Final Recreational Off-Road Vehicle Management Plan
Supplemental Environmental Impact Statement

BIG CYPRESS

National Preserve • Florida

Final

Off-Road Vehicle Management Plan
Supplemental Environmental Impact Statement

Big Cypress
National Preserve

Collier, Miami-Dade, and Monroe Counties, Florida

The National Park Service developed this plan to provide guidance on the management of off-road vehicle (ORV) use within Big Cypress National Preserve. This plan is called for and directed by the *General Management Plan and Final Environmental Impact Statement: Big Cypress National Preserve, Florida* (NPS 1991), and is required as part of a litigation settlement.

The plan presents and analyzes two alternatives for managing ORV use within the 582,000 acres in the original boundary of the preserve. The no action alternative analyzes the effects of continuing to apply the current management program. The proposed action would adopt a new program that focuses on the resource protection mandates of the National Park Service while providing reasonable recreational access.

The analysis evaluated the effects of the alternatives on natural resource and visitor experience impact topics. Compared to the no action alternative (continue current management), the analysis found that implementing the proposed action would result in substantial beneficial effects to surface water flow, soils, and vegetation. These beneficial effects would result from limiting ORVs to designated roads and trails, which would produce a major reduction in the spatial extent of the preserve affected by ORVs. The visitor experience for ORV users would be affected by the limitations on their ability to access certain places by vehicle, and by the need to conform with new rules and permit requirements. Many visitors who do not use ORVs would perceive a benefit from reduced impacts to the scenic quality of the preserve.

For more information concerning this plan contact:

John J. Donahue, Superintendent
Big Cypress National Preserve
HCR 61 Box 110
Ochopee Florida 34141
(941) 695-2000, ext. 310

EXECUTIVE SUMMARY

INTRODUCTION

The Final Recreational Off-Road Vehicle Management Plan and Supplemental Environmental Impact Statement addresses the management of recreational off-road vehicle[1] use within the original 582,000 acres of Big Cypress National Preserve. The preserve's general management plan (NPS, 1991) provided overall guidance for ORV management, but recommended the preparation of a more detailed ORV management plan. This off-road vehicle management plan was prepared in response to that recommendation. This planning effort is tiered off of the general management plan and incorporates new information gathered and new issues raised by the public since 1991. The purpose of the Supplemental Environmental Impact Statement (SEIS) is to analyze the alternatives presented in accordance with the National Environmental Policy Act of 1969.

In addition, the off-road vehicle management plan is being prepared in accordance with the 1995 settlement agreement negotiated between the Florida Biodiversity Project (FBP) and several agencies and bureaus. These include the U.S. Department of the Interior, National Park Service, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, U.S. Department of the Army, and U.S. Army Corps of Engineers. The settlement agreement was a result of a lawsuit filed by FBP, concerning the management of ORVs within the preserve.

Big Cypress National Preserve was established on October 11, 1974 (16 USC 698) "in order to assure the preservation, conservation, and protection of the natural, scenic, hydrologic, floral and faunal, and recreational values of the Big Cypress Watershed in the State of Florida and to provide for the enhancement and public enjoyment thereof." The boundary of the preserve was expanded by 147,000 acres in 1988, with administration of this addition by the National Park Service beginning in 1996. Management guidance for the Addition Lands was not included in the general management plan (NPS 1991) and will be addressed in a separate general management plan. ORV management guidance in the Addition Lands will be prepared as part of this future planning effort.

The enabling legislation states that the preserve, as a unit of the national park system, is to be managed in a manner that will ensure its "natural and ecological integrity in perpetuity." The legislation further states the management of the area should be in accordance "with the provisions of the Act of August 25, 1916" (NPS Organic Act). The enabling act allows for the use of off-road vehicles, but stipulates that this use will be controlled in a manner that does not impair the resources of the preserve. The legislative history of the preserve states that "While the use of all-terrain vehicles must be carefully regulated by the secretary (of the interior) to protect the natural wildlife and wilderness values of the preserve, the bill does not prohibit their use along designated roads and trails" (U.S. House of Representatives, 1973; U.S. Senate, 1974).

---

1 For the purposes of this document, "off-road vehicle" (or all-terrain vehicle (ATV)) refers to motorized vehicles, including all-terrain cycles (ATCs); swamp buggies; street-legal, 4-wheel-drive vehicles; and airboats. A description of these types of vehicles is included in the "Affected Environment" section.

The management plan and supplemental environmental impact statement consists of five chapters. The first chapter details the purpose and need for the plan, legislative mandates and special commitments, management objectives, and planning issues. The second chapter describes the two alternatives considered, and the alternatives considered but dismissed from further analysis, and summarizes the key differences between the alternatives and associated impacts. Chapter three discusses the aspects of the environment that would be affected by implementing the management plan. The environmental consequences of implementing the alternatives are presented in the fourth chapter. Finally, chapter five summarizes the public involvement in this planning process and consultation and coordination with federal, state, local and tribal governments.

The 1991 general management plan and environmental impact statement evaluated four alternatives, all of which included management of ORV use within the preserve. Three of these alternatives were considered but dismissed from further analysis in this plan. Only the general management plan proposed action was further considered. In compliance with the National Environmental Policy Act regulations that require a no-action alternative be evaluated in order to provide a baseline for comparison among the alternatives, the general management plan proposed action alternative represents this no action alternative.

The no action alternative, which reflects the current management strategy, and the proposed action are the two alternatives developed and evaluated in this document. These alternatives were based on the National Park Service legal mandates, the general management plan/environmental impact statement, and issues identified during the scoping process for the plan.

PROPOSED ACTION

The proposed action applies the precautionary principle in managing recreational ORV use within the preserve. Although the National Park Service has used the best available scientific information available to prepare this plan, this database is not complete. The research section of the proposed action outlines where more information is needed. Where the effects of an action are unknown, the proposed management actions would favor the protection of the preserve's natural and cultural resources. The proposed action would be a model for sustainable management of a high-impact recreational activity in a sensitive area.

The key features of the proposed action include the following.

ORVs would be allowed only on designated trails and would depart only from designated access points.

Sensitive areas would be closed immediately to all ORV traffic, including all marl prairies, specific Bear Island Unit trails, zone 1 of the Stairsteps Unit, and Cape Sable seaside sparrow habitat in the Stairsteps unit.

Temporal closures would be instituted including restriction of ORV traffic between the hours of 10:00 P.M. and 5:00 A.M., a 60-day seasonal closure, as well as closures triggered by high or low water levels.

Three permits would be required to operate an ORV in the preserve including a vehicle permit ($50.00), an ORV operator's permit (free), and a daily use backcountry permit (free).

Up to 2,000 annual permits would be issued by random draw.

A mandatory education course would be required to obtain an ORV operator's permit.

Vehicles must meet specifications.

Impacts of ORV use would be monitored and management actions would be taken as necessary, based on monitoring results.

Areas impacted by ORV use would be restored.

Research would be conducted to support ORV management within the preserve.

Fifteen access points would be designated. ORVs would travel only on designated trails throughout the preserve. The Deep Lake Unit and Loop Unit would both remain closed to all ORV traffic, as they are in the no action alternative (continue current management).

Guidance for the types of ORVs allowed in each management unit is given in the proposed action. These designations are based on the type of terrain found in the various areas of the preserve and to provide for resource protection. The Corn Dance Unit and Turner River Unit would be opened to swamp buggies and all-terrain cycles (ATCs). Bear Island Unit would be opened to swamp buggies, ATCs, and street-legal four-wheel drive vehicles. In the Stairsteps Unit, Zone 2 would be opened to swamp buggies and ATCs; Zone 3 would be opened to swamp buggies, ATCs and airboats; and Zone 4 would be opened only to airboats.

The number of annual vehicle permits that would be issued would be reduced from 2500 to 2000, in accordance with the 1990 biological opinion issued by the U.S. Fish and Wildlife Service on the general management plan.

The proposed action is based on the concept of adaptive management, which is a dynamic process. As the proposed action is implemented, additional information would be obtained through monitoring, research and experience. As the knowledge base expands, the National Park Service would respond by adapting management actions that assure the highest protection of the preserve's resources.

All aspects of the proposed action would be implemented within ten years. Closure of sensitive resource areas would be implemented immediately. Some dispersed use of ORVs would initially be allowed outside of marked sensitive areas until the designated trail system is in place, and only if monitoring results indicate that no further resource impacts are occurring.

Limiting ORV use to designated trails would substantially reduce the spatial extent of the preserve impacted by ORVs. Implementing the proposed action would result in long-term benefits to water resources, soils and vegetation. The plan may also benefit endangered and threatened species, including the Cape Sable seaside sparrow and the Florida panther. Some ORV users may experience adverse impacts due to a slight increase in permit costs, and the time required to complete the education course. Restricting travel to designated routes may alter the use patterns of some ORV users. Other visitors (non-ORV users) would experience beneficial impacts by reducing the visual impacts of ORV use and lessening the potential for user conflicts in the backcoun-

try of the preserve. The development of the trail system may eventually create greater access to the backcountry of the preserve for all visitors.

NO ACTION ALTERNATIVE (CONTINUE CURRENT MANAGEMENT)

The no action alternative continues the current management strategy. Under this alternative the National Park Service would adopt a strategy combining opened areas and designated trails for ORV use. ORV users would continue to have unlimited access from approximately 70 informal locations. ORVs would be required to travel on designated trails within the Bear Island Unit and a small portion of the Stairsteps Unit. ORVs would be allowed to disperse within the Turner River Unit, Corn Dance Unit and portions of the Stairsteps Unit. Deep Lake Unit and Loop Unit would remain closed to all ORVs. Prairies and other sensitive areas would continue to be open to dispersed ORV use.

This alternative does include limitations on the types of vehicles allowed within management units or portions of these units. Zone 1 of the Stairsteps Unit has been closed to airboats and Zone 4 in this unit has been designated for airboats only, except for some limited trails within the Lostmans Pine area. The Corn Dance Unit and Turner River Unit are opened to all permitted vehicle types. Bear Island Unit is closed to airboats.

The National Park Service would continue to permit 2,500 vehicles annually for use within the preserve. However, further consultation with the USFWS would be required, since the biological opinion prepared for the 1991 general management plan was based on 2,000 annual permits. To obtain an annual permit ($35.00), all vehicles would be required to meet certain specifications.

The current management under this strategy has been primarily reactive to unacceptable conditions. ORV impacts monitoring would be ad-hoc and would rely primarily on staff observations. In recent years, the National Park Service has made several closures of all or portions of the preserve in response to water levels. These closures were intended to reduce stress to wildlife during high water conditions, and to reduce impacts to soils and vegetation under low-water conditions.

During this planning effort, it has been revealed that this alternative would not meet the NPS legal mandates or comply with policy for managing the preserve.

The implementation of this alternative would result in long-term adverse impacts to water resources, soils, and vegetation. The spatial extent of impacts is expected to increase under this alternative, with major impacts to soils, prairies and marshes. The Cape Sable seaside sparrow may experience long-term adverse impacts by the alteration of the vegetation structure it needs for nesting, foraging and roosting. The alternative may impact the Florida panther by increasing the potential for human disturbance and the degradation of habitat. This alternative restricts backcountry access in the preserve to a limited number of individuals who possess specialized motorized equipment.

CONTENTS

Executive Summary v

Purpose of and Need for the Plan

Introduction 3

Legislative Mandates and Special Commitments 9
- National Park System Mandates 9
- Big Cypress Legislative Background and the Purpose of the Preserve 10
- Federal regulations, Executive Orders, and NPS Policies Related to ORV Use 11
- Federal Statutes, Executive Orders, and NPS Policies Related to Water Resources 12
- Federal Statues and NPS Policies Related to Biological Resources 13
- 1995 Settlement Agreement 15
- Ability to Meet Legislative Mandates and Special Commitments 16

Management Objectives 17
- Natural Resources 17
  - Water Resources 17
  - Soils 17
  - Vegetation 17
  - Wildlife 17
- Cultural Resources 17
- Visitor Experience 18

Planning Issues 19
- Natural Resource Impact Topics 19
- Cultural Resource Impact Topics 20
- Visitor Experience Impact Topics 20

Topics Dismissed from Detailed Analysis 22
- Other Wildlife Species 22
- Preserve Use by Miccosukee and Seminole Tribes 22
- Air Quality 22
- Mineral Interests 23
- Cultural Resources 23
- Environmental Justice 23
- Prime and Unique Agricultural Lands 23

Alternatives, Including the Proposed Action

Introduction 27

Proposed Action 28
- Introduction 28
- Trails and Access Points 29
  - Criteria for Developing the Trail System and Access Points 31
    - Resource Protection. 31
    - Visitor Experience. 32

Methodology 32
Proposed System of Trails and Access Points 33
Designated Trails. 34
Access Points. 36
Carrying Capacities 38
Monitoring 39
Trail Use Indicators and Standards 39
Methods of Monitoring 40
Management Actions 42
Closure of Areas 43
Nightly Closures 43
Seasonal Closures 43
Spatial Closures 44
Criteria for Closures 45
Permit Program 46
Fees 47
Off-Road Vehicle Permit 47
Number of Vehicle Permits. 47
Vehicle Inspection Program. 48
Allocation of Vehicle Permits. 49
ORV Operator Permit 49
Special Use Permit for Private Property Owners 50
Education and Communication 51
Vehicle Specifications 52
Rules and Enforcement 53
Restoration 54
Implementation 57
Resource Recovery Monitoring 57
Indicators 58
Methods 58
Frequency and Timing 59
Information Needs 59
Research 59
Implementation Strategy and Schedule 59
Cost 65

No Action Alternative (Continue Current Management) 67
Introduction 67
Trails, Areas, and Access Points 69
Trails and Areas 69
Access Points 70
Monitoring 70
Management Actions 71
Closure of Areas 71
Permit Program 71
Education and Communication 71
Vehicle Specifications 72
Rules and enforcement 72
Restoration 73

Research 73
Implementation Strategy 74
Cost 74

Alternatives Considered but Dismissed from Further Analysis 75

Summary of Alternatives 76

Affected Environment

Natural Resource Issues 85
Surface Water Flows 85
Water Quality 88
Soils 89
Vegetation 90
Prairies 90
Marshes 97
Cypress Strands and Domes, Mixed Hardwood Swamps, and Sloughs 98
Mangroves 99
Hardwood Hammocks 99
Pinelands 99
Wildlife 100
American Alligator 100
Cape Sable Seaside Sparrow 102
Bald Eagle 102
Wood Stork 103
Red-cockaded Woodpecker 103
Everglade Snail Kite 103
Florida Panther 104
West Indian Manatee 107
Other Wildlife Species 107

Visitor Experience Issues 108
General Preserve Visitation 108
Visits 108
ORV Use 109
ORV Trail Mapping 110
Characteristics of ORVs 112
Characteristics of ORV Users and Visitation 114
Hunting 119
Other Visitation 120
Nonfederal Property Owners 121

Environmental Consequences

Introduction 125

Methodology 125
Intensity 125
Duration 126
Direct versus Indirect Impacts 126

Cumulative Impacts 126

Impacts on Natural Resources 128
Water Resources 128
Surface Water Flows 128
Analysis of the Proposed Action. 128
Analysis of No Action (Continue Current Management). 128
Cumulative Impacts. 128
Conclusion. 129
Water Quality 129
Analysis of the Proposed Action. 129
Analysis of No Action (Continue Current Management). 130
Cumulative Impacts. 130
Conclusion. 130
Soils 130
Analysis of the Proposed Action. 130
Analysis of No Action (Continue Current Management). 131
Cumulative Impacts. 131
Conclusion. 131
Vegetation 131
Prairies and Marshes 131
Analysis of the Proposed Action. 131
Analysis of No Action (Continue Current Management). 131
Cumulative Impacts. 132
Conclusion. 132
Cypress Strands and Domes, Mixed Hardwood Swamps, and Sloughs 132
Analysis of the Proposed Action. 132
Analysis of No Action (Continue Current Management). 133
Cumulative Impacts. 133
Conclusion. 133
Mangroves 133
Analysis of the Proposed Action. 133
Analysis of No Action (Continue Current Management). 133
Cumulative Impacts. 133
Conclusion. 133
Hardwood Hammocks 133
Analysis of the Proposed Action. 133
Analysis of No Action (Continue Current Management). 134
Cumulative Impacts. 134
Conclusion. 134
Pinelands 134
Analysis of the Proposed Action. 134
Analysis of No Action (Continue Current Management). 134
Cumulative Impacts. 134
Conclusion. 134
Protected Species 135
Cape Sable Seaside Sparrow 135
Analysis of the Proposed Action. 135
Analysis of No Action (Continue Current Management). 135

Cumulative Impacts. 135
Conclusion. 136
Bald Eagle 136
Analysis of the Proposed Action. 136
Analysis of No Action (Continue Current Management). 136
Cumulative Impacts. 136
Conclusion. 136
Wood Stork 136
Analysis of the Proposed Action. 136
Analysis of No Action (Continue Current Management). 137
Cumulative Impacts. 137
Conclusion. 137
Red-Cockaded Woodpecker 137
Analysis of the Proposed Action. 137
Analysis of No Action (Continue Current Management). 138
Cumulative Impacts. 138
Conclusion. 138
Everglade Snail Kite 138
Analysis of the Proposed Action. 138
Analysis of No Action (Continue Current Management). 138
Cumulative Impacts. 138
Conclusion. 138
Florida Panther 139
Analysis of the Proposed Action. 139
Analysis of No Action (Continue Current Management). 139
Cumulative Impacts. 139
Conclusion. 140
West Indian Manatee 140
Analysis of the Proposed Action. 140
Analysis of No Action (Continue Current Management). 140
Cumulative Impacts. 140
Conclusion. 140
White-Tailed Deer and Feral Hogs 140
Analysis of the Proposed Action. 140
Analysis of No Action (Continue Current Management). 140
Cumulative Impacts. 140
Conclusion. 141

Impacts on Visitation 142
ORV Use 142
Analysis of the Proposed Action. 142
Analysis of No Action (Continue Current Management) 142
Cumulative Impacts. 142
Conclusion. 143
Hunting 143
Analysis of the Proposed Action. 143
Analysis of No Action (Continue Current Management). 143
Cumulative Impacts. 143
Conclusion. 143

Other Visitation 143
Analysis of the Proposed Action. 143
Analysis of No Action (Continue Current Management). 144
Cumulative Impacts. 144
Conclusion. 144
Nonfederal Property Owners 144
Analysis of the Proposed Action. 144
Analysis of No Action (Continue Current Management). 144
Cumulative Impacts. 145
Conclusion. 145

Sustainability and Long-term Management 146
Any Adverse Impacts that Cannot Be Avoided Should the Action Be Implemented 146
Analysis of the Proposed Action 146
Analysis of No Action (Continue Current Management) 146
The Relationship between Local Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity 146
Analysis of the Proposed Action 146
Analysis of No Action (Continue Current Management) 147
Any Irreversible or Irretrievable Commitments of Resources that Would Be Involved Should the Alternative Be Implemented 147

Consultation and Coordination

History of Public Involvement 151
Public Information 151
Consultation with the U.S. Fish and Wildlife Service 152
Consultation with Federally Recognized Tribes 152
Consultation with the State Historic Preservation Officer 153

List of Agencies, Organizations, and Individuals Who Received the Draft ORV Management Plan and Supplemental Environmental Impact Statement 153
Federal Agencies 153
Native American Tribes 153
State of Florida 153
Organizations 154
Companies 154
Media 154
Libraries 154
Individuals 154
Preparers and Contributors 155
Department of the Interior 155
Office of the Secretary 155
Office of the Solicitor 155
National Park Service 155
Big Cypress National Preserve 155
Denver Service Center 155
Everglades National Park 155
Southeast Regional Support Office 155
Washington Office, Park Planning and Special Studies Division 155

U.S. Fish and Wildlife Service 155
Parsons Engineering Science, Inc. 156
Virginia Tech University, Department of Forestry, Cooperative Park Studies Unit (CPSU) 156
Utah State University 156
Columbia University 156
University of Georgia 156

Response to Comments 157
Introduction 157
Response to Comments 162
Analysis and Utilization of Scientific Data and Supporting Information 162
Opening and Closing of Management Units 163
Compliance with Legal Mandates and the Settlement Agreement 164
Visitor Experience 167
Cumulative Impacts 168
Education and Communications 168
Protected Species 168
Enforcement 169
Management Objectives and Funding 170
Hunting 170
Surface Water Flow and Water Quality 171
Monitoring, Restoration, and Research 171
ORV Types and Specifications 172
ORV Permits, Fees, Regulations, and Operating Standards 173
Soils 175
Trails and Access Points 175
University of Georgia Database and Miles of Trails 177
Vegetation 178
Wildlife and Habitat 179
Scope of the Plan and Supplemental Environmental Impact Statement 180
Comment Letters 181

Appendices, Glossary, Bibliography, and Index

Appendix A: Draft – Proposed Application of Temporal Restrictions to Airboat Operations in the Southeast Corner of Big Cypress National Preserve 529

Appendix B: Preliminary Report – Off-road Vehicle Trail Accuracy Assessment 538

Appendix C: Biological Opinion for the Final Recreational Off-Road Vehicle Management Plan and Supplemental Environmental Impact Statement: Big Cypress National Preserve, Florida 545

Glossary 591

Bibliography 592

Index 598

Tables

1: Substrate Suitability and Resource Sensitivity 33
2: Candidate Indicators and Standards for Assessing Trail Conditions 39
3: Research Needs for Implementation of the Proposed Action 59
4: Implementation Schedule for the Proposed Action 64
5: Implementation Cost Estimate for the Proposed Action 66
6: Summary of Key Differences between the Alternatives 76
7: Summary of Impacts of the Alternatives 79
8: Listed Wildlife Species in Big Cypress National Preserve 100
9: Visitation at Big Cypress National Preserve, 1995 to 1999 108
10: Numbers of ORVs Registered for Use in Big Cypress National Preserve, 1980 to 1999 109
11: Activities Participated in by ORV Permit Holders during a 1-Year Period 115
12: Role and Importance of the ORV in Recreational Experiences 117
13: Agreement with Statements Describing the Importance of Specific Places, Vehicle Types, and Routes Used within the Preserve 104
14: Numbers of Hunters in the Field per Day per Season at Big Cypress National Preserve, 1996 to 1999 119
15: Identification of Commentors 158

Figures

South Florida Region 3
Management Planning Units 8
Conceptual Framework of Access Points and Primary Trails 30
ORV Management - Proposed Action 35
ORV Management - No Action Alternative (Continue Current Management) 68
L-28 Canal Map 87
Vegetation Classes 91
ORV Use Areas 93
Panther Locations, 1981-1999 105
GMP ORV Trails 111
University of Georgia Trails Interpretation 113
Off-Road Vehicles 115

PURPOSE OF AND NEED FOR THE PLAN

INTRODUCTION

The purpose of this Recreational Off-Road Vehicle Management Plan (plan) is to guide the National Park Service (NPS) in its management of recreational off-road vehicle (ORV) use in Big Cypress National Preserve, the location of which is shown on the South Florida Region map. This plan implements the direction established in the *General Management Plan and Final Environmental Impact Statement: Big Cypress National Preserve, Florida* (NPS 1991). The general management plan and environmental impact statement was finalized with a record of decision, and recognized the need for an ORV management plan.

The general management plan provided broad direction for management of the preserve and stated that more detailed actions concerning ORV management would be included in an ORV management plan, which would be developed after approval of the general management plan. This plan tiers off the general management plan and the environmental impact statement, in conformance with the Council on Environmental Quality (1978) guidelines for implementing the National Environmental Policy Act. It also reflects federal laws, regulations, and executive orders, and Florida laws, regulations, and policies that have been enacted or modified since the release of the general management plan.

This plan and supplemental environmental impact statement were also prepared in response to a settlement agreement negotiated in 1995 between the Florida Biodiversity Project and several federal agencies and bureaus. The agencies and bureaus named in the lawsuit included the U.S. Department of the Interior, National Park Service, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency (EPA), U.S. Department of the Army, and U.S. Army Corps of Engineers. This agreement and its relevance to ORV management in the preserve are described later in this section.

The purpose of this plan and the associated supplemental environmental impact statement is to analyze the specific actions for ORV management, incorporate new information gathered and policies developed since the 1991 general management plan and environmental impact statement, and address new issues raised by the public. The plan and supplemental environmental impact statement jointly address ORV use in Big Cypress National Preserve.

ORV activities in Big Cypress must be managed and regulated to conserve preserve resources and values in accordance with the NPS Organic Act of 1916, as amended; the preserve's enabling legislation; and other legal mandates. To comply with these mandates, the plan addresses

an ORV permit program, including vehicle specifications

a system of designated access points and trails

rules governing the operation of vehicles and enforcement of those rules

methods for monitoring

strategies for restoring areas impacted by ORVs

education needs

research needs

other management strategies, such as number limits for access points

the adaptive management approach to ensure that the plan remains current and effective

Soil disturbance is the most direct, visible, and lasting impact of ORV use in the preserve. When the soils of Big Cypress are saturated or inundated with water, they become especially susceptible to disturbance (including compaction, rutting, deformation, and ridging) from vehicle traffic. The factors that influence the degree of impact have changed over the years, including wetter hydrologic conditions, improved vehicle capabilities, and the long-term accumulation of effects, as summarized below.

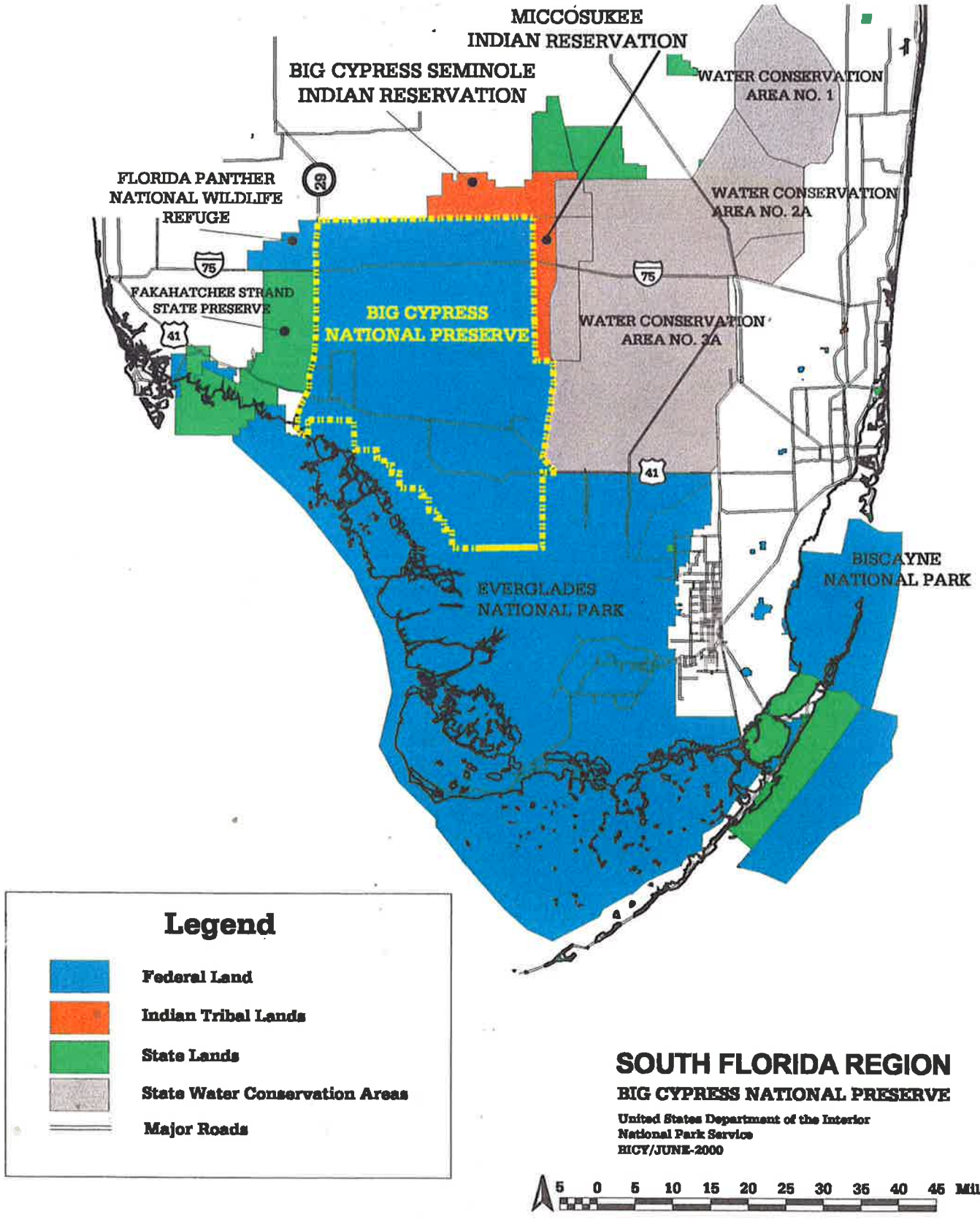
Wetter hydrologic conditions of the 1990s. The dryer conditions that prevailed during the establishment of the preserve meant that operation of ORVs resulted in less damage to the landscape than has been observed in the 1990s. The wetter conditions of the 1990s increased the level of soil impacts because soils are saturated for a longer time each year. This means that ORVs are more likely to be in operation when soils are most sensitive. Potential sources of wetter conditions in the 1990s included greater rainfall, modification to upstream water management practices, and landscape alterations within the preserve. The dry conditions of the 1960s and 1970s may also have been influenced by upstream water management practices. Major modification to the landscape and water management practices over the next 40 years as a result of region-wide ecosystem restoration efforts are anticipated to alter the hydrologic regime in the future.

Improved Vehicle Capabilities. Vehicle capabilities, including increased vehicle reliability, power, and maneuverability, have increasingly opened up areas of the preserve that were not accessible in the past. Increased accessibility is also related to improved maps and greater availability of remote communication and navigation devices.

Accumulation of effects over time. The persistence of disturbed soils suggests that ORV impacts are occurring at a faster rate than soils are naturally recovering, and that impacts are accumulating over time. There are no known processes that restore the soils once disturbed. Farm field furrows that existed prior to the preserve's establishment are still clearly visible from the air and on the ground decades later. Soil impacts from ORVs appear to be having similar persistence over time, with associated hydrological and biological impacts.

Ground-level observations, either at roadside entry locations or along trails, provide a limited view of ORV impacts. An aerial inspection of the ORV trails and travel corridors provides a greater appreciation of the levels of impacts that have occurred. The networks of tire ruts and airboat paths from dispersed used of ORVs influence the hydrological, vegetative, and wildlife conditions of the preserve.

Unlike many plans prepared by the National Park Service, the need for this plan was not prompted by increased demand for a particular type of recreation in the preserve. The 1991 general management plan limited the number of recreational ORV permits to 2000. The record of decision changed this number to 2,500 (NPS 1992). In 1999, 2,271 recreational ORV permits were issued. Therefore, the number of recreational ORVs in use in Big Cypress National Preserve


MICCOSUKEE
INDIAN RESERVATION
BIG CYPRESS SEMINOLE
INDIAN RESERVATION
WATER CONSERVATION
AREA NO. 1
FLORIDA PANTHER
NATIONAL WILDLIFE
REFUGE
WATER CONSERVATION
AREA NO. 2A
75
FAKAHATCHEE STRAND
STATE PRESERVE
BIG CYPRESS
NATIONAL PRESERVE
WATER CONSERVATION
AREA NO. 3A
41
BISCAYNE
NATIONAL PARK
EVERGLADES
NATIONAL PARK
Legend
Federal Land
Indian Tribal Lands
State Lands
State Water Conservation Areas
Major Roads
SOUTH FLORIDA REGION
BIG CYPRESS NATIONAL PRESERVE
United States Department of the Interior
National Park Service
BICY/JUNE-2000
5 0 5 10 15 20 25 30 35 40 45 Miles

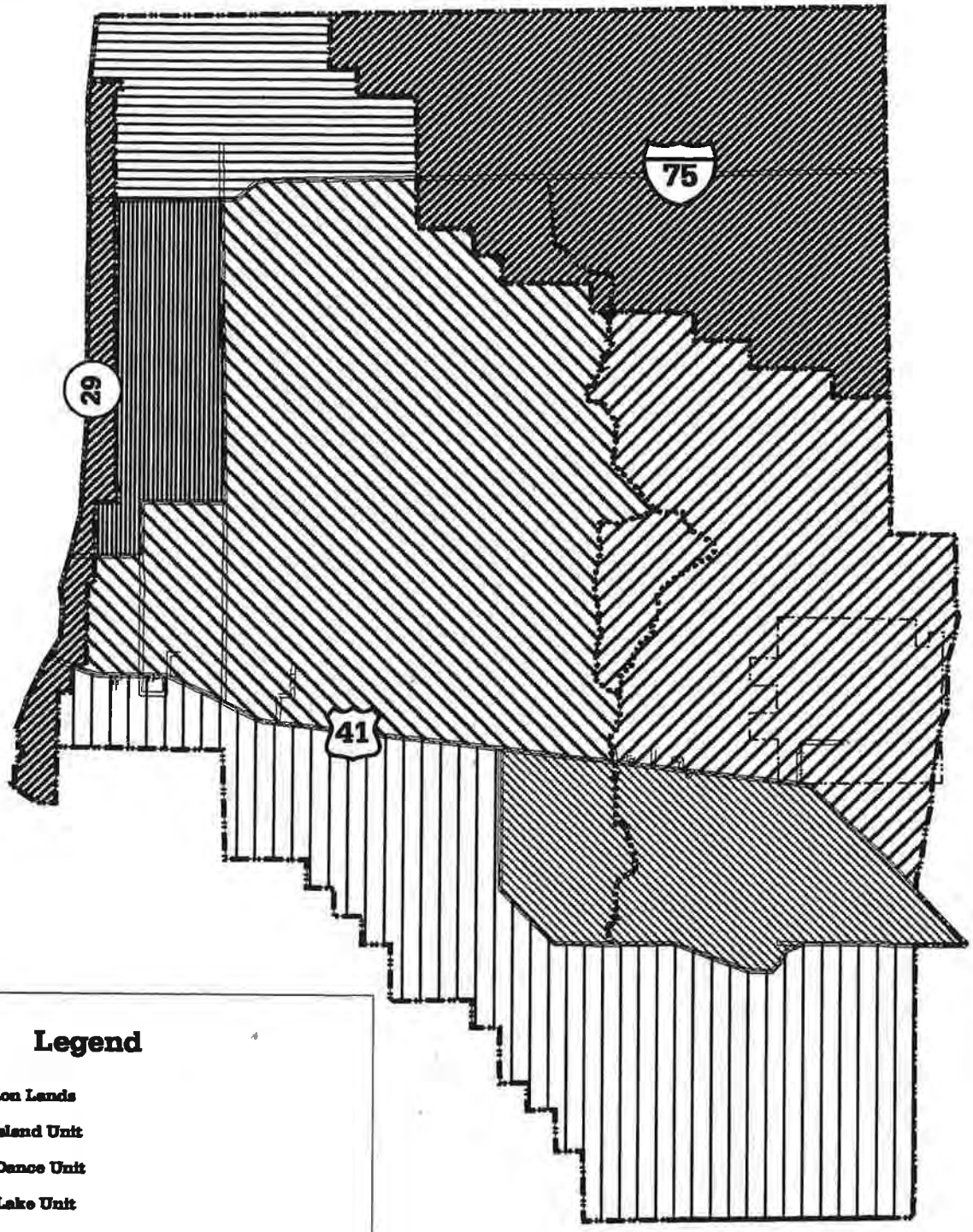
could increase by only 10 percent. Instead, the plan is needed to enable the National Park Service to comply with its legislative mandates and special commitments. Those mandates and commitments as they relate to recreational ORV use in the preserve are described below.

The scope and complexity of the plan would require a phased implementation over a 10-year period. However, many of the plan's key components would be initiated in the first year. A schedule for implementation is provided in the "Alternatives, Including the Proposed Action" section of this plan. Implementation would begin promptly after the record of decision for this ORV management plan was signed.

The National Park Service would use an adaptive management approach that would include continual review and modification of the plan as needed to ensure its effectiveness and to confirm that management of ORVs was in compliance with NPS mandates and policies. If modifications to the plan were needed, the National Park Service would comply with all appropriate laws and regulations, including but not limited to, the National Environmental Policy Act and Endangered Species Act, including appropriate public involvement.

The scope of this plan is limited to recreational ORV use within the original preserve boundary. It does not address oil and gas development in the preserve, commercial operations of ORVs, or tribal rights.

This plan also does not address any management issues in the Addition Lands (see Management Planning Units map). The management of the Addition Lands will be addressed in a future general management plan and environmental impact statement. The Big Cypress Addition Act (Public Law 100-301) requires these lands be evaluated for wilderness suitability pursuant to the Wilderness Act (78 Stat. 891: 16 U.S. Code (USC) 1132 (c) and (d)). Until the wilderness suitability study and the general management plan addendum are completed, the Addition Lands will remain closed to recreational ORV use.



Legend

- Addition Lands
- Bear Island Unit
- Corn Dance Unit
- Deep Lake Unit
- Loop Unit
- Stairsteps Unit
- Turner River Unit
- Preserve Boundary
- Dade-Collier Transition and Training Airport
- Florida National Scenic Trail (forms partial Unit boundary)
- Major Roads

MANAGEMENT PLANNING UNITS

BIG CYPRESS NATIONAL PRESERVE

United States Department of the Interior
National Park Service

BECY/JUNE-2000

5 0 5 10 Miles

"Research" section, the National Park Service will use adaptive management principles to integrate the results into the ORV management plan to continuously improve its effectiveness.

BIG CYPRESS LEGISLATIVE BACKGROUND AND THE PURPOSE OF THE PRESERVE

Big Cypress National Preserve was established in 1974 (16 USC 698), with the purpose being "to assure the preservation, conservation, and protection of the natural, scenic, hydrologic, floral and faunal, and recreational values of the Big Cypress Watershed in the State of Florida and to provide for the enhancement and public enjoyment thereof."

The enabling legislation states that the preserve, as a unit of the national park system, is to be managed in a manner that will ensure its "natural and ecological integrity in perpetuity." The legislation further states the management of the area should be in accordance "with the provisions of the Act of August 25, 1916" (NPS Organic Act). Thus, the natural and ecological integrity of the preserve is the fundamental value that Congress directed the National Park Service to protect.

In the enabling legislation for Big Cypress Natural Preserve, Congress directs the National Park Service to limit and control the use of federal lands and waters with respect to motorized vehicles and certain other activities. The enabling legislation directs the secretary of the interior to develop appropriate rules and regulations to carry out the purpose of the act, protecting the natural and ecological integrity of the watershed. This provision allows, but does not mandate, ORV use in the preserve, and directs the National Park Service to manage ORV use so that it does not impair the natural or cultural resources of the preserve.

The Senate and House reports that comprise part of the preserve's legislative history both contained identical language discussing the management of the preserve (U.S. House of Representatives 1973; U.S. Senate 1974).

> The area included in the preserve is largely undeveloped at the present time and . . . it will be managed in a manner which will assure its return to the true wilderness character which once prevailed

These reports indicate an intent to limit and control uses authorized at the time the preserve was created to allow the wilderness character of the area to be restored.

The congressional reports also discuss the management of ORVs, stating that "While the use of all-terrain vehicles must be carefully regulated by the secretary [of the interior] to protect the natural wildlife and wilderness values of the preserve, the bill does not prohibit their use along designated roads and trails."

The reports recognize that preserves "differ in some respects, from national parks and monuments insofar as administrative policies are concerned. Hunting for example, subject to reasonable regulation by the Secretary, could be permitted to the extent compatible with the purposes for which the area is established." However the reports state that "All management activities within these areas should be directed toward maintaining the natural and scientific values of the area, including preservation of the flora and fauna and establishment of the indigenous plant and animal life, if possible." The report further states "National preserves may accommodate significant recreational uses without impairing the natural values, but such public use and enjoyment would be lim-

LEGISLATIVE MANDATES AND SPECIAL COMMITMENTS

This ORV management plan has been developed consistent with NPS legal mandates, NPS management policies, the Big Cypress National Preserve general management plan, other approved preserve planning documents, and the 1995 settlement agreement. A review of these mandates and commitments as they relate to the use of recreational ORVs in Big Cypress National Preserve is provided in this section.

Legislative mandates and special commitments include those measures that apply to the entire National Park Service, plus preserve-specific requirements. In addition, ORV use in Big Cypress National Preserve must comply with all federal statutes, executive orders, and NPS policies.

The intent of all of the mandates and commitments is to establish sustainable conservation and to avoid impairment of NPS lands. As a result, ORV use can occur only to the extent that it does not significantly adversely affect the preserve and its natural and cultural resources. Appropriate use of ORVs within this context, and the means for achieving that use, are provided in this plan.

NATIONAL PARK SYSTEM MANDATES

The National Park Service and its mandates are authorized under the NPS Organic Act (16 USC 1, 2-4) and the General Authorities Act (16 USC 1a-8). These acts direct the agency to conserve the scenery, the natural and historic objects, and the wildlife, and to provide for the enjoyment of those resources in such a manner as to leave them unimpaired for future generations.

Amending the NPS Organic Act of 1916, the Redwood Act (March 27, 1978, 16 USC 1a-1) was passed shortly after Big Cypress National Preserve was established, with complete knowledge of how the act would affect such units as Big Cypress. In this act, Congress reaffirmed the mandates of the Organic Act and provided additional guidance on national park system management:

> The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established.

According to Senate Report No. 95-528, page 7, the restatement of these principles of park management in the Redwoods Act intended to serve as the basis for any judicial resolution of competing private and public values and interests in the national park system (U.S. Senate 1976). If a conflict occurs between visitor use and protection of resources, this act confirms the intent of Congress to favor resource protection.

The National Park Omnibus Management Act of 1998 (P.L. 105-391), Title II, National Park System Resource Inventory and Management, supports the integration of scientific study results into management. This act directs the secretary of the interior to take necessary steps to ensure the full and proper utilization of the results of scientific studies in the management decisions. In conformance with the 1998 act and the National Environmental Policy Act, this plan has used the best available scientific information to develop the ORV management measures of the proposed action. As additional information becomes available from such sources as the studies outlined in the

ited to activities where, or periods when, such human visitation would not interfere with or disrupt the values which the area is created to preserve."

The act provides management guidance on "usual and customary use and occupancy" of the preserve by members of the Miccosukee Tribe of Indians of Florida and the Seminole Tribe of Florida. Nothing in the alternatives considered would interfere with the right to usual and customary use and occupancy by members of the tribes. The act provides the following:

> Members of the Miccosukee Tribe of Indians of Florida and the Seminole Tribe of Florida shall be permitted, subject to reasonable regulations established by the Secretary, to continue their usual and customary use and occupancy of Federal or federally acquired lands and waters within the preserve.

In addition, the act provides the following guidance regarding improved properties and oil and gas rights.

> No improved property, as defined by this Act, nor oil and gas rights, shall be acquired without consent of the owner unless the Secretary, in his judgement, determines that such property is subject to, or threatened with, uses which are, or would be detrimental to the purpose of the preserve.

The National Park Service has worked with improved property owners to allow reasonable passage across federal lands to access their properties. Both alternatives considered would allow for reasonable access to improved properties within the preserve boundaries.

FEDERAL REGULATIONS, EXECUTIVE ORDERS, AND NPS POLICIES RELATED TO ORV USE

Under existing regulations published in 36 CFR 1.5, the superintendent has the authority to limit public use based on the determination that such action is necessary to maintain public safety and health, protect the environmental or scenic values, protect natural or cultural resources, aid scientific research, implement management responsibilities, provide equitable allocation and use of facilities, or avoid conflict among visitor use activities. The superintendent may limit public use through closures, by restricting times and areas of use, or by imposing conditions on the use.

ORV management regulations for Big Cypress National Preserve are published in the *Code of Federal Regulations* (36 CFR 7.86). These are modified as necessary to address management issues and concerns as they arise. These regulations prohibit the operation of ORVs in a manner that could cause significant damage to or disturbance of the preserve's resources, including soils, wildlife habitat, vegetation, and cultural resources. As provided by 36 CFR 7.86, the superintendent has discretionary authority to temporarily or permanently close portions of the preserve to ORV use if the use represents a threat to resources.

Executive Order (E.O.) 11644 (as amended by E.O. 11989 and E.O. 12608), "Use of Off-Road Vehicles on the Public Lands," directs agencies to designate trails and areas where ORVs would be permitted. In designating these trails and areas, the agency must base these decisions on "the protection of the resources of the public lands." The executive order states that in permitting ORV use, the agency must manage this activity to

> minimize damage to soil, watershed, vegetation, or other resources

minimize harassment of wildlife or significant disruption of wildlife habitats

minimize conflicts between ORV use and other recreational uses

ensure compatibility of uses in populated areas, taking into account noise and other factors

avoid adverse effects to natural, aesthetic, or scenic values

E.O. 11644 further requires federal agencies to immediately close areas or trails under their jurisdiction, or to discontinue certain vehicle types, whenever it is determined that ORV use will cause considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat, or cultural or historic resources of particular areas or trails. Closed areas and trails may be reopened after such adverse effects have been eliminated and future recurrence prevented with mitigation.

The order also calls for federal agencies to monitor the effects of ORV use on lands under their jurisdiction. On the basis of the information gathered, they shall from time to time amend or rescind designations of areas or other actions as required. The order also calls for federal agencies to develop operating conditions, establish enforcement procedures, and publish and distribute ORV use information to the public.

The National Park Service management policies on ORV use (NPS 1988) are based on E.O. 11644 and amendments described above. The policies emphasize that ORV routes and areas may only be designated in locations where there will be no significant adverse impacts on the area's natural, cultural, and scenic resources and values and in consideration of other visitors.

FEDERAL STATUTES, EXECUTIVE ORDERS, AND NPS POLICIES RELATED TO WATER RESOURCES

The NPS (1988) *Management Policies* require protection of water quality consistent with the Clean Water Act (33 USC Section 1251 *et seq.*) and other applicable federal, state, and local laws and regulations, and an examination of impacts during planning. The *Water Resources Management Plan: Big Cypress National Preserve* (NPS 1996) provides guidance for protecting water resources in the preserve. Special consideration of impacts on wetlands and floodplains is required by E.O. 11990, "Protection of Wetlands," and E.O. 11988, "Floodplain Management."

The primary goal of the Clean Water Act (33 USC Section 1251(a)) is to "restore and maintain the chemical, physical, and biological integrity of the Nation's water." The act directs the individual states to set and enforce water quality standards that meet U.S. Environmental Protection Agency (EPA) minimum guidelines. Section 404 of the act and Section 10 of the Rivers and Harbors Act authorize the Army Corps of Engineers to prohibit or regulate, through a permit process, discharges of dredged or fill material into the nation's waters, including wetlands.

Some of the ORV-related facilities that would affect wetlands would require a Section 404 permit. Most of these would consist of canal crossings at access points. To help protect wetlands, the National Park Service would obtain permits before affecting wetlands with construction. A Section 404 permit would not be required for other proposed management activities such as routing unimproved trails through wet areas, because they would not result in the dredging or filling of

wetlands. However, the great majority of this plan revolves around restoration of the environment.

Section 303 (d) of the Clean Water Act requires states to identify water segments that are impaired by pollution, even after application of pollution controls. For those waters, states must establish a total maximum daily load (TMDL) of pollutants to ensure that water quality standards can be attained. If a state does not do this, the EPA is required under Section 303 (d) to develop a priority list and make its own TMDL determination. Section 319 requires states to voluntarily develop and implement programs to control non-point pollution sources.

Under the Clean Water Act, the EPA has delegated to the state of Florida the authority to identify high-quality waters. It is then the responsibility of the state to protect the quality of such waters to ensure that they are not degraded. Under this authority, the Florida Department of Environmental Protection (DEP) established rules for protecting certain special waters to prevent any degradation from existing conditions. Designated waters are to be preserved in perpetuity for the benefit of the public. The waters of Big Cypress National Preserve are classified as Outstanding Florida Waters under these rules (Florida Administrative Code (FAC) 62-302.700 (2)(g)). Before construction of ORV-related facilities, the National Park Service would obtain all of the required permits to ensure protection of the preserve's waters.

The National Park Service will continue to work with the state and EPA to meet Clean Water Act provisions, including those under Sections 303 (d) and 319, and the Outstanding Florida Waters designation. The proposed action includes measures specifically designed to assist the National Park Service in meeting these requirements. The National Park Service would have considerably less ability to meet Clean Water Act requirements in association with ORV activities under the no action alternative (continue current management).

E.O. 11990 for protecting wetlands directs federal agencies to minimize the destruction, loss, or degradation of wetlands. NPS Director's Order #77-1 (NPS 1998a) and Procedural Manual #77-1 (NPS 1998b) provide the guidelines for implementing this order. If a proposed action would result in new adverse impacts on wetlands, a statement of findings documenting compliance with this director's order and procedure manual would be required.

E.O. 11988 on floodplain management directs federal agencies to reduce the risk of flood loss; minimize the impacts on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains. The *National Park Service Floodplain Management Guideline* (NPS 1993) provides the procedures for implementing this order. A floodplain statement of findings is required for certain actions that occur in regulatory floodplains.

A wetland and floodplain statement of findings was prepared for Big Cypress National Preserve in the general management plan and environmental impact statement (NPS 1991). The National Park Service concluded that there were no practicable alternatives to the general management plan for avoiding impacts on wetlands and floodplains. However, the proposed action would include development of a sustainable system that would incorporate wetland restoration.

FEDERAL STATUES AND NPS POLICIES RELATED TO BIOLOGICAL RESOURCES

The Endangered Species Act and *Management Policies* (NPS 1988) provide guidance for protecting biological resources and require the examination of impacts during planning. Additionally,

one of the primary goals in the overall mission statement of the Department of the Interior is to protect plant and animal diversity (biodiversity) on public lands.

The Endangered Species Act requires federal agencies, in consultation with the secretary of the interior, to utilize their authorities in the furtherance of the purposes of the act and to carry out programs for the conservation of listed endangered and threatened species (16 USC 1535 Section 7(a)(1)). The National Park Service interprets Section 7(a)(1) as an affirmative restoration mandate and will comply through positive habitat protection and restoration programs that are integral to the proposed action.

The act also directs federal agencies, in consultation with the secretary of the interior, to ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat (16 USC 1535 Section 7(a)(2)). Consultation with the U.S. Fish and Wildlife Service (USFWS) is required if the action may affect such a species to ensure that it does not jeopardize the species' continued existence.

NPS policies involve managing biological resources through the use of management areas. The management areas for Big Cypress National Preserve are described in detail in the general management plan and environmental impact statement (NPS 1991). Within the preserve, development and special use zones are managed and maintained for intensive visitor use. Within those zones, the natural aspects might be altered. The primary objective in natural zones, which constitute the majority of the preserve, is the protection of natural resources and values for appropriate types of enjoyment but only if that enjoyment occurs in a manner that leaves the resources unimpaired for future generations. In natural zones, the goal of the National Park Service is to maintain the natural components and processes of naturally evolving ecosystems, including the natural abundance, diversity, and ecological integrity of the plants and animals. However, ORV use under the no action alternative (continue current management) challenges and limits the ability of the National Park Service to maintain natural components and processes.

NPS (1988) policies for implementing the Endangered Species Act call for the National Park Service to "identify and promote the conservation of all federally listed threatened, endangered, and candidate species . . . and their critical habitat" within the preserve. The National Park Service also must control access to critical habitats and conduct management programs that perpetuate the natural distribution and abundance of these species and the ecosystems on which they depend. The no action alternative (continue current management) violates these policies, since it limits the ability of the preserve's staff to control access to critical habitats. A key feature of the proposed action alternative is the protection and affirmative restoration of threatened and endangered species habitats.

The National Park Service consulted with the USFWS during the development of the 1991 general management plan and environmental impact statement. The USFWS issued a biological opinion that the general management plan would adversely affect the Florida panther, but was not likely to jeopardize the continued existence of the species (USFWS 1991). The USFWS concurred with the determination of the National Park Service that the general management plan would not adversely affect eight other federally listed species that occur in the vicinity of the preserve. To reduce the potential adverse impacts, the USFWS recommended that the National Park Service

develop a recreational ORV management plan

provide details in the plan on how ORV use would be managed to protect Florida panthers

provide the draft plan to the Florida Panther Interagency Committee for review and comment

prohibit ORV use in areas regularly used by panthers, except where ORV use was determined essential for the preserve to comply with its mandates

apply adaptive management principles, such as changing ORV access points, designated trails and areas, or number of permits issued, based on continued monitoring of the Florida panther and any difficulties in controlling ORV activities.

Conditions have changed since the preparation of the biological opinion in association with the Big Cypress National Preserve general management plan. Therefore, the National Park Service will consult with the USFWS in association with preparing the ORV management plan, and a new biological opinion will be issued. The new biological opinion will update the recommendations presented in the earlier opinion and will supercede that document.

1995 SETTLEMENT AGREEMENT

The Florida Biodiversity Project filed suit alleging failures by several federal agencies and bureaus in connection with the use and/or management of ORVs in Big Cypress National Preserve. The agencies and bureaus named in the suit included the U.S. Department of the Interior, National Park Service, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, U.S. Department of the Army, and U.S. Army Corps of Engineers. The suit alleged failure to comply with federal statutes, including Section 404 of the Clean Water Act, the Endangered Species Act, and the National Environmental Policy Act (NEPA).

On October 25, 1995, the National Park Service settled the suit. As part of the settlement, the National Park Service agreed to prepare an ORV management plan and supplemental environmental impact statement in consultation with the EPA and other appropriate state and federal agencies. The plan builds on the analyses of issues and impacts previously set forth in the Big Cypress National Preserve general management plan and final environmental impact statement (NPS 1991).

The agreement specified that the overall objective of the ORV management plan would be to establish a comprehensive system for management of ORV use in the preserve. The goal would be assuring the natural and ecological integrity of resources in accordance with the enabling legislation establishing Big Cypress National Preserve. The settlement agreement specified that, at a minimum, the plan would address the following items:

Current ORV policies and practices within the preserve and each management unit

Methods for limiting and controlling ORV use to minimize impacts to resources in the preserve

Methods of avoiding adverse impacts to wetlands and sensitive resources from ORVs, and alternative methods of minimizing unavoidable adverse impacts

Best management practices (BMPs) designed to avoid and/or minimize impacts from ORV use on preserve resources

Criteria for the development of a comprehensive designated trail system and/or use areas

Management practices for particular vehicle types to avoid and/or minimize impacts to preserve resources

Methods for monitoring impacts of ORV use and mechanisms for taking remedial action based on the results of monitoring

Procedures and considerations (including but not limited to ecology and recreational factors) for closing, opening, and reopening areas and closing, relocating, opening, and reopening trails to ORV use

It was also stipulated that the National Park Service would involve the public and various state and federal agencies, and would use public and agency input to help prepare the plan and supplemental environmental impact statement.

ABILITY TO MEET LEGISLATIVE MANDATES AND SPECIAL COMMITMENTS

The National Park Service would not be able to meet some of its legislative mandates and special commitments for Big Cypress National Preserve under the no action alternative (continue current management). This situation is unacceptable to the National Park Service. Therefore, an ORV management plan is needed that will enable the National Park Service to conform with the

statutes and executive orders that apply to federal facilities throughout the nation

measures that apply to the entire National Park Service

preserve-specific requirements

MANAGEMENT OBJECTIVES

Objectives for management of recreational ORVs in Big Cypress National Preserve are presented below. These management objectives are based on the intent of the enabling legislation. They were further defined based on the preserve's general management plan (NPS 1991). This plan discusses how recreational ORVs would be managed under the proposed action and no action alternative (continue current management) to fulfill these objectives.

NATURAL RESOURCES

Water Resources

Maintain natural water flows within Big Cypress National Preserve and outflows to Everglades National Park.

Maintain the water quality within the preserve.

Restore areas where natural water flows have been disrupted.

Soils

Maintain natural elevation, composition, and integrity of soils.

Restore areas where soils have been disturbed.

Vegetation

Protect vegetation from disturbance outside of access points and designated trails.

Maintain and affirmatively restore habitat for rare and federally and state-listed species.

Control and reduce the spread of invasive plants.

Wildlife

Maintain the natural abundance of wildlife populations.

Protect and affirmatively restore federally listed threatened and endangered species and state special-concern species and their habitat.

CULTURAL RESOURCES

Protect all known cultural resources on or eligible for listing on the National Register of Historic Places. Prior to their evaluation, protect all known cultural resources to the same level that listed resources are protected.

Protect Indian sacred sites within the preserve.

Cooperate with the Miccosukee Tribe of Indians of Florida and Seminole Tribe of Florida to continue usual and customary use and occupancy of preserve lands.

Ensure that the plan does not conflict with the provisions of the Native American Graves Protection and Repatriation Act.

VISITOR EXPERIENCE

Provide all visitors with the opportunity to explore Big Cypress National Preserve.

Provide opportunities for diverse groups to use the preserve.

Maintain the scenic quality of Big Cypress National Preserve.

Provide appropriate resource–related recreational opportunities.

Manage and reduce adverse impacts of ORV use to natural and cultural resources.

Provide for public safety.

PLANNING ISSUES

Impact topics are potential environmental concerns that may result from federal action, if it is taken. Impact topics were identified by specialists in the National Park Service and in other state and federal agencies, and by the public during scoping for this project.

Two notices related to this planning effort were published in the *Federal Register*.

> A notice of the intent to prepare the ORV management plan was published in the January 22, 1996 issue (61 FR (14):1599-1600)
>
> A notice of intent to prepare the ORV management plan and supplemental environmental impact statement was published in the March 17, 1999 issue (64 FR (85):13233)

The general public and stakeholders have been kept informed of the progress of this planning effort through a series of newsletters, visitor surveys, and meetings with individuals, organizations, and agencies. Meetings were held between September 1995 and March 1996. Two newsletters were mailed to about 1,600 people during August 1996 and June 1997. The newsletters and other information about ORV use and management in the preserve were also made available on the Internet. Additional information on the public information program is provided in the "History of Public Involvement" section.

Once impact topics were identified, they were used to help formulate the alternatives. Impact topics in the general management plan and environmental impact statement (NPS 1991) were also reviewed for applicability to the ORV management plan. Impact topics were then selected for detailed analysis based on substance, the settlement agreement, environmental statutes, regulations, executive orders, and NPS management policies. A summary of specific impact topics and the rationale for their selection is given below.

NATURAL RESOURCE IMPACT TOPICS

Water Resources. ORV use may displace soils in such a way so that natural mechanisms are unable to restore the natural topography over periods of years or even decades (Duever *et al.* 1986b). This could change water flow patterns and directions. Preliminary studies also suggest that airboat trails may alter both direction and velocity of local surface water flow (Pernas *et al.* 1995). ORV use may increase turbidity or result in some discharges, leaks, or spills of petroleum products in localized areas. Construction of ORV access points could affect water flow and quality. For these reasons, surface water flows and water quality are two of the impact topics analyzed in this document.

Soils. ORV use causes soil rutting, displacement, and compaction. This causes soil loss or reduced productivity. Therefore, soils are included as an impact topic addressed in this document.

Vegetation. ORVs can directly impact vegetation by crushing plants, scarring trees, and exposing roots. Sites disturbed by ORVs may be susceptible to invasive plants. ORV ruts may act as firebreaks, which could alter fire behavior affecting vegetation. All of these could result in changes in plant composition. In addition, the construction of ORV access points would cause the loss of vegetation. The vegetation types that were identified in the general management plan and environ

mental impact statement as "important resources" included cypress strands and domes, mixed hardwood swamps, sloughs, marshes, mangrove forests, pinelands, and hardwood hammocks. All of these types are analyzed in this document. Prairies have been added as an impact topic because of their high susceptibility to ORV impacts.

Protected Species. A total of 30 animal species that receive special protection or are recognized by the state of Florida, the federal government, or the Convention on International Trade in Endangered Species may occur within the preserve (Florida Fish and Wildlife Conservation Commission 1997; USFWS 1999a). The endangered Florida panther, Cape Sable seaside sparrow, and red-cockaded woodpecker, and the threatened bald eagle, were analyzed in the general management plan and final environmental impact statement (NPS 1991). These four species, plus the endangered Everglade snail kite, West Indian manatee, and wood stork are analyzed in this supplemental environmental impact statement because ORV use and management activities could reduce the quality of habitat preferred by these species, directly disturb individual animals, or reduce foraging opportunities.

White-Tailed Deer and Feral Hogs. White-tailed deer and European feral hogs are preyed on by panthers and sought by hunters. Public comment indicated concern that ORV use facilitates hunting activities in remote areas and could reduce prey numbers, thus potentially affecting the panther's foraging opportunities in the preserve.

Other wildlife were dismissed from detailed analysis for the reasons given below under "Topics Dismissed from Detailed Analysis."

CULTURAL RESOURCE IMPACT TOPICS

The preserve has approximately 400 known archeological sites. These sites contain valuable information on past occupations of the area. All of these sites are protected under the National Historic Preservation Act of 1966, as amended, and the Archeological Resource Protection Act of 1979.

The preserve has three known sacred sites for the Miccosukee and Seminole people. Executive Order 13007, Indian Sacred Sites (1996), directs federal agencies, to the extent practicable, to accommodate access and ceremonial use of Indian sacred sites and avoid adversely affecting the physical integrity of such sacred sites. The executive order also states that where appropriate, locations of sacred sites should be confidential. Therefore, these locations are not included in any of the maps in this document.

VISITOR EXPERIENCE IMPACT TOPICS

ORV Use. ORV restrictions would affect the recreational opportunities for some ORV users. The ORV permitting process and limited access in some areas may also inconvenience some recreational ORV users. For these reasons, ORV use was included as an impact topic analyzed in this document.

Hunting. Many hunters use ORVs to access hunting areas and to transport camping and hunting gear and game. Restricting ORV use in some areas would challenge some hunters' mobility.

Conversely, limiting ORV use may enhance the hunting experience for those who prefer to walk. For these reasons, hunting was included as an impact topic analyzed in this document.

Other Visitation. Approximately 450,000 people who visit the preserve each year engage in activities other than those associated with ORV use. There is concern that noise and visual intrusions resulting from ORV use may adversely affect these non-ORV preserve visitors. ORV use and its impact on vegetation and soils could impact the scenic quality of the preserve, especially in areas frequently used by other visitors such as near roads, hiking trails, and campgrounds. ORV use could also affect natural sounds, and viewing opportunities for wildlife.

Nonfederal Property Owners. The recreational activities of property owners may be affected by recreational ORV use restrictions. Reasonable access to their properties would continue to be permitted by the National Park Service.

TOPICS DISMISSED FROM DETAILED ANALYSIS

Several topics were eliminated from further analysis because they were considered to be outside the scope of this supplemental environmental impact statement, the best available information indicated that impacts would be negligible, or scoping did not indicate public or regulatory concerns in association with ORV use. The topics considered but not evaluated further in the "Environmental Consequences" section of this document include the following.

OTHER WILDLIFE SPECIES

Other federally protected species, such as the eastern indigo snake, were considered but dismissed from detailed analysis. These species typically are not found in the affected areas and/or their preferred habitat would not be physically disturbed by ORV use and management under either alternative. Therefore, specific ORV management measures to protect these species are not needed, other than general protection afforded by the national preserve (NPS 1991).

The American alligator is federally listed because of the similarity of its appearance to the endangered American crocodile. Because the crocodile does not occur in the preserve, effects to the alligator were not considered.

The seven federally listed species analyzed, plus the white-tailed deer and feral hog, are suitable indicators for the status of other wildlife species that occur in the preserve. Together, these species reflect ecosystem health for wildlife in general. As such, the beneficial or adverse effects that would accrue to these species from the ORV management alternatives would probably indicate similar effects to state special-concern wildlife, other game species, and other non-game species. Therefore, effects to other wildlife were not included as an impact topic.

PRESERVE USE BY MICCOSUKEE AND SEMINOLE TRIBES

The preserve's enabling legislation provides for the usual and customary use and occupancy of the preserve by the Miccosukee Tribe of Indians of Florida and the Seminole Tribe of Florida. This plan only addresses recreational ORV use. Customary use and occupancy must be addressed in a different venue.

The National Park Service has consulted with the tribes during preparation of this plan and environmental impact statement. Nothing in the alternatives considered would interfere with these tribes' abilities to exercise their rights. Therefore, this topic was not considered in detail in this evaluation.

AIR QUALITY

Big Cypress National Preserve has been designated a Class II area under the Clean Air Act. The preserve is currently within a designated attainment area (i.e., concentrations below standards) for criteria pollutants. Fugitive dust and exhaust emissions would be produced by ORV use but would not cause national ambient air quality standards to be exceeded.

MINERAL INTERESTS

The proposed action would not affect mineral exploration or extraction operations in the preserve. Mineral operations are beyond the scope of this plan. The Big Cypress National Preserve mineral management plan, which is an appendix to the general management plan (NPS 1991), provides details on management of mineral-related activities. Thus, mineral interests were dismissed from detailed analysis.

CULTURAL RESOURCES

Cultural resources were dismissed from further detailed analysis. Nonstructural and other significant cultural resources will continue to be protected through management zoning and monitoring. Measures to protect sites on or eligible for the National Register of Historic Places as described in the general management plan and final environmental impact statement (NPS 1991) would be carried out to ensure that these sites were protected from ORV use.

ENVIRONMENTAL JUSTICE

E.O. 12898 requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects on minorities and low-income populations and communities. The proposed action is not expected to result in significant changes in the socioeconomic environment of the affected area, and therefore would not impact minorities or low-income populations or communities. Therefore, environmental justice was eliminated from detailed analysis.

PRIME AND UNIQUE AGRICULTURAL LANDS

The Farmland Protection Policy Act (7 USC 4201 *et seq.*) and the U.S. Department of the Interior (Environmental Statement Memorandum No. ESM94-7 – Prime and Unique Agricultural Lands) require an evaluation of impacts on prime or unique agricultural lands. No prime or unique agricultural lands exist in the preserve. Therefore, this topic was dismissed from further consideration.

ALTERNATIVES, INCLUDING THE PROPOSED ACTION

INTRODUCTION

Two alternatives were considered for the management of ORVs in Big Cypress National Preserve.

The proposed action would focus on meeting the legislative mandates and special commitments of the preserve through a sustainable management system of this high-impact recreational activity. It would include

provisions to restrict ORVs to designated trails and access points

an integral research component to determine such items as the best areas through which to route ORVs and the most effective trail construction and maintenance techniques

a restoration program to address conditions that have resulted in the preserve from past ORV use

an education and communication program to convey the importance and results of management plan implementation to ORV users and other stakeholders

application of the precautionary principle, which would favor resource protection over resource use

use of adaptive management techniques, which would apply lessons learned from research and field experience to improving ORV management and to improving the visitor experience of both ORV users and other preserve visitors

The no action alternative (continue current management) would continue current NPS programs for ORV use and natural resource management in the preserve. As described in the "Purpose of and Need for the Plan" section, the National Park Service would not meet several of its legal obligations for resource protection with implementation of the no action alternative.

PROPOSED ACTION

INTRODUCTION

This alternative emphasizes protection of natural and cultural resources in a manner that would leave the resources unimpaired for future users, while allowing ORV access for resource-related recreational opportunities. Key features of the proposed action include the following.

All ORVs would be required to depart from designated access points and travel only on designated trails within the preserve.

Sensitive areas, such as marl prairies and Cape Sable seaside sparrow habitat, would be closed.

The Loop Unit and Deep Lake Unit would remain closed to ORV use.

ORV users wanting to enter the preserve would be required to meet vehicle specifications and to obtain a vehicle permit.

Vehicle permits would be issued through a random drawing.

All vehicle operators would be required to attend an education course and obtain an operator's permit.

All recreationists in the preserve would be required to have backcountry permits for each trip into the preserve.

Temporal and spatial closures, such as nighttime and seasonal closures, would be implemented for all backcountry use.

Monitoring, restoration, and research activities would be implemented.

Adaptive management based on increased knowledge gained through implementation of the plan would be used to optimize all of the plan components.

This alternative focuses on the mandate of the NPS Organic Act, which is resource preservation. This and other legal mandates direct the National Park Service to manage the preserve's resources such that they are not impaired.

In developing this alternative, the National Park Service has used the best available information. However, to help ensure the effectiveness of the plan, the National Park Service would adaptively manage ORVs. This means that the plan would not be a static document but instead would evolve as additional information became available. Sources of information would include existing data, new information from scientific research and monitoring, and input from NPS staff and other individuals who are familiar with the preserve. These data would be entered into a geographic information system. As additional information was gathered and analyzed, it would be incorporated into the plan. For example, as the National Park Service learned through experience the most and

least effective techniques to solve a particular problem, both the plan and on-ground conditions (such as a trail alignment) may be modified to improve the protection of preserve resources.

The proposed action would also apply the precautionary principle to resources management. In all situations involving conflicts between resource protection and resource use, the National Park Service would decide in favor of resources protection.

Under the proposed action, the National Park Service would establish an advisory committee of concerned citizens to examine issues and make recommendations regarding the management of ORVs in the preserve. The establishment of the committee would meet the legal requirements of the 1972 Federal Advisory Committee Act (FACA) (P.L. 92-463, 1972, as amended). The committee is envisioned to be a subcommittee of the National Park Advisory Board and would be chaired by a member of that board. The advisory committee would provide access to the extensive knowledge available in the public arena and would offer advice to the National Park Service in the decision-making process in a manner consistent with FACA. This committee would be an element of the adaptive management approach that would be used to develop best management practices for ORV use.

TRAILS AND ACCESS POINTS

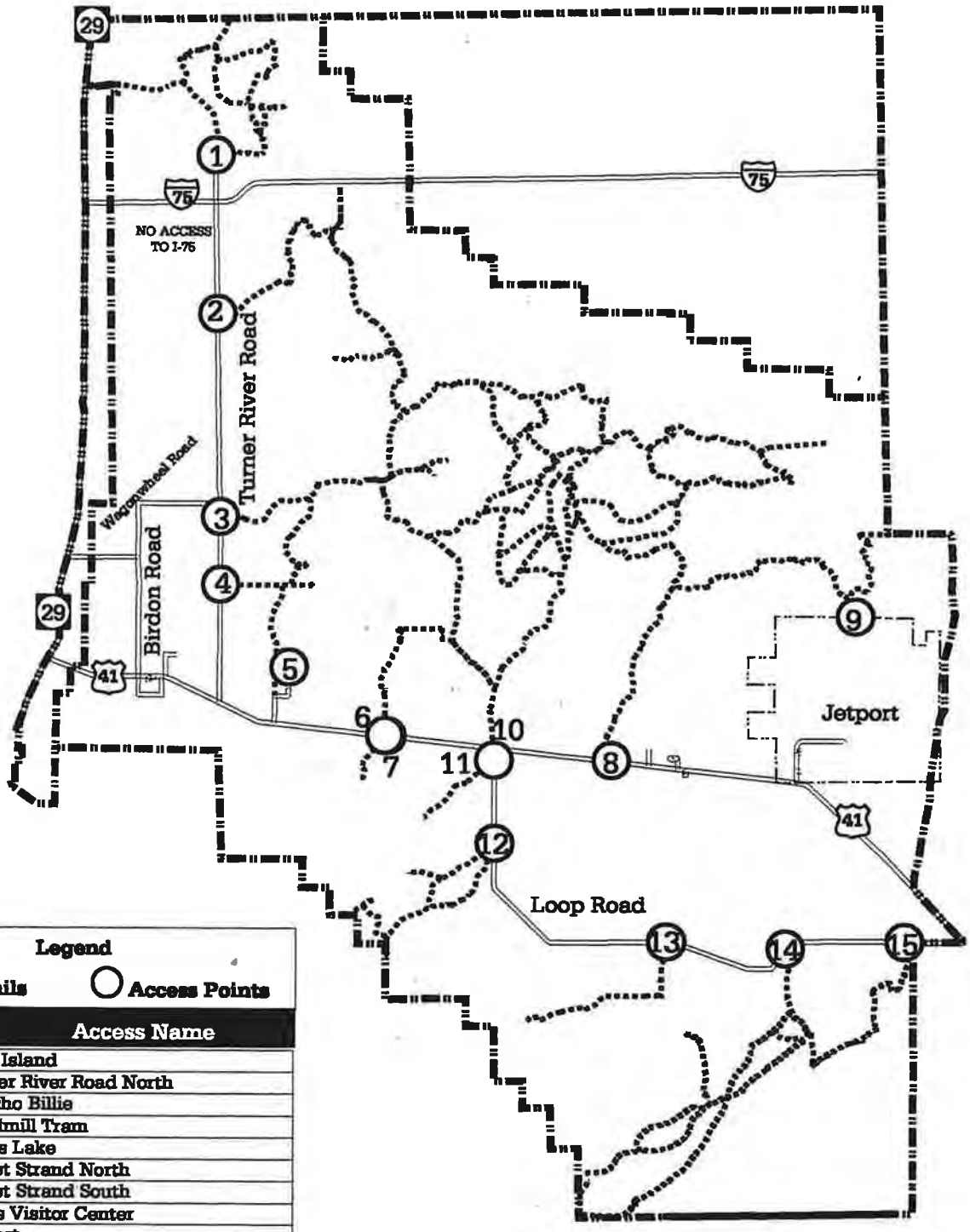
Under the proposed action, ORVs could enter the preserve only from specified access points. Within the preserve, ORVs would be restricted to designated trails. No off-trail or cross-county use of ORVs would be permitted.

The Conceptual Framework of Access Points and Primary Trails map shows the current configuration of the ORV network within Big Cypress National Preserve. The ORV network would include 15 access points, described later in this section, and no more than 400 miles of designated primary trails.

It should be recognized that the Conceptual Framework of Access Points and Primary Trails map represents only preliminary alignments for trails. As described below, a detailed analysis using such tools as geographic information system, staff knowledge, and ground-truthing would be used to refine the most appropriate route for each trail. Even after the ORV management plan went into effect, trail alignments could be modified by the National Park Service as part of the adaptive management approach, based on experience, environmental and resource conditions, and improved information.

A system of access points and designated trails is consistent with the intent of the enabling legislation for the preserve, as documented in its legislative history. Specifically, U.S. Senate Report 1128 (1974) and U.S. House of Representatives Report 502 (1973) state that " . . . the use of all-terrain vehicles must be carefully regulated by the Secretary [of the Interior] to protect the natural, wildlife and wilderness values of the preserve," but recognize that " . . . the bill does not prohibit their use *along designated roads and trails*" (emphasis added). This statement is interpreted by the National Park Service to authorize, but not mandate, the use of ORVs in the preserve, and to indicate the intent of Congress to restrict ORVs to designated roads and trails.

Private landowners within the preserve boundaries would be issued a special use permit to allow reasonable access to and from their private property. Their access routes would be determined by



Legend

Trails Access Points

Number	Access Name
1	Bear Island
2	Turner River Road North
3	Concho Billie
4	Windmill Tram
5	Burns Lake
6	Skillet Strand North
7	Skillet Strand South
8	Oasis Visitor Center
9	Jetport
10	Monroe Station North
11	Monroe Station South
12	Sig Walker
13	Pace's Dike
14	Red Bird Lane
15	Boundary Line

*Actual specific trail designations will be determined in the field.

Map shows all ORV trails for all vehicle types. Refer to document for specific details.

CONCEPTUAL FRAMEWORK OF ACCESS POINTS AND PRIMARY TRAILS*

BIG CYPRESS NATIONAL PRESERVE

United States Department of the Interior
National Park Service

BICY/JULY-2000

5 0 5 10 Miles

the National Park Service, based on resource protection criteria and discussions with the property owner. This permit would not allow for recreational ORV use of the preserve. Recreational ORV use by landowners would require participation in the recreational ORV permit program.

Criteria for Developing the Trail System and Access Points

The designated trail system and access points would continue to be developed based on resource protection and visitor experience criteria. These criteria were derived using recommendations from preserve staff, ORV users, and other individuals and groups interested in the protection of Big Cypress resources.

Resource Protection. Resource criteria were developed to protect important environmental and cultural areas, restore heavily impacted and environmentally sensitive areas, and direct use to areas of suitable substrate. The first three criteria were designed to avoid or minimize placement of trails and access points in vulnerable plant communities and wildlife habitats, and to entirely avoid archeological sites, Native American sacred sites, and areas that are currently heavily impacted and cannot sustain ORV use. The last two criteria target locations that are more suitable for placement of trails and access points.

Avoid or minimize trails through vegetation communities most susceptible to impacts. Some plant communities are highly sensitive to impacts from ORV use because of their soil and vegetative composition, hydroperiod, and/or the manner in which ORVs are operated in them. For instance, marl prairies have been identified as the vegetation community most sensitive to disturbance by ORVs. The soils in marl prairies are extremely soft when wet. Woody vegetation typically is absent in these areas, which promotes dispersal of ORVs to avoid heavily rutted areas. As a result, there has been extensive soil and vegetative disturbance throughout entire prairie systems. Adverse effects include widespread soil and vegetation disturbance and modification of water flow. These areas may require complete exclusion of ORV use to accommodate restoration.

Avoid or minimize trails in areas where ORVs may have a detrimental effect on threatened and endangered species. These areas include Cape Sable seaside sparrow habitat, red-cockaded woodpecker clusters, areas frequented by the Florida panther, bald eagle nest sites, Everglade snail kite nests, West Indian manatee critical habitat, and wood stork rookeries.

Avoid archeological and sacred sites. There are three known Indian sacred sites, and approximately 400 known archeological sites within the preserve.

Designate trails and access points in areas that offer the most suitable substrate. These areas primarily include semi-upland terrain, such as areas within and adjacent to pinelands, that are flooded less frequently and for shorter periods. Previously disturbed areas would be considered for use.

Locate access points and designate trails to maximize use of existing disturbed areas. These corridors include existing filled roadways, trams (raised or filled railroad beds constructed in the 1930s and 1940s for lumbering operations), and existing trails. Use of these corridors takes advantage of already affected areas and minimizes impacts to more

sensitive soils. This criterion would not apply to areas that are thought to be too heavily impacted and require complete exclusion to accommodate restoration.

Visitor Experience. Visitor experience criteria were developed to provide recreational ORV users with access to a variety of locations, and to avoid or minimize visual impacts, safety hazards, and conflicts with other types of preserve visitors. The first criterion would help identify trails to specific destinations. The other two criteria are designed to avoid or minimize placing ORV trails and access points where they would adversely affect other visitors, safety, or aesthetics.

Designate trails to provide access. Trails would be selected to provide access to a variety of recreation destinations, and would be used to provide access for property owners. However, they would not provide unlimited access to all open areas of the preserve as would occur with the no action alternative (continue current management).

Avoid or minimize user conflicts. Preferred locations for ORV trails and access points would avoid hiking trails, canoe trails, and viewing areas where possible. Access points would be located to minimize mixing ORV use with campgrounds, roadside day use areas, and proposed locations for improvements, such as pullouts and scenic viewing parking areas that will be developed as part of the U.S. Highway 41 enhancements project.

Avoid or minimize safety hazards. Much of the existing access requires parking ORV transport vehicles and trailers along a highway or county road. In other areas, the ORV user must leave a developed parking site and drive along the road shoulder to the access point. Sometimes, ORVs must cross a major highway to enter the preserve. Preferred locations for ORV trails and access points would attempt to avoid safety conflicts with roadway traffic and unlawful practices.

Methodology

Using the criteria described above, a computerized geographic information system (GIS) suitability analysis would be refined to develop the trail alignments and access points shown on the Conceptual Framework of Access Points and Primary Trails map. The GIS analysis to date has used data layers for vegetation communities, threatened and endangered wildlife species, archeological sites, and sacred sites. Other data included roadways, trams, and trails; existing park service personnel and ORV users' knowledge of the preserve; and preliminary field surveys.

Data layer categories were given a value by preserve staff for substrate suitability and resource sensitivity.

Substrate suitability is the capacity of an area to sustain ORV traffic, and was inferred from vegetation type and the availability of existing roads and trails.

Resource sensitivity is an area's susceptibility to ORV impacts and the importance of preventing these impacts or restoring past effects.

The values for each of the major categories are shown in Table 1. These data, along with locations of heavily impacted areas, were then used in the GIS analysis to reflect the resource protection criteria and produce a suitability map. Visitor experience criteria, including trail destinations

and best locations for access points, were applied using input from NPS staff and the public. The GIS was then used to plot the best trail routes and access sites.

TABLE 1: SUBSTRATE SUITABILITY AND RESOURCE SENSITIVITY

Category	Substrate Suitability	Resource Sensitivity
Pines	High	High
Hardwood hammocks	High	High
Cypress strands	Moderate	Moderate
Mixed swamp forest	Moderate	Moderate
Prairies	Low	High
Marshes	Low	High
Cape sable seaside sparrow habitat	NA [a/]	High
Red-cockaded woodpecker clusters	NA	Moderate
Bald eagle nest sites	NA	High
West Indian manatee critical habitat	NA	High
Archeological sites	NA	High
Indian sacred sites	NA	High
Canoe trails	NA	High
Existing ORV trails	NA	High
Florida Trail	NA	High
Existing roads and trams	High	Low

a/ NA = not applicable.

Proposed System of Trails and Access Points

The conceptual system of designated trails and access points is shown on the Conceptual Framework of Access Points and Primary Trails map. It consists of 15 access points and up to 400 miles of designated primary trails. This map depicts the general placement and overall distribution of designated primary trails and access points. The approach for implementing this ORV network is described in the "Implementation Strategy and Schedule" section.

Under the proposed action, more detailed GIS analyses would be performed to select optimal alignments for each component of the access points and trails network. Field inspections would be undertaken to ground-truth precise locations for ORV travel routes and boundaries of areas that are environmentally sensitive or heavily impacted by ORV activity. Designated trail routes would then be verified and more accurately located. An appropriate buffer guideline would be developed in consultation with the U.S. Fish and Wildlife Service (USFWS) for trail placement and maintenance in the vicinity of habitat of endangered or threatened species. As part of the adaptive management approach, individual trails and access sites would be periodically reevaluated as to how well they were meeting management goals and achieving acceptable conditions. If necessary, trail segments or access points would be relocated. Areas where the National Park Service was unable to maintain trails or trail marking due to vandalism would be closed.

Designated Trails. The Conceptual Framework of Access Points and Primary Trails map includes only the designated primary trails within the preserve. Primary trails would be those trails emanating from the designated access points and providing recreational access within the preserve. These trails would be the principal ORV routes.

Secondary trails would be identified to provide access to private property or specific destinations such as campsites. Like the primary network, secondary trail alignments would be based on field surveys and GIS analyses. Secondary trails would branch off of the primary trails and would receive less use. Trails accessing a private property would be limited to use by that landowner if no other destination existed along that route. Secondary trails for public recreational use accessing features such as designated campsites would extend for a short distance from the primary trail.

The management units for the proposed action are shown in the ORV Management – Proposed Action map. The types of vehicles that would be allowed within each management unit of the preserve are described below. The description also includes the total miles of designated primary trails available in each management unit, based on the alignments in the Conceptual Framework of Access Points and Primary Trails map. These lengths could change as better data become available.

Bear Island Unit. Permitted ORV use would include swamp buggies, all-terrain cycles, and street-legal, four-wheel-drive vehicles. This unit would have approximately 30 miles of designated primary trails.

Turner River Unit. Permitted ORV use would include swamp buggies and all-terrain cycles. This unit would have approximately 140 miles of designated primary trails.

Corn Dance Unit. Permitted ORV use would include swamp buggies and all-terrain cycles. This unit would have approximately 60 miles of designated primary trails.

Stairsteps Unit. Permitted ORV use would vary by zone, as follows. The U.S. Fish and Wildlife Service currently is reviewing a petition for the designation of critical habitat for the Cape Sable seaside sparrow. Changes to ORV management could occur if the USFWS designates critical habitat within the preserve. The proposed management for each zone is as follows.

Zone 1 – closed to all ORV use.

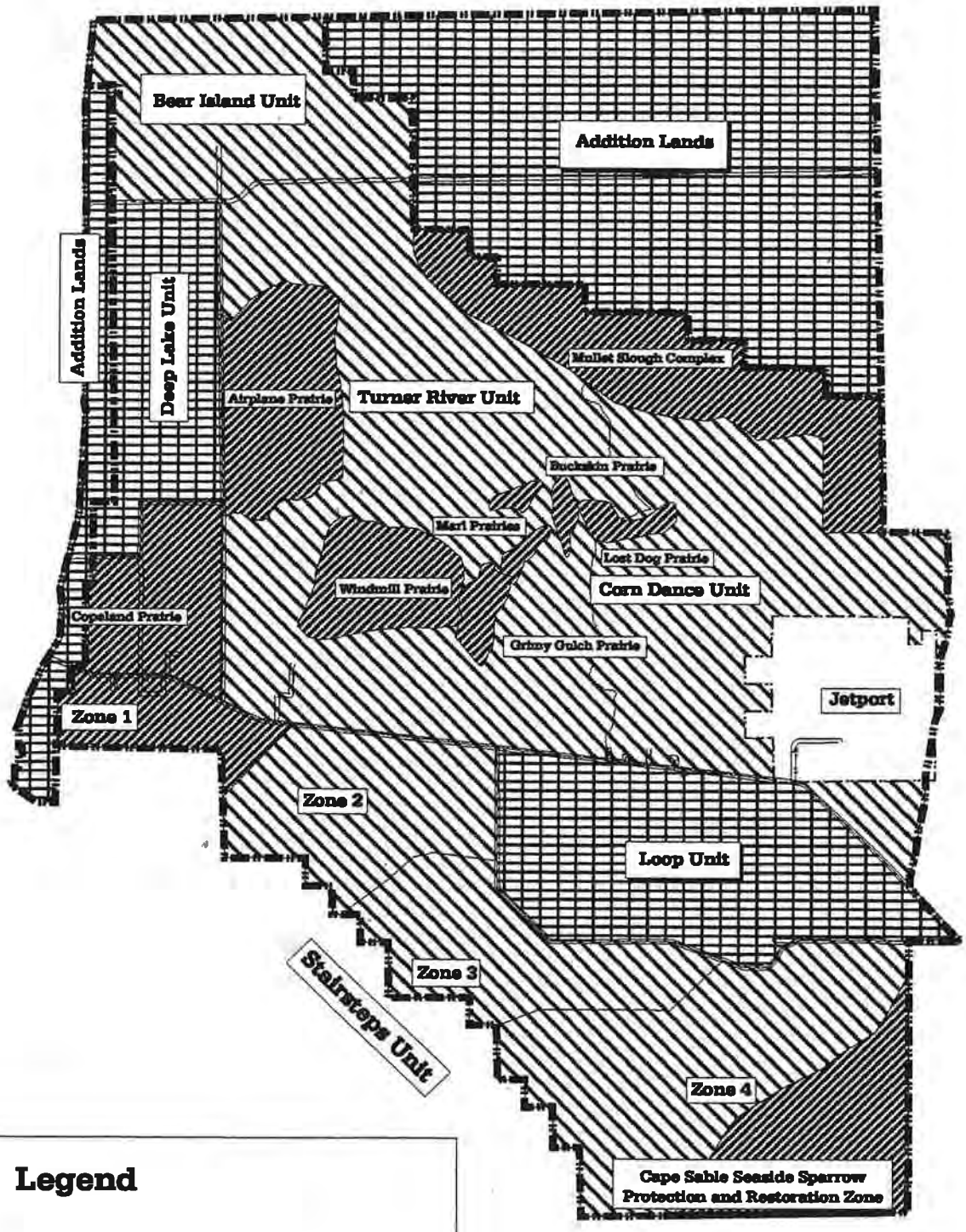
Zone 2 – only swamp buggies and all-terrain cycles would be allowed on the approximately 10 miles of designated primary trails, after they were designated.

Zone 3 – swamp buggies, all-terrain cycles, and airboats would be allowed on approximately 25 miles of designated primary trails, after they were designated.

Zone 4 – only airboats would be allowed, and then only on designated primary trails. The lengths of these trails have not yet been determined.

Loop Unit. No change – this unit would remain closed to ORV use.

Deep Lake Unit. No change – this unit would remain closed to ORV use.



Legend

- Closed to Motorized Access
- Designated Trails Only Subject to Restrictions
- Pre-existing closure, no change

ORV MANAGEMENT
PROPOSED ACTION

BIG CYPRESS NATIONAL PRESERVE

United States Department of the Interior
National Park Service

BICY/JULY-2000

5 0 5 10 Miles

ORV use would be limited within a strip 1 mile wide on either side of U.S. Highway 41 following issuance of the record of decision for the ORV management plan. In this area, which would serve as a visual buffer, access points and designated ORV trails would be established. Creation of this visual buffer is consistent with the general management plan.

Access Points. There would be 15 designated access points within the preserve. Their locations are shown on the Conceptual Framework of Access Points and Primary Trails map. In addition, Monument Lake Campground would continue to be an access point until January 31, 2001, after which it would be closed. The locations, parking, types of vehicles allowed, and facilities that would be available at each access point are described below.

1. Bear Island. This access point would be located near the existing Bear Island Campground. ORV users would park in the existing portion of Turner River Road north of the campground entrance. Campers could park their vehicles at their campsite. Swamp buggies, all-terrain cycles, and street-legal vehicles would be allowed to access the preserve from this point.

   During peak-use periods, the National Park Service would have portable toilet and trash collection facilities near the trailhead. A bulletin board would be maintained to provide information and a backcountry permit dispenser would be established. Closures and restrictions to protect the Florida panther and its habitat would be implemented as required.

2. Turner River Road North. This access point would be located approximately 15 miles north of U.S. Highway 41 on the east side of Turner River Road. Parking would be along Turner River Road. Swamp buggies and all-terrain cycles would be allowed to enter the backcountry from this point. A bulletin board would be maintained to provide information, and a backcountry permit station would be established.

3. Concho Billie. This access point would use the existing road located on the east side of Turner River Road approximately 7 miles north of U.S. Highway 41. Parking at this site would be along Turner River Road. Swamp buggies and all-terrain cycles would be allowed to enter the backcountry from this point.

   This road formerly was used for oil and gas exploration and has an elevated road bed. The road bed would be repaired and water conveyance structures would be added. A bulletin board would be maintained to provide information and a backcountry permit station would be established.

4. Windmill Tram. This access point would use the existing tram located on the east side of Turner River Road approximately 4 miles north of U.S. Highway 41. Parking at this site would be along Turner River Road. Swamp buggies and all-terrain cycles would be allowed to access the preserve from this point.

   The tram would be repaired and water conveyance structures would be added, if necessary. A bulletin board would be maintained to provide information and a backcountry permit station would be established.

5. Burns Lake. ORV parking would be provided at Burns Lake Campground. The access point would be located at the end of Burns Lake Road, about 1.5 miles away. Swamp

buggies and all-terrain cycles would be allowed to enter the preserve from this area. A bulletin board would be maintained to provide information and a backcountry permit station would be established.

6. Skillet Strand North. This access point would be developed on the north side of U.S. Highway 41. Swamp buggies and all-terrain cycles would be allowed to enter the preserve from this point. A bulletin board would be maintained to provide information and a backcountry permit station would be established.

7. Skillet Strand South. This access point would be developed on the south side of U.S. Highway 41. Swamp buggies and all-terrain cycles would be allowed to enter the preserve from this point. A bulletin board would be maintained to provide information and a backcountry permit station would be established.

8. Oasis. Oasis is located approximately in the middle of the preserve on the north side of U.S. Highway 41. The Big Cypress National Preserve Visitor Center parking lot at Oasis is being redesigned to make the area safer and more efficient. The redesign would include ORV parking spaces. Swamp buggies and all-terrain cycles would be allowed to access the backcountry from this point.

   The designated trail would be constructed on the east side of the facility and would provide access to the north. A bulletin board would be maintained to provide information and a backcountry permit station would be established.

9. Jetport. The Dade-Collier Jetport is located on the eastern side of the preserve north of U.S. Highway 41. Although the jetport is within the preserve boundary, the National Park Service does not have management authority over the jetport. Users wanting to access the preserve from jetport lands must continue to obtain permission from the Miami-Dade County Port Authority.

   The National Park Service would designate an access point for users of the jetport to enter preserve lands. Swamp buggies and all-terrain cycles would be allowed into the backcountry from this point. The National Park Service would work with the Miami-Dade County Port Authority in determining the best location for this access point. A bulletin board and backcountry permit station for this access point may be established at a convenient location.

10. Monroe Station North. Monroe Station is located about halfway through the preserve on the south side of U.S. Highway 41. Swamp buggies and all-terrain cycles would be allowed access north into the Turner River Unit.

    Portable toilets and trash facilities would be provided at Monroe Station at peak times of use. A bulletin board would be maintained to provide information and a backcountry permit station would be established.

11. Monroe Station South. Swamp buggies and all-terrain cycles would be allowed access west into Zone 2 of the Stairsteps Unit. Portable toilets and trash facilities would be provided at Monroe Station at peak times of use. A bulletin board would be maintained to provide information and a backcountry permit station would be established. Private stor-

age of ORVs would be eliminated at Monroe Station, in order to provide for adequate public parking for backcountry use at this access point.

12. Sig Walker Strand. This access point would be located on Loop Road approximately 4 miles south of the western intersection of Loop Road and U.S. Highway 41. Parking at this site would be along Loop Road. This access point would be for airboats only. A bulletin board would be maintained to provide information and a backcountry permit station would be established.

13. Pace's Dike. Parking at this site, which would be located on the east end of Pace's Dike and the intersection of Loop Road, would be along Loop Road. This access point would be for swamp buggies and all-terrain cycles. A bulletin board would be maintained to provide information and a backcountry permit station would be established.

14. Red Bird Lane (Mitchell's Landing). This access point would be located on the south side of Loop Road at Mitchell's Campground where the existing fill road extends approximately a half-mile south of Loop Road. Parking would be on the existing filled area at the campground. The existing boat ramp would provide access for airboats only. A bulletin board would be maintained to provide information and a backcountry permit station would be established.

15. Boundary Line. This access point would be located on the south side of Loop Road, with parking along Loop Road. The existing boat ramp would provide access for airboats only. A bulletin board would be maintained to provide information and a backcountry permit station would be established.

    The designated trail leaving from this area would be routed to avoid Cape Sable seaside sparrow habitat. If data indicated that additional protection for this species was required, this area could be closed in the future.

Current plans include installing bulletin boards and backcountry permit stations at each access point along Loop Road. However, this may be modified to provide bulletin boards and permit stations just at the east and west entrances to Loop Road.

Carrying Capacities

As described below in the "Monitoring" section, the National Park Service would continually monitor effects to the preserve's resources along designated trails and at access points. One of the goals of this monitoring would be to provide data to support the establishment of carrying capacities, as part of the adaptive management approach. The development of carrying capacities would be performed within a framework such as the visitor experience and resource protection (VERP) approach (NPS 1997b). ORV use could then be managed to stay within carrying capacities through such measures as adjusting the number of available parking slots at access points.

MONITORING

Trail Use Indicators and Standards

The National Park Service would develop a system of indicators and standards to assess trail conditions and to support the need for management action. The indicators and standards would be developed in conformance with such guidance as the visitor experience and resource protection handbook (NPS 1997b). Indicators would measure specific physical and ecological parameters that reflect the overall condition of an area. Standards would define the minimum acceptable condition of each indicator.

A preliminary list of indicators is provided in Table 2. Indicators were selected based on their ease of measurement, ability to provide useful data, cost effectiveness, and ability to provide useful results any time of day or any time of the year. Additions and improvements to these indicators would be made based on experience gained in implementing this plan.

TABLE 2: CANDIDATE INDICATORS AND STANDARDS FOR ASSESSING TRAIL CONDITIONS

Indicator	Measurement	What Does It Indicate?	What Exceeds Standard?
Trail width	Width in feet.	Sufficient traction, suitable substrate.	Expressed as a percent increase. The threshold would vary, based on the setting.
Trail depth	Depth in inches of the deepest sets of ruts.	Suitable substrate.	The threshold would vary, based on the setting.
Water flow	Flow in cubic feet per second or minute.	Hydrologic change.	Flows greater than background.
Turbidity	Turbidity greater than standard when measured outside of the acceptable zone of influence.	Water quality change.	Turbidity measurements greater than background.
Oily sheen	Visual observation.	Presence of petroleum product.	Oily sheen observed at the sampling location.
Soils	Difference from ambient conditions.	Change in soil chemistry or structure.	The threshold would vary, based on the setting.
Invasive plants	Spread of invasive plants or identification of newly established growth along a trail.	Potential distribution of seed by ORVs.	Any new invasive plants adjacent to designated trails.

The assessment of conditions would recognize that conditions such as removal of vegetation and localized, short-duration turbidity are inherent to ORV use and would occur within trail alignments. Therefore, some of the indicators such as turbidity would define an acceptable zone of in-

fluence within which exceedences of standards are expected. For these indicators, the standards would only be applied outside of the acceptable zone of influence.

The National Park Service would continue to consult with the Florida Department of Environmental Protection and conduct research regarding water quality impacts from ORVs.

Trail Width. Trail width is often an indicator of the degree of suitable substrate within a trail. As trails become rutted, ORV operators travel parallel to the rutted area in order for the vehicle to have traction to cross the area. This practice often increases the width of the trail.

Trail Depth. The trail depth is related to the rutting caused by vehicles traveling through moist soils. The displacement of soils by vehicles deepens trails over time.

Water Flow. Repeated passes of ORVs will result in the loss of the vegetation in the trail and rutting. The loss of vegetation and change in the topography have been shown to increase the rate of water movement (Pernas *et al.* 1995).

Water Quality. The use of ORVs could result in the changes in water quality by increasing turbidity, re-suspending nutrients and metals from soils, or discharging petroleum products.

Soils. Repeated disturbance by ORV use can displace soils. This produces topographic changes in and adjacent to ORV trails. Soil displacement and associated mixing can change soil hydrology and chemistry, which could alter the soil's ability to sustain plants or the type of plant community the soil can support.

Invasive Plants. There are indications that ORVs have resulted in the spread of invasive plants, such as *Schinus terebinthefolius* (Brazilian pepper), *Melaleuca quinquenervia, Typha* (cattail), and *Lygodium microphyllum* (old world climbing fern) within Big Cypress National Preserve. ORVs can collect seed in their tire tread and beds and distribute it in currently unaffected areas of the preserve as they travel (Pernas 1999).

Examples of candidate standards for some of the indicators are provided in Table 2. After the adoption of the proposed action, standards for each indicator would be developed in conformance with such guidance as the visitor experience and resource protection handbook (NPS 1997b). Like the indicators, the standards would be periodically reevaluated as the National Park Service collected additional data.

Methods of Monitoring

This section describes the strategy for monitoring the effects that would result from the recreational use of ORVs in Big Cypress National Preserve under the proposed action. Much of the monitoring would be performed along the trails and access points designated for use by ORVs and would be designed to determine whether management actions were needed. However, monitoring also would be conducted to define the acceptable zones of influence of ORV use, to determine the effectiveness of restoration, and to support enforcement.

The monitoring program would periodically survey the designated trails and access areas for impacts. The optimal frequency of monitoring would be determined as part of the adaptive management approach.

A goal of monitoring would be to provide information that would help NPS staff understand problems and select the most appropriate actions with a sound, scientific basis. After management actions were implemented, monitoring would reveal their effectiveness over time. This information would support development of a management action guideline or table, as discussed in the "Management Actions" section.

Another goal of monitoring would be to ensure that trails remained passable without causing adverse resource effects beyond the acceptable zone of influence. Monitoring would focus on direct impacts of ORV use and would employ the indicators and standards presented in Table 2. Indirect effects of ORV use on wildlife, vegetation, or hydrology would be considered based on a combination of scientific research and professional judgment.

Monitoring techniques primarily would include on-the-ground observations and measurements. Trail condition and compliance monitoring would occur during routine field activities by NPS staff, which would allow for early identification of problems. The staff assigned to this activity would be familiar with the indicators and standards, which they would apply on a daily basis.

In addition, regularly scheduled monitoring at permanent sampling locations would be conducted. Regularly scheduled monitoring could occur both to detect the development of problems and to determine the effectiveness of restoration efforts. The most appropriate approach for monitoring to meet each of these objectives would be developed as part of the adaptive management aspect of the proposed action.

NPS staff would select sites in response to concerns about a particular area of the trail system. Sites would be selected through the use of aerial photography, field observations, and comments from preserve visitors. Because the goal of regularly scheduled monitoring would be to provide long-term records from which trends could be established, strong justification would be required before a regularly scheduled monitoring site could be deleted or moved.

Typically, a transect perpendicular to the trail would be established at a monitoring site. The transect would establish benchmarks on both sides of the trail and would serve as the point of measuring trail widths. The established benchmarks would serve as the reference points for elevation. Using a basic survey transit, trail depth would be measured at 1-foot intervals across the trail to create a trail cross-sectional profile. This type of information would indicate the degree of rutting and could be used for trend analysis of trail conditions and to determine the need for management action. Photo points would be established to visually document conditions over time.
Water flow measurement would be taken in the trails and compared to background reference points in similar habitat in the vicinity of and upgradient from the trail. Trail and background measurements would be compared to determine if the standards were being exceeded.

Monitoring also would include the use of aerial photography. In conformance with adaptive management principles, the National Park Service periodically would determine the best source of photographs. Sources could include contracted fly-over, commercially available photography, or satellite imagery. The most appropriate photographic scale and schedule for obtaining new im-

ages would be identified as part of proposed action implementation. Aerial photographs would be examined for:

trail widths

the locations and extent of invasive vegetation

areas that should be targeted for on-the-ground evaluation

violations of the use of designated trails, potentially indicating the need for enforcement or other management actions

As described in the "Research" section, monitoring research needs already have been identified. Additional research needs would be identified with plan implementation. One need is to determine the areal extent of soil displacement and compaction along the trail system. This information could potentially be used as a threshold indicator for management decisions. The effectiveness of other trail condition monitoring techniques also would be explored.

MANAGEMENT ACTIONS

If monitoring indicated that standards had been exceeded in a trail, based on the indicators and standards described in Table 2, the National Park Service would implement management actions. The management actions could include, but would not be limited to, trail closures, trail relocation, trail maintenance, and altering the level or type of use on the trail. The course of action would be based on such factors as the degree of the problem, the location of the trail, experience at other similar sites, consultation with experts, and the professional judgment of NPS staff. The ultimate decision would be the protection of preserve resources.

Trail Closures. Could be implemented immediately if a trail exceeded the standards for any of the trail condition indicators in Table 2. The National Park Service would use a process such as that outlined in the visitor experience and resource protection handbook (NPS 1997b) to evaluate the situation and to determine if problems could be corrected to allow recreational use to continue. If the trail problem could not be corrected, the closure would be made permanent and the area would be restored.

Trail Relocation. Would be utilized when trail degradation was occurring and more suitable routes were available that would resolve unsuitable conditions. When trails were relocated, the original trail would be restored. The new trail locations would be based on the geographic information system suitability model and professional judgment of NPS staff.

Trail Maintenance. Would be used to stabilize or improve trails that were degrading. Maintenance would be conducted in such a way that any improvements did not cause further impact to resources (for example, impede sheet flow). Maintenance activities would use methods and materials that were compatible with the surroundings.

Alter Levels or Types of Trail Use. Would be used if the National Park Service determined that trail degradation was being caused by a particular type of ORV or by exces-

sive use. As part of this action, the National Park Service may implement a program to limit use at access points for resource protection and/or visitor safety.

It would not be necessary or desirable to bring rough routes up to a filled-roadway standard. Stabilization and improvement methods would be chosen based on their ability to reverse existing impacts and prevent additional deterioration.

Existing filled roads or trams would be maintained as roads, were appropriate. Where existing filled trams or roads were used for designated trails, water conveyance structures would be maintained to allow water flow.

Trails would be improved at the natural grade so that water flow was not compromised. Trails would not be improved to such a standard as to make a trail "easy" or to encourage a higher level of ORV use than would occur in the absence of such improvements.

A variety of techniques would be used to stabilize trails in the early stages of proposed action implementation. To date, the National Park Service has conducted limited testing of techniques using geotextiles and wood boards, both of which produced mixed results. It is anticipated that the effectiveness of trail stabilization techniques will vary based on site conditions. Therefore, the goal would be to determine the most appropriate methods of stabilization at each type of site, and to produce a management action guideline or table that NPS staff could use to select the most appropriate treatment, based on defining site characteristics. Consistent with the adaptive management approach for the plan, the recommendations for management actions would be continually updated as better information became available.

Whenever management actions involved dredging or filling of wetlands, the National Park Service would consult with the agencies involved in regulating activities in wetlands. Appropriate permits, such as Section 404 permits under the Clean Water Act, would be obtained as necessary.

CLOSURE OF AREAS

This section describes temporal and spatial closures of all or parts of the preserve to recreational ORV use, including criteria for closures. The closures discussed in this section are for broad areas, not management of specific trails. Management of specific trails was discussed previously under "Management Actions." All of these closures would be subject to modification based on research and feedback from implementation.

Nightly Closures

Recreational ORV use would be prohibited throughout the preserve between 10:00 P.M. and 5:00 A.M.

Seasonal Closures

A hydrologic trigger, described below under "Criteria for Closures" and in Appendix A, has been developed for Zone 4 of the Stairsteps Unit. This trigger to temporarily close this zone was developed and applied on an emergency basis during low-water conditions in 1999. Based on its success, it would be refined and incorporated as a standard operating practice.

High-water conditions place greater than normal demands on the preserve's terrestrial wildlife (Jansen 1996). Therefore, the National Park Service would develop high-water triggers for wildlife protection and would temporarily close areas when those triggers were met.

A seasonal 60-day period would be established to allow resources a time free from any pressures related to ORV use. This moratorium on ORV use would not apply to landowners who held special use permits to access their private properties via a designated route through the preserve. The optimal time for the seasonal rest period would be determined by research.

Safety closures would be implemented in all or portions of the preserve to ensure the protection of visitors. Safety closures primarily would be related to environmental conditions such as high fire danger or threats from hurricanes.

Spatial Closures

The following areas, shown on the ORV Management – Proposed Action map, would be closed under the authority of 36 CFR. Because of their environmental and wildlife sensitivity to ORV use, no ORV trails or access points would be located in these areas. Under adaptive management, additional closures may be implemented where monitoring showed adverse environmental impacts.

Area south of Upper and Lower Wagonwheel Road and west of Turner River Road

Stairsteps Unit Zone 1

Stairsteps Unit Zone 2 and Zone 3 (initially closed until trails are designated)

Airplane Prairie

Windmill Prairie

Grimy Gulch Prairie

Lost Dog and Buckskin Prairie

Selected Bear Island trails

Mullet Slough complex

Cape Sable seaside sparrow nesting area in Stairsteps Unit Zone 4

Under the Endangered Species Act, the National Park Service has an obligation to protect federally listed threatened and endangered species. If the National Park Service, in consultation with the U.S. Fish and Wildlife Service, determines that ORV use may result in adverse effects to listed species, area closures may be implemented. Such closures could be seasonal or permanent, depending on the nature of the adverse effects.

The identified Cape Sable seaside sparrow nesting areas in Zone 4 of the Stairsteps Unit would be among the areas closed to ORV use. There is no evidence that airboat use in Zone 4 has caused a decline in this endangered species. However, because the population is so low, the precautionary

principle dictates that any action and/or disturbance that could potentially cause harm to the species or its habitat should be avoided. If future research results demonstrate that the sparrow is not adversely affected by ORV use, all or portions of this area could be re-opened to ORV use on designated trails.

Other areas would be closed as needed to protect threatened or endangered species. In addition to the Cape Sable seaside sparrow, closures initially would be imposed for at least the bald eagle, wood stork, red-cockaded woodpecker, snail kite, and Florida panther. Criteria for closures are provided in the next section. Many of these closures would be imposed to protect parents and young during the vulnerable nesting or denning period. The closure could then be lifted after the young left the area.

High fire danger is another condition that may result in a closure to ORV uses. Public use in the backcountry during periods of drought present both a safety issue for ORV users and a fire threat to natural resources. Fire reports maintained by the preserve demonstrate that multiple wildfires have been started by ORVs. Therefore, when drought conditions exist, the superintendent may implement restrictions on ORV use in individual units or throughout the preserve.

During hurricane season, the superintendent may close the preserve to public use, including ORV use. The National Park Service continually monitors the tropical storm situation. When hurricanes are threatening, the preserve moves into a state of readiness at 100 hours from landfall. Decisions involving public use, including closure of the backcountry to ORV use, typically would be imposed between 48 to 72 hours from estimated landfall.

Criteria for Closures

Since 1999, the National Park Service has been evaluating airboat use in relation to water levels, particularly in Zone 4 of the Stairsteps Unit. Based on this evaluation, the National Park Service has developed a "hydrologic trigger" that would allow zone-wide decisions on airboat use. A draft description of the hydrologic trigger, including the development of closure criteria, is provided in Appendix A. Field work on this process is continuing, and in accordance with adaptive management principles, the results would be used to refine this tool.

Decisions regarding closure to airboats would be based on surface water depths. The hydrologic trigger would rely on water-level data collected at water gauging stations and a series of additional data gathering points. This monitoring system would establish both high- and low-water levels when airboat use would be prohibited.

Gauging stations can have different responses to rising or falling water levels. Thus, different low-water levels have been established for the summer-fall (June through December) and winter-spring (January through May) seasons. Initially, airboat use in Zone 4 would be allowed

during the summer-fall season only when water levels at the P34 gauging station were above 2.2 feet above sea level (asl) and below 4.0 feet asl

during the winter-spring season only when water levels at the P34 gauging station were above 3.0 asl and below 4.0 feet asl

In accordance with the principles of adaptive management, these trigger levels for resource protection might be changed as additional data were collected. This could include changing the trigger levels at the P34 gauging station, and/or establishing additional trigger sites within Zone 4.

The National Park Service currently has established water levels for airboat use only in Zone 4. Under the proposed action, additional data would be gathered to establish similar hydrologic triggers for airboat use in Zone 3 of the Stairsteps Unit.

The use of wheeled ORVs during periods of high waters could adversely affect wildlife. High-water conditions impede movement by wildlife such as deer, raccoon, and bobcat. Disturbance associated with ORV use during these periods may result in additional stress (Jansen 1996). Under the proposed action, the National Park Service would establish sufficient data-gathering stations to develop a high-water-level trigger for each unit, above which ORV use within that unit would be restricted to protect wildlife. The procedures for establishing the water-level triggers would be similar to those describe in Appendix A.

Criteria for closing areas to protect threatened and endangered wildlife would include the following.

Cape Sable seaside sparrow. Determination that a designated trail was within 0.5 miles of a territory, as determined by annual surveys.

Bald eagle. Determination that a designated trail was within 1,500 feet of an active bald eagle territory, as determined by annual surveys (USFWS 1987).

Wood stork. Determination that a designated trail was within the distance stated in the revised guidelines currently being prepared by Rodgers (citation not yet available).

Red-cockaded woodpecker. Determination that a designated trail was within 200 feet of an active cavity tree (Hendry 1989).

Everglade snail kite. Determination that a designated trail was within the distance stated in the revised guidelines currently being prepared by Rodgers (citation not yet available). The current guidelines are an 88-meter buffer.

Florida panther. Determination that a designated trail was within 0.5 miles of a den.

PERMIT PROGRAM

A revised permit program would be implemented to educate users, ensure that equipment and safety standards were met, monitor ORV use, and reduce resource impacts. All three of the following permits would be required to operate an ORV in the backcountry:

an off-road vehicle permit

an ORV operator's permit

a backcountry use permit

An off-road vehicle permit would be issued for vehicles meeting the specifications and permitting process requirements described in this plan. The vehicle permit would be issued through a random drawing, as described below.

An ORV operator's permit would be required for all individuals who operated any ORV in the preserve. The permit would be issued only after the operator met the requirements described in the "ORV Operator Permit" section. The ORV operator's permit would be required both for recreational ORV users and for private property owners who hold special use permits to access their property using an ORV.

All backcountry users, including ORV users, hikers, and boaters, would be required to obtain a free backcountry use permit for each trip. These permits would be available from rangers and from dispensers at major access points, trailheads, check stations, and visitor facilities. A comprehensive assessment of backcountry use would be made based on data collected from this permit. The results would be incorporated, on an ongoing basis as part of the adaptive management approach, into the recreational management of the preserve to ensure the quality of the visitor experience.

Private landowners would be issued a free special use permit to allow reasonable access to and from their private property. A description of this permit is provided below in the section entitled "Special Use Permit for Private Property Owners."

Fees

The recreational off-road vehicle permit would cost $50.00 per year. ORV inspections, ORV operator's permits, and backcountry use permits would be free.

Funds generated from the vehicle permits would be applied toward such costs as permit printing, administration of the drawing, education program materials, and operating the ORV permit system. While the cost of the permit is supposed to offset the cost of the ORV management program, the fee would actually pay only a small portion of the program costs.

Off-Road Vehicle Permit

Number of Vehicle Permits. The National Park Service would issue no more then 2,000 recreational off-road vehicle permits per year. This number was established in the Big Cypress National Preserve general management plan and environmental impact statement preferred alternative (NPS 1991), and was the basis for formal consultation and the biological opinion prepared by the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act. The record of decision for the general management plan and environmental impact statement modified the permit ceiling to 2,500 permits annually, but consultation with the USFWS was never reinitiated on this issue. This oversight was pointed out by public comment on the draft ORV management plan and environmental impact statement. Therefore, the proposed action would return the permit ceiling to 2,000, which would comply with the USFWS biological opinion.

As the proposed action was implemented, the vehicle permit program could be revised. The bases for changes could include research results, practical knowledge gained from the implementation of the plan, and safety concerns. Changes could include, but would not be limited to

reducing the number of permits issued annually, if monitoring demonstrated that recreational ORV use was causing unacceptable adverse effects on the preserve's resources

limiting the number of permits issued for specific management units

limiting the number of ORVs that were allowed to enter the backcountry from each access point

When reevaluating the permit ceiling, the National Park Service would comply with appropriate laws and regulations, including the Endangered Species Act, and would provide public involvement when appropriate.

Vehicle permits would not be transferable to other vehicles owned by the same person or family, or to other vehicle owners. Off-road vehicles would be registered to only one person with a valid state driver's license and only that person would be able to renew the permit.

Vehicle Inspection Program. Vehicles would be required to meet specifications for that particular type of vehicle (all-terrain cycle, airboat, swamp buggy, or street-legal four-wheel-drive vehicle) before being eligible for a permit. Each vehicle would have to pass an inspection conducted by the National Park Service.

Vehicle inspections would result in a sticker that designated the vehicle as having met vehicle specification and safety requirements. This sticker would identify the vehicle over time. The inspection number would be included in a computer database and would stay with the vehicle for the entire time it was under the same ownership. Possession of an inspection sticker would mean only that the vehicle was eligible for the vehicle permit drawing and would not, by itself, allow for use of the vehicle in the preserve.

ORV owners would be encouraged to have their vehicles inspected prior to the drawing, during the period between October 1 and November 30. This would allow the ORV owner to be ready to participate in the drawing.

National Park Service staff would affix inspection stickers as follows:

airboat – steering bar (joystick)

swamp buggy – steering column

street legal – inside the driver's door

all-terrain cycle – center of steering mechanism

The free inspection sticker would be valid for a 3-year period, at the end of which the vehicle would need to be re-inspected and a re-validated sticker would be obtained. All vehicles would be inspected in the first year of this new permit program, regardless of their inspection dates under the previous system.

Allocation of Vehicle Permits. The vehicle permit system under the proposed action would begin with vehicle inspections and entry into a random drawing, which would be held for the opportunity to obtain a permit. The permit drawing would be held each December.

Permits would be valid from January 1 of each year through January 31 of the following year. This 13-month permit would allow for a month grace period to obtain a new permit, should the owner be successful in the drawing.

Announcement of the drawing would be sent out each October by letter to all previous permit holders and by press release. Cards for the drawing would be sent with announcement letters and would also be available at the preserve. Cards would also be given to those who had their vehicles inspected during the October 1 to November 30 period. During the first year of implementation, drawing cards would be filled out at the time of inspection. Drawing cards would be due into the permit station or postmarked by November 30.

The system would be designed to provide an opportunity for each vehicle owner, regardless of how many vehicles they may own, to receive at least one ORV permit unless the total number of individual owners exceeded 2,000. More than one permit per person would be available if the initial drawing resulted in fewer than 2,000 permit requests. A maximum of five permits would be allowed per individual. A waiting list would be developed to reassign permits not claimed by January 31.

Successful drawing participants would be notified immediately after the drawing and would be required to purchase their permit by mail or in person before January 31. If the individual failed to purchase the permit by that date, the permit would go to the next person on the waiting list.

The owner would have the option of placing the purchased permit on any of the vehicles that were entered in the drawing. However, because the vehicle inspection number would be on the permit, the owner would have to specify the vehicle at the time of permit purchase.

Permits would be permanently fixed to the vehicle and would be non-transferable. The vehicle permit would be valid for 13 months. In each subsequent year, the vehicle owner would be required to reapply for the drawing, but could do so by mail unless an inspection was due.

ORV Operator Permit

Each person operating an ORV within the boundaries of the preserve would be required to obtain an ORV operator's permit. This requirement would apply both to recreational ORV users and to landowners who were issued special use permits to access their private properties. The permit would be a picture identification and would be carried by the operator while using an ORV in the preserve.

All ORV operators would have to possess a valid state driver's license, or possess a valid learner's permit and be accompanied by a licensed adult 18 years or older who also possessed a Big Cypress National Preserve ORV operator's permit.

Completion of a vehicle operator course would be required for each person who applied for an ORV operator permit. Information on this course is provided in the "Education and Communica-

tion" section. The National Park Service would offer this course in conjunction with the vehicle inspections at convenient times to reasonably accommodate those who wished to obtain a permit.

During implementation of the ORV management plan, research results are expected to produce greater knowledge of the best ways to operate and manage ORV use within the preserve. Therefore, operators would be required to attend the education course every year to stay current with rules and recommended techniques. As the program evolved and the need for updates diminished, the education program may be required less often.

The application for the operator's permit would include a section stating the responsibilities of the operator while using the preserve. In signing the application, the permit holder would acknowledge that they understood and would conform with the rules and regulations.

Special Use Permit for Private Property Owners

Unless an exempt property owner has legal right of way or pre-existing access rights, legislation, laws, and regulations do not provide right of access via ORV.

Owners of improved private property within the preserve boundaries would be issued a free special use permit that would allow them reasonable access to and from their private property. The special use permit would authorize them to cross federal lands to access their property via a reasonably direct route. In most cases, the property access trail would be limited to use by the landowner only. The property access route would be

resource-protection based

described in detail on the permit

determined by the National Park Service in consultation with the landowner

The special use permit would not be included in the 2,000 recreational ORV permits allocated annually. However, it also would not allow for recreational ORV use in the preserve. If landowners wanted to recreate with an ORV within the preserve, they would have to participate in the annual drawing for vehicle permits. If they did not draw vehicle permits, landowners would be restricted to using their ORVs on their private property and on the access route specified on their special use permit. This special use permit would not allow use of ORVs for any recreational activity in the preserve.

Owners of private frontcountry properties would not be allowed to enter the preserve on ORVs from any point along their property boundary. They would have to use a designated access point. Backcountry property owners also would be required to enter the preserve via designated access points.

The designated access points shown on the Conceptual Framework of Access Points and Primary Trails map currently do not include entry into the Corn Dance Unit from the east side. The National Park Service may consider allowing access into this unit for property owners who have permission from adjacent landowners.

Special use permit holders would have to meet all of the other requirements for ORV use in Big Cypress National Preserve. This would include, but not be limited to, holding a valid ORV operator permit for the preserve, meeting all vehicle specifications, completing the education course annually, and complying with all rules and regulations relating to recreational ORV use in the preserve.

EDUCATION AND COMMUNICATION

It is critical that all ORV operators understand the intent, purpose, and requirements of the ORV management program. Only with knowledge of the rules and regulations can the ORV user appreciate and understand the potential impacts of ORV use and the consequences of misuse. Therefore, the following types of information would be given to ORV users:

- an orientation to the preserve, the mission of the National Park Service, and the geography of the preserve
- a review of the rules and regulations governing ORV use in the preserve
- safety procedures for operating an ORV in the preserve
- introduction to the designated access points and trails
- resource sensitivity, including staying on designated trails, low-impact camping techniques, and wildlife awareness
- details of the permit process, including how to apply, and the privileges and responsibilities of the permit holder
- awareness of previous adverse effects, how they occurred, ways the new ORV management system mitigates past effects, and what is being done to restore areas

This information would be provided through any or all of the following:

- an ORV user's guide, with map
- an operator's orientation that would be required as a prerequisite to obtaining an ORV operator's permit
- an Internet page specifically for ORV users
- posting on the bulletin boards at each access point

All materials would be designed to be easily understood. They would be easily adapted to changing management strategies and flexible enough to incorporate new materials as research revealed additional information on operating techniques. NPS staff, subject matter experts, and local recreational ORV users would be sources of information for the materials.

VEHICLE SPECIFICATIONS

It is the intent of the National Park Service to establish vehicle specifications that protect the preserve's resources while providing for reasonable recreational access. The criteria established below are based on the best available information and the *Code of Federal Regulations* (CFR). Vehicle types are defined in 36 CFR 7.

Preserve staff would continuously evaluate ORV equipment and its effects on resources and the visitor experience. If it was determined that certain ORV equipment was causing unacceptable impacts, ORV equipment specifications would be modified.

Under the proposed action, Big Cypress National Preserve would initiate additional research to refine the vehicle specifications. Based on research results, limits could be established in the future for a number of vehicle characteristics, such as overall weight, tire size, tire type, noise, and ground-bearing pressure (measured in weight per unit area, such as pounds per square inch).

Initially, the proposed action would not include any requirements for ground-bearing pressure. However, under the adaptive management provisions of the plan, ground-bearing pressure requirements may be added if research indicates that they would help to reduce soil displacement and rutting by ORVs in the preserve. Using wider, high-flotation tires and reducing vehicle weight may help reduce soil displacement, rut depths, and root damage. This could allow for greater use of trails that might otherwise become impassible, and reduce the tendency of users to expand ORV trails (Smidt and Blinn 1995).

Under the proposed action, vehicles would be required to meet the following specifications.

Vehicle width and length:

Wheeled vehicles could not exceed 8.0 feet in total width, including tires.

Airboat total width could not exceed 8.0 feet.

Airboat length could not exceed 14.0 feet (total length, including the grass rake).

Noise control:

All wheeled vehicles would be required to have a muffler in good working condition and in constant operation.

All airboats would be required to have one or more exhaust headers or manifolds attached to a flex pipe and routed to the rear of the boat.

Airboat requirements:

Airboats would have to meet all Florida and U.S. Coast Guard rules and regulations for vessels, including lighting and registration.

A solid, orange-colored safety flag, 10 inches by 12 inches or larger, flown at a minimum of 10 feet above the bottom of the airboat, would be required (36 CFR 7).

Vessel registration numbers, with a minimum size of 3 inches, would have to be displayed on each side of the bow, or on both sides of the rudder, or outside of the dual rudders. The numbers would have to be a contrasting color from the underlying hull or rudder.

Other ORV equipment:

All ORV mechanical systems important for safe operation must be in good operating condition.

Tires on all buggies and street legal ORVs must have a minimum of 9 inches of tread face.

On all-terrain cycles, the minimum tire tread face requirement would be 7 inches in the front and 9 inches in the rear.

Any device used to push aside, shear off, or otherwise damage vegetation would be prohibited.

Any tire chain, bar grip, or other device affixed to a tire in any way would be prohibited.

All tracked vehicles would continue to be prohibited.

RULES AND ENFORCEMENT

The secretary of the interior is authorized to designate, pursuant to standards prescribed in regulations by the secretary, "certain officers or employees of the Department of the Interior whom shall maintain law and order and protect persons and property within areas of the national park system. The secretary of the interior shall make and publish such rules and regulations, as he may deem necessary or proper for the use and management of the parks, monuments, and reservations under the jurisdiction of the national park system" (16 USC).

ORV rules would include the provisions contained throughout this description of the proposed action. These rules would include, but not be limited to,

using only designated access points and trails

staying out of closed areas

having all three required permits

meeting all applicable vehicle specifications and training requirements

To facilitate compliance with regulations, the National Park Service would publish and distribute an ORV user's handbook, which would be updated as needed.

Some of the other rules that would apply to the use of ORVs in the preserve are listed below. With the adoption of the proposed action, rules for ORV management would be codified in the *Code of Federal Regulations* (36 CFR 7.86).

To enforce ORV rules, NPS rangers would regularly conduct ground and aerial patrols of the preserve. This would include visiting the access points and traveling the designated trails to determine compliance.

As provided by law, a person convicted of violating a provision of the regulations within Big Cypress National Preserve could be punished by a fine, by imprisonment, or both, and could be adjudged to pay all costs of the proceedings (36 CFR 1.3). ORV operators who did not comply with preserve rules or permit requirements could also have their permits suspended or revoked, could be required to pay restitution for damages caused to the resources, could be subject to seizure of their vehicle and other property used during the offense, and could be banned from applying for an ORV permit for a specified period.

Some of the rules that currently apply to the operation of ORVs in Big Cypress National Preserve are listed in the "Rules and Enforcement" section of the no action alternative (continue current management). All of those rules would continue to be enforced under the proposed action. In addition, new rules would be established for ORV use under the proposed action. Some of the new requirements, which are based on Title 36 of the *Code of Federal Regulations*, are identified below. Adaptive management would be used to evaluate the effectiveness of ORV use rules under the proposed action, and changes would be made as appropriate.

> All ORV operators would have to have in their possession a valid state driver's license or possess a learner's permit and be accompanied by a licensed adult 18 years or older. The operator with the learner's permit would have to stay within 100 feet of the licensed adult during operation of the vehicle. Operators would be required to have in their possession a Big Cypress National Preserve ORV operator's permit.
>
> Operating ORVs off of designated trails or roads would be prohibited.
>
> Vehicles would have to enter the preserve at designated access points.
>
> ORVs would not be allowed to travel or operate between 10:00 P.M. and 5:00 A.M.
>
> Speed limits would be 30 miles per hour for airboats and 15 miles per hour for wheeled vehicles.
>
> "Power loading," or running the engine to move the airboat onto the trailer, would be prohibited.

It would continue to be the responsibility of the user to know and follow all rules and regulations that apply to Big Cypress National Preserve.

RESTORATION

This section outlines the process the preserve would use to return areas impacted by ORV traffic to a more desirable condition and monitor the success of those recovery activities.

To focus restoration efforts most effectively, it is important to first understand the extent and severity of the adverse effects to the preserve ecosystem caused by the use of ORVs. The extent of degradation would, on a gross spatial scale, be answered by ground-truthing aerial photographs

taken of the preserve. The National Park Service is currently working with the University of Georgia to ground-truth ORV trail maps (Welch and Madden 1998; Welch *et al.* 1999).

It is vital to also determine what ecosystem processes or functions are not working. For example, has the diversity of the ecosystem been altered? Are the soils providing needed substrate for vegetation? Unless the problems are well understood, restoration can not be achieved. Secondly, restoration techniques for the degraded ecosystems must be determined. What are the most effective techniques and methods to return the ecosystem to a desired state? Lastly, after restoration techniques are determined and implemented, what are the environmental indicators that mark success?

To begin to set goals for restoration, a definition of "restoration" needs to be established. The National Research Council (1992) defines restoration as the "return of an ecosystem to a close approximation of its condition prior to disturbance." This report also suggests that restoration is by nature holistic and that recreating the form of an ecosystem but not restoring the functions of that system is not restoration. Applying this to the preserve, restoration is not necessarily achieved when ORV use has been removed from an area for a period of time and the area "turns green" again. Questions that need to be asked include: Is this area re-vegetated with those species that would naturally occur here and in the same proportions? Is the habitat that was once (before disturbance) supported by this area available again? Restoration can include one or more of the following: reconstruction of physical conditions such as topography or grade; chemical changes to the soils and water; and biological components such as the re-introduction of native plant species.

Long-range goals for restoring ORV disturbed sites in the preserve are to:

> remove the scars caused by vehicles and recover a sustainable, self-regulating, self-organizing ecosystem, by restoring to the extent possible the biological, physical, and chemical characteristic of the system
>
> meet biological, physical, and chemical targets defined by performance measures

To provide a gauge against which to measure restoration success there must be a baseline or reference condition. Specific restoration project goals should state which impacted condition(s) (for example, vegetation) is chosen for improvement. As restoration efforts proceed, the existing resource condition should begin to more closely resemble the reference condition. Restoration objectives defined in measurable ecosystem conditions (for example, vegetative community composition and richness) would define the basis for tracking restoration success.

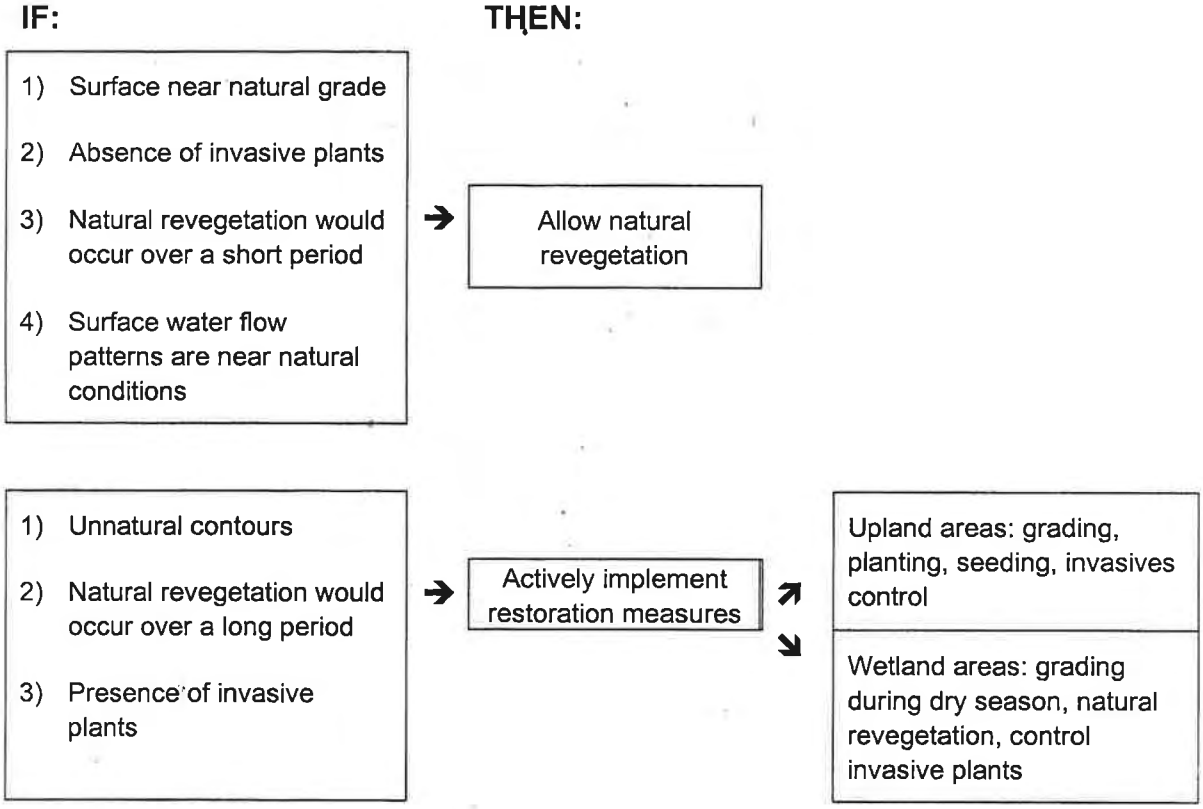
A key factor in successful resource restoration is to, if possible, remove the source of the adverse effects to the resources. Implementing the proposed action would allow ORV use only on designated trails. Removal of dispersed ORV use would help sustain restoration efforts. Areas to be restored must be ranked. These priorities would be determined based on the relative importance of the area to the preserve's overall management goals. Attributes that would be considered for prioritization include visual or scenic values, and the status of the biological, physical, and chemical ecosystem components or habitat health.

After the source of the resource impacts was removed, the best approach to restoring those areas would then be determined. Two approaches are to allow the area to recover on its own (passive restoration), or to in some way manipulate the area (active restoration). To let natural, or passive,

restoration take place, the ecosystem's self-organizational qualities must be sufficient to correct the pathology and restore the original optimal operating point.

The self-organizing quality of an ecosystem relates to the overall integrity of the ecosystem. The following flow chart will assist in deciding which of these pathways to choose. This process is based on current understanding of the preserve's resources and would be modified as more was learned about the ecosystem functions and recovery.

The restoration plans for identified areas would provide specific guidance for the earthwork, revegetation methods, invasive plant control, monitoring, and restoration at each site. As part of each reclamation plan, the National Park Service would develop a planting plan based on the desired plant community to be established, site elevations, water table elevations, and soil conditions. The planting plan would recognize which native plant species from nearby reference sites could live and reproduce within the range of environmental conditions that exist at each restoration site and could be used for revegetation.



For upland areas with unnatural contours, invasive plant species, and/or where natural revegetation was a slow process, the National Park Service would actively implement restoration measures. Grading, planting, and/or seeding would begin after closure. Native species found in nearby reference sites that were suited for upland conditions and that could compete with invasive plants would be selected for revegetation whenever possible. Plants would be propagated from seeds and cuttings gathered in the preserve at nearby reference sites. If available, indigenous material from commercial sources might be used.

For disturbed wet areas, the primary restoration method would be grading during dry periods to restore natural surface elevations and contours, and to create more natural surface water flow patterns. In some cases, disturbed areas would be reshaped or water conveyance structures installed to restore water flow directions and velocities. After grading was completed, natural regeneration of wetland vegetation would be allowed to occur without planting or seeding.

In some cases, natural regeneration of vegetation without grading, planting, or seeding would be allowed to occur. This passive restoration would be the preferred method in areas where the surface was near natural grades, invasive plants were not a problem, natural revegetation would occur over a short period, and surface water flow patterns were near natural conditions.

Although the above discussion outlines certain actions that would be taken – grading, planting, seeding – the specific techniques to use have yet to be determined. Because information on restoring areas disturbed by ORV use in south Florida is limited, research would be conducted that would apply various techniques to test areas. The results from these studies would be applied to determine the most effective means to restore habitat in impacted areas. Factors that would be considered when selecting the most feasible restoration techniques for a given area include the spatial scale, cost, and environmental impacts or risk associated with the technique.

Implementation

Under the proposed action, restoration would be a long-term activity. Execution of on-the-ground techniques to meet restoration goals would require detailed planning. The key components of restoration implementation, which would be applied to those areas that were identified for active restoration would include the following:

determining site-specific restoration goals

securing adequate funding

organizing and sequencing implementation activities

determining roles and responsibilities

developing a schedule

obtaining necessary permits

applying adaptive management to the process

Resource Recovery Monitoring

The goal of resource recovery monitoring would to determine the effectiveness of both active and passive restoration efforts, and to use this information to make adjustments to the restoration program as needed. Resource recovery monitoring would be conducted on areas that were closed to ORV use.

Indicators

The impacts of ORVs are most apparent on soils and plant communities. Therefore, these would be the most obvious choices for monitoring recovery of areas where ORV use had been restricted. More information is needed to determine which, if any, water quality monitoring parameters would yield useful recovery information. The response of wildlife to ORV traffic would be examined through research projects. Specific indicators would be chosen to reflect the restoration goals. For example, where the goal was to re-establish the natural grade of a prairie that had been extensively rutted by ORV traffic, topographic measurements may be taken. Measurements of the vegetation would be the appropriate indicators where re-establishment of the native plant community was the restoration goal.

Plants are convenient biological elements available for measure. They are valuable as measures of communities, as they reflect much of the physical nature of the community, particularly hydrologic and edaphic characters. Disturbances in the plant community may originate as a physical change, such as mechanical movement of soils in the substrate, or chemical change, such as a difference in local hydrology. Physical disturbances to substrates often result in soils that support greater numbers of ruderal plants (weeds), and lower species diversities. Measures of plant communities in affected areas may be conducted as comparisons with areas with little or no human-caused alteration.

Methods

Both aerial photography and on-the-ground measurements would be used for monitoring resource recovery. Aerial photographs would provide information on the overall recovery of preserve resources once the ORV management program was implemented. More intensive, on-the-ground measurements would yield information about the recovery of biological and physical attributes of specific areas.

Reference sites would be selected to compare targeted recovery areas with areas undisturbed by ORV traffic. Areas for comparison would be selected based on such features as community type, soil type, and hydrology. Replicate reference sites would be used to measure natural variation in similar communities and would be located in separate community systems. Considerations for field quantification of these sites should be the same as those for affected sites. Areas that are recovering from disturbances would be more similar to undisturbed areas as recovery progressed, and this would be reflected in diversity and similarity measures. Similarly, differences in areas that may have occurred with ORV use, may be demonstrated with these comparisons.

Requirements to monitor changes in biological communities may be partly addressed with diversity measures. At least two types of comparison can be used :

> Identifying and comparing areas that differ can help to demonstrate changes in amounts of area affected over time.
>
> Comparing amounts of difference between altered areas with areas identified as undisturbed, over time, can help identify whether recovery by the natural system is occurring.

If remediation or restoration is taking place, the effectiveness of these activities may be considered as change in altered areas becoming more similar to unaffected areas.

Acceptable alterations to natural areas (and habitat recovery programs) should be derived from standards applied to other national area, and refined to reflect the resources at Big Cypress. If these standards are not available, or clearly are not applicable to this area, standards derived from opinions of experts, public input, or preserve management and staff would be required. These standards should be flexible, to allow change as more information became available, but restrictive enough to adequately protect the biological community's resources.

Differences between sites of investigation always will exist, so that measures will be needed to determine the naturally occurring variation in the communities studied. When this variation is known, measures of communities can be compared to determine differences of sample areas. Variables may include biotic and abiotic community elements. Considerable differences may occur with these communities, so that many measures may be necessary to obtain reliable comparisons. Following this, an acceptable level of difference between altered sites and naturally occurring habitat sites would be established for management decisions.

Frequency and Timing

The frequency and timing of resource recovery monitoring would be determined by the specific restoration project goals and the restoration techniques that were implemented.

Information Needs

How to best apply aerial data gathering techniques for monitoring ORV impacts and resource recovery trends would need to be established. Although vegetation and soils information is generally thought to be the most direct indicators of resource recovery, the specific attributes of these parameters which yield the best information would need to be refined.

RESEARCH

Research needs have been identified throughout this description of the proposed action. As an integral part of the proposed action, research that focused on the outstanding questions related to managing ORV use in the preserve would be implemented. The results from this research would be used to make continuous improvements to the ORV management program.

Table 3 summarizes studies that would be useful in supporting management of ORVs in Big Cypress National Preserve. Although all of these research topics are important, budgets and staffing constraints would require that priorities be set. Therefore, the table includes an indication of the priority of each study and its justification.

IMPLEMENTATION STRATEGY AND SCHEDULE

Because of the comprehensive nature of the proposed action, implementing all aspects of the plan could take up to 10 years. The proposed action is conceptual in that not all of the information that is needed is currently available. More information would be gathered as a part of implementation, especially for restoration. This characteristic of the plan would provide for an iterative process that relied on feedback from the implementation of other parts of the plan. For example, the proposed action would result in the adoption of a designated trail system. However, it currently is not possible to identify exactly where all of these trails would be or how they would be maintained.

TABLE 3: RESEARCH NEEDS

Project Name	Description	Priority and Justification	Estimated Cost
Research goal: support the siting, construction, maintenance, and monitoring of the designated trail system.			
Ground-truth University of Georgia mapping data	Verify the trail and ORV use area database developed from aerial photographs.	HIGH. Continue to improve the accuracy of information on trails.	$115,000
Evaluate trail stabilization techniques	Identify best techniques, methods, and materials to harden and maintain trails and access points.	HIGH. Need to construct trails and access points with materials appropriate for environmental conditions and use, and to continually maintain these features.	$200,000
Improve topographic mapping	Current topographic mapping is at 5-foot intervals. Because the topographic relief in the preserve has less than 20 feet of variance, this level of detail is minimally useful in defining surface water flows across the preserve.	HIGH. Applications of more precise topographic information include mapping soil rutting, identifying vegetation changes, and determining trail locations to reduce surface water flow impacts.	$210,000
Determine how to apply aerial mapping for monitoring ORV impacts	Establish a technique to evaluate ORV use impacts, trends, and resource recovery.	HIGH. Aerial techniques will be necessary to effectively monitor the entire preserve trail system and resource recovery efforts.	$30,000
Research goal: determine existing levels of recreational use and the types of vehicles best suited for use in the Big Cypress environment.			
Determine impacts of a range of vehicle specifications on natural resources	Refine current understanding of the types of ORVs that reduce impacts to the preserve's soils, vegetation, and wildlife.	HIGH. Need to establish the effects of such factors as vehicle weight, ground pressure (psi), tire type, and vehicle noise to help profile the optimal "environmentally friendly" ORV. This would support future management decisions on vehicle specifications.	$220,000
Determine ORV carrying capacity of management units	Establish the numbers and types of ORVs that can be sustained in the management units without causing resource degradation.	MEDIUM. This information needs to be sequenced after the new designated trail system is in place.	$50,000

TABLE 3: RESEARCH NEEDS (CONTINUED)

Project Name	Description	Priority and Justification	Estimated Cost
Research goal: initially conduct or update inventories of the preserve's flora, fauna, and soils. The results would be used to establish a baseline to determine future trends in resource condition, identify ecosystem stresses and associated environmental indicators, and determine if sensitive resources were or had the potential to be adversely affected by the designated trail system.			
Update natural resources inventory and analysis	Establish baseline, identify stresses and indicators, and determine levels of concern for sensitive resources.	MEDIUM. Inventories previously have been done for many natural resource categories, but updates are needed to account for changes from ORV use and other factors within the dynamic ecosystem.	$300,000
Inventory and map soils	Same as above.	HIGH. Soils provide the base for the preserve's ecosystem.	$150,000
Inventory reptiles and amphibians	Same as above.	MEDIUM. Need to understand dynamics of fauna and habitat needs.	$180,000
Inventory small mammals	Same as above.	MEDIUM. Same as above.	$150,000
Inventory birds	Same as above.	MEDIUM. Same as above.	$90,000
Inventory invertebrates	Same as above.	MEDIUM. Same as above.	$180,000
Inventory fish	Same as above.	MEDIUM. Same as above.	$120,000
Update plant inventory, abundance, and distribution	Same as above.	LOW. Need to document changes in dynamic plant communities.	$120,000
Determine sensitive noise receptors and the natural sound-scape of the preserve	Establish baseline on the "natural quiet" of the preserve and determine levels of concern for sensitive noise receptors.	LOW. Need a baseline against which to compare the noise generated by ORVs and sensitivity values for receptors to established acceptable levels of noise.	$100,000

TABLE 3: RESEARCH NEEDS (CONTINUED)

Project Name	Description	Priority and Justification	Estimated Cost
Research goal: determine the effects of ORV use under the proposed action on the preserve's flora, fauna, and soils.			
Identify and analyze cumulative effects of ORV use	Evaluate the impacts of ORV use over time.	HIGH. Need to comply with NPS mandate to protect resources in perpetuity.	$400,000
Determine the response of the Cape Sable seaside sparrow to airboat use	The Stairsteps Unit has known Cape Sable seaside sparrow habitat and additional potential habitat. Direct and indirect effects of the use of airboats on this species would be analyzed.	HIGH. The Cape Sable seaside sparrow is a federally listed species under the Endangered Species Act. The USFWS has been petitioned to revise the critical habitat designated for this species.	$300,000
Analyze Florida panther response to ORV use	Early studies have suggested that ORVs affect the behavior of panthers. Further studies would help determine the accuracy of these findings.	HIGH. The Florida panther is a federally listed species under the Endangered Species Act.	$150,000
Determine the effects of ORV use on soils	Analyze soil compaction, soil moisture effects, oxidation, and other properties in reference to ORV effects.	HIGH. Soils are an integral environmental component of the preserve's ecosystem.	$50,000
Determine effects of ORV use on vegetative communities	Analyze the effects of spread of invasive plant species via ORVs and changes in vegetative community composition along ORV trail areas.	HIGH. Vegetative community response to ORV use is needed to most effectively site trails and to determine the most effective restoration techniques.	$210,000
Determine the effects of ORV use on surface flow	Analysis of sheet flow patterns across the preserve in reference to ORV use.	HIGH. Study is needed to refine understanding of the effects of rutting on hydrologic regime of the preserve.	$50,000
Evaluate impacts of ORV traffic on water quality	Evaluate parameters such as spatially cumulative aspects of turbidity, and re-suspension of nutrients and metals from soil disturbance.	LOW. Other habitat components such as soils and vegetation are believed to be more direct indicators of environmental integrity in relation to ORV use.	$50,000
Determine disturbance to wildlife from ORV use	This would include impacts of noise from ORVs on wildlife.	LOW. Basic inventories of other wildlife species are needed before this study.	$210,000

TABLE 3: RESEARCH NEEDS (CONTINUED)

Project Name	Description	Priority and Justification	Estimated Cost
Research goal: examine recreational interactions to ensure that all visitors to the preserve have an enjoyable and educational experience.			
Determine recreational interactions and effects on visitor experiences	Evaluate the experiences all visitors have and determine any incompatibilities between different user groups.	HIGH. Need to respond to numerous public comments regarding user conflicts between ORV and other preserve visitors.	$300,000
Research goal: determine the most efficient and effective means of mitigating effects caused by ORVs and establish best management practices for use in the preserve.			
Develop mitigation and restoration techniques	Determine the efficacy of restoration techniques applied to areas that have been impacted by ORV use.	HIGH. Need to know the most appropriate means to restore natural resources impacted by ORVs.	$260,000

Three scenarios have been suggested for implementing the designated trail system:

complete closure of the preserve to ORVs until the trail system was established

complete access to areas of the preserve that currently are open to ORV use until the trail system was established

phasing of actions to provide a transition to a designated trail system

The National Park Service currently is planning a three-phased implementation throughout a 10-year period. Actions would include:

immediately eliminating ORV access from areas that are heavily impacted and that are highly sensitive to impacts, such as prairies

requiring use of the designated trails where they have been established, and allowing dispersed use (outside of designated closed areas) until trails are in place throughout the preserve.

immediately establishing management rules and actions that do not depend on sequencing

determining carrying capacity of ORV use for each management unit

incorporating new information in the trail designation process as it becomes available

Table 4 outlines the proposed implementation schedule. Adaptive management, relying on feedback from all aspects of the plan, would be applied throughout implementation.

TABLE 4: IMPLEMENTATION SCHEDULE FOR THE PROPOSED ACTION

Activity	Phase I	Phase II	Phase III
Trail system			
Design plan for trail designation and construction	X		
Ground-truth and mark trails	X	X	
Establish temporary trails around designated sensitive areas	X		
Stabilize existing trails selected for designation	X	X	X
Maintain trail system	X	X	X
Access points			
Designate	X		
Develop	X	X	
Maintain	X	X	X
Eliminate vehicle storage at Monroe Station	X	X	
Implement spatial closures. Refine the boundaries of sensitive areas and endangered species nesting areas closed under the authority of 36 CFR.	X	X	X
Implement temporal closures	X	X	X
Hydrologic triggers for resource protection			
Seasonal closure to provide rest period for resources (optimal season to be determined as part of the program's adaptive management)			
Prohibit recreational ORV operation between 10:00 P.M. and 5:00 A.M.			
ORV user map			
Develop	X		
Revise as needed		X	X
Permit program			
Renew existing permits until January 2001	X		
Define vehicle specifications	X	X	X
Initiate vehicle inspection program	X		
Issue up to 2,000 annual recreational ORV permits beginning January 2001	X		
Initiate ORV operator permit program and education requirement	X		
Initiate permit system for all backcountry use	X		
On-going implementation		X	X
Research			
Initiate highest priority research projects	X		
On-going		X	X

TABLE 4: IMPLEMENTATION SCHEDULE FOR THE PROPOSED ACTION (CONTINUED)

Activity	Phase I	Phase II	Phase III
Initiate environmental permitting, compliance, and mitigation required for various ORV program components	X		
Establish advisory committee	X		
Restoration			
Establish interdisciplinary team	X		
Initiate implementation	X		
Continue implementation		X	X
Education program			
Initiate ORV operators course	X		
Refine course and other materials		X	X
Trail condition monitoring			
Develop trail standards	X		
Establish techniques for determining baseline conditions	X		
Monitor trail conditions		X	X
Resource recovery monitoring			
Establish and refine monitoring techniques	X	X	
On-going monitoring		X	X
Enforce all NPS legal mandates related to ORV program management	X	X	X
Apply adaptive management to ORV program based on research and feedback from implementation	X	X	X

Phase I would start in the first year of implementation. It would include actions that could be completed or initiated immediately, or would be necessary for completion of subsequent actions.

Phase II generally would be started in years 2 through 5 of the program. It would include a continuation of some of the actions started in Phase I and the initiation of actions dependent on Phase I completion.

Phase III would include long-term and on-going efforts, including monitoring, research, restoration, maintenance, and enforcement. All of these activities would be started before the end of year 10.

COST

The preliminary cost estimate for implementing the proposed action is outlined in Table 5. This estimate includes

initial and recurring costs for staffing, equipment, and materials needed for operating the permit and education programs

designating, marking, constructing, and maintaining the trail system and access points

trail condition and resource recovery monitoring

restoring impacted areas

conducting research to support management decisions

TABLE 5: IMPLEMENTATION COST ESTIMATE FOR THE PROPOSED ACTION

Activity	Estimated Cost
Permit program administration	$100,000 annually
Enforcement	$250,000 annually
Education program	$35,000 in year 1; $20,000 annually thereafter
Trail and access point design, marking, and maintenance	$1,000,000 annually (estimated for the first 5 years)
Trail condition monitoring	$50,000 annually
Restoration	To be determined
Research	$5,000,000 total, based on research needs identified in Table 3
Environmental permitting/compliance	$200,000 (total)

Because of the adaptive nature of this plan, cost estimates for each of these activities would be refined as more information was gathered through the implementation process. Cost for restoration would be determined through research results on the most effective restoration techniques. It is anticipated that significant funding for restoration would be needed in the future.

Funding sources for additional staffing and equipment would include requests for increases in the preserve's operating budget, which is determined annually through Congressional funding processes and by priorities set by the Department of the Interior and the National Park Service. Funding for research projects would be sought through several sources, including the National Park Service Natural Resources Protection Program (NRPP), the Cultural Resources Protection Program (CRPP), the Operating Financial System (OFS), and the Critical Ecosystems Study Initiative (CESI). Cooperative research programs with universities would be considered. Congressional line-item funding also would be sought for construction, maintenance, and restoration. To date, approximately $12,000,000 in funding has been requested for implementation.

NO ACTION ALTERNATIVE (CONTINUE CURRENT MANAGEMENT)

INTRODUCTION

The no action alternative (continue current management) would continue the current NPS programs for ORV management and natural resources management within the preserve. The ORV Management – No Action Alternative map provides a graphic representation of this alternative. Under this alternative:

the Bear Island Unit would be open to ORV use on designated trails

the Corn Dance Unit and Turner River Unit would allow for dispersed ORV use

the Stairsteps Unit would be managed under the four-zone strategy

the Deep Lake Unit and Loop Unit would remain closed to ORV use

The National Park Service would require an annual permit for each off-road vehicle. The permit would be obtained if the vehicle met the specification and safety equipment requirements.

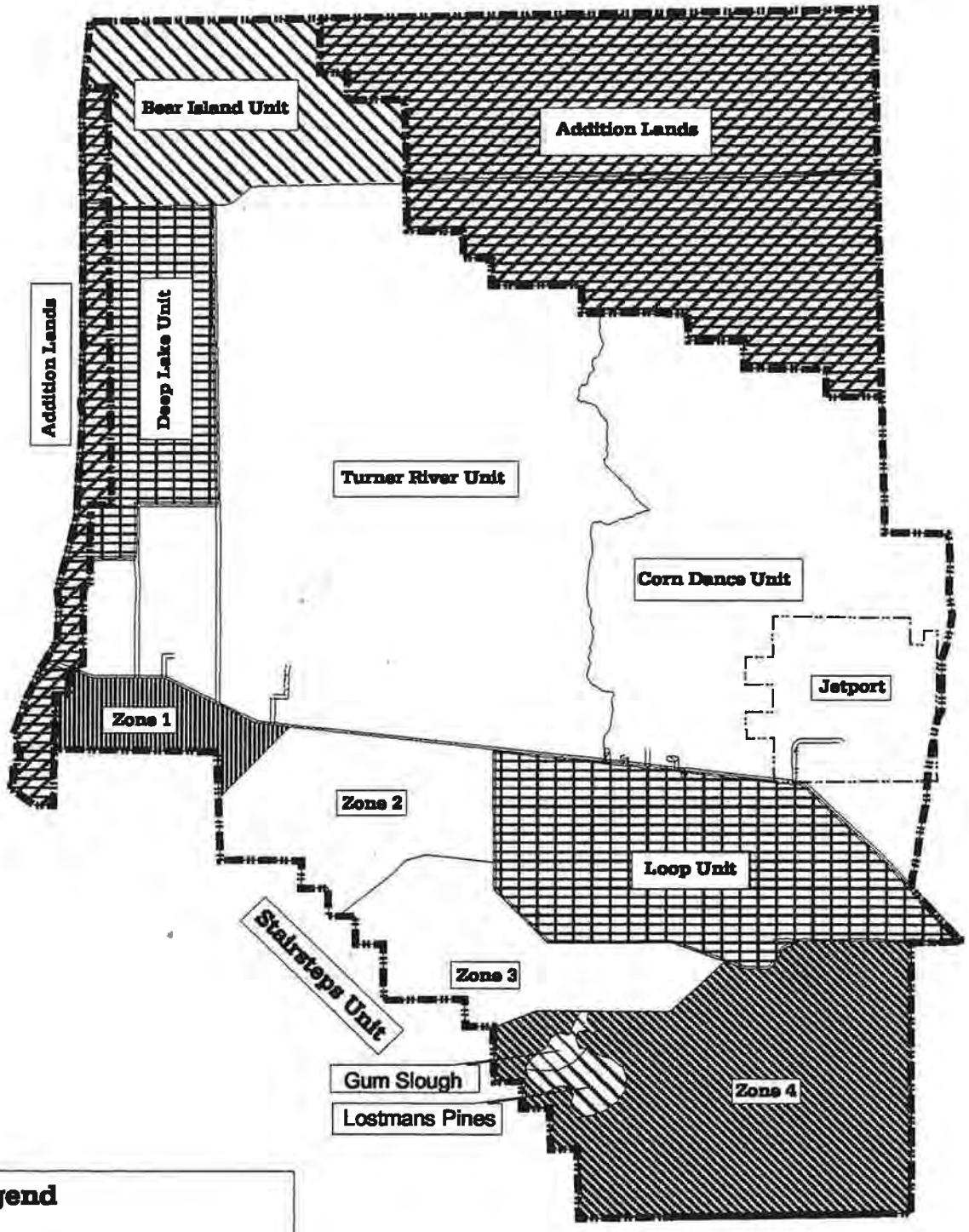
Access to the preserve would continue to occur from approximately 70 informal access points. Many of these do not have parking or involve the unsafe and illegal practice of driving on the road shoulder from an area where parking is available.

The National Park Service would respond to needs and problems, but no major change in management direction would be initiated under the no action alternative. Methods to avoid or reduce adverse ORV impacts would include regulation of ORV use and mitigation of impacts.

This alternative would not meet the legislative mandates and NPS policies for resource protection, or comply with the 1995 settlement agreement. This concern is described in the sections entitled "Purpose of and Need for the Plan" and "Environmental Consequences."

Continuing current management under this alternative would not be consistent with the goals and concepts of ORV management established in the preserve's general management plan. The primary focus of the general management plan, as directed by federal law and executive orders, is that preserve lands would be "closed to ORV use except for those areas or trails that are suitable and specifically designated as open to such use" (NPS 1991).

Only a few of the general management plan's proposed actions have been implemented. These include restricting ORV use to designated trails in the Bear Island Unit, closure of the Deep Lake Unit, and prohibiting the use of tracked vehicles in the preserve. However, no trails, areas, or access points have been designated in the Turner River Unit and Corn Dance Unit, and there have been only limited area closures and trail designations in the Stairsteps Unit. Continuing current management under this alternative would allow continued, virtually unrestricted ORV access and use in the Turner River Unit and Corn Dance Unit, and much of the Stairsteps Unit, in variance with the general management plan.



Legend

- Addition Lands, closed to hunting, landowners have access only with Special Use Permit
- Deep Lake and Loop Units, closed to motorized use
- Bear Island Unit, designated trails only
- Corn Dance, Turner River Units, Zones 2 and 3, open to all ORVs with permits
- Zone 1, open to all ORVs except airboats
- Zone 4, open to airboats only, except for airboats and ATVs in Lostmans Pines

ORV MANAGEMENT
NO ACTION ALTERNATIVE
(Continue Current Management)

BIG CYPRESS NATIONAL PRESERVE

United States Department of the Interior
National Park Service

BICY/JUNE-2000

5 0 5 10 Miles

The Big Cypress National Preserve general management plan and environmental impact statement included a limit of 2,000 vehicle permits per year (NPS 1991). This limit was not only the basis of the environmental analysis, but also was cited in the formal consultation between the National Park Service and the U.S. Fish and Wildlife Service under the Endangered Species Act. However, the record of decision for the plan and environmental impact statement issued the following January (NPS 1992) increased the total number of vehicle permits to 2,500 per year without reinitiating formal consultation as required by the Endangered Species Act. As a result, approval of this no action alternative would require formal consultation with the U.S. Fish and Wildlife Service to reinstate the 2,500 vehicle permits per year limit.

TRAILS, AREAS, AND ACCESS POINTS

Trails and Areas

Under this alternative, the National Park Service would continue to manage ORV use in the general framework established in the general management plan and environmental impact statement. This framework used a management unit approach, shown in the ORV Management - No Action Alternative map. The six units would be managed as follows.

Bear Island Unit. Within the Bear Island Unit, wheeled ORVs would be restricted to approximately 55 miles of designated trails, 16 miles of which are above-grade roads constructed prior to the establishment of the preserve for agriculture, logging, and mineral exploration. This unit contains a relatively high density of Florida panthers. Therefore, ORV use restrictions were initiated in 1989 to reduce potential disturbance to panthers, control hunting pressure on panther prey, and protect important resource areas. In 1991, designated trails were established in this unit and travel off designated trails was prohibited. Most of the area is within 1 mile of an ORV trail, with no area farther than 2 miles from a trail.

Turner River Unit. This management unit currently is designated as open to dispersed traffic for all types of ORVs. ORVs are prohibited on the Florida National Scenic Trail, except for required crossings. ORV use would not be permitted on any new mineral access roads (NPS 1991).

Corn Dance Unit. The Corn Dance Unit currently is open to dispersed traffic for all types of ORVs. ORVs are prohibited on the Florida National Scenic Trail, except for required crossings. ORVs also are prohibited on the existing mineral access roads, including Eleven-Mile Road. Under the no action alternative, ORV use would not be permitted on any new mineral access roads (NPS 1991).

Stairsteps Unit. Special management zones and restrictions were defined for the Stairsteps Unit in 1990 to allow area-specific ORV management. This unit is the wettest area of the preserve, and is often referred to as "airboat country." There are designated trails in Lostmans Pines.

The Stairsteps Unit contains four special management zones (see ORV Management – No Action Alternative map).

Zone 1: This zone includes the Ochopee Prairie. Airboats have been prohibited in this zone since 1994 because concentrated commercial airboat traffic caused considerable adverse effects to its natural resources. Dispersed use by wheeled ORVs is allowed in this zone.

Zones 2 and 3: These zones are open to dispersed used by all permitted ORVs.

Zone 4: This zone is restricted to airboats, except in the Lostmans Pines area, part of which is open to all ORVs and part of which is open only to all-terrain cycles and airboats.

Deep Lake Unit. With implementation of the no action alternative (continue current management), ORVs would be prohibited within the Deep Lake Unit. This unit was closed to ORVs in 1989 because of the unit's important resource areas and concern about illegal and unchecked hunting, which was difficult to control because of the unit's accessibility from surrounding roads (NPS 1991). This closure was also expected to reduce hunting pressure on panther prey and potential disturbance from ORV use of panther habitat.

Loop Unit. ORVs would continue to be prohibited within the Loop Unit. The Loop Unit was closed to maintain the primitive character of the area. The unit would be used as a control zone for comparing the extent of ORV impacts in other areas of the preserve.

Access Points

Currently, ORV access to the preserve is largely uncontrolled. Approximately 70 undesignated access points are used on a regular basis, and would continue to be used under the no action alternative. ORV users would be allowed to continue accessing the backcountry at any location.

MONITORING

As funding allows, Big Cypress National Preserve would continue to provide mitigation measures for the historical, current, and future environmental impacts that accrue as a result of the continued use of ORVs. Measures would be limited, but could include monitoring, research on trail improvement, and reclaiming or restoring impacted areas.

Limited resource monitoring to evaluate ORV effects has been conducted at the preserve. As funds were made available, resource monitoring would systematically collect and compare standardized resource measurements from different times to predict or detect natural and human-induced changes. Monitoring would provide managers with information necessary for establishing and evaluating resource protection policies, strategies, and actions. A monitoring program would help detect and evaluate trends. It may detect deteriorating conditions before severe or irreversible changes occur, allowing time to implement corrective actions. Analysis of monitoring data may assist in the selection of appropriate management actions and reveal their effectiveness over time.

MANAGEMENT ACTIONS

The preserve superintendent has the authority to close units or areas of the preserve. The superintendent could also place limitations on the types of vehicles accessing areas. Designated trails and areas could be altered if such action were deemed necessary.

CLOSURE OF AREAS

The preserve superintendent has the authority to close units or areas of the preserve if field observations indicate that adverse impacts due to ORV use are occurring. The criteria for closure would rely on the professional judgement of the NPS staff.

Low-water-level closures in Zone 4 of the Stairsteps Unit were instituted on an emergency basis in 1999. This type of action would continue under the no action alternative.

Closures for the protection of threatened and endangered species, and closures for threats associated with adverse environmental conditions such as high fire danger and hurricanes would be identical to those described for the proposed action.

PERMIT PROGRAM

ORV users would continue to be required to obtain a permit for each ORV operated within the preserve. Obtaining a permit would involve providing weight information and complying with tire size rules. Under this alternative, the cost of the annual permit would be $35.00. The permit would be a sticker that would be attached to the vehicle.

This alternative would allow for the issuance of no more than 2,500 permits annually, which conforms to the number of permits identified in the record of decision (NPS 1992). However, as pointed out by public comment on the draft ORV management plan, the biological opinion from the U.S. Fish and Wildlife Service (USFWS) on the general management plan was for no more than 2,000 permits annually. Therefore, with implementation of the no action alternative (continue current management), the National Park Service would conduct further consultation with the USFWS to change the permit limit to 2,500 per year.

To obtain a permit, the owner would have to bring the vehicle to the Oasis Visitor Center for inspection at least once every 5 years. During inspections, preserve staff would check the vehicle to ensure compliance with ORV specifications such as safety features and tire width.

EDUCATION AND COMMUNICATION

The preserve would continue to prepare and distribute an annual ORV brochure. The brochure would provide detailed information on the rules and regulations governing ORVs and maps showing areas accessible and closed to ORVs.

VEHICLE SPECIFICATIONS

Consistent with current practices, the National Park Service would only issue permits for ORVs that met the following vehicle specifications. The purpose of these specifications would be to help protect resources and ensure visitor safety.

Tire Sizes

Swamp buggy and 4 x 4 street-legal tires must have a minimum of 9 inches of tread face on both the front and rear tires. This would be measured as the flat or rounded surface of the tire contacting the ground during normal use.

All-terrain cycle tires must provide a minimum of 7 inches of tread face for front tires and a minimum of 9 inches of tread face for rear tires.

Noise Control

All ORVs must have a muffler in good working condition and in constant operation.

Wheeled ORVs must not cause noise levels that exceed 60 decibels measured on the A-weighted scale at 50 feet, except pursuant to the terms and conditions of the ORV permit (36 CFR 2.12).

Other ORV Equipment

All ORV mechanical systems important for safe operation, such as the braking or throttle systems, must be in good operating condition.

Tracked vehicles would continue to be prohibited to help protect soil and vegetation. Tracked vehicles were banned in 1988 after they were found to be causing substantially greater impacts to the vegetation than the other ORV types (Duever *et al.* 1981).

RULES AND ENFORCEMENT

General ORV management rules are derived from the resource protection, and public use and recreation sections of the *Code of Federal Regulations* (36 CFR 1.5, 2, 10, and 7.86). They are modified as necessary to address management issues and concerns as they arise. Some of the rules currently in effect that would continue to be enforced under the no action alternative (continue current management) include the following:

All accidents must be reported as soon as possible to a preserve ranger in person or by phone (36 CFR 4.4).

The permit holder is prohibited from giving false information. To do so is considered a breach of condition and could be grounds for permit revocation and/or fines (36 CFR 2.32 (4)).

No motor vehicle shall operate/travel on any part of the preserve that is designated as closed because of inclement weather, poor driving conditions, potential for environmental

damage or disturbance to wildlife, construction, management activities, or wildlife surveys (36 CFR 7.86).

It is prohibited to operate an ORV without due care or at a speed greater than that which is reasonable or prudent, considering wildlife, traffic, weather, trail, road, area, and light conditions (36 CFR 4.22).

Operating an airboat in or upon inland waters so as to exceed a noise level of 82 decibels measured at a distance of 82 feet is prohibited (36 CFR 3.7).

Airboats must be equipped with one type I, II, III, IV, or V U.S. Coast Guard-approved personal flotation device (PFD) for each person aboard. Children 6 years old and under must wear a PFD while riding in an airboat at all times.

Operating an ORV under the influence of alcohol or drugs is prohibited (36 CFR 4.23).

Open containers of alcoholic beverages are prohibited on all ORVs (36 CFR 4.14).

Preserve rules prohibit the operation of ORVs in a manner that could adversely affect the preserve's resources. Damaging or irresponsible practices, such as "mudding," racing, and tug-of-war contests with ORVs would continue to be prohibited. Cutting vegetation, ditching, filling, or other activities to build new trails or improve existing trails also would continue to be prohibited.

As provided by 36 CFR 7.86, the superintendent has authority to close portions of the preserve to ORV use if the use represents a threat to resources. Executive Order 11989 requires immediate closure of areas or trails, or the discontinuation of certain vehicle types, whenever it is determined that ORV use "will cause or is causing considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat or cultural or historic resources of particular areas or trails" of the preserve. The public would be notified before any area or trail was closed, or a vehicle type was discontinued, under such conditions (NPS 1991).

RESTORATION

The National Park Service has permanently closed the Loop Unit and Deep Lake Unit to allow these areas to recover from previous ORV activity. These closures would continue under the no action alternative (continue current management). However, there would be no active program to restore the hydrology in areas that are heavily rutted or to encourage the recovery of the native vegetation. There also would be no provisions to monitor the success of recovery at disturbed sites.

RESEARCH

The National Park Service would continue to pursue funding for research relating to ORV use. The priority would focus on trail maintenance.

IMPLEMENTATION STRATEGY

The National Park Service would continue to implement the program as it currently does. Permit fees would cover portions of the cost of managing the program.

COST

The cost estimate for administration, processing permit applications, educating visitors, enforcing ORV rules and regulations, monitoring, and reclamation would be $200,000 per year. ORV permit fees would only partially offset ORV management costs.

It should be recognized that the costs presented for the no action alternative (continue current management) represent only the expenditure of monies. This alternative also is accruing environmental costs associated with adverse effects to the preserve's resources and the inability to meet the mandates and commitments of the National Park Service. An accounting for these environmental costs will occur at some future date, either in higher expenditures for restoration or in the acceptance of a lower quality in the preserve's resources.

ALTERNATIVES CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS

The range of alternatives evaluated in this plan is based on the general management plan and final environmental impact statement (NPS 1991). The general management plan described four potential alternatives, including the proposed action, an alternative that emphasized recreational use, an alternative that emphasized resource protection, and a no action alternative (continue current management). This reasonable range of ORV management actions was analyzed in the general management plan. The record of decision (NPS 1992) documents the decision of the National Park Service and the rationale for implementing the proposed action.

This recreational ORV management plan refines the ORV management actions that were established in the general management plan proposed action. All other alternatives, except for the required no action alternative, were dismissed from further consideration because they would not fulfill the direction set by the general management plan and record of decision.

SUMMARY OF ALTERNATIVES

Table 6 provides an overview of the key differences between the alternatives for ORV management in Big Cypress National Preserve. More detailed descriptions of the alternatives can be found throughout this "Alternatives, Including the Proposed Action" section.

Table 7 summarizes the impacts of the alternatives. Detailed information on the impacts evaluation is provided in the "Environmental Consequences" section.

TABLE 6: SUMMARY OF KEY DIFFERENCES BETWEEN THE ALTERNATIVES

Feature	Proposed Action	No Action Alternative (Continue Current Management)
Management strategy	Restrict ORVs within the preserve to no more than 400 miles of designated primary trails. No dispersed use would be permitted.	Dispersed ORV use in the Corn Dance Unit and Turner River Unit, and portions of the Stairsteps Unit. Approximately 55 miles of designated trails in Bear Island Unit.
Management units closed to all ORVs	• Deep Lake Unit. • Loop Unit. • Zone 1 of Stairsteps Units.	• Deep Lake Unit. • Loop Unit.
Access points	15 designated access points, potentially with limits on numbers of users.	Unlimited access from approximately 70 informal locations.
Dispersed use areas	None.	Turner River, Corn Dance, and portions of the Stairsteps Unit would be open to dispersed use by ORVs.
Bear Island Unit	Swamp buggies, ATCs, and street-legal 4 x 4s would be allowed on approximately 30 miles of designated primary trails.	Wheeled ORVs would be allowed on approximately 55 miles of designated trails.
Turner River Unit	Swamp buggies and ATCs would be allowed on approximately 140 miles of designated primary trails.	Open to all ORVs for dispersed use.
Corn Dance Unit	Swamp buggies and ATCs would be allowed on approximately 60 miles of designated primary trails.	Open to all ORVs for dispersed use.
Stairsteps Unit	Managed in four zones: • Zone 1: Closed to all ORVs. • Zone 2: Swamp buggies and ATCs allowed on approximately 10 miles of designated primary trails. • Zone 3: Swamp buggies, ATCs, and airboats allowed on approximately 25 miles of designated primary trails. • Zone 4: Airboats allowed on designated primary trails.	Managed in four zones: • Zone 1: Closed to airboats; wheeled vehicles allowed. • Zone 2: Dispersed use of all ORVs. • Zone 3: Dispersed use of all ORVs. • Zone 4: Closed to wheeled vehicles except for designated trails in Lostmans Pines and dispersed use of airboats in remainder of the zone.
Loop Unit	Closed to all ORV use.	Closed to all ORV use.

TABLE 6: SUMMARY OF KEY DIFFERENCES BETWEEN THE ALTERNATIVES (CONTINUED)

Feature	Proposed Action	No Action Alternative (Continue Current Management)
Deep Lake Unit	Closed to all ORV use.	Closed to all ORV use.
Monitoring	Monitoring program based on indicators and standards.	No monitoring program.
Temporal closures	• A 60-day seasonal closure. • Closure of preserve to ORV use from 10 P.M. to 5 A.M. daily.	When National Park Service,determines closures are needed.
Closures of areas	• Use of hydrologic triggers to close areas when water levels are not appropriate. • Closures for environmental and wildlife sensitivity to ORV use. • Closures during high fire danger. • Closures due to threat of hurricanes.	• When National Park Service determines water levels are too high or to low. • Closures during high fire danger. • Closures due to threat of hurricanes.
Permit program	A three-permit program requiring: • An annual vehicle permit, • An annual operator's permit, and • A trip-specific backcountry permit.	An annual vehicle permit program.
Permit fee	$50 annual vehicle permit.	$35 annual vehicle permit.
Number of vehicle permits annually	2,000 issued annually by a random draw.	2,500 issued annually on a first-come, first-serve basis.
Vehicle specifications	Same as currently required, plus the following. • Wheeled vehicles could not exceed 8.0 feet in width, including tires. • Airboats could not exceed 8.0 feet in width or 14.0 feet in length. • Any device used to push aside, shear off, or otherwise damage vegetation would be prohibited. • Any tire chain, bar grip, or other device affixed to a tire in any way would be prohibited. • All airboats would have one or more exhaust headers or manifolds attached to a flex pipe and routed to rear of the boat. • ORVs would have to meet all current requirements for obtaining a vehicle permit.	Same as currently required.
Rules and	Same as currently required, plus the following.	Same as currently required.

TABLE 6: SUMMARY OF KEY DIFFERENCES BETWEEN THE ALTERNATIVES (CONTINUED)

Feature	Proposed Action	No Action Alternative (Continue Current Management)
enforcement	• ORV operators would have to possess a valid state driver's license. • Vehicles would have to enter the preserve at a designated access point and stay on designated trails. • Speed limits would be 30 mph for airboats and 15 mph for wheeled vehicles. • "Powerloading" or running the engine to load an airboat onto a trailer would be prohibited.	
Education and communication	• Mandatory annual educational course for all ORV operators. • Bulletin boards at all access points. • Annual ORV brochure.	An annual ORV brochure.
Restoration	• An active restoration program.	No active restoration program.
Research	• Integral research component. • Research needs have been identified.	No formal research effort on ORV management.
Total implementation cost	$1.3 million annually, plus $5.3 million over 10 years for education startup, research, and environmental permitting and compliance. Restoration costs are yet to be determined.	$200,000 annually.
Implementation strategy and schedule	A three-phased approach implemented over approximately 10 years.	Continue current management.

TABLE 7: SUMMARY OF IMPACTS OF THE ALTERNATIVES

Impact Topic	Proposed Action	No Action Alternative (Continue Current Management)
Water Resources		
Surface water flows	Minor to moderate, long-term, beneficial effects would result from restricting ORVs to trails and restoring previously affected areas. Minor, short-term, adverse effects would occur in the vicinity of designated trails until the monitoring and maintenance components were completely implemented.	Continuation of dispersed use throughout much of the preserve would produce long-term, moderate, adverse impacts by allowing increases in the area altered by ORVs.
Water quality	Moderate, beneficial improvements in water quality would result from limiting the spatial extent of the area subject to localized impacts from ORV use. Minor, adverse, localized water quality impacts would occur within designated trails.	Minor, adverse effects would occur because the area impacted by turbidity and sedimentation caused by ORVs would increase.
Soils	Long-term, major, beneficial effects would result from limiting ORVs to designated trails and restoring other areas. Soils within trails would be adversely affected.	Long-term, major, adverse impacts to soils would result from increases in the area of affected soils and worsening conditions in problem sites.
Vegetation		
Prairies and marshes	Long-term, major, beneficial impacts would result from the reduced area of impact and from the restoration of previously affected areas.	Long-term, major, adverse impacts would result from the increased area of impact and the inability of sites to recover, compounding the situation over time.
Cypress strands and domes, mixed hardwood swamps, and sloughs	Negligible to minor beneficial impact. Because of deep water or unstable substrate, these areas are little used by ORVs and have experienced relatively few adverse effects from past use.	Negligible to minor adverse impact. Continued dispersed use of ORVs would pose a continued threat to the soils and vegetation of shallower areas.
Mangrove forest	Negligible impacts would occur.	Negligible impacts would occur.
Hardwood hammocks	Long-term, minor, beneficial impacts would result from routing trails outside of these areas to protect the archaeological resources they often contain, and from restoring closed trails.	Minor, long-term, adverse effects would occur from increases in widths of trails in hammocks.
Pinelands	Long-term, moderate benefits to pinelands would result from the reduced trail mileage and from restoration. Minor, localized adverse effects would occur from the widening of some trails over time.	The widening of existing trails and establishment of new trails through pinelands would produce long-term, minor, adverse impacts.

TABLE 7: SUMMARY OF IMPACTS OF THE ALTERNATIVES (CONTINUED)

Impact Topic	Proposed Action	No Action Alternative (Continue Current Management)
Protected species		
Cape Sable seaside sparrow	Sparrows may experience long-term benefits from closures, which may eliminate impacts to vegetation structure used for nesting, foraging, and roosting.	Sparrows may experience long-term adverse impacts by alteration of vegetation structure needed for nesting, foraging, and roosting.
Bald eagle	Potential for beneficial effect, because designated trails would be located a least 1,500 feet from eagle nests in accordance with USFWS guidelines.	Potential for adverse effect, because protective buffer areas have not been established around all known nest sites.
Wood stork	Stork foraging would benefit from the confinement of ORVs to designated trails, which would reduce disturbances, and from the restoration of prairie and marsh habitats.	Negligible impacts, because no change to stork habitat or disturbance levels would occur with a continuation of current management.
Red-cockaded woodpecker	Negligible impacts. Benefits associated with habitat restoration and routing of trails around cluster areas could be offset by the preferential routing of ORV trails through pinelands.	Negligible impacts, because no change to red-cockaded woodpecker habitat or disturbance levels would occur with a continuation of current management.
Everglade snail kite	Negligible impacts, because there is no evidence that snail kites in the preserve are sensitive to or threatened by ORV use.	Negligible impacts, because no change to snail kite habitat or disturbance levels would occur with a continuation of current management.
Florida panther	Long-term, beneficial effects may occur because the potential for human disturbance to panthers and adverse impacts to panther habitat would be reduced.	Long-term, adverse effects may occur because degradation of panther habitat and potential for human disturbance to panther would continue.
West Indian manatee	Negligible effect. Critical habitat would be protected by closing Zone 1 of the Stairsteps Unit to all ORVs.	Negligible effect. Critical habitat would be protected by closing Zone 1 of the Stairsteps Unit to airboats.
White-tailed deer and feral hogs	Negligible to minor beneficial impacts to deer and hogs.	Negligible impacts to deer and hogs.
Visitor experience		
ORV use	Long-term, moderate, adverse impacts due to increased cost, increased time requirements, and additional restrictions on use.	Negligible impacts.

TABLE 7: SUMMARY OF IMPACTS OF THE ALTERNATIVES (CONTINUED)

Impact Topic	Proposed Action	No Action Alternative (Continue Current Management)
Hunting	No direct impacts to hunting. No reduction in the number of permits available to hunt in the preserve, availability of areas open to hunting, or number of game animals. Many hunters who use ORVs would have to walk further. Hunting on foot may be improved. These would be indirect impacts.	Negligible impacts.
Other visitation	Some visitors would perceive improved scenic and aesthetic quality in the preserve associated with reducing the spatial extent of the area impacted by ORVs. Decreases in noise from ORVs would be perceived as beneficial by some visitors.	Some visitors would perceive reduced scenic and aesthetic quality in the preserve because of increases in noise, rutting, and vegetation disturbances caused by ORVs.
Non-federal property owners	No impact to property owners' ability to reasonably access their property. Property owners would be required to obtain a free special use permit to access their property. Unless they drew and purchased a recreational ORV permit, private property owners could not recreate with an ORV within the preserve.	Negligible impacts.

AFFECTED ENVIRONMENT

NATURAL RESOURCE ISSUES

This section describes the characteristics of the existing natural environment that could be affected by the proposed action and the no action alternative (continue current management). In compliance with the guidelines contained in the National Environmental Policy Act (NEPA) and Section 1502.15 of the regulations for implementing NEPA developed by the Council on Environmental Quality (1978), the description of the affected environment focuses on only those environmental aspects potentially subject to effects from the use of ORVs.

As discussed in "Purpose of and Need for the Plan," the National Park Service has identified impact topics that may be affected by the proposed action or the no action alternative (continue current management). This section establishes the basis for the "Environmental Consequences" section, which assesses the effects the alternatives may have on the impact topics within the affected environment.

SURFACE WATER FLOWS

The preserve is exceptionally flat, with a typical gradient of only 5 to 10 inches per mile. Surface water hydrology of Big Cypress National Preserve is typically characterized as a "sheetflow" flooding regime. During the wet season, the landscape becomes covered with a shallow, continuous expanse of water that flows slowly toward the coast. Water movement is almost imperceptible in the interior of the preserve, where the terrain slopes an average of less than a foot per mile. However, flows are easily observable where the expanse of sheetflow is constricted to pass under a roadway or is channelized into a canal.

Surface water flows across the entire area during high-water conditions. It is most pronounced and is retained the longest in the forested cypress strands and marshy sloughs.

Wet-season conditions typically prevail from early summer to early winter. The quantity of water varies depending on the amount of summer rains, frequency of tropical depressions, occurrence of winter rain, and upstream water management practices. Typically, marsh, prairie, and cypress areas will have water depths of 1 to 3 feet, while areas of pines and hammock habitats will experience little or no inundation.

After surface flows have ceased, water losses continue through evapotranspiration and groundwater seepage. The preserve typically experiences an almost full drydown condition during the late spring, prior to the onset of summer rainfall. During drydown condition, standing water is retained only in the deepest depressions and canals.

The original boundary of the preserve was largely a self-contained, rain-driven watershed. However, surface flows in the original boundary are influenced by upstream management practices and internal barriers to flow. Major physical alterations of the landscape and associated water management practices have greatly modified the volume, timing, distribution, and quality of surface water in south Florida. These actions have included canal and levee building, road construction, agriculture, residential and commercial development, and operation of pumps and flood gates. Such disturbances have been especially pronounced in the greater Everglades east of the preserve and in the failed attempt to develop Southern Golden Gates Estates west of the preserve.

Investigators have documented that surface water in the Big Cypress vicinity preferentially flows in channels rather than in adjacent wetlands (Duever *et al.* 1981; Pernas *et al.* 1995). However, Duever *et al.* (1986a) also observed that topographic irregularities interrupted excessive drainage. Channelization is of particular concern at the southern boundary of the preserve where mixing of fresh water and salt water occurs, and where changes in salinity can change the vegetation composition.

A recent review of historical water-level information by preserve staff showed an increase in the duration of surface water inundation in the 1990s relative to the two previous decades (Sobczak and Pernas 2000). It is thought that the wetter condition in the 1990s was caused by increased rainfall amounts, but upstream water releases, gate operations in adjacent areas, and features within the preserve that block and channelize flow also contributed to the condition. Because the relatively dry conditions that prevailed in the 1970s and 1980s also were influenced by water management practices, there is uncertainty regarding future hydrologic conditions, both in terms of the weather patterns and the Central and South Florida Comprehensive Everglades Restoration Plan (CERP or Restudy) review study (U.S. Army Corps of Engineers 1999).

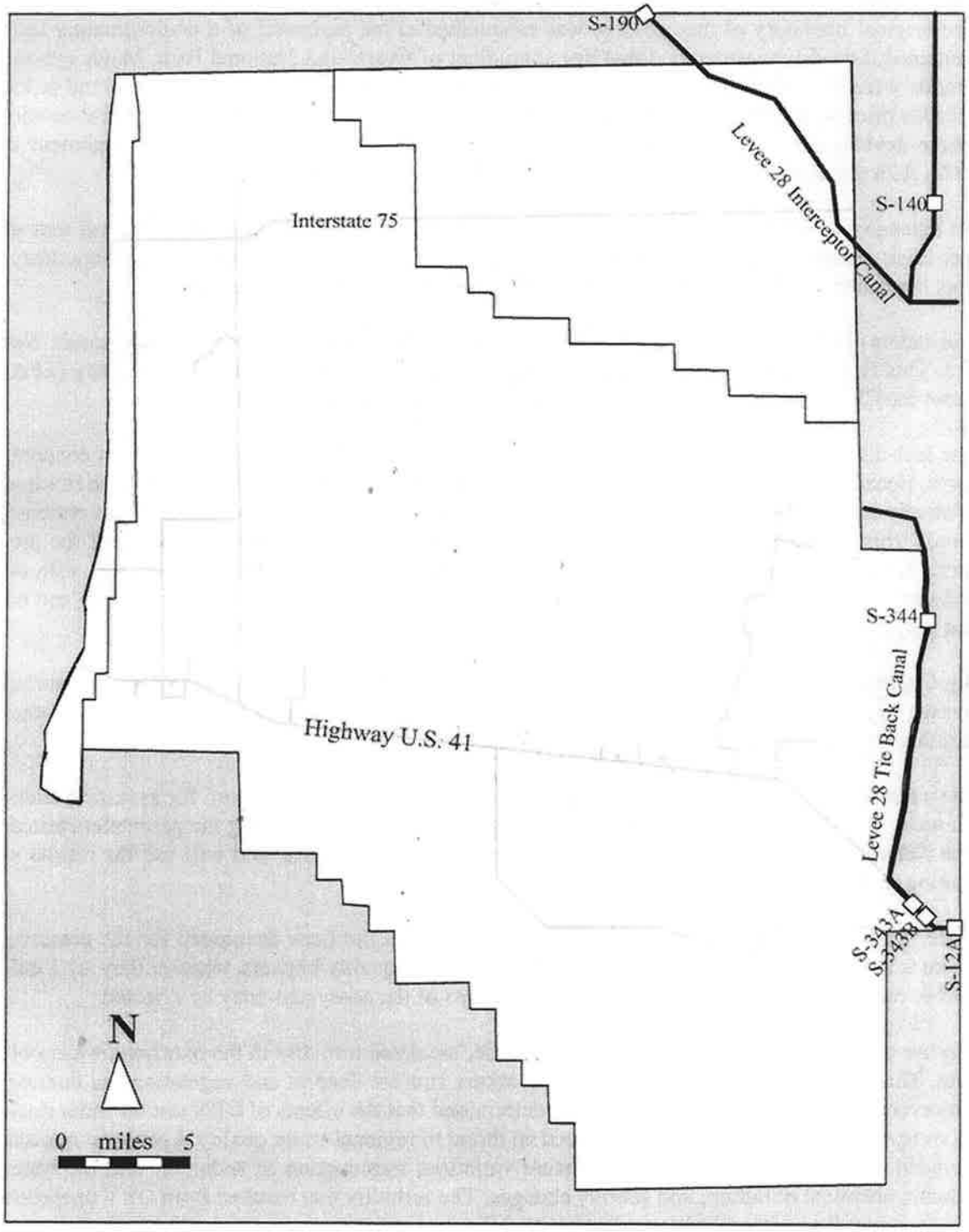
Major physical and operational alterations that will directly impact the preserve over the next 50 years include removal of part or all of the L-28 canal and levee, partial modification of the L-28 tieback, alteration of flows at the northern boundary of the preserve, and changes in the operational rules for regulating flows in adjacent and upstream areas. As shown in the L-28 Canal map, the L-28 canal system is directly east of the preserve boundary and interrupts the generally northeast to southwest flow of water across the area. Water management practices from upstream citrus expansion may influence high-water conditions along the northeast portion of the preserve, but the extent of this impact (if any) is unclear.

Flattened vegetation and tire tracks at roadside entry points are generally the extent of ORV effects seen by most observers. However, aerial views of the preserve show a vast network of ORV trails and travel corridors. This network of tire ruts and ridges could be influencing the volume, timing, and distribution of surface water flows.

The extent, occurrence, and severity of effects that ORVs have had on surface water flows of the preserve are largely unknown. However, ORV ruts, which can be 2 or more feet deep, can channel water and potentially alter natural water flow patterns and timing. Two studies have documented greater water flow rates within ORV ruts than in adjacent undisturbed areas. Duever *et al.* (1981) found that over wet and dry seasons, water flows accelerated from two to four times in trails oriented parallel to the direction of water flows. Flows in some trails continued after water had ceased flowing in surrounding areas, possibly leading to a shortened natural hydroperiod in a localized area. Pernas *et al.* (1995) found that surface water flow always followed airboat trails, regardless of the trail orientation. Within the study area, these flow rates were accelerated approximately five times faster within the airboat trails than in adjacent undisturbed areas.

Duever *et al.* (1986a) hypothesized that trails that were extensively rutted and oriented parallel to flow could drain surface water from an adjacent wetland, particularly in low-lying areas. Such channel formation would be of particular concern at the southern boundary of the preserve because it could increase saltwater intrusion into freshwater wetland habitat. However, they also observed that topographic irregularities interrupted excessive drainage effects, so that impacts tended to be localized.

L-28 Canal Map



WATER QUALITY

The original boundary of the preserve was established at the perimeter of a predominantly self-contained, rain-driven watershed that lies upgradient of Everglades National Park. Major cypress strands were logged in the early 1900s and areas of the watershed were used as farmland in the decades prior to the preserve's establishment. However, the area's remoteness limited it to only sparse development, much of which has been reclaimed since the preserve's establishment in 1974. As a result, the quality of the water within the preserve is high.

An extensive, shallow, surficial aquifer underlies the preserve. The formation is several tens of feet thick under the preserve, but diminishes completely near the preserve's eastern boundary. This limestone aquifer is the main source of fresh water supplies in Collier County.

The waters of Big Cypress National Preserve are currently designated as Outstanding Florida Waters. This is a state designation, delegated by the U.S. Environmental Protection Agency (EPA) under the Clean Water Act, and is intended to protect existing, high-quality waters.

The low-nutrient, high-quality water in the preserve is vulnerable to degradation from contaminants. Because the water is of such high quality, even small amounts of contaminants can result in relatively large adverse effects. External sources of pollution primarily include nutrient-enriched runoff from upstream agricultural activities, especially along the northern boundary of the preserve. Internal contaminant sources include leakage and ancillary activities associated with oil and gas exploration and development, operation of vehicles along roads in the preserve, and oil and gas leakage and soil disturbance caused by the operation of ORVs in the preserve.

Big Cypress National Preserve established a long-term water monitoring program for measuring surface water stage and quality in 1988. Water quality samples currently are collected every other month at 10 stations located throughout the preserve.

The intent of this water monitoring program is to provide a long-term record for assessing ambient water quality conditions and contamination threats. Turbidity is among the parameters tested. The National Park Service currently is analyzing water quality data, and will use the results in making management decisions.

Water quality standards for evaluating ORV impacts have not been developed for the preserve. There is an on-going debate regarding the degree of water quality impacts, whether they are localized or regional in nature, and how other components of the ecosystem may be affected.

The use of ORVs in the preserve generates visible, localized turbidity in the overlying water column. This effect is most pronounced in areas where ruts are deepest and vegetation has thinned. However, a study by Duever *et al.* (1986b) determined that the effects of ORV use on water quality were negligible, localized, and produced no threat to regional water quality. Localized impacts included hydroperiod alteration, temperature variation, introduction of sediment into the water column, chemical pollution, and salinity changes. The turbidity that resulted from ORV operation was found to decrease sunlight penetration, thereby decreasing primary productivity of plants.

According to Beardsley (1995), extensive vegetation impacts from ORV use may inhibit nutrient uptake, causing greater levels of nutrients to remain in the water. Beardsley also stated that loss of vegetation cover reduces water filtration and removes frictional forces that reduce retention of

water in the wetland. In some cases, subtle modification to water quality can impact other biological, vegetative, and wildlife components of the environment, and the existence of many localized impacts can translate into regional-scale and long-term impacts if the processes that cause them occur regularly and are permanent. Regional water quality effects would be most likely during times of heavy ORV use, and when ORV trails are heavily rutted and oriented in the direction of sheetflow.

SOILS

According to Duever *et al.* (1986a), most of the soils at Big Cypress National Preserve are simple geological and biological products that have not had sufficient time or environmental conditions for evolution into true soils. Marl, sand, organic matter, and rock are the four substrate types in the preserve.

Carbonate marls are the most widespread unconsolidated soil type of the preserve. Marls are mixtures of calcareous clays with calcite particles, sand, and/or shell fragments, and may have periphyton precipitates at the surface. Marl soils support few trees and provide poor traction when wet. Therefore, ORV use tends to spread out in these areas, causing numerous parallel routes.

A hard limestone substrate, commonly called cap rock, is typically located 10 inches to 40 inches below the soil surface. The limestone also outcrops at the land surface, particularly within hardwood hammocks. The shallow limestone rock is typically pitted with solution holes of all sizes. In some areas, ORV use has displaced overlying soils and the limestone cap rock is exposed.

Cypress domes indicate areas of thicker soil deposition. Typically, these sites were caused by advanced dissolution and subsequent collapse of the limestone rock.

Sand deposits within the preserve are thin, infrequent, and likely derived from old shoreline deposits. Peats derived from partially decayed plant material are also present in the preserve and are identified by their major plant components that include mangroves and sawgrass.

The extent to which ORV operation affects soils within the preserve varies based on soil depth, soil composition, plant cover, and frequency of use. The controlling factor often is the moisture content of the soil. The calcium carbonate-rich organic soils that occur throughout most of the preserve (less so in the north) are extremely pliable when saturated and are susceptible to deformation by vehicle tires. Localized impacts include complete loss of the soil (bedrock exposure), rutting and ridging of soil, and water channelization. In addition, lateral expansion of the trail network (development of new trails and widening of existing trails) occurs as operators avoid areas that are excessively muddy or rutted.

Duever *et al.* (1981) found that water elevation was the most important environmental factor influencing the severity of ORV impacts on soils. In areas where the water table was at the surface at the time ORV impacts occurred, the degree of impact and time required for recovery increased.

As described in the "Surface Water Flows" section, the annual surface water inundation periods during the 1990s were longer than they had been during the preceding two decades (Sobczak and Pernas 2000). As a result, surface organic sediments were saturated longer and dry less. This condition increased soil deformation from ORV activity, both from repeated passes and widening

existing trails to avoid heavily rutted areas. This is believed to have increased the degree and spatial coverage of ORV impacts in the preserve.

ORV-induced deformation of soil structure and level causes an overall depletion of the soil resource through such processes as oxidation and erosion (Yamataki 1994). ORVs also affect processes that are influenced by soils, such as surface flows, evaporation, and the abundance and distribution of plants and wildlife.

Duever *et al.* (1986b), in a study of old trails in Big Cypress National Preserve, stated that once soils have been displaced, there are few natural mechanisms of restoring ground contour, and the ruts remain indefinitely. Therefore, it is likely that soil impacts are cumulative and worsen over time.

VEGETATION

The Big Cypress National Preserve general management plan and environmental impact statement (NPS 1991) included a comprehensive description of the vegetation resources. Since then, vegetation has been re-classified by Welch *et al.* (1999) to provide consistency with the mapping of other public lands in the south Florida region. The largest changes were that some areas formerly classified as marsh, such as those in the Stairsteps Unit, are now defined as prairie. The current classifications of vegetation within the preserve are shown in the Vegetation Classes map. Areas used by ORVs are shown in the ORV Use Areas figure.

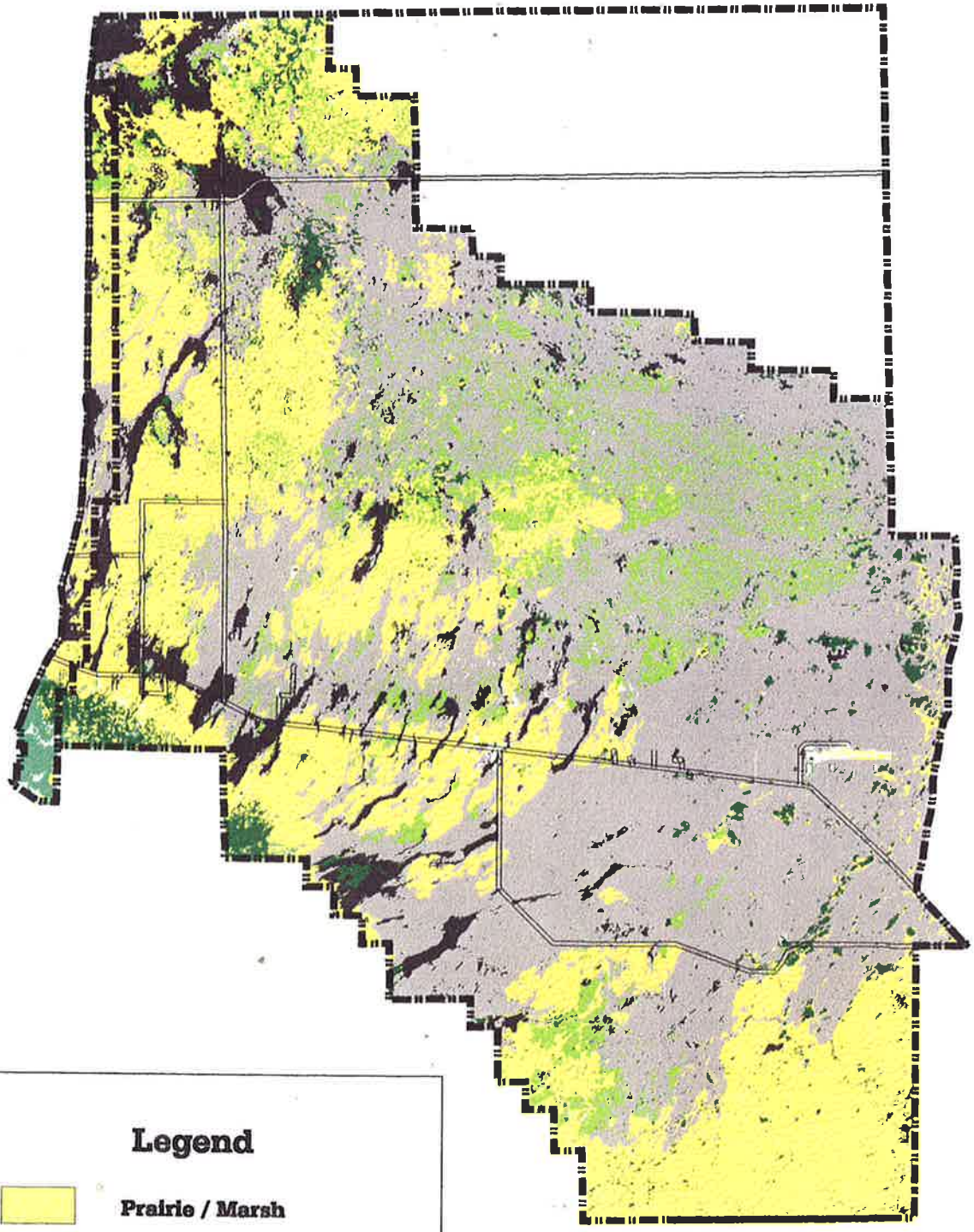
This ORV management plan and supplemental environmental impact statement tiers to the 1991 document. The ecological importance of the vegetation communities in the preserve has changed little since the publication of the general management plan. Therefore, except for ORV effects, the "Affected Environment" section of the general management plan is incorporated by reference to define the affected environment for vegetation in this ORV management plan.

There are indications that ORVs have resulted in the spread of invasive plants, such as *Schinus terebinthefolius* (Brazilian pepper), *Melaleuca quinquenervia*, and *Lygodium microphyllum* (old world climbing fern), within Big Cypress National Preserve. ORVs transport seed in their tire treads and vehicle beds, and distribute it in currently unaffected areas of the preserve as they travel. Evidence of the spread of invasive plants along ORV trails has particularly been documented around the Monroe Station trailhead (Pernas 1999).

Prairies

Prairies appear to be the vegetation community in the preserve most impacted by ORV use. ORV trails within this community are easily distinguished on aerial photography. The tracks made by ORVs persist and are even visible on large-scale aerial images.

Impacts of ORV traffic in prairies include vegetation loss and exposed soils. During the ORV trail analysis performed by the University of Georgia (Welch and Madden 1998), many of the prairie areas were so heavily trafficked that mapping of individual trails was impossible. These areas are represented by shaded polygons in the University of Georgia Trails Interpretation map that is presented later in this "Affected Environment" section under "Visitor Experience Issues."



Legend

- Prairie / Marsh
- Cypress
- Mangrove
- Hammock
- Mixed Hardwood Swamp
- Pineland

VEGETATION CLASSES

SOURCE: UNIVERSITY OF GEORGIA, CRSMS 1999

BIG CYPRESS NATIONAL PRESERVE

United States Department of the Interior
National Park Service
BECY/JUNE-2000

5 0 5 10 Miles

January 2000

January 2000

ORV USE AREAS: Examples of Rutting Caused By ORV Traffic In Airplane Prairie

Dispersed Use Area In Airplane Prairie

Dispersed Use Area In Turner River Unit

Trail Head and Dispersed Use Area Near Oasis Visitor Center

ORV Tracks Surrounding Willow Head In Turner River Unit

ORV USE AREAS

Duever *et al.* (1981) and Duever *et al.* (1986b) described effects of ORV traffic in marl marshes and sand marshes. Based on the species composition of these areas, these now appear to be classified as prairies. Duever *et al.* (1986b) observed that sand marshes that were not inundated were less likely to sustain heavy impacts from ORV use. This suggests that seasonal variation in hydrology may be an important factor in determining ORV effects, and that ORV use in prairies during the wet season should be minimized.

ORV uses have been shown to alter plant community structure. After 1 year of recovery, Duever *et al.* (1981) found that *Cladium jamaicense* (sawgrass) and *Muhlenbergia capillaris* (muhly grass) were reduced in the tire lanes. *Bacopa* sp.(hyssop) and *Utricularia* sp. (bladderwort) were common in the rutted areas; this was attributed to an increased hydroperiod in the tire ruts and increased sunlight from tree or shrub canopy removal within ORV use areas. After 7 years, Duever *et al.* (1986b) found that four graminoids (grasses, sedges, and rushes) were more common in ORV trails than in comparison areas. *Cladium jamaicense* (sawgrass) was less common in the trails used by ORVs than in the undisturbed comparison areas.

Duever *et al.* (1981) and Duever *et al.* (1986b) also evaluated effects in "small cypress" communities. Descriptions of these areas in Duever *et al.* (1981) suggest that they may be ecotones between cypress domes and prairies or dwarf cypress prairies, where scattered small cypress occur in a prairie community. These areas are closely aligned ecologically with marl prairies.

Duever *et al.* (1981) indicated that, of all five types of sites tested with wheeled vehicles, the small cypress communities required the lowest amount of use by wheeled ORVs to create "a significant impact." Duever *et al.* (1986b) indicated recovery of small cypress communities was lower than other communities 7 years after intermediate and heavy impacts from wheeled ORVs.

Duever *et al.* (1981) found that small (less than 3 feet tall) cypress trees suffered minor damage in areas used by ORVs, but that cypress trees between 3 feet and 10 feet tall had severe damage. Damage to these trees and associated mortality increased with ORV use. This indicates that cypress trees between 3 and 10 feet tall can be adversely affected in areas used by ORVs, but that after limited ORV use, recovery of very small trees can occur quickly.

Marshes

Since the preparation of the general management plan in 1991, the classification of marshes in the preserve has been changed to be consistent with vegetation classification throughout the south Florida region. Under the new classification of Welch *et al.* (1999), marshes now include many of the areas identified as prairies in 1991.

Marshes in Big Cypress National Preserve include fresh water and salt water wetlands. Aerial photography indicates that, along with prairies, the marsh community has incurred the greatest impact from ORV use (Welch and Madden 1998; Welch *et al.* 1999). Marshes in the preserve have extensive, braided networks of trails. Rutting from ORVs in marshes is easily visible on aerial photography, and in many areas is quite extensive.

Duever *et al.* (1981) and Duever *et al.* (1986b) described effects of ORV traffic in inundated sand marshes and peat marshes, although wheeled vehicles were not tested in peat marshes. These communities appear to include much of the "marshes" category used in this plan. They consist of

open communities with few trees or shrubs and a ground cover that is dominated by emergent herbs. Inundation is year-round or nearly year-round.

Duever *et al.* (1981) indicated that, with the same amount of ORV use, ORVs produced heavy impacts in inundated areas of marshes, but less impact in non-inundated areas. Continuously inundated marl marshes were not tested with wheeled vehicles, but appeared to be more affected when they were inundated than when the water table was below the ground surface. This suggests that marl marshes with extended hydroperiods may be quickly impacted by ORV use.

ORV use has been shown to alter marsh plant composition and structure. In marl marsh communities, Duever *et al.* (1981) found that *Panicum* sp. (panic grass), *Cladium jamaicense* (sawgrass) and *Muhlenbergia capillaris* (muhly grass) decreased with increased ORV use. *Utricularia* sp. (bladderwort), often a floating aquatic plant, was common in the rutted areas; this was attributed to an increased hydroperiod in the tire ruts. Sand marsh communities showed little difference in plant diversities with comparison areas after 1 year. After 7 years, *Centella asiatica* (coinwort) was more common in marl marsh areas used by ORVs.

Cypress Strands and Domes, Mixed Hardwood Swamps, and Sloughs

Cypress strands, mixed hardwood swamps, and sloughs form irregular bands trending northeast to southwest along the major drainages of the preserve. These communities, along with the scattered cypress domes, are the wettest of all vegetation types in the preserve. The interiors of these types are important refuges and concentration points for water-dependent wildlife during the annual dry season. The general management plan contains more detailed descriptions of each of these vegetation types (NPS 1991).

Generally, strands, swamps, sloughs, and domes are natural barriers to ORVs. Because these wetlands depend on topographic depressions, water depth increases substantially from their edges to the center. Most of the areas covered by these wetlands have water too deep to support ORV use, and ORVs must either skirt the shallowest margins or cross at the narrowest and shallowest places.

The forested wetlands, including cypress strands, cypress domes, and mixed hardwood swamps, typically have sandy, mineral soils that are less sensitive to ORVs than adjoining marl prairies. However, deep water and large, closely spaced trees confine ORVs to established, previously cut trails threading along the margins where mineral soil or bedrock provides sufficient traction and water depth is relatively shallow. ORV tracks usually encircle or skirt cypress domes along their outermost perimeter for the same reasons.

There are relatively few ORV trails perpendicular to the forested drainages. ORV trails crossing strands and swamps are normally on well-established, deeply entrenched routes where the forest narrows and water levels are shallower. Duever *et al.* (1981) found that established ORV trails through strands and swamps had the deepest ruts of all vegetation types, and that typically trails were worn down to bedrock and filled with standing water.

Sloughs, which are located primarily in the marshes of the Stairsteps Unit, typically contain deep water and deposits of muck or peat, all of which discourage the use of wheeled ORVs. Dense thickets of willows along sloughs deter airboats. As a result, ORV trails usually cross sloughs at

established, narrow passages where wheeled vehicle drivers are reasonably confident of not being mired and airboats can avoid willows.

Mangroves

The mangrove communities in Big Cypress National Preserve are found primarily in Zone 1 of the Stairsteps Unit. Zone 1 is currently open only to wheeled vehicles, which primarily use the northern portion of the area, which does not contain mangrove forest.

Zone 2 of the Stairsteps Unit contains mangrove forest along its southern edge. Currently, airboats are allowed to travel in this area when water levels are adequate.

Hardwood Hammocks

Hammocks are scattered throughout the preserve. These areas are located on higher sand islands, and because of their raised position, they often appear as islands of trees. These areas function as refuges for wildlife during periods of high water. A large proportion of the known archeological sites within the preserve have been found in hardwood hammocks.

Hammocks are a successional stage that occurs after pinelands, when hardwoods dominate the community and exclude pines. In south Florida, this typically occurs when a pineland is insulated from fire for a long period, so that hardwoods are able to survive and replace pines. Trees that dominate these communities are often large, such as *Quercus* spp. (oaks), *Sabal palmetto* (sabal palms), or *Lysiloma latisiliquum* (wild tamarind). As a result, the hardwood hammocks usually are avoided by vehicle trails, and experience little ORV use. Occasionally, smaller trees and shrubs in the understory may be subject to damage, as they can be bent or broken by vehicles.

Duever *et al.* (1986b) stated that abandoned trails in the Loop Unit were vegetated by *Baccharis* spp. (saltbush) after 7 years. Saltbush species are opportunistic in disturbed areas. Duever *et al.* (1986b) speculated that the abandoned trails would eventually succeed to the native understory species, but no further assessment has been conducted to determine if this is occurring.

Pinelands

Pinelands occur extensively within the preserve, primarily throughout the northeastern portions. An estimated 23,500 acres of pinelands in the preserve have never been cut. Old-growth pinelands within the preserve are one of the largest examples of this vegetation type remaining in south Florida.

Of all the plant communities tested for ORV impacts by Duever *et al.* (1981), pinelands were the most resistant to adverse effects. Wetter pine communities were more heavily affected. Duever *et al.* (1986b) found that two of three pineland areas affected by ORVs had recovered after 7 years, but that the third, and wettest, pineland had not fully recovered. Amounts of ground cover did not appear to be substantially altered by ORV use. Heights of plants in areas of ORV use were decreased, but recovered in one growing season.

Within the pineland understory, Duever *et al.* (1981) found few differences in plant communities compared with undisturbed areas after 1 year. However, they did note slight increases in *Cladium*

jamaicense (sawgrass), *Centella asiatica* (coinwort), and *Hyptis* sp. compared with undisturbed comparison sites, while *Panicum* sp. (panic grass) and *Aristida* sp. (three-awn grass) decreased with increased ORV use. After 7 years, Duever *et al.* (1986b) indicated that *Hypericum* sp., *Ludwigia* sp., and *Xyris* sp. (yellow-eyed grass) were more common in ORV trails than in comparison areas, while *Pluchea* sp. (fleabane) was less common. *Cladium jamaicense* (sawgrass) was less common in the trails used by ORVs than in the undisturbed comparison areas.

Pinelands are fire-dependent, and prescribed fires by NPS staff maintain the habitat viability by preventing hardwood succession. The trails through these communities could act as firebreaks, isolating portions of the pinelands from the benefits of fire. However, the firebreak effect of trails is usually taken into account in management fires, and multiple ignition points are used. While the effect of trails on the behavior of natural fires has not been studied, it is likely that low-intensity fires are more affected than high-intensity fire patterns.

Pinelands provide habitat for the federally listed red-cockaded woodpecker. Red-cockaded woodpeckers form clusters of cavity trees within pinelands. NPS annual surveys of red-cockaded woodpecker clusters have not documented the loss of pines because of ORV traffic.

WILDLIFE

The general management plan and environmental impact statement (NPS 1991) included a comprehensive description of the wildlife resources of the preserve. This ORV management plan and supplemental environmental impact statement tiers to that document, in conformance with the Council on Environmental Quality (1978) guidelines for implementing the National Environmental Policy Act. Therefore, the "Affected Environment" section of the general management plan is incorporated by reference to define most of the affected environment for wildlife in this ORV management plan.

As shown in Table 8, ten species of wildlife that are federally listed as either endangered or threatened reside in Big Cypress National Preserve. All of these species occupy portions of the preserve where ORV activity occurs. The state of Florida lists an additional seven species that occur in the preserve as threatened or endangered. Of these 17 species, two are reptiles, nine are birds, and six are mammals.

The state lists an additional 13 species of special concern (SSC). These species warrant attention because they have experienced long-term population declines and are vulnerable to exploitation or environmental changes.

Table 8 displays the status of all 30 special status wildlife species that occur in Big Cypress National Preserve. Brief descriptions of the federally listed species as they relate to ORV use are provided below.

American Alligator

The American alligator is listed as threatened because of its similarity of appearance to the American crocodile, which is endangered. The alligator is common in the vast wetland communities of the preserve. Encounters with ORVs occur most often during the dry season when alligators travel overland seeking permanent bodies of water.

TABLE 8: LISTED WILDLIFE SPECIES IN BIG CYPRESS NATIONAL PRESERVE [a/]

Common Name	Type	Scientific Name	Designated Status [b/]	
			Federal	State
Florida tree snail	Mollusk	*Liguus fasciatus*		SSC
Common snook	Fish	*Centropomus undecimalis*		SSC
American alligator	Reptile	*Alligator mississippiensis*	T (S/A)	SSC
Eastern indigo snake	Reptile	*Drymarchon corais couperi*	T	T
Roseate spoonbill	Bird	*Ajaia ajaja*		SSC
Cape Sable seaside sparrow	Bird	*Ammodramus maritimus mirabilis*	E	E
Limpkin	Bird	*Aramus guarauna*		SSC
White-crowned pigeon	Bird	*Columba leucocephala*		T
Little blue heron	Bird	*Egretta caerulea*		SSC
Reddish egret	Bird	*Egretta rufescens*		SSC
Snowy egret	Bird	*Egretta thula*		SSC
Tri-colored heron	Bird	*Egretta tricolor*		SSC
White ibis	Bird	*Eudocimus albus*		SSC
Arctic peregrine falcon	Bird	*Falco peregrinus tundrius*		E
Florida sandhill crane	Bird	*Grus canadensis pratensis*		T
American oystercatcher	Bird	*Haematopus palliatus*		SSC
Bald eagle	Bird	*Haliaeetus leucocephalus*	T	T
Wood stork	Bird	*Mycteria americana*	E	E
Osprey	Bird	*Pandion haliaetus*		SSC
Brown pelican	Bird	*Pelecanus occidentalis*		SSC
Red-cockaded woodpecker	Bird	*Picoides borealis*	E	T
Everglade snail kite	Bird	*Rostrhamus sociabilis*	E	E
Black skimmer	Bird	*Rynchops niger*		SSC
Least tern	Bird	*Sterna antillarum*		T
Everglades mink	Mammal	*Mustela vison evergladensis*		T
Mountain lion	Mammal	*Puma concolor*	T (S/A)	
Florida panther	Mammal	*Puma concolor coryi*	E	E
Big Cypress fox squirrel	Mammal	*Sciurus niger avicennia*		T
West Indian manatee	Mammal	*Trichechus manatus*	E	E
Florida black bear	Mammal	*Ursus americanus floridanus*		T

a/ Sources: USFWS 1999a and Florida Fish and Wildlife Conservation Commission 1997.

b/ E = endangered. S/A = similarity of appearance to a threatened or endangered species.
SSC = species of special concern. T = threatened.

The American crocodile does not occur within Big Cypress National Preserve. Therefore, effects of ORV management on the American alligator were not considered in the "Environmental Consequences" section.

Cape Sable Seaside Sparrow

The Cape Sable seaside sparrow is endemic to south Florida. The U.S. Fish and Wildlife Service (USFWS) has been petitioned to revise the critical habitat designated for this species, which could include the Stairsteps Unit in Big Cypress National Preserve.

Two of the six subpopulations described by Curnutt and Pimm (1993) occurred in the preserve. The Ochopee Prairie subpopulation (Zone 1 of the Stairsteps Unit) was extirpated by 1979, with its demise attributed to fires and salinity changes associated with altered hydrology (USFWS 1983). The subpopulation of the sparrow west of Shark River Slough, half of which is within the preserve's boundaries, experienced a 90 percent decline in the 1990s (USFWS 1999c). This was attributed to water management practices that had extended the hydroperiod into the breeding season, which has resulted in sparrows shifting from mixed marl prairie vegetation suitable for breeding to sawgrass-dominated vegetation that sparrows do not use for nesting (Curnett *et al.* 1998).

Wheeled vehicles currently are not allowed within known sparrow habitat and administrative actions in recent years have prohibited airboats when and where water levels are at a stage in which their use may cause soil displacement. These management actions have limited airboat use during the nesting season. The long-term effects of airboats on sparrow habitat and their behavior outside the nesting season have not been examined. ORVs may affect the vegetative structure required by sparrows for foraging, nesting, and roosting.

The Cape Sable seaside sparrow is critically endangered. The remaining birds that inhabit the preserve are vulnerable to further losses by either natural or man-caused impacts. Precautions must be taken to minimize disturbance to this species.

Bald Eagle

Three bald eagle territories have been documented in the preserve along the southern boundary, one each in Zones 1, 3, and 4 of the Stairsteps Unit. Based on annual eagle surveys by the Florida Fish and Wildlife Conservation Commission (1980-1999), their productivity has varied.

> When commercial airboat activity was allowed in Zone 1, a buffer was established to prevent ORVs from disrupting nesting activity. This 1,500-foot buffer conforms with USFWS (1987) guidelines for protection of eagle nests.
>
> The eagle nest in Zone 3 is located in the center of a cypress strand, which serves as a natural buffer to ORV traffic. Therefore, the National Park Service determined that posting a 1,500-foot buffer was not necessary.
>
> In 1995 and 1996, adults eagles were observed in the area of the nest in Zone 4, but no young were observed in the nest. Since 1997, no eagle activity has been observed in the territory. A buffer is not posted at this location.

Wood Stork

The wood stork forages annually in the preserve when water levels provide concentrations of fish. Documented nesting in the preserve was rare until 1996 when 45 colonies were reported (Jansen and Brooks 1996). The previous two consecutive years of high water and subsequent buildup of the prey base apparently provided ideal conditions in which to raise young. Wood stork nests have been found only sporadically in the preserve after 1996.

Red-cockaded Woodpecker

The red-cockaded woodpecker is federally listed as an endangered species. Habitat fragmentation and/or loss is the primary threat to this species, which nests in cavities in mature, living pines. Other range-wide threats to the red-cockaded woodpecker include cluster abandonment due to mid-story encroachment and invasive plants.

Management actions for this species within the preserve include mechanical removal of fuel loads under cavity trees and midstory control through prescribed fire. Annual work includes determining cluster status, observing nesting activity, and banding nestlings.

Fifty-three red-cockaded woodpecker clusters, of which 42 are active, have been documented in the pinelands of the preserve. This represents the fifth largest red-cockaded woodpecker population in Florida.

The red-cockaded woodpecker population within the preserve is stable overall. However, the southernmost group of clusters located in Zone 4 of the Stairsteps Unit was impacted by Hurricane Andrew in 1992. The hurricane destroyed approximately 80 percent of the cavity trees and probably killed individual birds.

The habitat surrounding the clusters in Zone 4 continues to show impacts from environmental events such as wildfires and inundation by water for extended periods. The high-water years of 1994 and 1995 resulted in tree mortality at the periphery of the Zone 4 pinelands, demonstrating that extended inundation may adversely affect red-cockaded woodpecker habitat. Reproduction in this area is low and may be the result of a sparse understory in some areas. This area warrants special attention to ensure protection and survival of this species.

There has been no documentation of the loss of trees used by the red-cockaded woodpecker due to compaction or injury along ORV trails. Abandonment of clusters due to disturbance by ORVs also has not been observed.

Everglade Snail Kite

Everglade snail kite habitat consists of freshwater marshes that support apple snails and provide perching and nesting substrate in the form of scattered shrubs or small trees. Snail kites have been documented in the preserve in Lostmans Slough in Zone 4 of the Stairsteps Unit, in the Ochopee Prairie in Zone 1 of the Stairsteps Unit, in the eastern Loop Unit, in the eastern Corn Dance Unit, and in East Hinson Marsh and Okaloacoochee Slough in the Bear Island Unit. On rare occasions, snail kites have been observed along the Birdon Road and Turner River Road canals.

Since nest survey work began in 1995, Everglade snail kite nesting has been documented annually in Zone 4 of the Stairsteps Unit. Annual nest success in 1998 and 1999 was 60 percent, which is relatively high compared to other wetlands surveyed and is above the average range of 32 percent to 50 percent reported by previous studies (Dreitz *et al.* 1999).

Two studies addressed the impacts of human disturbance on snail kites in the water conservation areas of south Florida. Over a 10-year study period, Sykes (1987) reported two nest failures resulting from airboats. Bennetts *et al.* (1988) stated that snail kite nests usually were in denser vegetation than is normally traveled by airboats, but often were in proximity to travel routes. They did not find any evidence of nest damage by airboats.

Florida Panther

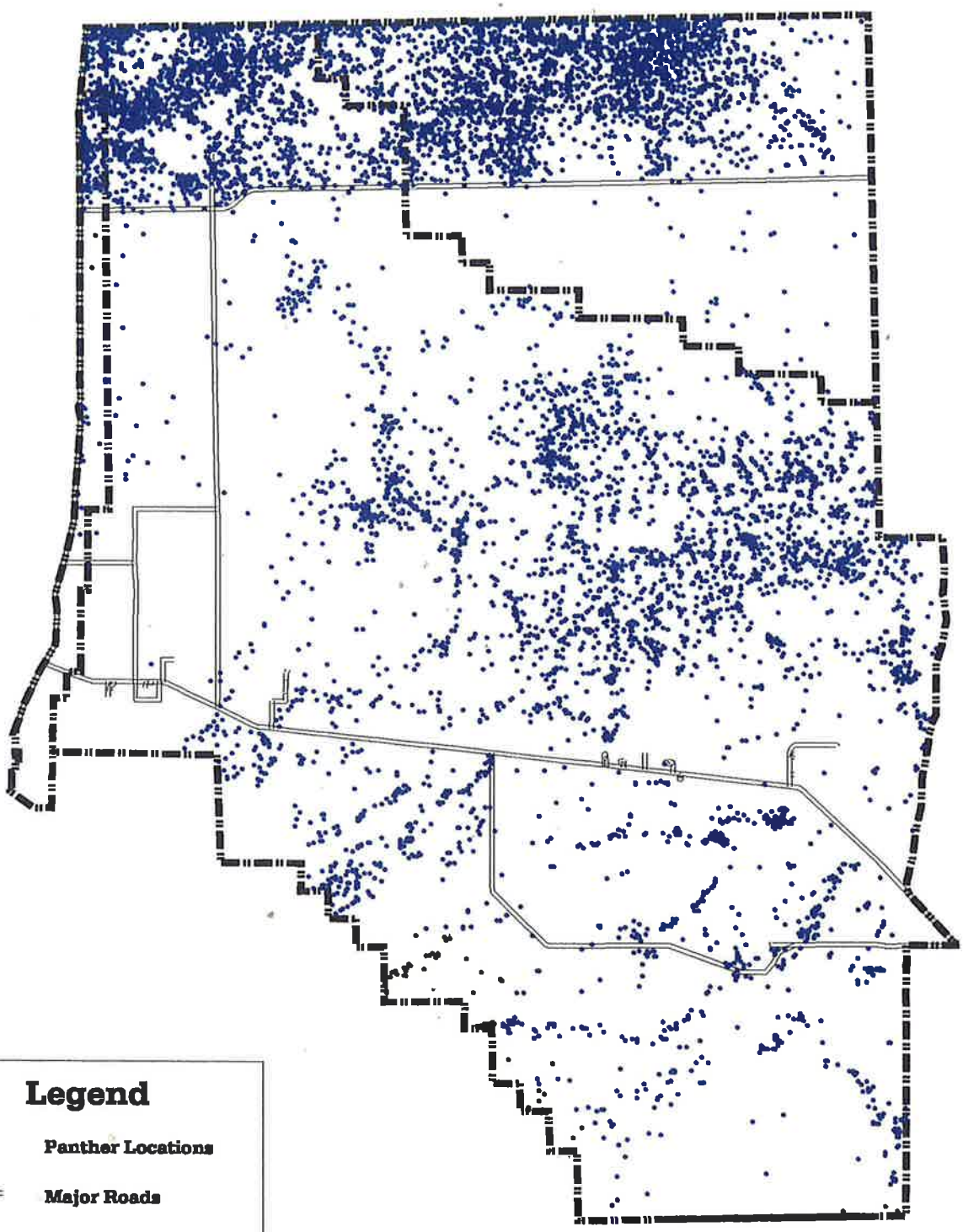
The Florida panther was listed as endangered in 1967. In 1995, eight female mountain lions were released into the Florida panther population, including four introduced into the preserve, to offset the negative effects of inbreeding documented in panthers. The mountain lion, therefore, is federally listed, based on its "similarity of appearance" to the panther.

The Florida Panther Habitat Preservation Plan (Logan *et al.* 1993) identified about 926,000 acres of habitat considered essential to maintaining a minimum viable population of panthers in south Florida. About 582,000 of these acres are within Big Cypress National Preserve, representing approximately 63 percent of the essential habitat.

The most recent verifiable population estimate is 60 panthers, including adults and subadults (McBride 2000). Of the 35 panthers currently monitored via radio-telemetry, 19 inhabit the preserve. The Florida Fish and Wildlife Conservation Commission (FFWCC) monitors six panthers that reside north of I-75 and the National Park Service monitors 13 panthers south of I-75 and north of U.S. Highway 41.

The Panther Locations, 1981-1999 map shows panther locations obtained by radio telemetry three times per week. No panthers currently are known to inhabit the Loop Unit or Stairsteps Unit, although past use has confirmed that these areas can support them. The greater numbers of locations north of I-75 are the result of a longer monitoring period and a denser population in the 1980s.

A study entitled *The Effects of Recreational Deer and Hog Hunting on the Behavior of Florida Panthers* was conducted between 1994 and 1998 (Janis and Clark 1999). It centered on the panther population north of I-75, including the Bear Island Unit. The study results indicated that panthers avoided the system of trails designated for ORV use. Panthers also reduced their use of the unit during the hunting season. It is not known whether this was in response to an impacted prey base or to an increase in disturbance by ORV users or other preserve visitors.



Legend

- Panther Locations
- Major Roads
- Preserve Boundary

PANTHER LOCATIONS, 1981-1999

BIG CYPRESS NATIONAL PRESERVE

United States Department of the Interior
National Park Service

RICY/JUNE-2000

5 0 5 10 Miles

West Indian Manatee

The West Indian manatee uses the open-water creeks and canals of the southwest portion of the preserve. This area has been designated by the USFWS as critical habitat for the manatee. Recreational airboats currently are prohibited in Zone 1.

Other Wildlife Species

The diverse habitats of the preserve support numerous species that are not federally listed as endangered or threatened, yet are important components of a healthy and balanced ecosystem. Duever *et al.* (1986a) provided a partial list of birds, reptiles, amphibians, and mammals that use the habitats of the preserve. A list of the fish and invertebrates has not been compiled.

The marl prairie habitat in the preserve has been the most impacted by ORVs, which have altered both soil and vegetative structure in some areas. Prairies support a biotic community that includes invertebrates, amphibians, reptiles, fish, birds, and small mammals. It is expected that soil disturbance, vegetative loss, and altered water quality and quantity associated with ORV use have locally affected populations, but the extent of the effect has not been quantified.

Since the 1991 general management plan was written, the deer population in many areas of the preserve has increased. Factors influencing this increase include area closures, favorable environmental conditions, and changes in hunting regulations. The feral hog population in Big Cypress National Preserve appears to be stable.

VISITOR EXPERIENCE ISSUES

GENERAL PRESERVE VISITATION

Visitation statistics maintained at the visitor center report a trend of increasing visitation to the preserve. Table 9 shows the last 5 years of visitation.

TABLE 9: VISITATION AT BIG CYPRESS NATIONAL PRESERVE, 1995 TO 1999

Year	Visits
1995	365,463
1996	424,920
1997	462,553
1998	474,895
1999	503,110

The Big Cypress National Preserve visitor study conducted in the winter of 1999 by the Cooperative Park Studies Unit, University of Idaho (Meehan 1999) identified general visitor demographics as follows. These findings are based on 857 questionnaires that were distributed January 2 through 10, 1999 at nine locations; 582 surveys were returned for a 68 percent response rate. Surveys were distributed at many locations, including ORV access sites and hunter check stations.

Twenty-five percent of total visitors surveyed were Florida residents. New York, Indiana, and California followed with 4 percent each. International visitors from 21 countries comprised 21 percent of the visitors surveyed. Germany, Canada, and England were the most frequently cited countries of origin.

Twenty-two percent of those surveyed had used an ORV during their visit to the preserve. Of those, 70 percent had been on a commercial airboat tour, 15 percent used a street-legal 4 x 4, 11 percent used an all-terrain cycle, 10 percent used a swamp buggy, and 2 percent used a privately owned airboat. This totals more than 100 percent because a few individuals had used more than one type of ORV.

Birdwatching, viewing wildlife, sightseeing, experiencing wilderness, and experiencing solitude were rated as the most important activities by those surveyed.

To the question, "What did you like least about your visit to Big Cypress National Preserve?" the most frequent answers included lack of information, poor quality of roads, too much litter, hunting and fishing, people driving too fast, ORVs and ATC's, lack of animals, lack of time, and too many bugs.

Another question was "If you were a park manager planning for the future of Big Cypress National Preserve, what would you propose?" Frequent responses included better signage; more guided foot and bike tours; need to promote the area; boardwalks into wet areas; increased number of trails; more overlooks and roadside parking areas; improved quality of roads; discontinue ORV, airboat, and ATC usage; prohibit hunting and fishing;

discontinue mining and drilling; no further development; expand preserve boundary; provide careful preservation of area; and restore water quality.

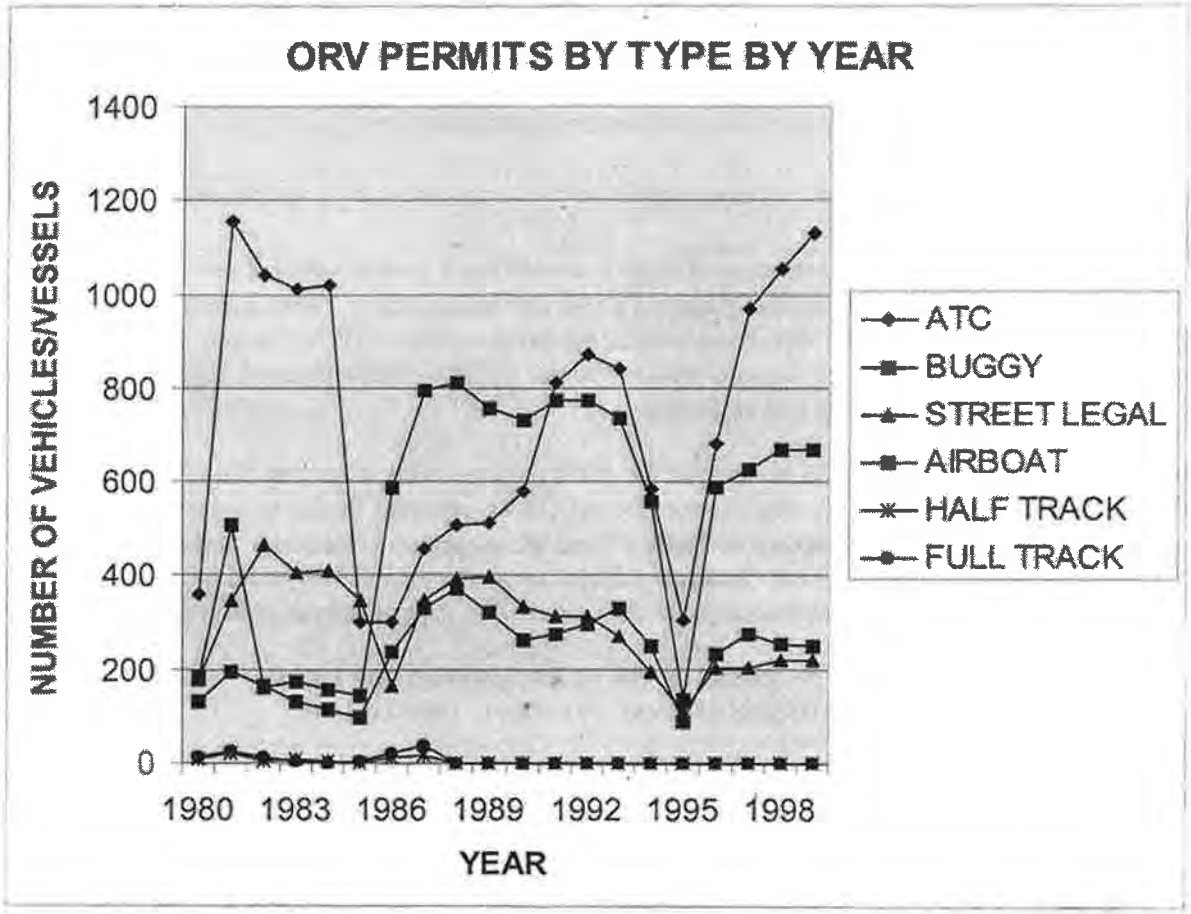
ORV USE

The use of ORVs is a popular recreational activity within Big Cypress National Preserve. Several types of ORVs are used to access the preserve's swampy backcountry. These include street-legal four-wheel-drive vehicles (4 x 4s); light-weight, all-terrain cycles (ATCs); swamp buggies; and airboats. Recreational activities that can involve the use of ORVs in the preserve include hunting, fishing, trapping, birdwatching, and exploring.

No data on ORV numbers could be located for years prior to 1980, when the National Park Service implemented a mandatory registration for all ORVs operated in the preserve. NPS ORV permit data since 1980 are presented in Table 10 and are presented graphically in the figure entitled ORV Permits by Type by Year. Tracked vehicles were banned in 1988 based on research that showed they produced more adverse impacts than other ORV types (Duever *et al.* 1981).

TABLE 10: NUMBERS OF ORVS REGISTERED FOR USE IN BIG CYPRESS NATIONAL PRESERVE, 1980 TO 1999

Year	ATC	Swamp Buggy	Street Legal	Airboat	Half Track	Full Track	Totals
1980	361	180	176	130	10	14	871
1981	1,154	508	347	195	22	26	2,252
1982	1,042	162	464	166	5	14	1,853
1983	1,012	174	404	133	10	4	1,737
1984	1,020	155	410	115	4	2	1,706
1985	300	143	345	96	2	5	891
1986	300	586	165	238	14	21	1,324
1987	456	794	348	328	17	37	1,980
1988	507	810	393	371	0	1	2,082
1989	512	756	398	323	0	0	1,989
1990	580	733	334	261	0	0	1,908
1991	812	773	315	274	0	0	2,174
1992	872	773	314	296	0	0	2,255
1993	842	735	270	331	0	0	2,178
1994	584	559	193	250	0	0	1,586
1995	303	135	108	87	0	0	633
1996	682	586	205	234	0	0	1,707
1997	967	625	202	277	0	0	2,071
1998	1,053	667	219	255	0	0	2,194
1999	1,131	670	220	250	0	0	2,271



Notes: [a] Tracked vehicles were banned in 1988.
[b] Year 2000 data not available at printing.

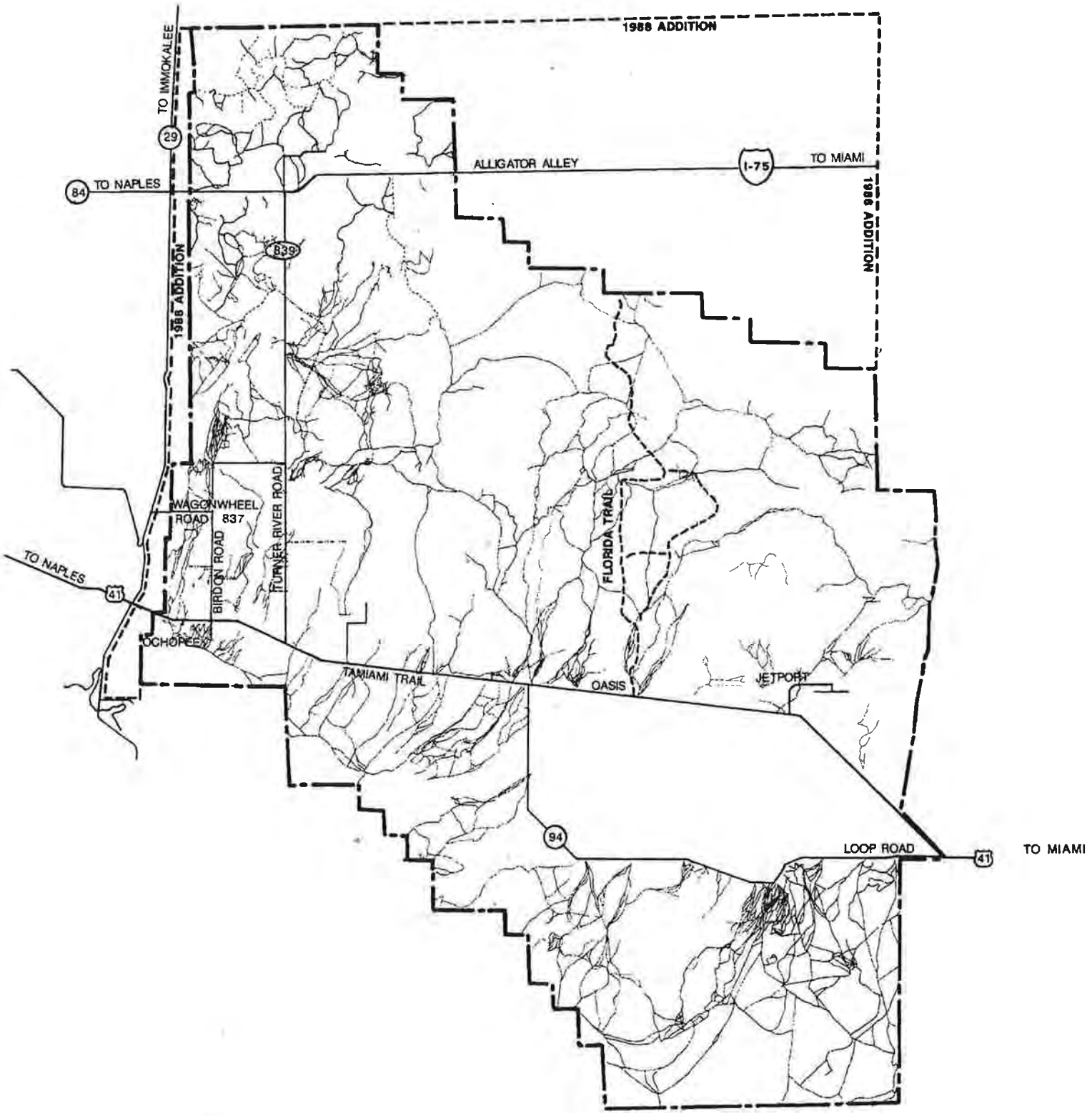
ORV permit numbers have ranged from 633 in 1995 to 2,271 in 1999. Fluctuations in the number of ORV permits issued each year primarily reflect water levels within the preserve, with fewer registered vehicles in the wetter years (e.g., 1995) when portions of the preserve were closed to hunting. Overall, ORV numbers have been slightly increasing.

ORV use is heaviest during the fall, winter, and spring hunting seasons. Opening weekends of hunting seasons and holidays receive the greatest usage.

Accurate data on ORV-related visitation are unavailable, although several efforts have been made to gather such information. Duever *et al.* (1986a) attributed the substantial increase in ORV trails visible in aerial photographs from 1953 to 1973 to increased recreational ORV use, primarily associated with hunting. They further estimated that approximately 2,540 to 4,000 ORV-related hunters may be present in the preserve at peak use times (weekends) during the hunting season. A 1970 study estimated 40,000 person-days of use per year in the entire Big Cypress region (Everglades Jetport Advisory Board 1970).

ORV Trail Mapping

In 1985, during preparation of the general management plan and environmental impact statement, the National Park Service mapped ORV trails, defined at the time as corridors and routes consistently used by ORVs. Trails were mapped from 1:63,000 color infrared photography flown in March 1984. The results are shown in the GMP ORV Trails map. Only those routes that were



OFF-ROAD VEHICLE ROUTES

———— ORV Trails Note: Based on trails visible in USGS high-altitude program imagery (March 1985) and on consultation with preserve staff

·—·—·—·— Abandoned, filled roads used by ORVs

– – – – – – Active or former oil roads used by ORVs

GMP ORV TRAILS

BIG CYPRESS NATIONAL PRESERVE
United States Department of the Interior
National Park Service

DSC/MARCH 1991/176-20,046-A

3 6 9 MI.

clearly visible in the aerial photography were mapped, and major trails through forests were estimated. Based on this method, the total mileage for ORV trails in the preserve was conservatively estimated at 1,240 miles (NPS 1991). This effort did not attempt to map all existing trails.

The Center for Remote Sensing and Mapping Science, University of Georgia, mapped linear features for the National Park Service. The results are shown in the University of Georgia Trails Interpretation map. This map was prepared from 1:40,000 infrared aerial photographs flown in 1994 and 1995 that were enlarged to 1:10,000 scale (Welch *et al.* 1999). Rather than mapping only consistently used routes as in the earlier estimate, ORV trails for this effort were defined as any discernible linear feature.

This map shows a fine network of linear features totaling approximately 29,000 miles. Many of the prairie areas were so heavily trafficked that mapping of individual trails was impossible. These areas are represented on the map by shaded polygons. The mapping technique was quite sensitive, even indicating residual linear features in the Loop Unit, which has been closed to vehicles for more than 20 years. Because of the absence of ground-truthing, the researchers cautioned that linear features other than ORV trails may have been included in the map and that active and abandoned ORV trails were indistinguishable (Welch *et al.* 1999).

Ground-truthing in selected areas was performed in the year 2000. The preliminary findings of this activity are presented in Appendix B.

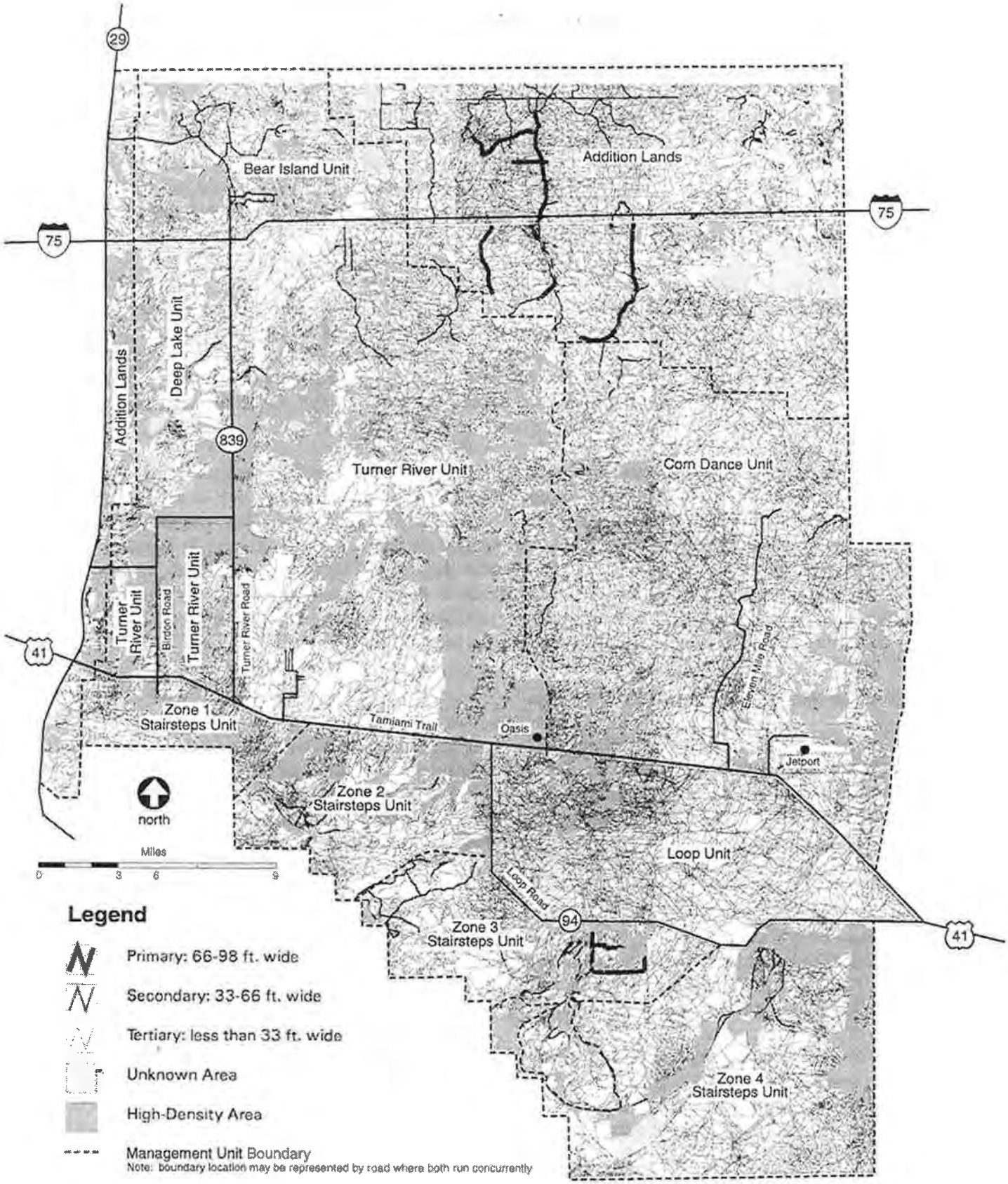
A comparison of the maps appears to show an exponential increase in ORV use since 1984. The difference in the map estimates, however, primarily reflects the difference between mapping known, primary ORV trails and mapping all linear features. To more accurately assess ORV impacts since 1984, the recently mapped linear features are currently being ground-truthed to separate ORV tracks from other linear features such as wildlife trails.

Characteristics of ORVs

The following paragraphs describe the typical types of ORVs that currently are being used in the preserve. Photographs of example vehicles are provided in the Off-Road Vehicles figure.

Street Legal 4 x 4s. Street-legal four-wheel drive ORVs and trucks that are commercially manufactured and sold are very restricted in the extent of their access within the preserve. These vehicles require the driest driving conditions and rarely venture very far into the preserve's backcountry. As a group, this ORV type is the heaviest, with a mean weight of 4,431 pounds (based on 1996/97 permit data from the preserve). On average, they comprise approximately 18 percent of the ORV permits registered with the National Park Service, although this varies from year to year.

All-Terrain Cycles (ATCs). Small, commercially manufactured ATCs tend to be restricted to drier terrain, as they lack the clearance required for deeper water and mud. They are also limited in their ability to carry camping gear and supplies on extended overnight backcountry trips. However, they are less expensive to purchase and maintain, easier to transport, and can penetrate wooded areas more easily than other ORV types. These vehicles are the smallest and lightest ORVs used in the preserve; current four-wheel drive models range in weight from 400 to 600 pounds. On average, ATCs comprise approximately 39 percent of the Big Cypress National Preserve ORV permits.



Notes:
This map is a photgrammetric interpretation.
Information shown on this map has not been field verified.
Data Source: University of Georgia Cooperative Agreement 5280-7-9002, September 1, 1998

University of Georgia Trails Interpretation
Big Cypress National Preserve
United States Department of the Interior
National Park Service

Swamp Buggies. Swamp buggies include a wide variety of custom-designed and -built vehicles. These vehicles have a wide range of configurations based on the frames, engines, number of axles, and wheel sizes used. Their weights range up to 7,160 pounds with an average of 3,629 pounds. These vehicles are less restricted in their access than street-legal vehicles and ATCs, and can carry several individuals and supplies deep into the backcountry on extended trips. However, they are more expensive to build and maintain, less reliable, and require substantially larger trailers to transport to and from the area. Swamp buggies annually comprise approximately 30 percent of ORV permits.

Airboats. Airboats can be commercially manufactured or custom-designed and -built. Airboats consist of a shallow, rectangular, aluminum hull powered by an aircraft or automobile engine that drives a large aircraft propeller. This ORV type is generally restricted to areas covered by deeper water, as their hulls are easily damaged by rock outcrops or obstructed by trees. An advantage is their speed of transport; while wheeled ORVs travel very slowly, airboats are operated at 20 to 60 mph. On average, airboats comprise about 13 percent of ORV permits.

Use patterns within the management zones are directly influenced by terrain characteristics. Airboats can most easily negotiate the marshes and wet prairies south of U.S. Highway 41 and Loop Road. Wheeled vehicles are used more frequently in shallow marl soils, sandy soils, and the drier upland areas north of U.S. Highway 41. Swamp buggies are less restricted, although in forested areas they are constrained by the width of the corridor through the trees, size of the vehicle, and tire size. ATCs are less confined to trails and can move faster but cannot traverse the marl or mucky soils as well as the swamp buggies. Street legal four-wheel-drive vehicles require mostly dry conditions and infrequently travel very far into the preserve backcountry (NPS 1991).

Characteristics of ORV Users and Visitation

Information about ORV users was obtained from a survey conducted as part of this planning effort (Farrell *et al.* 1998). Eight hundred of the 1,660 ORV permit holders registered by spring of 1997 were sent a mail-back questionnaire in April 1997. A stratified random sampling approach was used to obtain representative subsamples for permit holders for the four vehicle types. The survey had a response rate of 69 percent (552 respondents). Of these, 10 were unusable and were not included in the analysis.

Nearly all of the respondents were male (98 percent) and white (78 percent); other significant ethnicities were Native American (11 percent) and Hispanic (11 percent). Eighteen percent of the respondents reported that they owned land within the preserve, and 7 percent lived within the preserve. The respondent's ORV types were swamp buggy (48 percent), all-terrain cycle (25 percent), airboat (14 percent), and street-legal 4 x 4 (13 percent).

ORVs were used predominantly for hunting-related activities, although as shown in Table 11, the survey revealed participation in a wide variety of non-hunting activities. Most respondents visit the preserve frequently, and 67 percent estimated they have made more than 100 trips to the area. Over the previous 12 months, 61 percent of the respondents reported they had visited the preserve 10 or more times, while 16 percent visited 30 or more times. Most respondents spent 2 or 3 days per trip.

Swamp buggy

Airboat

Swamp buggy

Swamp buggy

All-terrain

Street legal 4 X 4

Off-Road Vehicles

TABLE 11: ACTIVITIES PARTICIPATED IN BY ORV PERMIT HOLDERS DURING A 1-YEAR PERIOD

Activity	Percent (N=542)	Activity	Percent (N=542)
Camping	81	Visiting with members of my group	52
General gun hunting (deer or hog)	81	Photography	51
Pleasure of driving an ORV	77	Visiting others (residents/campers)	50
Prehunting season scouting	69	Picnicking	48
Fishing	68	Small game hunting	38
Sightseeing	64	Frogging	34
Animal/bird watching	54	Swimming	20
Archery hunting	52	Migratory game bird hunting	14
Spring turkey hunting	52	Other	10

ORV riding is a social activity. Most (61 percent) of the respondents said they visit the preserve with family and friends, 21 percent visit most often with just friends, 11 percent with just family, and only 5 percent visit the area alone.

Respondents were asked about the role and importance of the ORV to their enjoyment of the preserve. As shown in Table 12, seeing wildlife, the ability to reach a favorite destination, sharing activities with friends and family, and reaching a favorite hunting spot were the most highly rated items.

TABLE 12: ROLE AND IMPORTANCE OF THE ORV IN RECREATIONAL EXPERIENCES

Role of ORV	Mean Scale Rating [a/]
See wildlife	3.8
Reach a favorite destination	3.7
Share an activity with friends or family	3.6
Reach my favorite hunting spot	3.4
Explore places where few others go	3.4
Scout new hunting places	3.2
Experience the simple joy of riding	3.2
Travel off the beaten path	3.2
Bring in equipment and supplies	3.0
Visit friends in other camps	2.6

a/ Scale: 1 = strongly disagree to 5 = strongly agree.

Respondents also were asked to indicate their extent of agreement with statements describing the importance of specific places, vehicle types, and routes used within the preserve. The results, shown in Table 13, reveal a remarkably clear delineation and substantial agreement among ORV users. Strong agreement was voiced for the statements "I like to explore new places in Big Cypress" and "I am very attached to a special place in Big Cypress." Such statements indicate that while ORV visitors are deeply attached to certain places such as hunting camps or favored hunting spots, they also assign considerable importance to the opportunity provided by their ORVs to

roam and explore the preserve's backcountry. The most strongly rated statement was "I am very attached to the ORV I use in Big Cypress," likely reflecting the substantial work involved with constructing and maintaining ORVs such as swamp buggies and airboats.

TABLE 13: AGREEMENT WITH STATEMENTS DESCRIBING THE IMPORTANCE OF SPECIFIC PLACES, VEHICLE TYPES, AND ROUTES USED WITHIN THE PRESERVE

Statements	Mean Scale Rating [a/]	Percent Agree	Percent Disagree
I am very attached to the ORV I use in Big Cypress	4.5	89	4
I like to explore new places in Big Cypress	4.3	87	2
I am very attached to a special place in Big Cypress	4.1	73	5
I couldn't do what I do in Big Cypress with any other type of ORV	3.9	67	18
I keep going back again and again to the same place	3.7	63	20
I generally take the same travel route through Big Cypress	3.1	44	37
If amount of time needed to reach my destination in Big Cypress stays about the same, one travel route is as good as another	2.4	25	58
One management unit is as good as another for what I like to do	2.1	15	65
One type of ORV is as good as another for what I do in Big Cypress	2.0	15	75

a/ Scale: 1 = strongly disagree to 5 = strongly agree.

Many recreation outings are reported to produce long-lasting benefits and valued experiences. As part of the planning effort, selected preserve ORV visitors were asked to describe and explain the experiences and benefits they received from their recreation. These people provided detailed, passionate descriptions of numerous ways in which recreational use of the preserve improved their lives (Hull 1998). An analysis of information from these focus group discussions suggests that preserve ORV users are similar to ORV users in other parts of the country. Specifically, they:

travel in groups

prefer little managerial intervention

see themselves as skilled risk takers and identify with others like themselves

say the ORV experience is a way to release stress, revitalize spirits, and gain a sense of purpose

want to protect the natural environment

enjoy opportunities for social bonding

value the ORV as a means to achieve solitude and immersion in nature

Preserve ORV users experience a high intensity of benefits and attachment to ORV riding in the preserve. Based on information from the larger survey of ORV permit holders, many of the most significant benefits depend on their specific activities and/or on specific places. The type and intensity of place- and activity-dependent benefits create connections between users, activities, and places that must be taken into consideration when selecting ORV management actions.

HUNTING

Hunting is a popular recreational activity in the preserve. Hunting seasons run from September through April. Table 14 summarizes the average number of hunters in the field per day per season at Big Cypress National Preserve.

TABLE 14: NUMBERS OF HUNTERS IN THE FIELD PER DAY PER SEASON AT BIG CYPRESS NATIONAL PRESERVE, 1996 TO 1999

Season	Season Length in Days	Average Number of Hunters per Day
Archery	30	67
Muzzle-loading	16	131
General gun	51	220
Small game	35	9
Turkey	37	33

Deer, turkey, and feral hogs are the principal species hunted. The primary weapons include rifles, shotguns, bows, and muzzle-loading guns. Bird dogs and waterfowl retrievers are the only dogs permitted for hunting. While many hunters use ORVs to get to hunting areas, many other hunters access the preserve on foot.

The general management plan and final environmental impact statement (NPS 1991) describes the types of hunting, different hunting opportunities, general regulations, and permit program. Hunting and fishing are permitted in the preserve in accordance with state laws and regulations, and the preserve is designated as a wildlife management area by the state of Florida. The National Park Service has authority to manage wildlife within the preserve and has delegated the management of the hunt to the Florida Fish and Wildlife Conservation Commission (FFWCC).

In a 1984 FFWCC hunter survey reported in Jansen (1986), approximately 82 percent of Big Cypress National Preserve hunters owned and used ORVs for hunting, 9 percent used someone else's ORV, and 9 percent did not own or use an ORV. The vehicle with the highest ownership was the all-terrain cycle, but the vehicle of highest use was the swamp buggy, which was also the preferred vehicle for 39 percent of the respondents. In this survey, the typical hunter had been going to the preserve for 14 years and used the area 29 days per year, of which 19 were spent hunting. The typical hunter hunted with a group of five family members and friends and stayed at an established camp for 3 days. Hunters used a vehicle for hunting more in 1984 than in the past and supported vehicle use during muzzle-loading, general gun, and small game seasons, but were undecided about their use during archery or spring gobbler seasons.

Jansen (1986) also reported results of a vehicle survey within the preserve. The mean number of hunting-related vehicles counted on Saturday surveys was 178, while weekday surveys recorded an average of 27 vehicles. No visitor estimates were derived from these vehicle counts.

FFWCC records show 19,122 hunter-days of use for the preserve in the 1998-1999 season. The average for the past 5 years in which hunting was not limited by closures was 16,945 hunter-days of use.

Hunters stay at frontcountry campgrounds and at backcountry camps in structures that range from primitive to elaborate. Approximately 100 private, backcountry camps currently exist on private

lands within the preserve. While most hunters access hunting camps by ORV, some walk in, and a few fly in to one of the preserve's three active, private, backcountry airstrips.

OTHER VISITATION

Big Cypress National Preserve visitors participate in a variety of non-motorized recreational activities, including camping, hunting, hiking, canoeing, wildlife observation, photography, fishing, sightseeing, bicycling, and picnicking. Hiking opportunities include Fire Prairie Trail and a section of the Florida National Scenic Trail. The National Park Service collects limited information on visitor statistics for various categories of recreational use.

Camping occurs in both frontcountry and backcountry sites. In 1999, there were 16,301 tent and recreational vehicle (RV, not ORV) camping overnight stays. Backcountry camping statistics were collected only for hikers using Florida Trail campsites and totaled 10,158 overnight stays.

Walk-in hunting particularly occurs in the Loop Unit and Deep Lake Unit.

Visitors drive Turner River Road and Loop Road to view birds, alligators, and other wildlife in the roadside canals.

People commonly fish in roadside canals.

Biking is gaining in popularity, particularly in the Bear Island area and along the Loop Road and Turner River Road/Birdon Road corridor.

Canoeing occurs primarily on the Turner River and Halfway Creek, with commercial tours taking frequent trips from U.S. Highway 41 to the Everglades City area.

Hiking the Florida National Scenic Trail is increasing. Many hikers use the first 5 to 10 miles north of Oasis and return there rather than hiking all the way through to I-75 or points further north.

Interpretive activities offered to visitors in the Oasis, Concho Billie, Bear Island, and Turner River areas sometimes use ORV trails as access into the preserve. Guided bicycle trips, canoe tours, and environmental education activities, as well as swamp walks and hikes up the Florida Trail, are offered each winter season from mid-December through early April.

The Florida Trail received national designation in 1983. The trail is currently incomplete but is planned to extend approximately 1,300 miles from Big Cypress National Preserve to the Gulf Islands National Seashore in Florida's western panhandle. The trail, which is the only designated hiking trail longer than 2.5 miles in the preserve, provides backcountry hiking experiences to preserve visitors. Section 1 of this trail (Oasis to I-75) was established by the Florida Trail Association in the early 1970s. Section 1 begins at the visitor center trailhead and extends about 35 miles to a rest area along I-75. Several informal campsites are located along the trail.

To improve non-motorized recreational opportunities, improvements are gradually being made to campgrounds, access points, and picnic areas. Safety and visitor amenity improvements associ-

ated with the U.S. Highway 41 project will provide further opportunities by providing easy walking on boardwalks, interpretive and educational panels, and safe parking off of the main highway.

Facilities presently available include one visitor center, two picnic areas, a developed campground, five primitive campgrounds, and an interpretive trail on Loop Road. Future projects will add interpretive trails, a canoe landing, a welcome center, and improved parking in many areas.

Frontcountry visitors primarily witness ORV use or its environmental effects at ORV access points along preserve roads. Trails across prairies adjacent to the main highway are particularly noticeable to these visitors, as the trails interrupt the viewshed of wild lands. Walk-in hunters, Florida Trail hikers, mountain bikers, canoeists, and campground visitors are more likely to notice ORV impacts in the preserve than are frontcountry visitors.

NONFEDERAL PROPERTY OWNERS

The legislation establishing the preserve permitted continuation of private ownership of "improved properties." There are numerous types of non-federal landowners within the boundaries of Big Cypress National Preserve. These include approximately 100 owners of frontcountry properties that can be accessed from improved roads, and another 100 owners of backcountry properties that are customarily accessed by ORVs. In addition, the Miami-Dade County Port Authority owns the 23,481-acre Jetport, and the Internal Improvement Trust Fund of the State of Florida owns 12,561 acres.

Both residential and commercial frontcountry private property owners have access to their properties from improved roads. Many of these owners use ORVs to enter the preserve from any point along their property boundary.

ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

The National Environmental Policy Act (NEPA) requires that environmental documents disclose the environmental impacts of the proposed federal action, reasonable alternatives to that action, and any adverse environmental effects that cannot be avoided should the proposed action be implemented. This section analyzes the environmental impacts of the two alternatives for managing ORV use in Big Cypress National Preserve on water resources, soils, vegetation, wildlife, and visitors. This analysis provides the basis for comparing the effects of the alternatives. The consideration of impacts included the intensity and duration of effects, mitigation measures, and cumulative impacts.

This supplemental environmental impact statement tiers from the Big Cypress National Preserve general management plan and environmental impact statement (NPS 1991), in conformance with the Council on Environmental Quality guidelines for implementing NEPA. As such, this supplemental environmental impact statement includes by reference the impacts determined in the 1991 study, and only evaluates the additional effects of implementing this ORV management plan.

The geographical area included in this supplemental environmental impact statement includes the original boundaries of Big Cypress National Preserve. It does not include the Addition Lands.

Activities included in this analysis include only recreational ORV use and the use of ORVs to access private property. It does not include commercial ORV use or any other type of recreation within Big Cypress National Preserve.

This evaluation used the best available information. It is anticipated that additional information would be available in the future, especially if the proposed action, which includes an integral research component, were implemented. In accordance with the principles of adaptive management, the National Park Service would modify the ORV management program based on the experience gained from implementing the proposed action. To comply with NEPA, the National Park Service would prepare environmental assessments (EAs) as appropriate to determine the potential for significance of major changes to this plan.

METHODOLOGY

The National Park Service based these impact analyses and conclusions on the review of existing literature and park studies, information provided by experts within the National Park Service and other agencies, professional judgments and preserve staff insights, and public input.

INTENSITY

For this analysis, intensity or severity of the impact is defined as follows:

Negligible – impact to the resource or discipline is barely perceptible and not measurable and confined to a small area.

Minor – impact to the resource or discipline is perceptible and measurable and is localized.

Moderate – impact is clearly detectable and could have an appreciable effect on the resource or discipline.

Major – impact would have a substantial, highly noticeable influence on the resource or discipline on a regional scale.

DURATION

The duration of the impacts in this analysis is defined as follows:

Short term – impacts that last less than 1 year.

Long term – impacts that last longer than 1 year.

DIRECT VERSUS INDIRECT IMPACTS

The following definitions of direct and indirect impacts were used in this evaluation:

Direct – an effect that is caused by an action and occurs at the same time and place.

Indirect – an effect that is caused by an action but is later in time or farther removed in distance, but still reasonably foreseeable.

CUMULATIVE IMPACTS

A cumulative impact is described in regulations developed by the Council on Environmental Quality (CEQ), 40 CFR 1508.7, as follows:

> Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from indi
>
> vidually minor but collectively significant actions taking place over a period of time.

Cumulative impacts were determined by combining the impact of implementing this plan with potential impacts of other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or foreseeable future projects within Big Cypress National Preserve and the surrounding region. The projects identified include:

The U.S. Highway 41 Scenic Corridor Visitor Safety Highway Improvement Project. This project involves work at several locations along U.S. Highway 41, Turner River Road, and Loop Road. These projects include improving entrance roads to three existing campgrounds and constructing new parking facilities and boardwalks.

Collier Resources Company Oil and Gas Plans of Operations. The Collier Resources Company has submitted 24 plans of operation for the exploration for oil and gas. The plans include conducting geophysical surveys and drilling exploratory wells. Implementation of the plans would

use specialized off-road equipment that would travel cross-country. In addition, the plans call for constructing a series of roads and pads to provide access for exploratory well drilling. None of the plans has received approval from the National Park Service. An environmental analysis of these proposals and their potential cumulative impact has not been finalized.

South Florida Ecosystem Restoration. The south Florida ecosystem stretches south from Orlando through the Chain of Lakes, the Kissimmee Valley, Lake Okeechobee, and the remaining Everglades to the waters of Florida Bay and coral reefs. The ecosystem encompasses approximately 18,000 square miles within 16 counties. This region supports 68 federally listed plant and animal threatened and endangered species. There is an intense, cooperative effort among federal, state, and local government agencies, tribes, environmental organizations, universities, businesses, and local citizens to preserve and restore the greater Everglades ecosystem. More than 200 restoration projects within this region have been identified. Listed below are projects that would have the most influence on the preserve.

> Comprehensive Everglades Restoration Plan (CERP), commonly known as the Restudy. This is a multi-billion-dollar water system improvement plan led by the U.S. Army Corps of Engineers. It will reconfigure the artificially created drainage patterns of south Florida back to more natural conditions. Several projects under the umbrella of CERP that will have direct effects on the Big Cypress ecosystem include the removal of all or part of the L-28 levee, the modified waters project, and the U.S. Highway 41 Tamiami Trail culvert project. These projects will alter the regional hydrology, including the timing, distribution, and quantity of water. Implementation of this complex plan will continue for at least the next 20 years.
>
> Southwest Florida (Feasibility) Study. This Corps of Engineers-initiated project will focus on ecosystem restoration needs specific to the southwest Florida region. This 4-year effort (through 2004) will result in a plan of action similar to the CERP, which emphasizes the eastern portion of south Florida.

Regional Growth and Development. Based on the most recent data from the Southwest Florida Regional Planning Council, southwest Florida is one of the most rapidly growing areas of the nation. For example, yearly gross and taxable sales nearly doubled from 1990 to 1999. In 1999, more than 12,000 new single-family-unit building permits and more than 8,000 multi-family-unit building permits were issued. This rapid growth is expected to continue, and the population of the southwest Florida region is projected to expand from 1,161,000 in 2000 to 1,652,300 in 2020. This represents a 42 percent increase. As this growth occurs, increasing demand will occur on all of the region's resources.

IMPACTS ON NATURAL RESOURCES

WATER RESOURCES

Surface Water Flows

Analysis of the Proposed Action. The proposed action would result in minor, short-term, adverse impacts to surface water flows in the areas of the designated trails. In the long term, there would be minor to moderate, beneficial effects to surface water flows throughout areas of the preserve that currently are subject to dispersed ORV use. Closing prairies to ORV use and restoring the natural grades that have been heavily rutted by ORV activity, thereby re-establishing natural surface water flows to the prairies, would have localized, moderate to major, beneficial effects to surface water flow.

In the short term, the concentration of wheeled ORVs along designated trails would result in rutting within those trails. However, following complete implementation of the proposed action, the designated trails would not alter water flows because they would be continuously monitored and maintained whenever adverse alterations occurred. The restriction of ORV use to designated trails would substantially reduce the total affected area.

The hydrologic trigger would limit airboat use to times when surface water depths provided sufficient separation between the boat hulls and land surface. This would reduce the trail entrenching (channelization) that currently occurs with the operation of boats during low-water conditions.

Designating trails in areas that are more resilient to ORV traffic would reduce the amount of rutting, and should help control the increases in water flow that were observed by researchers (see the "Affected Environment" section). Maintenance of trails would further reduce the impacts on water flow. Monitoring water flow would be critical. When monitoring indicated that trails were deteriorating, appropriate management actions would be taken, based on the individual situation.

Analysis of No Action (Continue Current Management). The no action alternative would result in long-term, moderate, adverse impacts to surface water flow in areas used by ORVs. With no restriction on where ORV use could occur in the Turner River Unit, Corn Dance Unit, and portions of the Stairsteps Unit, impacts would increase. Increases in impacts would be anticipated in terms of the total area affected (number and width of trails), magnitude of impact on high-use trails, and magnitude of impact in areas susceptible to rutting. Duever *et al.* (1986a) state that once soils are displaced, there are few natural mechanisms of restoring ground contour, and the ruts remain indefinitely. They also found that trails and ruts created by ORVs could act as drainage channels and alter natural hydrologic patterns on a localized basis. Therefore, since the no action alternative does not include a restoration component, the hydrologic changes resulting from ORV use would be expected to compound over time.

Cumulative Impacts.

The South Florida ecosystem restoration project includes several proposals for restoration of water flow within the region. Projects involving the preserve include the removal of the L-28 canal

levee, modification of the L-28 Tieback canal, and operational changes to various water control structures. These efforts are expected to result in major, long-term benefits to the hydrology of the preserve.

The Collier Resources Company plans to explore for oil and gas could adversely impact water flow. Collier proposes to construct roads and pads, which would have the potential to alter local hydrology. However, because approval of the operation plans would require mitigative measures to eliminate or reduce the impact of activities on water flow, the long-term effect of exploration could be minor to negligible. In addition, oil companies are required to restore any resources adversely impacted by their operation.

The construction of visitors amenities along U.S. Highway 41 could adversely affect water flow. These impacts are anticipated to be negligible to minor because of their close proximity to U.S. Highway 41, which has already altered flows in the area.

Cumulatively, beneficial effects to surface water flows would accrue from the proposed action and from the South Florida Ecosystem Restoration project, while negligible to minor adverse effect would result from oil and gas exploration and from construction along U.S. Highway 41. The overall effect is expected to involve long-term benefits to water flows within the preserve.

Conclusion. Implementing the proposed action would have minor to moderate, long-term, beneficial effects on surface water flows, by limiting ORV travel to no more than 400 miles of designated primary trails and restoring areas previously affected by ORV use. There would be minor, short-term, adverse effects to surface water flows until the monitoring, maintenance, and restoration components of the proposed action were completely implemented. The no action alternative would result in long-term, moderate, adverse impacts to surface water flow by allowing increases in the area altered by ORVs.

Water Quality

Analysis of the Proposed Action. Limiting ORV use to designated trails would produce moderate, beneficial improvements in water quality by limiting the spatial extent of the area subject to the localized impacts from ORV use. This would reduce areas subject to localized effects of turbidity and the potential for spills or leaks of fuels and oils associated with ORV use. Locating designated trails in areas that can sustain ORV use also would reduce impacts to water quality.

Monitoring of water quality associated with ORV trails would provide needed information to correct unacceptable conditions. The National Park Service would respond with appropriate management actions, based on the results of monitoring. These actions could range from maintenance to closures.

Analysis of No Action (Continue Current Management). While the turbidity caused by ORVs has been described as localized (Duever *et al.* 1986a), the existing network of trails occurs in much of the preserve. The expected increase in the spatial extent of ORV use throughout the preserve would increase turbidity and sedimentation, producing minor, adverse impacts to water quality. The potential for spills of petroleum products would be similar to current conditions.

Cumulative Impacts. The south Florida ecosystem restoration effort is working on improving water quality throughout the area. Implementation of these efforts is expected to produce long-term, major benefits to the water quality of the region.

Collier's oil and gas proposals have the potential to degrade water quality through the release of contaminants and turbidity. However, their implementation of best management practices, the stipulations in the mineral management plan, and the obligation of operators to restore any detrimental effects should prevent any long-term adverse water quality effects.

The U.S. Highway 41 safety improvement project would result in a small loss of wetlands and the water quality benefits associated with wetlands. These activities would also result in short-term, adverse impacts to water quality due to elevated turbidity levels during construction.

Cumulatively, these projects and the preserve's ORV management strategy would result in negligible to minor, short-term, adverse impacts to water quality during construction. However, in the long term, the water quality of the preserve is expected to benefit, particularly from the south Florida ecosystem restoration effort.

Conclusion. Water quality would improve with the implementation of the proposed action by limiting the spatial extent of the area experiencing adverse water quality impacts. The no action alternative would result in minor, adverse effects associated with more widespread and repeated turbidity and sedimentation due to the anticipated increase in the area impacted by ORVs.

SOILS

Analysis of the Proposed Action. The proposed action would limit ORV travel to no more than 400 miles of designated primary trails. This would result in long-term, major, beneficial effects to soils by

restoring areas where extensive rutting has displaced soils

preventing new areas of soil impacts

locating designated trails in areas that can sustain use, which would limit the severity of the impacts to the soils within the trails

Analysis of No Action (Continue Current Management). This alternative is expected to result in long-term, major, adverse impacts to soils. Under this alternative, dispersed use by ORVs would be allowed in portions of the preserve. The area of adversely impacted soils would increase under this alternative, and problem sites would continue to get worse.

Duever *et al.* (1986b) state that once soils are displaced, there are few natural mechanisms of restoring ground contour, and the ruts remain indefinitely. Therefore, since the no action alternative does not include a restoration component, the soils effects resulting from ORV use would compound over time.

Cumulative Impacts. The proposed oil and gas exploration and construction activities along U.S. Highway 41 are expected to result in minor, long-term, adverse impacts to soils. They would result in the placement of fill over native soils. The implementation of the proposed action would result in long-term benefits to soils that could exceed the adverse effects from the other two projects mentioned above, providing a net beneficial effect. Adverse effects from the no action alternative would be additive with the adverse effects from oil and gas development and from construction, producing a cumulative adverse effect.

Conclusion. The proposed action would produce long-term, major, beneficial effects by promoting the recovery and restoration of heavily impacted soils in the preserve, and decreasing the area affected by ORVs. The no action alternative would have long-term, major, adverse impacts to soils.

VEGETATION

Prairies and Marshes

Analysis of the Proposed Action. The proposed action would have a long-term, major, beneficial effect on marshes and prairies. Contributing factors include the following.

The spatial extent of prairies and marshes subjected to ORV use would be substantially reduced.

Crossings of these areas, which have a low suitability for and high sensitivity to ORV use, would be limited to small segments of trails and would involve the use of trail maintenance strategies such as corduroy or geotextiles.

Restoration and recovery of prairies and marshes using both active and passive techniques would be implemented.

Analysis of No Action (Continue Current Management). Implementing the no action alternative would result in long-term, major, adverse impacts to prairies and marshes. Contributing factors include the following.

Dispersed use allows ORV operators to drive through areas of prairies and marshes that currently do not have trails, increasing the affected area.

The poor traction in prairies and marshes causes ORV operators to run parallel to existing tracks, which widens ORV trails.

Repeated passes through areas with poor suitability would continue to enlarge and deepen ruts.

The no action alternative does not include a restoration component, the so effects in these areas would compound over time.

Cumulative Impacts. The general management plan and final environmental impact statement (NPS 1991) states that several hundred thousand acres of prairies and marshes south of Lake Okeechobee and north of I-75 have been lost to agriculture and, to a lesser extent, urban development. The anticipated increase in human population in south Florida would result in more development, causing additional losses of prairie and marsh communities on private lands outside of the preserve. However, efforts to restore the south Florida ecosystem would have major, long-term, beneficial effects on the remaining prairies and marshes throughout the region.

Locally, construction activities associated with the U.S. Highway 41 project that placed fill material within prairies and marshes would produce long-term, adverse impacts. However, these impacts would be minor because of their small areal extent.

Oil and gas exploration activities also would produce adverse effects associated with the placement of fill. If mitigation measures were not implemented, the large number of plans (24) could result in moderate effects. However, environmental protection and restoration provisions that would be included in the permit requirements would limit the adverse effects to prairies.

Cumulatively, the preceding two projects plus the no action alternative would have long-term, major, adverse impacts to prairies and marshes within the preserve. The long-term, major, beneficial impacts to prairies and marshes associated with the proposed action would offset the adverse effects of the other developments.

Conclusion. Implementation of the proposed action would result in long-term, major benefits to prairies and marshes. Long-term, major, adverse effects would be produced by the no action alternative.

Cypress Strands and Domes, Mixed Hardwood Swamps, and Sloughs

Analysis of the Proposed Action. As described in the "Affected Environment" section, deep water, closely spaced trees, and/or deposits of muck or peat have discouraged ORV use in all but the shallow margins of these areas. Because these areas have been only slightly affected by ORV use, they would have only minor to negligible effects from a change in ORV management. This change would be beneficial, as the proposed action would prevent the establishment of new trails through these areas and could result in the restoration of some routes previously used by ORVs.

ORV trails crossing strands and swamps are normally on well-established, deeply entrenched routes where the forest narrows and water levels are shallower. Some of these crossings probably would be incorporated into the designated trail system. Monitoring and management actions would ensure that only minor adverse effects would occur at these crossings.

Analysis of No Action (Continue Current Management). The no action alternative would produce negligible to minor adverse impacts to cypress strands and domes, and mixed hardwood swamps, and sloughs. The hydrologic, soils, and vegetative conditions that have discouraged ORV use in these areas in the past would continue to limit ORV use. However, the dispersed use of ORVs would pose an ongoing threat to the soils and vegetation of shallower areas.

Cumulative Impacts. Throughout south Florida, state and federal regulations are targeted at preventing the loss of cypress strands, domes, and hardwood swamps. The southwest Florida feasibility study will help identify opportunities to reduce effects to these communities. However, the continued trend of increased urbanization and more intensive agriculture may locally alter the hydrologic conditions that support these communities. Over time, a net loss in this vegetation type is expected.

Conclusion. Either management approach would have only minor to negligible effects on cypress strands and domes, mixed hardwood swamps, and sloughs. For the proposed action, that small effect would be beneficial. The no action alternative would produce a small adverse effect.

Mangroves

Analysis of the Proposed Action. Mangrove forests are found only in Zone 1 of the Stairsteps Unit. Under this alternative, Zone 1 would be closed to all ORV use. Therefore, implementing this alternative would result in negligible effects on mangrove forests.

Analysis of No Action (Continue Current Management). The current management has closed Zone 1 to airboats, due to resource impacts associated with previous commercial activities. Although Zone 1 is open to wheeled vehicles, these vehicles operate primarily within the northern portion of the area which does not contain mangrove forest. Therefore, implementing this alternative would result in negligible effects on mangrove forests.

Cumulative Impacts. Throughout the region, mangrove forests have been adversely affected by past waterfront development, agriculture, boating, and pollution of coastal waters. As a result, mangroves in south Florida are protected by state law. The remaining populations of mangroves are expected to proliferate. Neither alternative is expected to contribute to the cumulative impacts on mangroves.

Conclusion. Neither the proposed action nor the no action alternative would affect the mangrove forest.

Hardwood Hammocks

Analysis of the Proposed Action. Large numbers of the known archeological sites within the preserve are located in hardwood hammocks. It is anticipated that there also are many undiscovered archaeological sites on the hammocks. To avoid these resources, most designated trails would be routed outside of hardwood hammocks, despite their high substrate suitability. This would reduce the miles of trails with this vegetation community and would allow for the restora-

tion of closed trails. The result would be a long-term, minor, beneficial effect to this vegetation community.

Analysis of No Action (Continue Current Management). Long-term, minor, adverse impacts to hammocks are expected under this alternative. Few new trails in hammocks are anticipated under this alternative, but existing trails would probably increase in width over time. Hammocks would be subject to the introduction of invasive vegetation along trails.

Cumulative Impacts. Hardwood hammocks on private lands throughout the region are being reduced in number by increasing urbanization and more intensive agriculture associated with a growing human population. ORV management practices within the preserve would have little effect on regional, development-related decreases of hammocks. Locally, the U.S. Highway 41 project could involve the placement of fill material within hammocks, which would produce long-term, minor, adverse impacts.

Conclusion. Either management approach would have only minor effects on hardwood hammocks. For the proposed action, that small effect would be beneficial. The no action alternative would produce a small adverse effect.

Pinelands

Analysis of the Proposed Action. Because of their suitable substrate, pinelands are preferentially used by ORVs under the dispersed-use approach. This ability to tolerate ORV use would also result in the routing of designated trails through pinelands under the proposed action. This use would produce widening of some trails through pinelands. However, the total mileage of trails through pinelands would decrease, compared to the no action alternative, and closed trails would be restored. This would result in a long-term, moderate benefit to pinelands.

Analysis of No Action (Continue Current Management). Under the no action alternative, dispersed ORV use would produce the widening of some trails through pinelands. Some new trails through pinelands also may be established. These actions would result in long-term, minor, adverse impacts to pinelands.

Cumulative Impacts. An analysis of vegetation types most impacted by human land conversion indicates that statewide, only 36 percent of pinelands remain (64 percent loss). According to the USFWS (1999c) south Florida pinelands are among the habitats least protected by current public lands. Residential and commercial development will continue to eliminate pinelands in private lands surrounding the preserve. ORV management practices within the preserve would have little effect on regional, development-related decreases of pinelands.

Conclusion. With the proposed action, long-term, moderate benefits to pinelands would result from the reduced trail mileage and from restoration. The no action alternative would produce long-term, minor, adverse impacts as a result of widening existing trails and establishing new trails through pinelands.

PROTECTED SPECIES

Cape Sable Seaside Sparrow

Analysis of the Proposed Action. Implementing this alternative may result in long-term, beneficial effects to the Cape Sable seaside sparrow. Within the preserve, sparrows are currently found only within Zone 4 of the Stairsteps Unit. Since 1992, this population has experienced drastic declines caused by water management practices (USFWS 1999c). Therefore, precautionary measures are warranted.

Most of the area where sparrows were observed during the 1992 survey would be closed under the proposed action. This includes the eastern portion of Zone 4 of the Stairsteps Unit. The proposed action would also close Zone 1, another area historically occupied by sparrows, to all ORV use. This action may benefit the sparrow by allowing vegetative recovery in an area where natural re-population or translocation is possible.

Analysis of No Action (Continue Current Management). The implementation of this alternative may result in both short- and long-term adverse impacts to the sparrow and its habitat through the continued dispersed use of airboats within the Stairsteps Unit. Airboat use in areas having low water levels during the nesting period (late February through early August) may have a detrimental impact on nesting occurrence, success, and productivity. Airboat activity that includes "mashing" of vegetation to enhance the harvest of frogs may negatively impact the vegetative structure required for sparrow nesting, foraging, and roosting.

Cumulative Impacts. The changes in habitat that have occurred as a result of changes in the distribution, timing, and quantity of water flows into the western side of Shark River Slough have reduced the population of sparrows by 90 percent between 1992 and 1997. Although it is not known if ORV use has contributed to that decline, a precautionary approach is warranted. It is biologically more sound to promote the expansion of an existing population than resort to translocations after the loss of all of the birds in the area.

The south Florida ecosystem restoration efforts are addressing issues concerning the Cape Sable seaside sparrow. These efforts include water deliveries that will enhance sparrow productivity.

The U.S. Highway 41 project and oil exploration proposals do not include activities within sparrow habitat.

Both the proposed action and the south Florida ecosystem restoration efforts would have beneficial effects on the Cape Sable seaside sparrow, while the U.S. Highway 41 project and oil exploration would have no effect. Therefore, the cumulative effect of the projects in the vicinity of the preserve would be beneficial.

Conclusion. The proposed action may benefit the Cape Sable seaside sparrow. The no action alternative may result in adverse impacts on habitat and nesting activity.

Bald Eagle

Analysis of the Proposed Action. There are three known active bald eagle nests in the preserve, in Zones 1, 3, and 4 of the Stairsteps Unit near the southern boundary of the unit. The proposed action would close Zone 1 to ORV use. Zones 3 and 4 would allow ORVs on designated trails, but in conformance with U.S. Fish and Wildlife Service (USFWS) guidelines for protection of eagle nests (USFWS 1987), trails would be routed at least 1,500 feet away from nest trees. The establishment of buffers around known nest sites could have a beneficial effect on bald eagle nesting.

Analysis of No Action (Continue Current Management). Under this alternative, ORV use would continue within 1,500 feet of some of the known bald eagle nest sites in the preserve. As a result, implementation of this alternative could have an adverse effect on bald eagles.

Cumulative Impacts. The bald eagle currently is listed as threatened under the Endangered Species Act. It also is protected under the Bald and Golden Eagle Protection Act (16 USC 668 *et seq.*, as amended) and the Migratory Bird Act of 1918 (16 USC 715 *et seq.*). This wide-ranging bird will continue to be adversely affected by habitat loss, human disturbance near nests, and poisoning by pollutants such as mercury, pesticides, and lead.

Locally, the South Florida restoration project and U.S. Highway 41 culvert projects may have minor beneficial effects on the bald eagle through hydrologic restoration, which could improve habitat and increase the prey base. Because proposed oil and gas development activities would be prohibited within 1.25 miles of active bald eagle nests during nesting season, they would have negligible effects on this species. Collectively, these projects and ORV management in the preserve would have a negligible to minor beneficial impact on bald eagles.

An active nest occurs within 1.3 miles of the U.S. Highway 41 visitor safety project. Impacts from this project will be addressed in the project's environmental assessment.

Conclusion. The proposed action could have a beneficial effect on bald eagles. The no action alternative could result in adverse effects to this species.

Wood Stork

Analysis of the Proposed Action. Wood storks nest in the fringe of cypress trees surrounding open water within the larger domes of the preserve. These domes typically are not traversed by ORVs because of the density of trees and deep water levels. Therefore, wood stork nests are little affected by ORVs and a change in ORV management would have negligible effects on wood stork nesting.

Foraging habitat consists of drying prairies and marshes. Designated trails may have a minor, beneficial, long-term benefit to storks by confining ORV use to limited areas and reducing distur-

bance within foraging habitat. Storks also may benefit from the restoration of prairies and marshes that would be a component of the proposed action.

Analysis of No Action (Continue Current Management). Wood stork use of the preserve is dictated primarily by water levels and drying conditions. These conditions would not change from the current situation with a continuation of current ORV management procedures. Therefore, the no action alternative would have negligible effects on wood storks.

Cumulative Impacts. Range-wide threats to the wood stork include loss or degradation of wetlands, improper regulation of water stages, and toxic effects from environmental contaminants such as mercury and pesticides. In addition, the decline of the wood stork is caused by poor reproduction associated with an inadequate food supply, which is attributed to water management practices that have disrupted the natural hydrology of Florida. Ongoing efforts to restore the south Florida ecosystem are expected to improve water quality and hydrological conditions, thus improving wood stork habitat conditions (USFWS 1999c). Despite these efforts, continuing development pressures throughout the region will have a long-term adverse effect on the wood stork, regardless of ORV management efforts within the preserve.

Conclusion. The proposed action may provide a long-term, minor benefit to wood storks. The no action alternative would result in negligible effects.

Red-Cockaded Woodpecker

Analysis of the Proposed Action. Under the proposed action, ORV activities within the preserve would be limited to designated trails. These trails would not traverse active clusters, and a 200-foot buffer would be established around the aggregate of cavity trees in accordance with USFWS guidelines (Hendry 1989). The proposed action also includes a restoration element that could improve woodpecker habitat. These actions may have a minor, long-term, beneficial effect on the red-cockaded woodpecker.

Many trails currently traversing pineland habitat would be eliminated. However, ORV trails would be preferentially routed through pinelands, which generally provide a suitable substrate for ORV use. Routing trails through pinelands may produce a minor, long-term, adverse impact on the red-cockaded woodpecker.

While the buffer zone and restoration components of the proposed action may produce minor beneficial effects to the red-cockaded woodpecker, routing of ORV trails through pinelands could be slightly detrimental. The net effect to this species is expected to be negligible. However, consistent with the adaptive management component of the proposed action, monitoring would be conducted, and modifications would be made if a net adverse effect was detected.

Analysis of No Action (Continue Current Management). There is no documentation that ORVs have a negative impact on red-cockaded woodpeckers in the preserve. However, continued ORV use in Zone 4 of the Stairsteps Unit may further stress a population that already is stressed by environmental factors. If this occurs, the superintendent has the authority under current management practices to close this area to ORV use. Therefore, implementation of the no action alternative would have a negligible effect on this species.

Cumulative Impacts. Range-wide threats to the red-cockaded woodpecker include habitat fragmentation and/or loss, cluster abandonment due to mid-story encroachment, and exotic plant invasion. Locally, the U.S. Highway 41 project would not affect the red-cockaded woodpecker because it does not include construction near known woodpecker clusters. Oil and gas development proposals would not affect this species because of the 500-foot buffer imposed by the preserve's mineral management plan (1991), which is more stringent than the 200-foot buffer discussed earlier. Despite these efforts, continuing development pressures throughout the region will have a long-term adverse effect on the red-cockaded woodpecker, regardless of ORV management efforts within the preserve.

Conclusion. Either ORV management alternative would have a negligible effect on the red-cockaded woodpecker.

Everglade Snail Kite

Analysis of the Proposed Action. The implementation of this alternative is expected to result in negligible impacts to snail kites. Snail kites use the preserve for both foraging and nesting, especially in Zone 4 of the Stairsteps Unit. There are no reports or studies that document snail kites as being sensitive to or threatened by ORV use. Studies in several wetland environments in Florida have shown that the snail kite is fairly tolerant of airboat activity (Sykes 1987, Bennetts *et al.* 1988).

Analysis of No Action (Continue Current Management). There is no documentation that snail kites are negatively affected by the current level of ORV use in the preserve. Therefore, the no action alternative is expected to result in negligible impacts to snail kites.

Cumulative Impacts. The decline of snail kites has been attributed to the loss of habitat to agriculture and to reductions in their primary food source, the apple snail, that have resulted from water pollution. However, recent water quality and habitat restoration projects in the region have increased their numbers. Most of the current impacts to the population are caused by climate-related stresses, manipulation of water levels, and the spread of nuisance aquatic plants, such as water hyacinth, water lettuce, torpedo grass and hydrilla (Rodgers *et al.* 1996). Ongoing efforts to restore the south Florida ecosystem are expected to improve water quality and hydrological conditions, thus improving snail kite habitat.

Conclusion. Either alternative would result in negligible impacts to snail kites.

Florida Panther

Analysis of the Proposed Action. Under the proposed action, ORV activities within the preserve would be eliminated in some areas occupied by panthers and limited to designated trails in others. No studies thus far have shown that ORV use alone causes changes in panther behavior. However, Janis and Clark (1999) studied the effects of human activity on panthers in the preserve and found home range shifts and avoidance of designated trails by panthers during periods of higher levels of human activity associated with hunting. The study focused on the Bear Island Unit, which has one of the higher levels of hunting activity in the preserve during the deer and feral hog hunting seasons between October and January. The study used radio-telemetry data on 21 panthers over a 4-year period, as well as data collected since 1982 by the Florida Fish and Wildlife Conservation Commission (FFWCC). The study examined eight variables in panther behavior, including morning activity rates, movement rates, predator success, home range size, home range shifts, distance from panther location to trails, frequency of use of the Bear Island management unit, and habitat selection.

The proposed action would limit the extent of the ORV trail system in Bear Island. It would also establish a system of designated trails throughout the preserve, thus reducing disturbances by humans and minimizing the area of panther habitat impacted by ORV traffic. Implementing the proposed action may result in long-term beneficial impacts on the panther.

Analysis of No Action (Continue Current Management). Janis and Clark (1999) reported that the level of human disturbance in the Bear Island Unit between 1995 and 1998 resulted in a significant response by Florida panthers. They reported that panthers avoided trails and departed the Bear Island Unit during periods of highest human activity. The no action alternative would result in the continuation of these types of effects on the panther.

Cumulative Impacts. The decline of this large, secretive predator is largely attributed to habitat loss and human disturbance. In addition, panthers range over large areas both inside and outside of the preserve, and experience mortality from such sources as being struck by automobiles on highways. Continuing development pressures throughout the region will continue to adversely affect the panther.

The U.S. Highway 41 project and the oil exploration proposals would result in construction activities within panther habitat. Alteration of habitat and highway improvements are expected to result in adverse impacts to panthers. Panthers and their habitat will be factors considered in the review and decision on approval of Collier's oil exploration plans.

The U.S. Highway 41 Scenic Corridor Visitor Safety Highway Improvement Project also would be constructed in panther habitat and may impact panther use of the preserve. These impacts will be addressed in the project's environmental assessment.

Cumulatively, development in the region is expected to have a substantial, long-term, adverse impact on the panther. This trend makes it increasingly important to implement incremental beneficial actions within the preserve.

Conclusion. The proposed action would result in long-term benefits to the Florida panther and its habitat. The no action alternative would adversely affect the panther through its continued habitat degradation and potential for human disturbance.

West Indian Manatee

Analysis of the Proposed Action. Manatees only occur in the estuarine portions of Zone 1 of the Stairsteps Unit. The tidal creeks and bays of this area have been designated critical habitat by the U.S. Fish and Wildlife Service. Because the National Park Service already manages this area to protect manatees, the proposed action would have negligible effects on this species.

Analysis of No Action (Continue Current Management). Under the no action alternative, the National Park Service would continue to protect manatee critical habitat. Therefore the effects of this alternative to the manatee would be negligible.

Cumulative Impacts. The largest known human-related causes of manatee mortality are collisions with hulls and/or propellers of boats and ships (USFWS 1996). Mortality from collisions with watercraft has been increasing, including deaths of dependent calves (USFWS 1999b). Other factors in the decline of the manatee population have been entrapment in floodgates and navigation locks (USFWS 1996), and the loss of suitable habitat through incompatible coastal development, particularly destruction of seagrass beds by boating facilities (USFWS 1999b). The combination of high mortality and low reproduction has led to serious doubts about the species' ability to survive in the United States (USFWS 1999b). The south Florida restoration project and U.S. Highway 41 culvert project will likely benefit the manatee through improved freshwater quality and quantity into the estuarine system.

Conclusion. Both alternatives prohibit airboat use in Zone 1. Therefore, implementing either alternative would result in negligible impacts on manatees.

WHITE-TAILED DEER AND FERAL HOGS

Analysis of the Proposed Action. The general management plan and final environmental impact statement (NPS 1991) states that the reduction in noise and other disturbances associated with ORV use would likely result in an increase in the populations of the white-tailed deer and feral hogs. However, studies conducted in two areas of the preserve reported that white-tailed deer did not leave their home ranges in response to hunting (Land 1991; Sargent and Labisky 1995). This indicates that disturbances associated with hunting, including ORV use, have little adverse effect on individual deer or the overall deer population. Therefore, the proposed action would result in negligible to minor beneficial effects on populations of deer and feral hogs.

Analysis of No Action (Continue Current Management). The no action alternative would result in negligible change to deer and feral hog populations.

Cumulative Impacts. The white-tailed deer and feral hog are widespread, resilient species that are adaptable to human disturbances. Therefore, individual projects such as the U.S. Highway 41

project and oil exploration would have negligible effects on their populations. However, like all wildlife in south Florida, increasing urbanization and more intensive agricultural practices are decreasing the available habitat and will continue to do so in the foreseeable future. Therefore, long-term declines in the numbers of both of these species in areas subject to development are anticipated, regardless of the ORV management alternative implemented at the preserve.

Conclusion. The proposed action would result in negligible to minor beneficial effects. The no action alternative would result in negligible impacts to deer and hog populations.

IMPACTS ON VISITATION

ORV USE

Analysis of the Proposed Action. The proposed action would result in long-term, moderate, adverse impacts to ORV users. Effects to ORV use would include the following.

ORV users would have to commit time to obtaining permits. This would include spending time getting their vehicles inspected, taking the ORV educational course, and filling out the vehicle permit application.

The cap of 2,000 permits would involve a lottery that would require ORV owners to plan ahead in order to obtain a permit for the upcoming season.

An ORV owner might not be successful in the drawing and might not be able to purchase a permit.

An increase in purchase price of the permit, from $35.00 to $50.00 per year, would increase the cost of recreating in the preserve for ORV users.

The restriction of ORVs to designated trails would reduce the freedom of driving to nearly any location within open areas, a privilege that ORV users previously experienced.

Access to many locations would require users to walk from the nearest designated trail.

The designated trail system may require longer travel times and distances to reach locations once directly accessible.

Potential restrictions at access points may limit the ability of some ORV users to enter their preferred areas during periods of heavy use.

Closures of some areas formerly open to ORVs would move ORV users into areas that are unfamiliar and perhaps less desirable to them.

Analysis of No Action (Continue Current Management). This alternative could result in negligible effects to ORV users. Eventually, some would be denied permits as demand exceeded the 2,500-permit limit. Most ORV users are satisfied with the current level of regulations, permit fee, and restrictions. Those who have commented on impacts of increasing usage in some areas would be disappointed to see no action to mitigate adverse effects.

Cumulative Impacts. As the population increases, and privately owned land is developed, competition for use of public land in south Florida will increase. As a result, the demand for areas to recreate using an ORV is expected to increase. Another result of increased development of open space is more restriction on the types of uses considered acceptable on public lands. Fewer places with open access for ORV use will bring more pressure on those areas that do allow such use.

Conclusion. The proposed action would increase costs and time and add new restrictions that would result in long-term, moderate, adverse impacts to ORV users. The no action alternative would have negligible impacts on ORV users.

HUNTING

Analysis of the Proposed Action. The proposed action would not have any direct effects on hunting in the preserve. There would be no changes in the number of permits available to hunt within the preserve, the availability of open areas, or the number of animals available to be hunted.

Depending on personal perspective, the designated trail system could be considered either an adverse or a beneficial impact. Hunters who prefer hunting away from ORV traffic would benefit from ORVs being restricted to designated trails. The proposed action may improve the hunter success for walk-in hunters because of reductions in disturbances from ORVs. However, individuals who use ORVs to access hunting areas could be required to walk longer distances to reach many locations. As a result, there would be moderate indirect impact to hunting.

Analysis of No Action (Continue Current Management). No change would occur as a result of the no action alternative. Hunting activities would remain the same as current conditions.

Cumulative Impacts. Continued urbanization and the application of more intensive agricultural practices around the preserve will increase demands on the habitats of game species. As development increases, lands outside of the preserve that are available for hunting will be reduced. With either alternative, the preserve would continue to provide habitat for game species and would continue to provide hunting opportunities for the public.

Conclusion. Hunting in Big Cypress National Preserve would not be directly impacted by the implementation of the proposed action or by the no action alternative. The proposed action could increase the distances that some hunters walk, which would be an indirect effect.

OTHER VISITATION

Analysis of the Proposed Action. Some visitors would perceive an improved recreational and/or aesthetic experience in the preserve with the implementation of the proposed action. According to Meehan (1999), some visitors indicated that the rutted tracks and impacted vegetation caused by ORV uses detract from the natural beauty of the preserve, and that the visual experience would improve if ORV uses were restricted and former trails were revegetated. The access points may have negligible to minor adverse visual effects, but these would be offset by visual improvements associated with restoration.

Bird calls and other wildlife sounds would be more noticeable if the noise of ORVs was restricted to certain areas and buffered from non-motorized users. Designated trails routed away from primary visitor corridors like boardwalks, trails, and campgrounds would reduce the potential for

conflict between user groups. Areas closed to ORV travel would increase the opportunity for backcountry experiences, including solitude and adventure, for non-motorized recreationists.

Analysis of No Action (Continue Current Management). Implementation of the no action alternative would result in little change in the expectations of the non-motorized visitors. Potential for conflicts between ORV users and other visitors to the preserve would continue. Visually obvious rutting and vegetation disturbance would continue to increase, and noise would increase as ORV numbers increased to the permit limit of 2,500.

Cumulative Impacts. As the population of south Florida grows, increasing pressure will be placed on public lands to serve all types of recreationists. The conflicts or potential conflicts identified now will increase. South Florida will also continue to be a very popular vacation destination for visitors from all over the world. These visitors have expectations of NPS sites to provide a wilderness or near-wilderness experience and to be preserved in their natural state. These expectations will grow as more awareness is drawn to our natural lands and their increasing rarity.

Conclusion. The proposed action would reduce impacts to other visitors' enjoyment of the preserve. The no action alternative would allow the potential for conflicts between user groups to continue and increase.

NONFEDERAL PROPERTY OWNERS

Analysis of the Proposed Action. The implementation of this alternative would produce minor adverse impacts to non-federal property owners. Unless an exempt property owner has legal right of way or pre-existing access rights, legislation, laws, and regulations do not provide right of access via ORV. The National Park Service would continue to provide landowners with reasonable access to their properties. However, landowners would experience the following new restrictions.

> Property owners could not recreate with an ORV in the preserve unless they successfully drew and purchased an annual vehicle permit. If they did not draw vehicle permits, landowners would be restricted to using their ORVs on their private property and on the access route specified on their special use permit.
>
> Like all other ORV users, property owners would be restricted to using designated access points and trails on federal lands. This would limit the free-ranging opportunities that private property owners now experience, just as it would for all other ORV users.
>
> The route identified in the special use permit, or the designated access point, might not be the most convenient route or the route that the landowner has routinely used.

Analysis of No Action (Continue Current Management). There would be negligible impacts on non-federal property owners in the preserve under the no action alternative. Private property owners would continue to access their property at their discretion and use the preserve for recreation.

Cumulative Impacts. Like all other ORV users, private property owners would be restricted from using construction zones within the preserve, such as those associated with the U.S. Highway 41 scenic corridor project, or areas that were actively being explored for oil and gas, such as those proposed by the Collier Resources Company. These would produce short-term, minor, adverse effects to private property owners who use ORVs in the preserve.

Conclusion. The proposed action would have minor adverse impacts on the free-ranging opportunities private property owners now experience in the preserve. The no action alternative would not impact non-federal property owners.

SUSTAINABILITY AND LONG-TERM MANAGEMENT

ANY ADVERSE IMPACTS THAT CANNOT BE AVOIDED SHOULD THE ACTION BE IMPLEMENTED

Analysis of the Proposed Action

The proposed action is a model for sustainable management of high-impact recreation in a natural area of national significance. However, implementing the proposed action would result in unavoidable adverse effects to vegetation and soils within the designated trails. Plan implementation would result in the removal of vegetation within the trails. Soils would be increasingly displaced in some trails, although siting trails on suitable substrate or within previously disturbed areas would limit additional soil displacement and compaction.

Analysis of No Action (Continue Current Management)

Implementing the no action alternative (continue current management) would result in unavoidable adverse effects to surface water flows, water quality, soils, vegetation, and wildlife, including threatened and endangered species.

Localized disruption of surface water flows would occur because of rutting caused by wheeled ORVs and airboat trails.

Adverse water quality effects would include an increase in the area impacted by turbidity caused by ORVs.

Soils would become increasingly rutted and compacted, and would be subject to erosion. In some heavily used areas, soils could be completely displaced and the limestone cap rock would be exposed. Soils disturbances would become more widespread over time.

Crushing and removal of vegetation, particularly in prairies and marshes, would continue and would compound over time.

Degradation of protected species habitat would continue, and the potential for human disturbance of protected species would increase.

THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Analysis of the Proposed Action

Activities associated with the proposed action would be consistent with a long-term management strategy for ensuring the protection and restoration of natural and cultural resources.

Restricting ORVs to designated roads and trails would enhance long-term ecological health. This alternative would reduce the spatial extent of soils and vegetation that would be affected by ORV

use in the preserve. Endangered species, including the Florida panther and Cape Sable seaside sparrow, may benefit by reductions in the area of their habitat impacted by ORVs and reductions in the potential for human disturbance.

The proposed action includes a component to restore areas that previously had been adversely impacted by ORV use. This restoration would result in long-term benefits to the ecological health of the preserve.

Analysis of No Action (Continue Current Management)

This alternative would not meet legislative mandates, nor would it be consistent with NPS policies for resource protection. In addition, it would violate the 1995 settlement agreement and would not meet the intent of the preserve's general management plan.

Implementing the no action alternative would result in adverse impacts to the long-term ecological health of the preserve. This would occur from the increased spatial extent of the impacts related to ORV use. Vegetation and soils are expected to experience the greatest spatial increase in impacts from the continuation of current ORV management practices.

The ability of the preserve to provide suitable habitat to support the endangered Florida panther and Cape Sable seaside sparrow may also be adversely affected. Because of the endangered status of both of these species, any adverse effects could put their continued existence in the preserve at risk.

ANY IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED SHOULD THE ALTERNATIVE BE IMPLEMENTED

None of the natural resource or visitor experience changes associated with the proposed action would be considered irreversible or irretrievable commitments. However, the effort required to reverse some resource commitments and decisions, once implemented, may require substantial planning and implementation efforts.

The energy and materials expended during any access point or trail establishment or maintenance project would be an irretrievable resource commitment. Access point and trail construction would employ methods encouraging energy conservation and recycling when possible.

The no action alternative may include irreversible or irretrievable commitments of the preserve's soil and vegetation resources.

CONSULTATION AND COORDINATION

HISTORY OF PUBLIC INVOLVEMENT

Public Information

Two notices related to this planning effort were published in the *Federal Register*.

> A notice of the intent to prepare the ORV management plan was published in the January 22, 1996 issue (61 FR (14):1599-1600).
>
> A notice of intent to prepare the ORV management plan and supplemental environmental impact statement was published in the March 17, 1999 issue (64 FR (85):13233).

The general public and stakeholders have been kept informed of the progress of this planning effort through a series of newsletters, visitor surveys, and meetings with individuals, organizations, and agencies. Meetings were held between September 1995 and March 1996. Two newsletters were mailed to about 1,600 people during August 1996 and June 1997. The newsletters and other information about ORV use and management in the preserve were also made available on the Internet.

The National Park Service published in the *Federal Register* on August 16, 1999 (64 FR (157):44532) a notice of availability for the draft off-road vehicle management plan and supplemental environmental impact statement. This notice announced that the public review period for the draft document would be from August 13, 1999 until November 15, 1999, and that public meetings would be held in the preserve vicinity at times to be published in local newspapers.

Announcements for two public meetings were placed in the *Naples Daily News* and the *Miami Herald* prior to the meetings that initially were scheduled in Miami on September 14, 1999 and in Naples on September 15, 1999. Due to hurricane threats, the public meetings were re-advertised and re-scheduled for November 1, 1999 in Miami and November 3, 1999 in Naples. Because of this delay, the public comment period was extended to December 13, 1999, which was announced in the *Federal Register* on November 16, 1999 (64 FR (220):62218).

At the public meetings, a brief overview of the draft plan was presented and oral comments were received from 83 speakers. More than 1,400 written comments were received during the public comment period. These comments were reviewed, responded to, and incorporated into the final document where appropriate (see "Response to Comments" section).

Representatives from the National Park Service and the Department of the Interior met with ORV user group and environmental organization representatives and individuals during 2 days in February 2000 to discuss ORV issues and concerns in the preserve. In addition, NPS staff participated in two meetings hosted by the Florida Wildlife Federation to discuss ORV management options with representatives from a wide range of user and environmental groups.

The National Park Service consulted with the following agencies by direct personal communications, by providing ORV management planning information for review and comments, and/or by requesting assistance or information:

U.S. Environmental Protection Agency

U.S. Fish and Wildlife Service

U.S. Army Corps of Engineers

Miccosukee Tribe of Indians of Florida

Seminole Tribe of Florida

Florida Fish and Wildlife Conservation Commission

Florida Department of Environmental Protection

State Historic Preservation Officer

South Florida Water Management District.

Consultation with the U.S. Fish and Wildlife Service

Informal consultation with the USFWS began in January 2000. Representatives of the USFWS were an integral part of the planning team for preparation of this document. The USFWS received a copy of the draft plan and submitted comments, which are included as B1 in the "Response to Comments" section.

Formal consultation was initiated on July 8, 2000. The USFWS has prepared a biological opinion on this ORV management plan. The biological opinion is included as Appendix C of this document.

Consultation with Federally Recognized Tribes

The National Park Service provided copies of the draft document to federally recognized tribes, including the Miccosukee Tribe of Indians of Florida and the Seminole Tribe of Florida. The Miccosukee Tribe submitted written comments on the plan. A copy of their comments is included as G1 in the "Response to Comments" section. The superintendent addressed the Tribe's written comments on June 14, 2000 and invited further consultation at the Tribe's discretion and convenience.

Although the Seminole Tribe did not provide written comments on the draft plan, the superintendent offered to consult with the Seminole Tribe in a memorandum dated June 28, 2000.

Consultation with the State Historic Preservation Officer

As stipulated by the October 1995 programmatic agreement among the National Conference of State Historic Preservation Officers, the Advisory Council on Historic Preservation, and the National Park Service, consultation with the Florida State Historic Preservation Officer and the Advisory Council on Historic Preservation was initiated in August 1999. On November 30, 1999 the preserve received a response from the State Historic Preservation Officer. The response stated that in accordance with the procedures contained in 36 CFR, part 800 ("Protection of Historic Properties"), the proposed project will have no effect on historic properties listed, or eligible for listing, in the National Register, or otherwise of historical or architectural value.

LIST OF AGENCIES, ORGANIZATIONS, AND INDIVIDUALS WHO RECEIVED THE DRAFT ORV MANAGEMENT PLAN AND SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

Copies of the draft plan were distributed to the following agencies and organizations. In addition, approximately 400 copies were sent to individual citizens upon request. The draft document was also available on the preserve's Internet site at www.nps.gov/bicy/draftorvplan.

FEDERAL AGENCIES

Department of Agriculture
- Forest Service
- Natural Resources Conservation Service

Department of Commerce
- National Marine Fisheries Service
- National Oceanic and Atmospheric Administration

Department of Defense
- Army Corps of Engineers

Department of Interior
- Bureau of Indian Affairs
- Fish and Wildlife Service
- Geological Survey
- National Park Service
  - Biscayne National Park
  - Everglades National Park
  - Dry Tortugas National Park
  - Southeastern Archeological Center

Department of Justice
Environmental Protection Agency

NATIVE AMERICAN TRIBES

Miccosukee Tribe of Indians of Florida
Seminole Tribe of Florida

STATE OF FLORIDA

Office of the Governor
Florida Department of Environmental Protection
Florida Fish and Wildlife Conservation Commission
Florida State Clearinghouse
South Florida Water Management District
State Historic Preservation Office

Florida Congressional Delegation

U.S. House of Representatives
- Peter Deutsch
- Mark Foley
- Porter Goss

U.S. Senate
- Bob Graham
- Connie Mack

Florida State Legislature

Florida House of Representatives
- J. Dudley Goodlette
- Carole Green
- Luis Rojas
- J.R. Spratt

Florida Senate
- Steven A. Geller
- Burt Saunders

County/Local Government

Collier County
- Manager
- Commission
- Sheriff

Miami-Dade County
  Manager
  Commission
Hendry County
  Manager
  Commission
Monroe County
  Manager
  Commission
Southwest Florida Regional Planning Council

ORGANIZATIONS

Airboat Association of Florida
Biodiversity Legal Foundation
Collier County Historical Society
Collier County Sportsman Association
Conservancy of Southwest Florida
Corkscrew Swamp Sanctuary
Everglades Area Chamber of Commerce
Everglades Conservation and Sportsman Club, Inc.
Everglades Coordinating Council
Florida Audubon Society
Florida Biodiversity Project
Florida Panther Technical Advisory Committee
Florida Trail Association, Inc.
Florida Wildlife Federation
Governor's Commission for a Sustainable South Florida
Greater Homestead/Florida City Chamber of Commerce
Independent Traditional Seminole Nation of Florida
Izaak Walton League
Marco Island Chamber of Commerce
Naples Chamber of Commerce
National Audubon Society
National Parks and Conservation Association
National Wildlife Federation
Sierra Club–Florida Chapter
South Florida Ecosystem Restoration Task Force
Tropical Audubon Society
World Wildlife Fund

COMPANIES

Calumet Florida, Inc.
Collier Resources Company
Everglades National Park Boat Tours

MEDIA

Everglades Echo
Fort Lauderdale Sun Sentinel
Fort Myers News Press
Miami Herald
Naples Daily News

LIBRARIES

Barron (Hendry County) Public Library
Broward County Public Library
Collier County Public Library
Glades County Public Library
Hendry County Public Library
Miami-Dade County Public Library
Monroe County Public Library
Palm Beach County Public Library

INDIVIDUALS

Approximately 400

PREPARERS AND CONTRIBUTORS

DEPARTMENT OF THE INTERIOR

Office of the Secretary

Donald J. Barry, former Assistant Secretary for Fish, Wildlife, and Parks
T. Destry Jarvis, Senior Advisor to the Assistant Secretary for Fish, Wildlife, and Parks

Office of the Solicitor

Patricia Hooks, Attorney

NATIONAL PARK SERVICE

Big Cypress National Preserve

John Donahue, Superintendent
Wallace Hibbard, former Superintendent, Big Cypress National Preserve, currently Associate Regional Director for Operations
Carolyn Kriz, Deputy Superintendent (retired)
Larry Belles, Chief of Fire Management Division
Ron Clark, Chief of Resource Management Division
Ellen Hand, former Chief of Administration Division
Terry Saunders, Chief of Maintenance Division
Dan Sholly, Chief of Ranger Activities Division

Christine Bates, Hydrologic Technician
James Burch, Botanist
Tina Collins, Program Assistant
Beth Ann Donahue, Office Automation Assistant
Randy Effert, Contract Specialist
Marlena Horvorka, Fire Effects Specialist
Deborah Jansen, Wildlife Biologist
Kevin Kacer, Management Assistant
Kim Kacer, Budget Analyst
Susan Kaynor, Environmental Protection Specialist
Peg Kohl, Program Assistant
J.D. Lee, Ranger
Wes Leishman, Interpretive Planner
Dusty Olson, Ranger
Frank Partridge, Computer Specialist
Greg Podany, Ranger
Sandra Snell-Dobert, Chief Interpretive Ranger
Bill Snyder, Forestry Technician
Robert Sobczak, Hydrologist
Tom Thatcher, Telecommunications Specialist
G.B. Wangerin, Ranger

Denver Service Center

John Hoesterey, Project Manager
Patrick Kenney, Job Captain
Steven Culver, Job Captain (draft)
Mary Magee, Natural Resource Specialist
Elaine Rideout, Natural Resource Specialist
Carol Whipple, Supervisory Leader, Planning

Everglades National Park

Sonny Bass, Wildlife Biologist
Troy Mullins, GIS Specialist
Antonio Pernas, Botanist

Southeast Regional Support Office

Tim Bemisderfer, Landscape Architect
Stuart Johnson, Chief of Planning and Compliance Division
John Yancy, Associate Regional Director for Natural and Cultural Resources Stewardship and Science

Washington Office, Park Planning and Special Studies Division

Nat Kuykendall, Program Analyst

U.S. FISH AND WILDLIFE SERVICE

Jay Slack, Project Leader

Jane Tutton, Wildlife Biologist

PARSONS ENGINEERING SCIENCE, INC.

Michele Goddard, Geologist
Kathryn Kuhlman, Environmental Scientist
Tauna Murphy, Geologist
Brian Lane, Environmental Scientist
Julia Schulten, Environmental Scientist
Jan Snyder, Editor

VIRGINIA TECH UNIVERSITY, DEPARTMENT OF FORESTRY, COOPERATIVE PARK STUDIES UNIT (CPSU)

Dr. Jeffrey L. Marion, CPSU unit leader
Tracy Farrell
Dr. Troy Hall
Dr. Bruce Hull
Angelina Kendra
Dr. Joseph Roggenbuck

UTAH STATE UNIVERSITY

Dr. Dale Blahna
Peter Williams

COLUMBIA UNIVERSITY

Stuart Pimm

UNIVERSITY OF GEORGIA

Center for Remote Sensing and Mapping Science

RESPONSE TO COMMENTS

INTRODUCTION

The National Park Service received approximately 1,400 letters and oral remarks regarding the Big Cypress National Preserve draft recreational ORV management plan and supplemental environmental impact statement. A comment included any of the following:

An oral statement at a public meeting.

A letter or other written document from an private citizen. This included both individually prepared comments and form letters.

A letter or memorandum from a Native American Tribe or from a federal, state, regional, or local agency.

A letter or memorandum from a non-government organization.

Photocopies of all of the written comments from agencies, organizations, and Native American Tribes, and substantive written comments from individuals are provided at the end of this section. For each of the two form letters received by the National Park Service, a photocopy of a single letter is provided to be representative of the entire group of identical letters. The National Park Service received 775 copies of the letter represented by F250, and 223 copies of the letter represented by F251.

Written transcripts from the two public meetings and copies of all of the written comments are available for public review at Big Cypress National Preserve.

Each comment was assigned an alpha-numeric code. The letter within the code describes the affiliation of the commentor (agency, organization, or private citizen) and is followed by a number, assigned sequentially, that uniquely identifies the comment. Identification of each substantive commentor is provided in Table 15.

Written comments varied in length from less than a page to more than 100 pages and ranged in coverage from a single item to many subjects. Many commentors identified similar concerns. Individually addressing each concern from each commentor would have resulted in considerable repetition. Therefore, 20 broad topics that encompassed all of the comments were identified. Similar comments within each topic were summarized, with an identification of their sources. A response to each comment was then provided.

The Council on Environmental Quality (1978) guidelines for implementing the National Environmental Policy Act require that responses be provided to "substantive" comments. A comment that met any of the following criteria from *Draft Directors Order 12: Conservation Planning and Environmental Impact Analysis* (NPS 1999) was judged to be substantive.

It questioned, with reasonable basis, the accuracy of information.

It questioned, with reasonable basis, the adequacy of environmental analyses.

It presented reasonable alternatives other than those proposed in the plan and supplemental environmental impact statement.

It would cause changes or revisions in the proposal.

Many of the comments that were determined not to meet any of these criteria expressed an opinion. Many others were outside of the scope of the Big Cypress National Preserve recreational ORV management plan and supplemental environmental impact statement. While the National Park Service values this input, no response is provided to such comments. Comments that identified errors such as misspelled words were not included as substantive, but the National Park Service appreciates the information and has corrected the errors.

TABLE 15: IDENTIFICATION OF COMMENTORS

Commentor	Commentor Identification Code
A – Oral comments from public meetings	
Adams, Franklin	A2.13
Barry, Patrick	A1.31
Beardsley, Gary Lee	A2.15
Billie, Danny	A2.32
Bishop, Patrick	A1.40
Brewer, Bill	A2.39
Buckley, Robert	A1.10
Cain, Shannon	A2.23
Campo, Paul	A2.34
Carpenter, Ken	A1.17
Cartwright, Karen	A2.19
Clark, Todd D.	A2.1
Coffey, Kenneth	A1.28
Cook, Michele	A1.29
Cruz, Luis	A1.37
Cruz, Mark	A1.32
Cunbelo, Robert	A1.11
Del Toro, Ray	A1.38
Denninger, Frank	A2.3
Denninser, Frank	A1.6
DiNunzio, John	A2.25
Easom, James	A1.30
Ednor, Benjamin	A1.3
Fisikelli, Freddy	A1.41
Ford, Michael	A2.21
Furland, Wayne	A1.39
Garrott, John	A2.6
Grant, David W.	A2.31
Green, Mark	A1.2
Greer, Karl	A1.5
Guggenheim, David	A2.10
Hampton, Charles W.	A2.2
Hauser, Sean	A2.4
Howard, Nat	A2.27
Hull, Jerron	A2.22
Jenkins, Wayne	A2.33
Jensen, Hank	A2.26
Jensen, Holly	A1.14
Kimmel, Eric	A1.23
Kimmel, Travis	A1.24
Klein, Helene	A1.4
Larkins, Mary	A2.36
Lee, Mike	A2.38
Leon, Leopoedo	A1.26
Leon, Maritza	A1.27
Marco, Joel	A1.8
Marlin, Dennis T.	A2.17
McCandless, Lyle	A2.40
McDowell, Donnie	A2.12
Mogelvang, Christian, M.D.	A2.30
Moller, Jack	A1.12
Myers, William	A1.21
Newell, Norm	A1.18
Peacock, William	A1.22
Pershing, Keith	A2.24

Commentor	Commentor Identification Code
Peterson, Ellen W.	A2.18
Powell, Barbara Jean	A1.20
Powell, Barbara Jean	A2.20
Rodriguez, Clemente	A1.1
Rosewik, Richard	A1.9
Sanders, Eddie	A2.5
Sawyer, Carson and Kit	A2.28
Scherf, Brian	A1.16
Scherf, Brian	A2.9
Scherf, Rosalyn	A1.15
Scherf, Rosalyn	A2.8
Shirley, Tom	A1.25
Smith, Gregory H.	A2.11
Snell, Shane	A2.14
Sorrell, Mike	A2.35
Swingle, John	A2.16
Taylor, Mark	A1.33
Thoemke, Kris	A2.29
Townsend, Robert	A2.37
Van Schaick, Gene	A1.42
Varela, Rick	A1.7
Vatter, Dave	A1.34
Wilsey, Glen	A1.19
Wilson, Chuck	A2.7
Wilson, Dennis	A1.13
Wimmer, Kent	A1.36
Youse, Christopher	A1.35
B – Federal agency comments	
U.S. Environmental Protection Agency	B2
U.S. Fish and Wildlife Service	B1
C – State of Florida agency comments	
Florida Department of Health	C5
Florida Department of Community Affairs, Areas of Critical State Concern	C9
Florida Department of Community Affairs, Coastal Management Program	C8
Florida Department of Environmental Protection	C7
Florida Department of State, Division of Historical Resources	C2
Florida Department of Transportation	C6
Florida Division of Forestry	C3
Florida Division of Forestry	C4
Florida Fish and Wildlife Conservation Commission	C1
D – Regional and local agency comments	
Southwest Florida Regional Planning Council	D1
Southwest Florida Regional Planning Council	D2
E – Non-government organization comments	
Blue Ribbon Coalition Inc.	E7
Collier Sportsmen and Conservation Club	E11
Everglades Conservation and Sportsman Club, Inc.	E8
Everglades Coordinating Council	E20
Florida Biodiversity Project	E1
Florida Biodiversity Project	E23
Florida Trails Association	E19
Florida Wildlife Federation	E2
Florida Wildlife Federation	E6
Florida Wildlife Federation	E21
Georgia Cruisers 4WD Club	E9
Meyer & Glitzenstein, on behalf of the Florida Biodiversity Project and Biodiversity Legal Foundation	EL1
National Audubon Society	E12
National Parks and Conservation Association, South Florida Field Office	E17
National Rifle Association of America	E4
Panther Action Coalition and Friends of Whales	E15
Predator 4-WD	E5
Responsible Growth Management Coalition, The Environmental	E24

Commentor	Commentor Identification Code
Confederation of Southwest Florida, and Save the Manatee Club	
Ridberg, Press & Sherbill, LLP, on behalf of National Park Trust	E13
Sierra Club, The Florida Chapter	E14
Sierra Club, The Florida Chapter	E22
Southern Appalachian Biodiversity Project	E16
SVIA – Specialty Vehicle Institute of America	E10
Wildlands Center for Preventing Roads	E18
Wildlife Legislative Fund of America, The	E3
F – Comments from the general public	
Abraham, Eve	F65
Abraham, Eve	F68
Adams, Franklin	F252
Bang, Harold W.	F113
Barnes, William D.	F162
Baxter, Michael	F4
Beardsley, Gary	F231
Beaver, Kris	F135
Botticher, Pamela D.	F92
Brooks, Leigh	F189
Buisson, Justine	F171
Bussing, Thomas D., Ph.D.	F218
Camaraa, Tom	F227
Cardona, Armando	F210
Cherry, Robert	F161
Christ, Doug	F241
Clark, Todd	F149
Clark, Todd	F150
Counterman, Jesse	F138
Crawford, William J.	F156
Curle, Chris	F188
Dayhoff, Fred E.	F242
DeGraff, Rob	F191
DeGraff, Rob	F192
DeLine, Steven B.	F155
De Mateo, Eduardo	F257

Commentor	Commentor Identification Code
Ridberg, Press & Sherbill, LLP, on behalf of National Park Trust	E13
Sierra Club, The Florida Chapter	E14
Sierra Club, The Florida Chapter	E22
Southern Appalachian Biodiversity Project	E16
SVIA – Specialty Vehicle Institute of America	E10
Wildlands Center for Preventing Roads	E18
Wildlife Legislative Fund of America, The	E3
F – Comments from the general public	
Abraham, Eve	F65
Abraham, Eve	F68
Adams, Franklin	F252
Bang, Harold W.	F113
Barnes, William D.	F162
Baxter, Michael	F4
Beardsley, Gary	F231
Beaver, Kris	F135
Botticher, Pamela D.	F92
Brooks, Leigh	F189
Buisson, Justine	F171
Bussing, Thomas D., Ph.D.	F218
Camaraa, Tom	F227
Cardona, Armando	F210
Cherry, Robert	F161
Christ, Doug	F241
Clark, Todd	F149
Clark, Todd	F150
Counterman, Jesse	F138
Crawford, William J.	F156
Curle, Chris	F188
Dayhoff, Fred E.	F242
DeGraff, Rob	F191
DeGraff, Rob	F192
DeLine, Steven B.	F155
De Mateo, Eduardo	F257

Commentor	Commentor Identification Code
De Mots, Dennis	F186
Denison, Mr. and Mrs. J.L.	F253
Denninger, Frank F.	F107
Dernburg, Ernest A., M.D.	F119
Dettmers, Dr. Almut E.	F46
Drivas, Helen	F159
Easom, James A.	F148
Eichholz, Neal F.	F35
Elton, Wallace	F230
Fagergren, Fred J.	F83
Featherly, Roxanne	F77
Fleming, Donald H.	F198
Fontenot, Donald	F82
Fowler, Beverly, O.P.	F52
Gabel, Bunny	F185
Garrott, Joe F.	F145
Garvey, Lydia	F194
Grayson, Lee	F32
Greenfield, Leonard J., Ph.D.	F124
Griffin, Tim	F142
Hall, Michele, Ms.	F217
Hampton, Charles W.	F240
Hampton, Charles Wade, Jr.	F243
Hampton, Harold	F245
Hampton, Steven K.	F244
Hansen, Mary Lou	F42
Henry, Barbara R.	F246
Henry, Charles R.	F246
Hodges, Dorothy	F48
Horgan, Christopher	F146
Houghton, Richard L.	F152
Hull, Jerron K.	F34
Joyce, Lawrence	F147
Keim, Susan, O.P.	F220
Kent, David A.	F254
Kile, Gary E.	F2
Kimmel, Cody	F140
Kimmel, Eric	F140
Kimmel, Michele	F140
Kimmel, Travis	F140

Commentor	Commentor Identification Code
King, Jean	F126
Knowles, Gary	F201
Lauredo, Rod	F39
Lenz, Dennis J.	F129
Leon, Maritza	F153
Libkind, Marcus	F184
Lohman, Donna	F256
Mathews, Mary	F133
Mayer, William Patrick	F5
McClory, Valerie J.	F50
McDonald, David M.	F143
Mento, Sam A.	F204
Merkel, Robert S.	F187
Metzger, Sherry J.	F180
Michaels, Bob	F193
Millard, Andrew J., Dr.	F132
Moller, Donna	F28
Moller, Jack	F29
Moller, Jack	F30
Moller, L. Jack	F25
Moller, L. Jack	F37
Moller, L. Jack	F249
Morris, Heather	F147
Neufeld, Steven	F81
Nichols, Nick	F125
Nye, Mrs. Dagmar	F14
O'Connell, Dorothy E.	F62
O'Neal, Denny	F159
Patterson, Jeff & Dawn	F199
Rauch, Peter	F167
Rentschler, Dennis S.	F215
Roby, Kinley E.	F229
Rodriguez, Armando, Jr.	F164
Ruscoe, Dean	F131
Rust, Terry	F3
Rutkowski, Robert E., Esq.	F51
Rutkowski, Robert E., Esq.	F128
Rutkowski, Robert E., Esq.	F134
Salmon, Jean L.	F63
Sandberg, Harlan K.	F170

Commentor	Commentor Identification Code
Savett, Adam T.	F49
Scott, Lynwood V.	F151
Sherk, Jerome	F116
Smith, Sean	F130
Snell, Shane	F36
Spotts, Richard	F139
Torres, Lorenzo	F1
Trabulsy, Norman M., Jr.	F219
Travis, Lisa A.	F137
Trumbly, Gary L.	F258
Turner, Kathleen Kaeding	F136
Tyner, Robin D.	F61
Van Winkle, Charlotte B.	F64
Volk, Jeff	F169
Voorhies, Bill & Marilyn	F47
Wack, David R.	F106
WDB, Martha	F175
Whidden, David E.	F141
Wilsey, Susan N.	F259
Wilson, Cody	F205
Youse, C. Robin	F255
Zinn, Robert K.	F223
G – Native American Tribe comments	
Miccosukee Tribe of Indians of Florida	G1

RESPONSE TO COMMENTS

Analysis and Utilization of Scientific Data and Supporting Information

Comment: *The description of the affected environment does not analyze global, national, and regional processes that impact the south Florida ecosystem and Big Cypress National Preserve.* (Source: E1)

Response: The National Park Service is participating in the south Florida ecosystem restoration planning effort, which is providing a regional analysis of the environment. Consideration of this program is described in the "Environmental Consequences" section under "Methodology, Cumulative Impacts." The regional effects of each impact topic are included in the "Environmental Consequences" section. In addition, information on regional processes was included in the 1991 Big Cypress National Preserve general management plan from which this document is tiered, in conformance with 40 CFR 1502.20. Global and national processes are beyond the scope of this management plan and supplemental environmental impact statement.

Comment: *Devise a plan that is based on science, utilizing the best available data. The methodologies cited do not reflect all of the relevant environmental documents.* (Sources: A1.1, A2.9, A2.15, A2.22, E1, E12, E13, E14, E15, E17, E18, F47, F48, F49, F50, F51, F52, F125, F126, F130, F131, F132, F133, F134, F135, F136, F137, F138, F139, F159, F161, F199, F215, F218, F220, F223, F231, F242, G1)

Response: Additional information has been provided throughout the ORV management plan and supplemental environmental impact statement. Readers also should recognize that this plan is tiered to and incorporates all of the information included in the 1991 general management plan and environmental impact statement.

Comment: *The plan does not contain comprehensive and scientifically justifiable conservation goals and objectives.* (Sources: A1.14, A1.16, E1, F1, F2, F49, F148, F149, F250)

Response: See the revisions to management objectives in "Purpose of and Need for the Plan," and "Alternatives, Including the Proposed Action."

Comment: *The plan does not provide any supporting data or analysis for dispersed ORV use.* (Sources: E1, F143)

Response: The proposed action would eliminate all dispersed use of ORVs. See the "Alternatives, Including the Proposed Action" section.

Comment: *A 5- to 10-year research program is needed.* (Source: A1.14)

Response: See the modified "Research" section in "Alternatives, Including the Proposed Action."

Comment: The *plan needs more input from ORV users and locals.* (Sources: A1.35, A1.37, A1.38)

Response: The "Consultation and Coordination" section describes the public participation program that was conducted as part of preparing the plan.

Comment: *The information in the supplemental environmental impact statement does not support the "no unavoidable adverse impacts" stated in the conclusion.* (Source: B1)

Response: The "Unavoidable Adverse Impacts" section has been revised.

Comment: *Geographic information system suitability analysis principles should be used in rewriting the ORV management plan and supplemental environmental impact statement.* (Source: E15)

Response: Geographic information system suitability analyses have been included in the proposed action. See the revised text in "Alternatives, Including the Proposed Action."

Comment: *Provide analysis of the impacts of current levels of ORV use.* (Sources: E20, F229)

Response: Additional information on the effects of current ORV use has been provided in the "Affected Environment" section.

Comment *Provide a projection of the expected increase in ORV use over the next decade and the effects of the increase.* (Source: F229)

Response: Projected ORV use in the preserve is described in the "Purpose of and Need for the Plan" and "Alternatives, Including the Proposed Action" sections.

Comment: *Evaluate reductions in impacts that have resulted from implementing measures included in the general management plan since its enactment in 1991 to the present.* (Source: E.20)

Response: See the description of the no action alternative (continue current management in the "Alternatives, Including the Proposed Action" section for a description of the measures from the general management plan that have been implemented, and their effectiveness.

Opening and Closing of Management Units

Comment: *The plan fails to analyze procedures and considerations for closing and opening trails and areas. Explain the criteria used to determine whether or not a trail or area should be closed for resource or visitor protection.* (Sources: A1.14, A1.16, A2.10, A2.23, B1, B2, C1, E1, E2, E6, E8, E14, E15, E17, E18, E21, E24, F46, F65, F81, F82, F150, F151, F152, F184, F246, F252)

Response: Criteria for opening and closing trails and areas have been added to "Alternatives, Including the Proposed Action."

Comment: *The plan should describe the hydrological criteria that would be used for management of each unit, particularly including the Stairsteps Unit.* (Sources: B1, B2, F242)

Response: Hydrologic criteria are provided in the "Alternatives, Including the Proposed Action" section and Appendix A.

Comment: *Reopen the gate on Cypress Lane at Alligator Alley to reduce traffic in Airplane Prairie.* (Source: F145)

Response: This action was considered and analyzed in the general management plan and environmental impact statement and the I-75 recreational access plan and environmental assessment (NPS 1990). The National Park Service does not plan to reconsider opening Cypress Lane. Under the proposed action, ORVs in the vicinity of Airplane Prairie would be restricted to designated trails.

Comment: *Prohibit ORV use on all lands identified as potential nesting sites for the Cape Sable seaside sparrow and all waters that are critical to the endangered West Indian manatee.* (Source: E15)

Response: Unit management practices described in the "Alternatives, Including the Proposed Action" section have been developed in consultation with the U.S. Fish and Wildlife Service to ensure the protection of these and other threatened and endangered species.

Comment: *How will no-drive areas be maintained and regulated?* (Source: E14)

Response: See the revised proposed action description in the "Alternatives, Including the Proposed Action" section.

Compliance with Legal Mandates and the Settlement Agreement

Comment: *The plan does not clearly explain the relationship of the no action alternative (continue current management) in the ORV plan relative to the 1991 general management plan proposed action.* (Source: E1)

Response: See the revised description of the no action alternative.

Comment: *The plan does not contain a reasonable range of alternatives as required by the National Environmental Policy Act.* (Sources: A1.30, A2.15, B1, B2, E1, E14, E16, E20, F230, G1)

Response: The 1991 general management plan examined a wide range of reasonable alternatives for ORV management. Because this ORV management plan is tiered to the general management plan in conformance with 40 CFR 1502.20, the requirements and intent of the National Environmental Policy Act have been satisfied.

Comment: *The plan does not set forth the traditional and customary use rights of the Miccosukee people or how this plan may or may not affect those rights.* (Source: G1)

Response: The National Park Service has further consulted with the Miccosukee Tribe. Additional information concerning protection of these rights is included in the "Purpose of and Need for the Plan" section.

Comment: *The plan impacts and discriminates against Native Americans.* (Source: A2.32)

Response: The plan has no effect on Native American Tribes. The National Park Service has consulted with the Tribes and will con-

tinue to do so to ensure that their rights are protected.

Comment: *At least one alternative must consider complete elimination of ORVs from the preserve.* (Sources: E15, E16)

Response: As described in "Big Cypress Legislative Background and the Purpose of the Preserve," the Senate and House reports on the bill establishing Big Cypress National Preserve specifically stated that the bill did not prohibit the use of ORVs along designated roads and trails. Therefore, there is no basis for requiring such an alternative.

Comment: *Provide an interpretation of the phrase in the preserve's mandate "subject to regulation" that allows vehicles in the preserve.* (Source: F229)

Response: See the revised "Purpose of and Need for the Plan" section and the description of the proposed action in the "Alternatives, Including the Proposed Action" section.

Comment: *The plan does not assure that ORV usage will not supercede the preserve's mission of resource protection.* (Source: E17)

Response: See the revised "Purpose of and Need for the Plan" section and the revised description of the proposed action.

Comment: *Congressional authorization does not appear to include basic ORV pleasure use of the preserve. Described how the alternatives meet the Congressional authorization. If this was discussed in the 1991 general management plan, it should be referenced.* (Sources: B2, F229)

Response: This was addressed on page 44 of the Big Cypress National Preserve general management plan and final environmental impact statement.

Comment: *The term "no action" for one of the management alternatives may be misinterpreted. The National Park Service should use "current action" instead.* (Sources: C1, E2, E6, E20, E21, F252)

Response: This alternative is now referred to throughout the plan as "no action alternative (continue current management)."

Comment: *The plan should mention that current management, embodied in the "no action alternative," has resulted in major impacts to the preserve.* (Source: B2)

Response: The "Purpose of and Need for the Plan" and "Affected Environment" sections have been revised to include this information.

Comment: *The proposed alternative does not adequately account for past negative impacts when deciding how to manage the resource in the future.* (Source: E17)

Response: The "Alternatives, Including the Proposed Action" section has been revised to provide additional detail on this subject.

Comment: *Both the 1990 biological assessment for the general management plan and the 1991 biological opinion were based on 2,000 vehicle permits per year. However, the NPS record of decision for the general management plan changed the number of permits to 2,500 and never reinitiated consultation with the U.S. Fish and Wildlife Service. Therefore, the National Park Service and U.S. Fish and Wildlife Service have violated the consultation requirements of the Endangered Species Act.* (Source: EL1)

Response: The proposed action has been revised to include no more than 2,000 permits per year, which is consistent with the 1990 biological assessment and the 1991 biological opinion. Selection of the no action alternative (continue current management), including its provision to permit 2,500 ORVs per year, would require further consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act.

Comment: *The plan does not adequately analyze the criteria for the development of a comprehensive designated trail system and/or use areas for ensuring the natural and ecological integrity of the preserve's resources in accordance with the provisions of the Big Cypress National Preserve enabling act and the 1995 settlement agreement.* (Sources: A2.9, B2, E1, EL1, E14, E15, F81, F82, F150)

Response: As described in the revised text in "Alternatives, Including the Proposed Action," geographic information system suitability analyses would be used to select the optimal trail alignments.

Comment: *Under the Endangered Species Act, a Section 7 consultation is required.* (Sources: E14, E16)

Response: The National Park Service has consulted with the U.S. Fish and Wildlife Service in conformance with Section 7 requirements. See the "History of Public Involvement" section.

Comment: *The statement on page 73, "The non-federal property owners are not regulated with respect to access to or dispersal from their property" is not true.* (Sources: F37, F83)

Response: The text has been corrected.

Comment: *Regarding the text on page 27, the National Park Service is not required to consult with the Florida Fish and Wildlife Conservation Commission on ORV use. (Source: F83)*

Response: The text has been corrected.

Comment:. *The plan is not an action-oriented document, but instead is only a planning tool with an inadequate level of detail on implementation.* (Sources: B1, B2, E15, G1)

Response: The description in the "Alternatives, Including the Proposed Action" section has been revised to address implementation.

Comment: *The plan has no timetable, target dates for management, or specifics for implementing actions.* (Sources: B2, E14, G1).

Response: An implementation schedule for the ORV management plan is provided in the "Alternatives, Including the Proposed Action" section.

Comment: *ORV use is allowed by the enabling act; thus, a large fee increase is neither required nor legal.* (Sources: F2, F4, F5, F28, F250, F251)

Response: The proposed fee for an off-road vehicle permit has been revised in the "Alternatives, Including the Proposed Action" section.

Comment: *The plan must include an environmental justice component because the proposed fee increase and ORV specifications will deliberately reduce visitation by low-income individuals. Costs of changes to ORVs under the plan should fall under Executive Order 12898, Environmental Justice.* (Sources: E20, F25)

Response: Environmental justice was not considered in detail for the reasons provided in the "Topics Dismissed from Detailed Analysis" section.

Comment: *The provisions in the plan could result in landowners not being able to access their property, which is a taking of their land. Any reference to non-federal property rights and uses should not be part of the plan.* (Sources: E20, F25)

Response: See the revised description of the proposed action. Exempt property owners would continue to be provided reasonable access to and from their property.

Comment: *Private property owners have the right to access their property, but does*

this mean staying on the designated roads/trails or creating short cuts for convenience? What about if in environmentally sensitive area? (Source: E17)

Response: See the revised description of the proposed action.

Comment: The *plan gives the misleading impression that ORV use is mandated under Congressional law.* (Source: E17)

Response: The text in the section "Legislative Mandates and Special Commitments" has been revised to clarify the authorization of ORV use in the preserve.

Visitor Experience

Comment: *Provide documentation on conflicts between ORV users and other visitors. Analyze the effects of these conflicts.* (Sources: C1, E1, E2, E6, E8, E14, E,17, E20, F107, F148, F256)

Response: See the revised "Affected Environment" and "Environmental Consequences" sections.

Comment: *The proposed action alternative fails to recognize social issues or issues related to the enjoyment of the area by ORV operators, including the ability to explore new places and reach favorite destinations.* (Sources: C1, E2, E6)

Response: Recognition of the importance of these activities is included in the revised "Affected Environment" section. In the "Environmental Consequences" section, the text describing impacts to ORV users has been revised.

Comment: *There are no alternative places to hunt and ride for recreation.* (Source: F32)

Response: This ORV management plan would not limit places to hunt. Additional information on effects to ORV users has been provided in the "Environmental Consequences" section. This issue also was addressed on page 249 of the 1991 general management plan.

Comment: *Do not link scenic highway management and the ORV plan.* (Source: F107)

Response: The revised text does not include scenic highway management. However, as discussed under legislation mandates, Big Cypress National Preserve was established in part to protect the scenic values of the watershed.

Comment: *The plan misrepresents the number of walk-ins and hikers using the preserve.* (Source: A1.34)

Response: The "Affected Environment" section has been revised to provide additional information on visitors who do not use ORVs.

Comment: *The survey of visitors included no African Americans.* (Source: E17)

Response: The survey was sent to a randomly selected group of current ORV permit holders and reflects those who responded. The survey was developed in compliance with Office of Management and Budget regulations to ensure that it was an objective surveying instrument.

Comment: A *buffer on the Florida Trail is impractical to comply with due to the difficulty in navigating within the preserve.* (Source: F258)

Response: The proposed action has been revised to restrict ORVs to designated trails throughout the preserve. The designated trails would be located to minimize crossings of the Florida Trail.

Cumulative Impacts

Comment: *The plan fails to fully consider cumulative impacts.* (Sources: A2.15, E1, E14, E24, F61, F63, F64, F68, F81, F82, F119, F169, F171, F175, F184, F185)

Response: Cumulative impacts sections have been revised throughout the "Environmental Consequences" section.

Comment: *The cumulative impact statement for the future loss of habitat section should be changed to "no cumulative impact," as the preserve is surrounded almost entirely by state and federally owned property where the loss of habitat through development is not a threat.* (Sources: C1, E2, E6)

Response: Although state and federal lands are protected, privately owned lands in the region also provide important habitat and are subject to development. The northern boundary of the preserve has substantial private ownership, and there also are large, privately owned tracts throughout the region. The U.S. Fish and Wildlife Service has expressed concern about habitat fragmentation for several species.

Comment: *The National Park Service must ensure that the environmental impact statement and final plan include a comprehensive analysis of all potential adverse impacts of ORV use, including all commercial activities and other activities which may produce cumulative or connected impacts.* (Source: E18)

Response: The general management plan and final environmental impact statement were prepared to fulfill this intent. Commercial activities are beyond the scope of this recreational ORV management plan.

Education and Communications

Comment: *The plan does not contain an adequate education and communication plan to avoid and minimize ORV impacts. Elements of such a plan could include an ORV users manual, videos, and establishing an educational component to the permitting process.* (Sources: A1.6, A1.32, A2.3, B1, B2, E1, E2, E6, E8, E14, E17, E20, E21, F37, F81, F82, F107, F140, F148, F164, F180, F252)

Response: The descriptions of the education and communication programs in the "Alternatives, Including the Proposed Action" section have been revised.

Comment: *NPS personnel must be trained to manage ORV use.* (Source: E20)

Response: NPS personnel are trained about the regulatory history and legal authorities relating to the management of ORVs.

Protected Species

Comment: *The plan does not adequately support the analyses of impacts on protected species.* (Sources: B2, C1, E1, E2, E6, E14, E18)

Response: The "Environmental Consequences" section has been revised based on the best available information and consultations with the U.S. Fish and Wildlife Service.

Comment: *The plan does not adequately analyze the direct, indirect, and cumulative impacts on the Florida panther, its habitat,*

and its restoration. (Sources: A2.14, B1, E1, E2, E6, E7, E13, E14, E16, E17, F81, F82, F210)

Response: The protected species discussions in the "Affected Environment" and "Environmental Consequences" sections have been modified based on recent studies and consultations with the U.S. Fish and Wildlife Service.

Comment: *The Janis and Clark (1999) study represents the personal position of the researchers and is not scientifically valid.* (Sources: F29, F37)

Response: Janis and Clark (1999) is a scientific study that was successfully defended as part of a major university's masters degree program and has been accepted by the National Park Service.

Comment: *The plan does not adequately analyze the direct, indirect, and cumulative impacts on the eastern indigo snake, wood stork, or West Indian manatee.* (Sources: E1, E2, E6)

Response: The U.S. Fish and Wildlife Service has concurred with the National Park Service conclusion. See the letter from the U.S. Fish and Wildlife Service that is reproduced in this plan as Source B1.

Comment: *Recreational airboating poses no threat to the manatee. In particular, the Ochopee Prairie and Stairsteps Airboat Trail are too shallow for the manatee. When water levels are adequate to support recreational airboating, these areas should not be closed to protect this species.* (Sources: E2, E6)

Response: The U.S. Fish and Wildlife Service concurs with the proposed management action of the National Park Service for protection of this species and with the impacts of each alternative that are presented in the "Environmental Consequences" section.

Comment: *The plan does not adequately analyze the direct, indirect, and cumulative impacts to the Cape Sable Seaside Sparrow. It also does not provide adequate protection to sparrow habitat and fails to use the best available information.* (Sources: B1, B2, E1, E14, E17)

Response: The proposed action has been modified to protect this species. The "Environmental Consequences" section has been revised to reflect this change in the proposed action. Concurrence would be obtained from the U.S. Fish and Wildlife Service in a biological opinion before the proposed action would be implemented.

Enforcement

Comment: *Provide additional information on enforcement, such as how the National Park Service would establish the level of enforcement that would be needed, how the appropriate number of rangers would be determined, and how checkpoints and access points would be monitored.* (Sources: B1, E1, E14, F36, F229, G1)

Response: The description of the enforcement program in "Alternatives, Including the Proposed Action" section has been revised to provide additional information.

Comment: *How can NPS enforcement be maintained after regular business hours?* (Source: B2)

Response: NPS enforcement patrols, dispatch, and emergency response occur around the clock and are not restricted to regular business hours.

Management Objectives and Funding

Comment: *The plan does not establish a comprehensive system for management of ORV use. It should be revised to contain clear conservation goals and objectives, specific management procedures, criteria that would avoid or minimize ORV impacts, criteria for implementing the program's provisions, and descriptions of monitoring and education programs. Goals and objectives should be connected to specific indicators, threshold levels, and performance measures. Management provisions must be nondiscretionary and expressed as enforceable management standards.* (Sources: B2, E1, E14, E15, E17, E18, E24, F81, F82, F184, F186, F246, G1)

Response: Management objectives, which are in "Purpose of and Need for the Plan," have been revised. The description of the proposed action alternative has been revised to include a more detailed description of the comprehensive plan for ORV management.

Comment: *How would implementation of the ORV plan be funded? Without guaranteed funding, what assurances are there that the plan would be implemented? Implementation costs should (or should not) be borne by ORV users or ORV manufacturers.* (Sources: E1, E12, E14, E15, E21, F3, F4, F28, F30, F83, F107, F126, F231, F251, F252, G1)

Response: The "Alternatives, Including the Proposed Action" section includes revised cost estimates for both alternatives and information on funding sources.

Hunting

Comment: *The hunting factor should not be considered in the decision-making process as hunting is a separate and independently controlled activity.* (Sources: F36)

Response: The scope of this plan is the management of recreational ORVs, not hunting. The effects of ORV management to hunting, as well as to all other users of Big Cypress National Preserve, are considered in the "Environmental Consequences" section.

Comment: *Traditional hunting activities would be impacted by the proposed action. Without ORVs, hunting access would be diminished.* (Sources: E20, F210)

Response: The evaluation of effects to hunting has been revised in the "Environmental Consequences" section.

Comment: *Provide reasons for proposed restrictions of hunting.* (Source: F162)

Response: The proposed action for recreational ORV management does not contain any proposed restrictions on hunting.

Surface Water Flow and Water Quality

Comment: *The plan does not adequately analyze the direct, indirect, and cumulative impacts to surface water flows. This includes consideration of the effects of designated trails and new parking areas at access points.* (Sources: B1, C1, C9, E1, E14, F113, F189, F210, F256)

Response: See the revised "Environmental Consequences" section.

Comment: *The plan does not adequately analyze the direct, indirect, and cumulative impacts to water quality.* (Sources: B1, B2, C1, E1, E2, E6, E14)

Response: See the revised "Environmental Consequences" section.

Comment: *Many other features besides ORV use affect surface water flows and water quality. Some of these include roads, levees, Corps of Engineers' ditch digging, and sugar farmers' pollution.* (Sources: A1.8, A1.9, A1.11, A2.1, A2.4, C1, F188, F201, F210)

Response: As stated in the "Affected Environment" section, the National Park Service recognizes that the hydrology and water quality of the area have been altered by these and other features. However, their presence does not affect the analysis of the effects of ORVs on surface water flows and water quality.

Monitoring, Restoration, and Research

Comment: *Explain how the preserve would manage the problem corridors.* (Source: E14)

Response: Management of problem corridors is addressed in the monitoring, management actions, and restoration sections of "Alternatives, Including the Proposed Action."

Comment: *Develop specific procedures and measures for evaluating ecological integrity.* (Source: E17)

Response: See the revised description of the monitoring program in the "Alternatives, Including the Proposed Action" section.

Comment: *The proposed action fails to adequately analyze methods of monitoring impacts and taking remedial actions based on results of such monitoring. The research program is vague, speculative, and does not comply with legal mandates.* (Sources: C9, E1, E17, F81, F82, F161, F167)

Response: See the revised description of the monitoring and research programs in the "Alternatives, Including the Proposed Action" section.

Comment: *Identify mitigation, on-going or proposed, for ORV impacts.* (Sources: B1, E17)

Response: Many of the individual components of the proposed action were developed to serve as mitigation for impacts from ORV use in the preserve.

Comment: *Explain how future impacts to restored or reclaimed areas would be prevented through mitigation.* (Sources: B1, E14)

Response: The revised proposed action would restrict ORVs to designated trails only. Therefore, they would not cause adverse effects to restored off-trail areas in the future.

Comment: *Incorporate evaluating ecological integrity into a comprehensive monitoring program.* (Source: E17)

Response: See the revised description of the monitoring program in the "Alternatives, Including the Proposed Action" section.

Comment: *Provide timetables for reclamation of damaged areas.* (Sources: B2, E14)

Response: The implementation schedule is included in the "Alternatives, Including the Proposed Action" section. However, actions would be implemented based on the availability of funding.

Comment: *Cite on-going or previous mitigation areas that offset ORV impacts.* (Source: E14)

Response: See the revised description of the alternatives.

ORV Types and Specifications

Comment: *Commentors support or oppose the proposed 2 pounds per square inch tire pressure standard, its justification, and/or its cost and have provided reasons to buttress this position.* (Sources: A1.5, A1.7, A1.18, A1.21, A1.22, A1.23, A1.34, A1.42, A2.1, A2.2, A2.3, A2.4, A2.10, A2.11, A2.22, A2.23, A2.25, A2.27, A2.30, A2.33, A2.40, B1, B2, C1, E1, E2, E6, E7, E8, E12, E14, E17, E20, E21, F2, F3, F4, F5, F28, F34, F35, F36, F37, F81, F82, F141, F143, F145, F147, F148, F150, F156, F184, F198, F210, F224, F240, F241, F242, F243, F244, F245, F250, F251, F252)

Response: The proposed action has been modified to eliminate any tire pressure standard.

Comment: *Buggies do not need braking systems because they so low-geared.* (Sources: E2, E6, E8, E20, F37, F142)

Response: Agreed. This requirement has been eliminated in the revised description of the proposed action.

Comment: *Street-legal 4 x 4 vehicles must be restricted to above-grade roads. Clarify proposed specifications for street-legal 4 x 4s. Allow a higher psi limit for 4 x 4 street-legal vehicles, but restrict them to designated trails.* (Sources: B1, E1, E14, F39, G1)

Response: See the revised vehicle specifications in the "Alternatives, Including the Proposed Action" section.

Comment: *The 265-horsepower limit on airboat engines to reduce noise is an unjustified requirement.* (Sources: B2, E20, F2, F3, F5, F28, F36, F140, F143, F148, F150, F242, F250, F251)

Response: This requirement has been eliminated in the revised description of the proposed action.

Comment: *Vehicle specifications should include tire construction (such as lugs) and tire pressure.* (Sources: A1.18, B2, E1, F140, F142, F145, F148, F156, F198)

Response: No specifications are currently included, but they could be added in the future under the adaptive management provisions of the proposed action.

Comment: *New ORV specifications are cost prohibitive. This concern includes, but is not limited to, changing tire diameter, which requires changing gears and other equipment.*

(Sources: A1.23, A1.34, E20, F140, F140, F142)

Response: Many specifications were eliminated from the revised description of the proposed action.

Comment: *Specifications should include limits on size, tires, equipment, weight, speed, noise, engine revolutions per minute, and engine size. Also, a timeline to comply with new standards should be prepared.* (Sources: B2, E2, E6, E8, E17, E18, E20, F42, F47, F48, F48, F49, F50, F50, F51, F52, F77, F92, F116, F125, F128, F129, F130, F131, F132, F133, F134, F136, F137, F138, F139, F170, F188, F192, F215, F217, F220, F223, F230, F242)

Response: The proposed action includes research to determine if additional ORV specifications are required to protect the preserve's resources. All of the factors identified in this comment were considered in the preparation of the revised specifications that are included in the "Alternatives, Including the Proposed Action" section. An implementation schedule for the ORV management plan also is provided in this section. Vehicles would have to pass an inspection that included the specifications before the owner could be eligible for the vehicle permit drawing in the first (and all subsequent) year of program implementation.

Comment: *Document how vehicle standards are justified to help protect sensitive resources.* (Sources: E20, E24, F35)

Response: The rational for vehicle specifications is provided in the revised "Alternatives, Including the Proposed Action" section.

Comment: *Clarify vehicle width restrictions – does this include tire width?* (Source: B2)

Response: Yes, tire width is included in the total vehicle width. See the revised vehicle specifications in the "Alternatives, Including the Proposed Action" section.

Comment: *What types of motorized vehicles are under the umbrella of "motorized vehicles"?* (Source: E17)

Response: See "Characteristics of ORVs" in the "Affected Environment" section.

Comment: *Provide a definition of an ATC and distinguish it from other ORVs.* (Source: E10)

Response: See the "Characteristics of ORVs" in the "Affected Environment" section.

Comment: *The proposed maximum ORV sound level of 60 decibels must not apply to airboats and should be measured with ORV engines at idle speed.* (Sources: F2, F5, F150, F250, F251)

Response: See the revised vehicle specifications in "Alternatives, Including the Proposed Action."

Comment: *Provide analysis of the effects that ORV headlights have on endangered species.* (Source: B2)

Response: The ORV management plan was prepared in conjunction with the U.S. Fish and Wildlife Service. Impacts from headlights were not identified by the U.S. Fish and Wildlife Service or other experts as being of concern to threatened and endangered species.

ORV Permits, Fees, Regulations, and Operating Standards

Comment: *Commentors support or oppose the proposed fees and have provided reasons to buttress their position. They suggest that ORV user fees should be specifically earmarked for ORV management, should be better explained, should be consistent with those charged on other federal lands, should*

cover program administrative costs only, or should be levied only after a fee analysis study. (Sources: A1.9, A1.13, A1.22, A1.23, A1.29, A1.24, A2.35, B2, E2, E5, E6, E7, E8, E14, E10, E17, E20, E21, F2, F3, F36, F37, F106, F140, F142, F145, F146, F147, F148, F150, F155, F199, F201, F204, F205, F240, F241, F243, F244, F245, F250, F252, G1)

Response: See the revised description of fees, described as part of the permit program for each alternative, in the "Alternatives, Including the Proposed Action" section.

Comment: *NPS Director's Order #53 is not applicable for fee increase.* (Sources: F3, F4, F5, F28, F251)

Response: Agreed. The text has been revised.

Comment: *Fees discriminate against low incomes and minorities.* (Sources: A1.1, A1.24, A1.25, A1.27, A2.14, A2.21, A2.33, A2.35, A2.37, E7, F2, F36, F116, F145, F150, F242, F249, F250, F255)

Response: While ORV permit fees might affect *how* some people use the preserve to recreate, they would not affect any group's ability to *use* the preserve.

Comment: *Some statements regarding fees conflict. These include page 1, line 15; page 17, line 1; and page 111, Tactic 12.1.* (Source: F107)

Response: The tactics presented in Appendix B of the draft plan were generic options. That appendix has been eliminated from the revised plan.

Comment: *Tactic 10.3-"restrict use of particular ORV types in sensitive or problem areas" – The National Park Service needs to develop sound criteria to decide what is acceptable and what is not.* (Sources: E2, E6)

Response: The project description in the "Alternatives, Including the Proposed Action" section has been revised to provide criteria for defining sensitive or problem areas.

Comment: *Commentors support or oppose a ceiling on the number of ORV permits issued annually and have provided reasons to buttress their position.* (Sources: B1, E1, E14, E17, F83)

Response: The permit ceiling of 2,000 was established on page 46 of the final general management plan and environmental impact statement. The effects of existing ORV use to resources are described in the "Affected Environment" section.

Comment: *Commentors support, oppose, or request clarification on restrictions on age limits and the requirement that only licensed drivers be allowed to operate ORVs in the preserve.* (Sources: A1.23, A1.24, A1.29, B2, F83, F140)

Response: Only persons having a valid drivers license would be allowed to operate an ORV in Big Cypress National Preserve. See "Rules and Enforcement" in the "Alternatives, Including the Proposed Action" section.

Comment: *To control impacts, limit the number of ORVs using the preserve or any access point at the same time.* (Sources: B2, F62, F210)

Response: The adaptive management approach of the proposed action potentially could include limiting use at access points. Research would be conducted to determine the carrying capacity of each area. See the revised text in the "Alternatives, Including the Proposed Action" section.

Comment: *References in the "Environmental Consequences" section erroneously relate reductions in impacts to a management plan that would reduce ORV numbers when no such proposal was defined in the proposed action.* (Source: C1)

Response: The revised proposed action would limit the number of vehicle permits issued annually to 2,000 in compliance with the 1991 Big Cypress National Preserve general management plan and environmental impact statement, and the U.S. Fish and Wildlife Service 1991 biological opinion. The "Environmental Consequences" section in this ORV management plan has been revised to reflect this and other changes in the regulation of ORVs.

Comment: *Regarding text on owners of property within the backcountry on page 20: Legislation, laws, and regulations do not provide right of access via an ORV unless an exempt property owner has legal right-of-way or pre-existing access rights.* (Source: F83)

Response: Exempt property owners would be provided reasonable access to their private property through a special use permit issued by the National Park Service. See the revised description of the proposed action.

Comment: *The Specialty Vehicle Institute of America, a trade association representing manufacturers and distributors of ATCs, supports the use of helmets and eye protection for all ATC operators, not just children. The institute strongly opposes the carrying of passengers on ATCs, which are not designed for carrying passengers and carry warning labels to this effect.* (Source: E10)

Response: In the education course described in the proposed action, the National Park Service would recommend the use of appropriate safety equipment.

Soils

Comment: *The analysis of impacts on soils is insufficient.* (Sources: C1, E1, E2, E6, F124, F187)

Response: The "Affected Environment" and "Environmental Consequences" sections have been revised. Identification of additional soils research has been included in research section.

Comment: *The conclusion for impacts to soils should state under the no action alternative that some areas would be reclaimed to more natural conditions over time through the current use of temporary trail closures.* (Sources: C1, E2, E6, F147)

Response: The assessment of impacts under the no action alternative (continue current management) has been revised.

Comment: *The statutory and regulatory framework for soil impacts is misleading.* (Source: E1)

Response: See the 1991 general management plan and environmental impact statement for more complete information on the statutory and regulatory framework for soils management.

Trails and Access Points

Comment: *Indicate locations of access points, criteria for their selection, and where users would park. Data on points of entry and exit, and the destinations of ORV users should be obtained and evaluated before making decisions on adding, deleting, or improving access points.* (Sources: A2.30, E1, E14, F3, F4, F28, F36, F150, F251, F254)

Response: Access point locations for the proposed action are shown in the Conceptual Framework of Access Points and Primary

Trails map. Selection criteria for access points are provided in the revised "Alternatives, Including the Proposed Action" section.

Comment: *The plan does not sufficiently assess the aesthetic effects of designated parking areas.* (Source: F189)

Response: See the evaluation of effects to other visitation in the "Environmental Consequences" section.

Comment: *There currently is insufficient information to determine the amount of parking that would be needed for ORV users at access points. Access and parking should be provided at least at the level identified in the general management plan.* (Sources: B1, B2, E14, E20, F2, F36, F150, F250)

Response: Under adaptive management, the National Park Service would determine parking needs and provide appropriate parking.

Comment: *Commentors support or oppose limiting ORVs to designated trails and access points, and have provided reasons to buttress their position.* (Sources: A1.10, A1.34, A1.39, B2, C1, E2, E6, E17, E18, E20, F34, F140, F141, F143, F149)

Response: The legislative history for the establishment of the preserve recognizes that the use of ORVs must be carefully regulated, while stating that the establishing legislation "does not prohibit their use along designated roads and trails." In conformance with this legislative history, the proposed action has been revised to restrict ORVs to designated trails.

Comment: *The positive benefits created by trails and ruts should be examined.* (Sources: E2, E6)

Response: The mandate of the National Park Service under the establishing legislation is to manage for natural and ecological integrity. Artificial ponding, trails, and ruts are not consistent with this mandate.

Comment: *Selection of access points would require review, permitting, and coordination with other agencies. These could include the Florida Department of Transportation, Florida Fish and Wildlife Conservation Commission, Florida Department of Community Affairs, and South Florida Water Management District.* (Sources: C6, C7, C8, C9)

Response: The National Park Service would coordinate with other agencies as appropriate.

Comment: *Information should be provided on trail stabilization locations, schedules, and techniques.* (Sources: B1, B2, E1, E2, E6, E21, F252)

Response: See the revised "Alternatives, Including the Proposed Action" section. As described there, geographic information system-based suitability analyses would be used to select the optimal routes for the designated trails. This would reduce the need for trail stabilization. As funding was available, the National Park Service would continue to evaluate methods for trail stabilization as described in the revised "Research" section.

Comment: *Visible trails are a cultural and historical resource.* (Source: F107)

Response: Trails have not been identified or designated as a cultural or historical resource by the National Park Service or the Florida State Historic Preservation Office.

Comment: *Provide recreational and interpretive information at the parking areas.* (Source: F189)

Response: This has been incorporated into the revised description of the proposed action in the "Alternatives, Including the Proposed Action" section.

Comment: *Why is the access point to the Loop Road Unit being developed when that unit is closed to ORVs?* (Source: B2)

Response: This access point has been eliminated from the revised description of the proposed action.

Comment: *Commentors support or oppose access into the preserve from the eastern boundary, including the L-28 levee system, and have provided reasons to buttress their position.* (Sources: E7, E20, F2, F3, F4, F5, F28, F37, F140, F150, F242, F250, F251, G1)

Response: Recreational access along the eastern boundary would be excluded because of enforcement and resource protection concerns. The closure would be implemented in cooperation with landowners along the preserve's eastern boundary, including the Miccosukee Tribe. The National Park Service may consider allowing access to private properties from the eastern boundary via special use permits.

Comment: *Commentors support or oppose access into the preserve from the jetport and have provided reasons to buttress their position. Commentors suggest that such entry points be selected in consultation with Florida Fish and Wildlife Conservation Commission and ORV users.* (Sources: E20, F2, F3, F4, F28, F150, F250, F251)

Response: The National Park Service would work in cooperation with the Miami-Dade County Port Authority (the jetport manager) to designate an access point from the jetport.

Comment: *Provide an accurate map of the preserve with acceptable ORV trails marked.* (Source: F229)

Response: The Conceptual Framework of Access Points and Primary Trails map shows the conceptual map of the trails network. A detailed map would be prepared during implementation of the first phase of the proposed action.

Comment: T*actic 7.1-"add fill material in problem areas" - A test area should be done and monitored to see how effective this expensive idea is.* (Sources: E2, E6, E8)

Response: The research and monitoring components of the proposed action would determine the best approaches for maintaining trails.

University of Georgia Database and Miles of Trails

Comment: *The plan does not discuss why the University of Georgia ORV trail database was not ground truthed or when it will be completed.* (Sources: A1.16, A1.20, A2.10, B1, B2, C1, E1, E2, E6, E14, E17, E20, F257, G1)

Response: Insufficient funding at the time the draft was released for public review prevented field verification of the potential trails shown in the University of Georgia ORV map. Since then, the National Park Service has engaged the university to provide this service, and preliminary results are provided in Appendix B.

Comment: *The plan fails to note that much of the "permanent destruction" is not related to ORVs but is historical in origin, such as logging roads, access from trailer parks and houses, and activities of the U.S. Army Corps of Engineers and Florida Division of Forestry.* (Sources: A1.8, A2.23, A2.26, E2, E6, F2, F150, F250)

Response: The intent of the National Park Service is to manage for the natural and ecological integrity of the preserve, regardless of the origin of the adverse effect. The mechanisms cited in this comment were the sources of trails in only a small portion of the total affected area. In addition, the con-

tinued use of these trails by ORVs exacerbates the condition and prevents recovery.

Comment: *Even at 29,000 miles, no more than 1.4 percent of pre-addition Big Cypress has ever had a tire on it.* (Sources: A2.3, F107)

Response: This calculation was based on the width of a vehicle's tires and mistakenly assumed that all of the vehicles that have ever traveled along a particular trail have always traveled in the same pair of ruts. It did not consider multiple passes and numerous sets of ruts within a single trail.

Comment: *Buggy ruts are beneficial as firebreaks.* (Source: A2.31)

Response: Many vegetation types on the preserve are fire dependent. Therefore, the action of ruts as firebreaks is not necessarily beneficial.

Vegetation

Comment: *The plan does not adequately analyze effects to vegetation.* (Sources: B1, E1, E2, E6, E14, F253)

Response: The "Affected Environment" and "Environmental Consequences" sections have been revised.

Comment: *Because of considerable mangrove damage from commercial operations in the southwest Addition Lands, the National Park Service is in violation of Executive Orders 11644 and 11989.* (Source: E1)

Response: The Addition Lands are not within the scope of this plan.

Comment: *The plan should discuss the effects of ORVs on invasive vegetation spread and succession.* (Sources: A1.16, F37)

Response: See the revised vegetation description in the "Affected Environment" section.

Comment: *The analysis of no action impacts for all plant communities should include "severely impacted areas would be closed and reclaimed to more natural conditions over time."* (Sources: C1, E2, E6)

Response: See the revised description of impacts to vegetation from the no action alternative (continue current management) in the "Environmental Consequences" section.

Comment: *The existing trails in the old-growth pinelands plant community represent 0.1 percent of this community's area in the preserve. The impact of trails on ecological function and the ability of the area to support wildlife is negligible. This type of information would be useful to better assess the impacts of ORV use on ecological function.* (Source: C1)

Response: See the revised "Affected Environment" and "Environmental Consequences" sections.

Comment: *Provide a listing of habitats where ORVs should not be allowed and where ORV use can be sustained while preserving the integrity of the environment.* (Source: F229)

Response: As described in the "Alternatives, Including the Proposed Action" section, a geographic information system suitability analysis would be used to define trail alignments that could best handle ORV use on a sustained basis.

Wildlife and Habitat

Comment: *The plan does not adequately analyze effects to wildlife species that are not designated as protected species.* (Sources: E1, E15, E17, E18, F46, F242)

Response: The "Affected Environment" and "Environmental Consequences" sections have been revised. The rationale for the selection of wildlife impact topics is included in "Planning Opportunities and Issues" within "Purpose of and Need for the Plan." In addition, a section entitled "Other Wildlife Species" has been added to the discussion of "Topics Dismissed from Detailed Analysis."

Comment: Include reducing or prohibiting traffic in sensitive areas to the strategies and tactics for managing ORV use. To address this strategy, sensitive areas should be identified and mapped, and criteria should be developed to determine the degree of sensitivity. (Sources: E2, E6)

Response: The geographic information system-based suitability analysis for selecting optimal trail alignments would incorporate maps of sensitive areas for wildlife, including both protected species and common regional species. Criteria would be developed within the suitability analysis to evaluate the effectiveness of each proposed alignment in protecting both of these wildlife groups.

Comment: *Regarding deer movement, more recent studies using telemetry have been conducted and should be considered in the discussion of deer movements in response to hunting. In addition, the draft states that the reductions in noise and other disturbances that would result from more restrictive ORV management would likely result in population increases of white-tailed deer and feral hogs. This statement needs further clarification and documentation.* (Sources: A1.6, C1, E2, E6, F107, F148)

Response: The "Environmental Consequences" section has been revised.

Comment: *ORV use and hunting as currently regulated within the preserve have no known significant impacts to the area's wildlife.* (Sources: E2, E6, F141, F153)

Response: The 1999 study by Janis and Clark demonstrated that human activities associated with ORVs and hunting affect the Florida panther. This finding has raised concerns about the potential impacts of these activities to other wildlife species.

Comment: *The sections describing wildlife impacts contain a number of contradictions and need careful review.* (Sources: A2.29, C1, E2, E6)

Response: The "Environmental Consequences" section has been revised.

Comment: *There are no empirical data to support the possible effects on breeding birds from airboat noise.* (Source: F143)

Response: The proposed action has been modified to include research on the effects of airboat noise on breeding birds. Consistent with the precautionary principle, the proposed action would protect breeding birds from airboat noise until research demonstrated that protection was not needed.

Comment: *Specify threshold criteria for unacceptable impacts.* (Sources: E24, F81, F82, F169, F184, F218, F229, F46)

Response: Criteria for unacceptable impacts are included in the "Alternatives, Including the Proposed Action" section.

Scope of the Plan and Supplemental Environmental Impact Statement

Comment: *The plan should include commercial vehicle use. Include a comprehensive analysis of past and present commercial ORV use.* (Sources: E14, E15, E17, E18, E24, F14, F184, F227, F229, F242, F426, G1)

Response: Commercial activities are beyond the scope of this recreational ORV management plan.

Comment: *Include the Addition Lands in the plan and prohibit/allow ORV use in the Addition Lands.* (Sources: E13, E15, E24, F14, F47, F48, F49, F50, F51, F52, F65, F81, F82, F125, F129, F130, F131, F132, F133, F134, F135, F137, F138, F139, F165, F184, F198, F215, F217, F220, F223, F F227, F229, 230, F246, F240, F242, F246, F259)

Response: Management of the Addition Lands is beyond the scope of this plan. Refer to the section entitled "Purpose of and Need for the Plan."

Comment: *Address use by hikers, cyclists, canoeists, etc.* (Sources: F186, F189, F191, F193, F194)

Response: Non-ORV recreational activities are beyond the scope of this ORV management plan, except to the extent that interactions may occur between user types. Such interactions are addressed under "Other Visitation" in the "Affected Environment" and "Environmental Consequences" sections.

Comment: *The plan must include all vehicles in the preserve, not just recreational ORVs.* (Source: E20)

Response: Other types of vehicles in the preserve are beyond the scope of this recreational ORV management plan.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
P.O. Box 2676
Vero Beach, Florida 32961-2676

November 12, 1999

RECEIVED
NOV 17 1999
BIG CYPRESS NATIONAL PRESERVE

Wallace A. Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141-9710

Dear Mr. Hibbard:

Thank you for your letter dated August 13, 1999. The Fish and Wildlife Service (Service) has reviewed the attached *Off-Road Vehicle Management Plan, Supplemental Environmental Impact Statement* (SEIS) and other supporting documentation.

General Comments

The SEIS describes two alternatives, the proposed alternative and the no-action alternative. The SEIS also states that two other alternatives were considered and eliminated. The Service would prefer to see all alternatives considered and analyzed in the SEIS. The presentation of only the preferred alternative and no-action alternative precludes review of other alternatives to the proposed action. In addition, the SEIS appears, as stated in our May 20, 1999, letter, to be a planning tool used to determine what measures may be initiated to achieve the proposed alternative rather than an action-oriented document designed to describe how the proposed alternative will be executed, monitored, and managed. Actions needed to implement the components of the proposed alternative are not identified with the exception of the new ORV specifications.

Specific Comments

Page iv, third paragraph - This paragraph states that "criteria would be developed for determining when a unit should be closed..." These criteria should be presented in the SEIS as a component of the proposed action.

Page v, third paragraph - This paragraph states that neither the proposed action nor the no-action alternative would be likely to adversely affect any listed species. Information in the SEIS does not support this conclusion. The study on panther use and movements in the Big Cypress National Preserve (BCNP) indicates that panther use shifts during hunting season. This indicates a change in breeding, feeding, and sheltering behavior.

181

Page 5, second paragraph - The SEIS identifies that the Strategic Plan for BCNP calls for reclamation of five percent of lands disturbed by various uses. The Service recommends the National Park Service (NPS) consider reclamation of additional land above this five percent goal.

Page 6, second paragraph - Please explain how future impacts to reclaimed areas will be prevented through mitigation.

Page 7, bullet (1) - Inside perentheses should read "Florida Game and Fresh Water Fish Commission."

Page 7, last paragraph - Please include all correspondence with agencies consulted on the SEIS. Our May 20, 1999, letter was not included in the Consultation and Coordination section.

Page 9, vegetation paragraph, last sentence - The sentence should read "For similar reasons, prairies were an added impact topic."

Page 10, first line - Change Everglades snail kite to Everglade snail kite.

Page 11, Other Protected Species - The Service agrees with the conclusions reached for additional analysis and protection for the American alligator (*Alligator mississippiensis*), eastern indigo snake (*Drymarchon corais couperi*), and peregrine falcon (*Falco peregrinus*).

Proposed Action

Page 16, last paragraph - Identify how many vehicle permits will be issued under the proposed alternative. Table 4 includes the total number of permits issued between 1981 and 1997. Based on the information in this table, the Service found the maximum number of permits issued in any year to be 2,255. The Service recommends that the maximum number of permits issued for the either alternative be reconsidered. The current cap of 2,500 has never been requested or issued, therefore, the cap appears to be set too high.

Page 18, Vehicle Specifications - This section describes, in detail, the new restrictions on vehicle specifications for ATVs and swamp buggies. The section does not, however, identify the specification requirements for street-legal 4x4s although we assume they will still be permitted access to BCNP. Please clarify the proposed specifications for street-legal 4x4s in the proposed action.

Page 20, Access Points - The proposed action does not identify where additional access points will be proposed and how access at other locations will be controlled. As an action, this information should be included in the SEIS. Additionally, the need for increasing parking at existing access points is not identified. The Service requests that additional information supporting the need for increased parking be submitted to our office for review.

B1

182

Page 23, Criteria for Closure - The SEIS indicates that criteria for unit closure will be developed in the future. The SEIS should contain the criteria for unit closure. These criteria are essential components for any proposed action. Without them, review of the proposed action is not complete.

Page 23, Education and Communication - The preparation of an ORV user manual as well as other forms of information exchange would be invaluable in preventing damage to sensitive resources. This component should be included in the no-action alternative as well.

Page 24, Enforcement - Please provide more specifications on the number of additional rangers and other mechanisms for increasing enforcement of ORV regulations.

Page 25, Wildlife Monitoring - The Service recommends models be developed for wildlife monitoring. While HEP is a useful tool, it was designed to evaluate habitat based on selected species and may not be the appropriate tool to monitor wildlife.

Page 25, Vegetation Monitoring - Baseline information on current conditions should have already been collected and included in the SEIS. The use of photo points for vegetation monitoring will be beneficial.

Page 27, Bear Island Unit - Describe how road and trail systems in this management unit would be maintained. Please identify the source and mechanism for the determination that a total of only 54 miles of trails exist in this unit. Since the Clark and Janis study (1999, citation missing from reference section) concludes there is a correlation between Florida panther (*Puma concolor coryi*) movements and hunting activities, this issue should be investigated and the proposed action modified to minimize the effects of human activities on this species. Consultation with the Service on the effects of hunting on the panther would be recommended.

Page 28, Turner River Unit - "No drive" areas are referenced, but not described in the glossary or introduction sections. Please describe "no drive" areas and how they would be controlled, managed, and regulated.

Page 28, Stairsteps Unit - The SEIS should include the hydrologic criteria that will drive management of this unit. This is an essential component of management of the Stairsteps Unit. The absence of these criteria precludes sufficient review of the proposal for this management unit.

No-Action Alternative

Page 29, Vehicle Permit System - The no-action alternative does not propose to reduce the number of permits issued. Or the increase the number of areas closed to ORV use. Therefore, there can be no reduction of impacts from ORVs.

Page 30, first line - Identify the mitigation, either on-going or previously accomplished, that compensates for ORV impacts.

Page 30, second paragraph - NPS should consider reducing the maximum number of permits issued to ORV users.

Page 49, ORV Trail Mapping - The SEIS questions the accuracy of the University of Georgia study, which indicated a total of approximately 29,796 miles of trails. If the tertiary trail (up to 33 feet in width) total is eliminated, the current impact of trails totals approximately 9,525 miles. This increase is extraordinary considering the 1984 study estimated1,240 miles of trails. Ground-truthing should have been completed and the data presented in the SEIS for review during this process.

Page 56, Conclusion - Since the proposed action and the no-action alternative identify options for actions to manage ORV's in BCNP, the Service does not agree that the proposed action will have a beneficial effect on surface water flows. The proposed action would have to include more activities and measures that will be implemented to accomplish this.

Page 57, Analysis of Proposed Action Impacts - This section does not analyze the effects of ORV use on water quality. It states that the proposed action would improve water quality. In addition, the lack of action-oriented components in the proposed action does not support the conclusion in this section. Please provide more information on what "improvements to trails" constitutes.

Page 60, first paragraph - While the more stringent ORV vehicle specifications of 2.0 psi or less would promote recovery of soils and improve conditions, they may be unrealistic and onerous considering the $1,000 or greater to retrofit each ORV.

Page 61, Conclusion for Cypress Strands and Domes, and Mixed Hardwood Swamps- The Service does not agree that the proposed action would provide additional protection to cypress strands and domes, and mixed hardwood swamps. The proposed action lacks specific components that would provide support for such a conclusion.

Page 62, Conclusion for Marshes - Since no additional area closures are proposed with the proposed action, the conclusion that the proposed action would reduce impacts to marshes is only supported by the changes in the ORV specifications.

Page 62, Conclusion for Mangrove Forests- The Service agrees with this conclusion.

Page 62, Old Growth Pinelands - Thirty miles of trails on 54 acres of pinelands may be excessive. A reduction greater than five miles should be considered.

Page 63, Conclusion for Pinelands - The no-action alternative would also reduce impacts to this plant community, if unit closures were incorporated into the no-action alternative.

B1 (cont.)

Page 64, Hardwood Hammocks - Since the results of the Duever study (1986) were published greater than 10 years ago, these areas should have been resurveyed to identify additional recovery over the last 10 years. The NPS would then have more data to support some of the conclusions contained in the SEIS.

Page 65, second paragraph - NPS should be aware that avoidance and minimization of impacts to wetlands for access point construction would have to be adequately demonstrated before permits could be issued for them. In addition, their location is not identified in the SEIS. Their absence precludes the formation of alternative location recommendations.

Page 66, Florida Panther - Please describe the "proposed reclamation program" in detail. Since no actual closures are proposed in the proposed action, the proposed action cannot minimize effects to the Florida panther. The Service recommends the NPS refine the proposed action to include this information. Altered movements and shifts in home range may be adverse effects that should be addressed in consultation with the Service.

Page 68, Cape Sable Seaside Sparrow - The conclusions are difficult to determine based on the information in the SEIS. More specific information on closures, airboat restrictions, and reclamation should be presented to support the conclusion.

Page 69, Red-cockaded Woodpecker - The Service agrees that neither proposal in the SEIS will affect the red-cockaded woodpecker (*Picoides borealis*).

Page 70, Bald Eagle - The Service agrees that neither proposal in the SEIS will affect the bald eagle (*Haliaeetus leucocephalus*).

Page 71, Everglade Snail Kite - The Service agrees that neither proposal in the SEIS will affect the Everglade snail kite (*Rostrhamus sociabilis plumbeus*).

Page 72, Wood Stork - The Service agrees that neither proposal in the SEIS will affect the wood stork (*Mycteria americana*).

Page 72, West Indian Manatee - The Service agrees that neither proposal in the SEIS will affect the West Indian manatee (*Trichechus manatus*).

Page 76, Unavoidable Adverse Impacts - The SEIS states that the proposed action would not result in unavoidable adverse impacts. This conclusion is not supported by the information in the SEIS. The proposed action does not define the measures NPS will take to avoid on-going impacts. In addition, the proposed action calls for the identification of criteria for unit and trail closure, but does not define the criteria to be used. Essential components are not, currently, included in the proposed action.

183

Page 145, Appendix D - The Service supports the development of hydrologic criteria to determine the level and type of ORV use in the Stairsteps Unit.

The Service recommends that the SEIS be modified to include the criteria or mechanisms to be used to determine closure, level of use, and need for enforcement in units or on trails. We would be available to provide technical assistance to NPS in the formation of any modifictaions to the document. We agree that activities that would minimize current ORV impacts and rectify past impacts while allowing for continued use of the BCNP would be preferred. If you have questions, please contact Jane Tutton at (561) 562-3909, extension 235.

Sincerely,

James J. Slack
Project Leader
South Florida Field Office

cc:

FWC, Tallahassee, FL
FWS, Naples, FL
FWS, Vero Beach, FL (Betty Grizzle)

bcc:
Florida Biodiversity Project, Brian Scherf
Biodiversity Legal Foundation, Sidney Maddock

B1 (cont.)

184

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

November 12, 1999

4EAD-OEA

NOV 18 1999
BIG CYPRESS NPRE

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

RE: EPA Review and Comments on
Draft Off-Road Vehicle (ORV) Management Plan
Supplemental Environmental Impact Statement
Big Cypress National Preserve, Florida
CEQ No. 990285

Dear Mr. Hibbard:

Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) has reviewed the subject Draft Supplemental Environmental Impact Statement (DSEIS) and Draft Off-Road Vehicle (ORV) Management Plan (Plan).

The National Park Service (NPS) proposes to adopt a new plan for managing the resources within the Big Cypress National Preserve. The objectives in preparing this DSEIS and Plan were, in part, to meet the October 25, 1995 lawsuit settlement agreement between NPS and the Florida Biodiversity Project. The Plan was to include an ORV management techniques; strategies to reduce the impacts of ORVs on the Preserve resources by increased regulation of their use; make park management practices consistent with the Clean Water Act; and protect biological resources, especially threatened and endangered plant and animal species.

Part of the October 25 lawsuit settlement was an NPS agreement to prepare an ORV Management Plan. This Plan (See Appendix B, DSEIS) includes 12 general strategies and 42 specific strategies available for managing ORVs. EPA agrees that an improved Plan is needed and has no issue with properly controlled use of ORVs in the Preserve, but we are concerned by the absence of a plan with specific steps/strategies in the DSEIS. Although the Plan describes proposed reclamation of impacted areas and discusses closing some trails and resource areas, it does not provide a time table or specifics for implementing these actions. Since the DSEIS is being prepared in response to the settlement agreement negotiated between NPS and the Florida Biodiversity Project, it would be helpful to provide a description of how this document meets the settlement requirements as set out on Page 8 of the DSEIS. It appears that decisions on the implementation strategies - admittedly difficult elements in any management plan - are being deferred to some point in the future.

Other concerns include:

- The DSEIS states that "impaired water segments and TMDLs have not been determined for the Preserve," however, the Tamiami Canal in Big Cypress and the L-28 Gap in the Preserve Addition are included in the 1998 State of Florida 303 (d) list for the following parameters: dissolved oxygen, iron, mercury, cadmium and copper. This apparent contradiction needs clarification. Water quality impacts of a preferred management plan alternative should have been better defined in this DSEIS.

- The federally-protected Cape Sable seaside sparrow is known to inhabit the Preserve, and the effects of ORV use on seaside sparrows has not been studied. We question the wisdom of allowing ORVs in areas also used as nesting sites. Due to the declining population of this species, additional work and consultation needs to done with the U.S. Fish and Wildlife Service.

The basic goal of the DSEIS should be to fully identify the impacts of a proposed action or a set of actions. This document sets out a *process* for developing a management plan rather than describing the plan itself. In the absence of crucial details, it is difficult to assess the impacts and consequences of implementing the proposed action. EPA believes that this DSEIS, rather than defining impacts of proposed actions, postpones analyses on far too many resource issues which should be addressed now.

Based on our review, we rate the DSEIS "EO-2," that is, we have environmental objections about the proposal, and believe that potentially significant environmental impacts and issues have been left unaddressed. The issues of ORV management plan implementation, ORV permitting system, enforcement, impact mitigation, water quality, and threatened and endangered species warrant further detailed discussion in the Final SEIS. In addition, EPA believes additional alternative strategies should be considered, and expanded to include plans in addition to those found in the 1991 General Management Plan/FEIS. Our detailed comments are attached.

Thank you for the opportunity to comment on this DSEIS. If you have any questions or require technical assistance you may contact Ramona McConney of my staff at (404) 562-9615.

Sincerely,

Heinz Mueller

Heinz J. Mueller, Chief
Office of Environmental Assessment

Attachment

B2

Comments on
Draft Off-Road Vehicle (ORV) Management Plan
Supplemental Environmental Impact Statement
Big Cypress National Preserve
CEQ No. 990285

1. **Document Format:** We suggest that the five maps found in the document be given figure numbers to facilitate their reference in the review process.

2. **Vehicle Permit System and Operating Standards** (pages 16-17): We note that the back country use permit system did not specify an upper limit of visitors, either ORV or walking on foot, for back country preserve units. Considering that the Preserve management intends to upgrade/create 15 upgraded access points, EPA recommends that the number of ORVs that may enter the Preserve be limited. Creating new and/or improved access points and additional parking to the Preserve may encourage greater use of Preserve resources, not unlike new highways in pristine habitats inducing growth.

The statement concerning age limits for driving on public roads and campground roads is vague (page 17). It is unclear which roads are considered public requiring licensed drivers. Since this is a public facility, all drivers should be required to be licensed. This would also discourage visitors from leaving the main roads so that youths under 16 could drive.

According to the DSEIS, Congressional authorization seems to allow six different uses of the Preserve (page 2), and this does not appear to include basic ORV pleasure use. How the proposed and existing uses meet the Congressional authorization should be described. If this was discussed in the 1991 General Management Plan, it should be referenced. Has NPS considered requiring ORV permit users to justify their need for a permit? For example, ensuring that visitors have hunting and/or fishing licenses if that is their proposed use.

3. **ORV Specifications:** Tire size is discussed on page 18. The document needs to explain why 2.0 PSI is the appropriate maximum ground pressure. The document refers to a study, but does not explain how this conclusion was reached. Since this directly impacts Preserve visitors, a more detailed analysis is needed. Tire chains and bar grips are prohibited (page 19), but what about lugged farm tires or other tires with large treads? Although these are basic to the concept of swamp buggies, if they cause too much environmental damage, these should also be limited or prohibited.

It is unclear in the discussion on vehicle width (page 19) whether the width includes the tires or the body of the vehicle. This should be clarified.

Consideration should also be given to speed limits, RPM limits, and engine size in the ORV permitting system. Tactic 9 mentions restricting engine size, but no details are given.

4. **Appendix D: Use of Hydrogeologic Criteria to Prevent Damage of Natural Resources caused by Non-Commercial Airboat Activity in the Stairsteps Unit of the Big Cypress National Preserve.** EPA supports the development of hydrologic-based criteria to improve the

management of airboats in the Preserve and protect the resource from further damage. Establishing minimum water level depth criteria to determine acceptable conditions for airboat activity seems like a common sense approach to protect susceptible habitats, such as open sawgrass prairie and marsh.

Please clarify how limiting airboat engines to 265 horsepower would reduce noise (page 19).

Since limiting horsepower would help to restrict airboat use in deeper water, a lower-horsepower engine may help prevent environmental damage by preventing access to shallow water areas.

5. **ORV Permit Cost:** Page 16 states that the annual permit price will increase from $35 to $120 - $200. Page 35 states that ORV users will be "inconvenienced" by increased requirements and fees. The fee increase may raise a protest, since it will be more than merely "inconvenient" for ORV owners. The Park should be clear that the fee is necessary to continue use of the Preserve. The other option is to propose alternative means to generate the income necessary to implement the controls. The fee appears to be based on the estimated cost of the program decided by the number of users (Page 29), however, neither the dollar amount of mitigating impacts, nor the number of areas that need restoration, has been defined. The basis for the $120 - $200 fee structure needs to be explained.

6. **Access Points:** It is unclear why Access Point 10 into the Loop Road Unit, (see page 21, "ORV Access Points" Figure), is listed as scheduled for development/improvement when vehicles are prohibited in the Loop Road units, (see Table 2: Development of Access Points: Estimates of Area Occupied and Fill Required). According to the text, this unit is closed to ORVs (See "Management Uses" Figure, Page 14).

Some of the access points shown in "ORV Access Points" Figure, (Page 21), would appear to cross the canal situated immediately north of and parallel to US 41 (Tamiami Trail). Will the Preserve be providing new bridge or culvert structures at these locations, or will the Preserve be taking advantage of existing bridges and culverts?

Page 20 notes that access points will reduce impacts caused by informal roadside parking. However, better enforcement and control barriers, such as guardrails, should be used to stop this activity.

There is no discussion of how many parking spaces actually exist, versus the number of permits. Broad ranges in the number of parking spaces are given for each location, but the range in the number of available parking spots are not explained.

Specific criteria should be given for when and how a unit would be closed or restricted (see page 23). Deferring this to a later date does not give the public adequate information to make a decision about the proposed action.

7. **Education and Communication:** EPA questions whether ORV user manuals are the most effective way to communicate with users about regulations governing ORV use in the Preserve. Providing only written materials assumes that the ORV user will read the manual or fully understand the information presented.

B2 (cont.)

186

EPA recommends that a short video be provided that is required viewing before securing an ORV permit. The *Tactic 1.4: Require Attendance at an ORV Low Impact Workshop* (Appendix B; Page 95) contains this element, and includes having the ORV community participate in the making of such a film, to give the ORV community some sense of ownership in the video. EPA believes that most ORV users, when confronted with aerial video documentation that clearly and dramatically shows the extent of the long-term environmental damage caused by indiscriminate ORV use, are far more likely to modify their behavior.

8. Alternatives: The "no action alternative" was evaluated on Page 29. This alternative would continue current NPS programs for ORV management and natural resources management, but without major changes in management direction. It should be noted that the current management system has resulted in major impacts to the Preserve, and current levels of enforcement are not adequate to address these impacts. The preferred alternative is adopting a new management plan, in order to better protect natural resources.

The DSEIS considered only the alternatives identified in the 1991 General Management Plan/FEIS, and did not identify or review other alternatives (Page 34). EPA believes additional alternative strategies should be considered, expanding to include plans in addition to those found in the 1991 GMP/FEIS.

9. Endangered Species: We note that federally-protected species are listed for the area by the U.S. Fish and Wildlife Service (FWS), and that the FWS was consulted during the development of this DSEIS. EPA principally defers to the FWS regarding endangered species assessments and encourages NPS to continue coordination with the FWS as appropriate.

See Pages 39 and 67; the Cape Sable Sparrow. Due to the declining population of this species, additional work and consultation with FWS needs to be done to restore and preserve their habitats. On page 67, the document states that even under the proposed action, ORV use in possible sparrow habitats would occur. NPS acknowledges that the effects of ORV use on the sparrow have not been studied. but then make an assumption that the proposed action would have a positive impact on the sparrow by restoring hydrology. Further discussion of the ORV impacts on the Cape Sable Sparrow and their habitat is also needed. Consideration of restricting the use of ORVs in these areas should be discussed.

The DSEIS would be greatly improved if habitat maps of threatened and endangered plant and animal species were provided.

10. Enforcement: Under the new management plan, Preserve staff would continue to enforce regulations related to ORV use. The DSEIS states that "currently, enforcement is not a problem," (page 31), because most visitors comply with regulations.

However, when the new regulations create more restrictions for ORV users, there may be a need for increased enforcement efforts by Preserve staff. What plans does the NPS have for increasing enforcement efforts, if necessary? Page 29 notes five employees; how does this compare to the current staff?

The problem with vehicle lighting is not solved by the requirement that all vehicles have at least one operating headlight. An analysis of nighttime and lighting impacts on threatened and endangered species should be done. Perhaps lights should be eliminated entirely to avoid

nighttime excursions. We note that NPS staff enforcement ceases after 4:30 P.M., or whenever the Park closes. How can enforcement be maintained after regular business hours?

11. Quantifying ORV Management Details: The document neither provides nor discusses measurable activities that could be used to manage ORVs. General issues and benefits are discussed, but the document fails to address details of the plan. More specific information is needed about how the Preserve plans to manage ORVs.

12. ORV Traffic: EPA has concerns stemming from the terms "dispersal" and "concentration" as they apply to ORV use in the Preserve. The statement (Page 16) that ORV ". . . dispersal and concentrated use would reduce impacts" is confusing and appears to be contradictory.

The DSEIS (Page 91) discusses encouraging the dispersal of traffic in remote areas as a means to prevent or reduce impacts. Figure 2 (Page 47, photograph showing newly-made wheel tracks in an open prairie) shows a "dispersed use area," that is, an open area with no restrictions on use. This is contrary to general consensus and studies that show designated trails as the best alternative to manage and control impacts. The logic appears to be that lighter use of Preserve resources will occur by dispersion, which in turn will result in fewer impacts, but the document does demonstrate that damage which is dispersed is less egregious that damage which is concentrated. The document refers to the lack of information about how much damage is done by a one time ORV passing, but there is no mention or indication that NPS will conduct studies to quantify the damage.

The DSEIS (Page 5) quotes a provision from the Senate and House Reports as guidelines on how ORVs are to be managed. The cited provision notes that:

> While the use of all-terrain vehicles must be carefully regulated . . . to protect the natural wildlife and wilderness values of the preserve, the bill does not prohibit their use along designated roads and trails.

This language seems to preclude open area use as discussed in the DSEIS. Please describe how the dispersal use meets this Congressional requirement of "designated roads and trails" usage?

13. Environmental Monitoring and Restoration: In addition to the identified basis for managing ORVs in second paragraphs of page 1, the need to restore previously impacted areas should also be discussed. What is the time frame for identifying which roads need restoration, and what is the schedule for implementing that action?

When will NPS ground truth the University of Georgia's aerial photo survey so that the level of impact may be assessed? This is critical to understanding whether these areas can be restored. If the Loop unit has been closed, but trails are still evident, this is indicative of the permanent nature of the impacts, and restoration becomes more critical.

None of the proposed monitoring programs define how often NPS plans to monitor for impacts or implement restoration (page 24 - 25). For example, the document refers to "standard vegetation evaluation methods," but do not describe them.

B2 (cont.)

In the discussion of reclamation and restoration (page 26), no time frames for the action are given. What is the schedule for restoration? The extent of the areas that need restoration should be identified in this document. Plans for stabilization of the existing roads and trails NPS plans to leave open should be included.

Conclusions stated on page 56 say that "the proposed action would have a beneficial effect of surface water flows, especially if some of the more impacted areas are restored to historic grade as planned." But the document does not state that the "more impacted" areas have been identified. Since NPS acknowledges that some of the longer North/South trails through the lower wetland areas are affecting surface water flows, they should specifically identify which areas they plan to restore, and which roads they will close.

14. **Aerial Photography Analysis:** In discussing the University of Georgia aerial photo analysis (Page 49), the DSEIS discusses the differences in mapping techniques used in 1984 and 1994-95 to assess impacts. NPS acknowledges that they do not know if some linear features are in fact ORV tracks or some other linear feature - a strong indication that the aerial photos need to be "ground truthed" before interpretations are made.

Significant differences exist between the 1984 impact estimates and the current impact estimates. It is highly unlikely that the recent impacts are wildlife trails. The critical element of this analysis is to fully assess the level of impacts to the system. Another approach would be, if the photos are available, to analyze the earlier 1984 photos with a similar level of sensitivity.

15. **Proposed Action:** Does NPS plan to make a selection of management practices for the final SEIS? If not, when would Big Cypress Preserve management practices be selected?

16. **1995 Settlement Agreement:** The 1995 Settlement Agreement states specific requirements that are listed in the SEIS, (page 8). For the benefit of the reader, the document should describe how the Plan addresses the requirements of the Settlement Agreement.

17. **Surface Water Quality:** The Tamiami Canal in Big Cypress Preserve and the L-28 Gap in the Preserve Addition are included in the 1998 State of Florida 303 (d) list for the following parameters: dissolved oxygen, iron, mercury, cadmium and copper. However, page 83 of the DSEIS states that "impaired water segments and TMDLs (Total Maximum Daily Loads) have not been determined for the Preserve . . ." This apparent contradiction needs clarification. Impacts to the impaired segments should be considered in the overall management plan.

187

B2 (cont.)

Florida Fish and Wildlife Conservation Commission

James L. "Jamie" Adams, Jr. Bushnell
Barbara C. Barsh Jacksonville
Quinton L. Hedgepeth, DDS Miami
H.A. "Herky" Huffman Deltona
Thomas B. Kibler Lakeland
David K. Meehan St. Petersburg
Julie K. Morris Sarasota
Tony Moss Miami
Edwin P. Roberts, DC Pensacola
John D. Rood Jacksonville

ALLAN L. EGBERT, Ph.D., Executive Director
VICTOR J. HELLER, Assistant Executive Director

OFFICE OF THE EXECUTIVE DIRECTO
620 South Meridian Stre
Tallahassee, FL 32399-16
www.state.fl.us/f
(850) 487-37
TDD (850) 488-95

October 26, 1999

Mr. Wallace A. Hibbard
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141-9710

Dear Mr. Hibbard:

Thank you for the opportunity to comment on the Draft Off-Road Vehicle (ORV) Management Plan / Supplemental Environmental Impact Statement (draft plan) for the Big Cypress National Preserve (Preserve). General comments based on the review of the draft plan are provided in this letter. More specific comments are provided in Attachment 1. All publications cited in these comments were originally referenced in the draft plan. We appreciate the opportunity to work with the Preserve to develop an ORV plan that protects the resources of the Preserve while providing public recreational opportunities in accordance with the enacting legislation for the area.

The draft plan evaluates two ORV management alternatives, the "proposed action" and "no-action" alternatives. Though NEPA regulations require a "no-action" alternative, this term suggests that no action is currently being undertaken to regulate ORV use on the Preserve which is clearly not the case. The Preserve has developed a complex set of area regulations designed to allow ORV use while still maintaining the environmental integrity of the area. A more appropriate and descriptive term for the second alternative would be "current action."

A critical component of the proposed action alternative is the criteria that would be used to determine when or if a trail or particular unit of the area should be closed for resource or visitor protection. This information was noticeably absent from the draft plan except for an example in the appendix which was included to demonstrate how criteria would be developed Preserve-wide. Without the actual criteria, a comprehensive and informed review of the draft plan is not feasible.

A second critical component of the proposed action alternative is the new vehicle specification that would limit the ground pressure of ORV's to a maximum of two pounds per square inch (psi). Within the draft plan, there was no information or data to explain how the maximum ground pressure of two psi was derived, how it would be measured in the field, how this figure compares to the average ground pressure for current ORV's, and there was no analysis on how the proposed maximum ground pressure would reduce ORV impacts to soils and/or vegetation in comparison to existing ground pressures. Considering the financial cost this change could impose on ORV owners, the justification for proposing a maximum two psi ground pressure should be included in the draft plan to support the new vehicle specifications described in the proposed action alternative.

We recognize that implementation of an ORV plan could have significant impacts on public recreation on the Preserve. We believe that it is possible to balance traditional uses with natural resource protection, and in many ways the Preserve has already demonstrated this. We believe the comments provided in this letter will contribute to the development of a final comprehensive ORV plan that will maintain this balance between resource protection and traditional recreational use. We look forward to the opportunity to review a revised draft of the ORV plan, and thank you for the opportunity to review and comment on this version. Please contact me if you have questions or require additional information.

Sincerely,

Allan L. Egbert, Ph.D.
Executive Director

ALE/W201/nw
WLD 8-5-1
bwm/nick/hibbar05.let

Attachments

cc: Mr. Frank Montalbano
Mr. Mark Robson

C1

ATTACHMENT 1

Specific Comments
October 13, 1999

The major topics discussed in the draft plan included the comparison of proposed action and no action impacts on natural resource issues including water resources, soils, vegetation. protected species, and white-tailed deer and feral hog populations. Visitor use issues included ORV operators, hunting and hunters, other visitors, and non-federal property owners. These specific comments are provided in the order the issues appeared in the draft plan.

Water resource issues discussed in the draft plan included factors that affected water flow and water quality. With respect to water flows, the draft plan states on page 55 that the extent, severity, and occurrence of ORV trails altering water flows in the Preserve is largely unknown. Additionally, the study conducted by Deuver et al. (1986) and referenced on page 56 indicated that although under certain circumstances ORV trails could act as drainage channels and potentially alter natural hydrologic patterns, in most parts of the Preserve the ground is sufficiently irregular to interrupt any channelizing effects and any potential hydroperiod impacts would be localized. The conclusionary statement for this section of the draft plan states "The no-action alternative would result in continued localized impacts to surface water flow." This statement confuses the issue of localized impacts on hydroperiod with the broader issue of surface water flow in the Preserve. It has not been substantiated that ORV trails alter surface water flow in the Preserve. The conclusion should be clarified to make the distinction between localized impacts and surface flow impacts and to more accurately reflect the actual information on ORV trails and surface flows. In addition, infrastructure such as U.S. 41, 11 Mile Road, Jetport. Loop Road, Turner River Road, oil pads and pipelines, water control structures, etc. which serve as impediments to natural water flow should be discussed in this section to place the potential impacts of ORV trails in proper perspective.

Sections of the draft plan related to water quality appear to contain contradictory information. On page 56, water quality in the Preserve is described as good although temporary water quality problems have occurred due to petroleum related spills (from oil exploration?) and illegal discharge of raw sewage from recreational vehicles such as camper trailers. On page 56, Duever et al (1986b) determined that the effects of ORV use on water quality were negligible and localized. In the discussion of the proposed action on page 57, however, these facts are ignored, and the draft plan includes statements such as "... impacts of ORV use to water quality, however localized, may be substantial" and "The implementation of the proposed action would improve water quality in certain marshes...". These statements differ considerably from the studies that were cited in the draft plan and should be revised to more accurately reflect the negligible impacts of ORV use on water quality and the current status of water quality within the Preserve. Similarly, the section on cumulative impacts goes into great detail on water quality issues on properties surrounding Big Cypress, even though these issues have no relevance to ORV use. This section should be revised and focused more closely on ORV use in the Preserve. If concerns exist over water quality issues outside the Preserve, monitoring activities should be conducted as recommended in the Water Resources

Management Plan (NPS 1996) referenced on page 24, but should not be included or funded as part of the proposed action under the draft plan. The cumulative impacts section should be amended to state neither the proposed or no-action alternative would have cumulative effects.

The discussion on impacts to soil beginning on page 58 states the NPS is responsible for managing ORV's and prohibiting vehicle operation that could adversely affect the Preserve's resources. The pertinent question that needs to be addressed in this section is whether this type of use constitutes an adverse affect on the Preserve's resources or merely creates a temporary visual impact. In commercial operations, other soil impacts have been considered acceptable by NPS as demonstrated in the cumulative impact section: "Oil and gas exploration and operations, and grazing in the Preserve have and will continue to impact soils in the Preserve, but are limited in area...". The relative impacts of ORV use compared to other on-going activities should be discussed in this section.

In the studies conducted on Big Cypress and cited in this section, rutting was the most severe impact identified with respect to ORV use. The referenced studies demonstrated that in all study environments some recovery in rut depths occurred within months after impacts and in all but one habitat type "medium impact" ORV trails were completely filled in and no longer visible in $\leq$ 5 years. This information suggests the least amount of impact occurs under a scenario where ORV users are not restricted to designated trails. The conclusion statement for this section should also be revised to state under the no-action alternative some areas would be reclaimed to more natural conditions over time through the current use of temporary trail closures.

Impacts to vegetation collectively discusses ORV impacts in a variety of plant communities. While operating ORV's ultimately impacts vegetation to some degree, it is important to evaluate these vegetative impacts with respect to ecological function. For example, on old-growth pinelands (reported as 54 acres in size on page 62 and 23,500 acres on page 38) the reported 30 miles of existing trails encompasses approximately 1/10 of one percent of the total landscape for this plant community (assuming the correct acreage figure is 23,500 and the average trail width is 8 feet). The impact this has on the ecological function of the area and the ability of the area to support wildlife is negligible. This type of information is missing for all
plant communities in the draft plan and would be useful to better assess the possible impacts ORV use may have on ecological function.

The cumulative impacts section for most plant communities references the loss of habitat in south Florida due to development and agriculture and a resulting increase in the importance of protecting plant communities within the boundaries of Big Cypress Preserve.

C1 (cont.)

While the loss of natural areas is concerning to all resource agencies, it should be recognized that more than 2.3 million acres of land surrounding the Preserve have been purchased by state and federal agencies to protect these types of plant communities in south Florida. The cumulative impacts sections seem to suggest that these plant communities are unique to Big Cypress which is misleading. In addition, the analysis of no-action impacts for all plant communities should include "severely impacted areas would be closed and reclaimed to more natural conditions over time." This statement is included for some plant communities but missing in others.

It was also noticed that for some plant communities the conclusion section references restricting ORV numbers as part of the proposed action alternative. The explanation of the proposed action alternative in the beginning of the draft plan does not include any restrictions on the number of ORV's allowed to operate on the area other than the current cap of 2500 permits which is already in place and described under the no-action alternative. The statement regarding restricting ORV numbers needs clarification.

The sections describing wildlife impacts (both protected species and white-tailed deer and feral hogs) contains a number of contradictions and needs careful review. For example, on page 66 in reference to Florida panthers it is stated as part of the proposed action impacts "The proposed reclamation program would likely increase diversity and abundance of prey in some areas " but under the white-tailed deer and feral hog section, which are important prey species for panther, it is stated "It is unlikely that the impacts on the deer and feral hog population would be significant under the proposed action." A second example exists under the discussion of red-cockaded woodpeckers . On page 66, it is stated that no studies or reports exist that demonstrate red-cockaded woodpeckers are sensitive or threatened by ORV use or similar activities. The following sentence, however, states that red-cockaded woodpeckers may benefit by the proposed action due to a reduction in disturbance. These types of contradictions and unsupported conclusions are found throughout the sections dealing with wildlife and necessitate revisions based on an objective overview of the best available scientific information.

A central theme that runs through the protected species section is that neither the proposed or no-action alternative would adversely affect listed wildlife species, but the no-action alternative is less desirable because "there would be fewer ORV restrictions and less effort to improve habitat." This statement needs to be explained in more detail. As previously discussed, there is no information in the draft plan that explains what, if any, relationship exists between ORV use, ecological function, and the ability of an area to support wildlife. The only place this topic is discussed is on page 73 where a lack of any measurable relationship is described for white-tailed deer and feral hogs. For the majority of these species, the most significant impacts on population and habitat have been altered hydrology as a result of

development and the operation of water control structures. To suggest that adopting additional ORV rules would improve habitat and result in healthier wildlife populations is unrealistic in light of much larger impacts such as altered hydrology. A second suggested benefit of the proposed alternative mentioned in relation to several wildlife species is that the proposed alternative would improve water quality and flows. As discussed earlier, it is doubtful the proposed alternative would have a significant effect on water quality or flows throughout the Preserve. A more objective view is that if significant hydrological problems exist, they are related to regional water flows and existing infrastructure and not ORV use.

The University of Georgia ORV Map included in this draft plan and described in the affected environment section is referenced several times with respect to ORV impacts on vegetation without the authors qualifying statement that the map needs to be ground-truthed as linear features other than ORV trails may be included in the map. The accuracy concerns expressed by the map's authors appear valid as the Loop unit has been closed to ORV use for 21 years and yet the map shows a maze of "ORV trails" throughout this area. Studies conducted on Big Cypress and cited in the draft plan state that most moderate impact trails become indistinguishable in less than five years. Therefore, given that the Loop unit has been closed to ORV use for 21 years it appears many of the linear features represented on the map must be something other than ORV trails. A similar situation exists in Deep Lake unit which has been closed to ORV use for ten years. References made to this map in the vegetation section should include this type of information as well as the authors' cautionary note on interpretation. Preferably, the map should be ground truthed for accuracy before it is included in the draft plan.

The section on Florida panthers warrants special consideration due to the limited range of this endangered species in Florida. The discussion on panthers states the Janis and Clark study (1999) demonstrated a correlation between panther movement and home range shifts and higher levels of human activity associated with hunting. This is incorrect. The study demonstrated current levels of public use on Bear Island *did not* affect movement rates and home range shifts. The two variables that tested significant were distance to trails, which was considered biologically insignificant by the authors, and use of Bear island during fall and early winter. The overall results of the study indicated human activity during the hunting season did not produce negative energetic responses which were considered the most direct indicators of the well-being of the Florida panther. In fact, mean values for panther predation success were higher on hunted areas than on non-hunted areas.

White-tailed deer and feral hogs are important prey species for panthers as well as game species for recreational hunting. In the discussion of these species on page 73, it is stated "... the reduction in noise and other disturbances associated with ORV use would likely result in an

C1 (cont.)

increase in the populations of the white-tailed deer and feral hogs." This statement is in need of further explanation and supporting documentation. The analysis of the proposed action also discussed deer movement in response to hunting and cited a dated study conducted by Downing et al.(1969) that suggested it is not uncommon for deer to temporarily abandon their home ranges to avoid hunters. More recent studies utilizing advanced telemetry equipment have been conducted by Sargent (1992) and Land (1991) on deer behavior relative to hunting in the Big Cypress Preserve. These studies indicated deer did not leave the Bear Island unit or the southern portion of Big Cypress in response to hunting or ORV use during the hunting season. These more current and site-specific studies should be cited and elaborated on in the discussion of deer movements in response to hunting, especially as they relate to the availability of panther prey. Both studies are referenced in the Janis and Clark panther report.

Visitor use issues discussed in the draft plan included impacts on ORV users, hunting and hunters, other visitors, and non-federal property owners. As with natural resource issues, impacts were analyzed for both the proposed and no-action alternatives.

The discussion on the impacts of the proposed action alternative fails to recognize social issues or issues related to the enjoyment of the area by ORV operators. Page 31 of the draft plan identifies approximately 70 undesignated access points currently used by the public to access the Preserve. The proposed action alternative would reduce the total number of access points to 15. This will undoubtedly cause at least localized crowding problems which should be identified as an impact to ORV users under the proposed action alternative. Another impact that should be included in the proposed alternative is that adopting the new ORV rules would reduce an individual's ability to explore new places and possibly reach favorite destinations. These factors were considered important components relative to the enjoyment of the Preserve by ORV owners according to the survey conducted by Farrel et al. (1998) and should also be listed as impacts under the proposed alternative. In the discussion of permit fees, the permit fee increase from $100 to $200 per year listed on page 74 does not correspond to the expected permit fee listed on page 16 in the beginning of the draft plan.

In reviewing the Off Road Vehicle Management Practices in Appendix B as it relates to ORV operators, it was disturbing to read that strategies being considered to reduce ORV use in general (Strategy 12, beginning on page 110) included "increasing ORV use fees to reduce visitation" and "increasing the difficulty of access, either by reducing the number of accesses or restricting parking lot sizes." Neither one of these appear to be appropriate management strategies for an area purchased and funded by public tax dollars. Both strategies would certainly cause difficulties in the future as they give an unfair advantage to individuals with a higher economic status and would promote confrontational situations at designated access points.

191

The discussion on hunting and hunters suggests the proposed action would likely result in a reduction in harvest for hunters utilizing ORV equipment and an increase in harvest for walk-hunters. While this suggestion seems logical for motorized hunters as they would no longer be able to access all portions of the Preserve, it is unlikely walk hunters would realize an increase in harvest "due to the reduction in disturbance from the ORV's and the reduced startle effect on the wildlife." The panther report produced by Janis and Clark indicates these types of reactions to vehicles are minimal and provides a measurement of 50 meters as the distance deer in northern Florida moved away from roads during the hunting season. The cumulative impact statement for this section which references future loss of habitat should be changed to "no cumulative impact" as the Preserve is surrounded almost entirely by state and federally owned property where the loss of habitat through development is not a threat.

The impact of ORV use on non-ORV users was one of the visitor use issues identified in the draft plan. The draft plan states that "noise and visual intrusions resulting from ORV use may adversely affect other Preserve visitors (non-ORV users)" but does not provide quantitative data to support this statement. Conversely, page 54 of the draft plan states "Many pass-through visitors do not see and are likely not affected by the Preserve's ORV use" and "...few non-motorized visitors venture off roads or other prepared surfaces or engage in back country recreation." Based on this information, it appears user groups already segregate themselves and the potential for conflict between user groups may be more of a perceived problem than an actual problem. This issue should be revisited and quantified as the supposition of user conflicts exists throughout major sections of the draft plan and forms one of the foundations for needing to place further restrictions on ORV use within the Preserve. In addition, when discussing visitor use issues, the draft plan should emphasize that Loop Unit and Deep Lake Unit have already been designated as non-motorized zones currently available for visitors who wish to utilize the area without encountering ORV use. This geographic separation of user groups has been implemented successfully on other wildlife management areas to address the same concerns.

Comments related to impacts to non-federal property owners are the same as the comments prepared for impacts to ORV operators.

n:\bwm\nick\orvplan.ltr

C1 (cont.)

192

DIVISIONS OF FLORIDA DEPARTMENT OF STATE
Office of the Secretary
Office of International Relations
Division of Elections
Division of Corporations
Division of Cultural Affairs
Division of Historical Resources
Division of Library and Information Services
Division of Licensing
Division of Administrative Services

MEMBER OF THE FLORIDA CABINET
State Board of Education
Trustees of the Internal Improvement Trust Fund
Administration Commission
Florida Land and Water Adjudicatory Commission
Siting Board
Division of Bond Finance
Department of Revenue
Department of Law Enforcement
Department of Highway Safety and Motor Vehicles
Department of Veterans' Affairs

FLORIDA DEPARTMENT OF STATE
Katherine Harris
Secretary of State
DIVISION OF HISTORICAL RESOURCES

November 30, 1999

Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

RE: DHR Project File No. 996086
Cultural Resource Assessment Request
Draft Off-Road Vehicle (ORV) Management Plan and Supplemental Environmental Impact Statement (SEIS) for Big Cypress National Preserve

To Whom It May Concern:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), we have reviewed the referenced project for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places*. The authority for this procedure is the National Historic Preservation Act of 1966 (Public Law 89-665), as amended.

We have reviewed the referenced draft supplemental environmental impact statement. We specifically reviewed sections dealing with Cultural Resources. We note that cultural resource issues were dismissed from this document but will continue to be protected through management zoning and monitoring.

Therefore, conditioned upon Big Cypress National Preserve appropriately protecting project impacts to any identified archaeological or historic sites, the proposed project will have no effect on historic properties listed, or eligible for listing, in the National Register, or otherwise of historical or architectural value.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservation Planner, at 850-487-2333 or 800-847-7278. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,

Laura L. Kammerer

for Janet Snyder Matthews, Ph.D.
State Historic Preservation Officer

JSM/Ese

R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399-0250 • http://www.flheritage.com
Director's Office (850) 488-1480 • FAX: 488-3353
Archaeological Research (850) 487-2299 • FAX: 414-2207
Historic Preservation (850) 487-2333 • FAX: 922-0496
Historical Museums (850) 488-1484 • FAX: 921-2503
Historic Pensacola Preservation Board (850) 595-5985 • FAX: 595-5989
Palm Beach Regional Office (561) 279-1475 • FAX: 279-1476
St. Augustine Regional Office (904) 825-5045 • FAX: 825-5044
Tampa Regional Office (813) 272-3843 • FAX: 272-2340

C2

09/23/99 14:40 ☎904 488 0863 DIV OF FORESTRY 002

COUNTY: State

DATE: 09/08/1999
COMMENTS DUE-2 WKS: 09/23/1999
CLEARANCE DUE DATE: 11/12/1999
SAI#: FL9909080073BC

Message:

STATE AGENCIES	WATER MANAGEMENT DISTRICTS	OPB POLICY UNITS
X Agriculture Community Affairs Environmental Protection Fish & Wildlife Conserv. Comm Health State Transportation	South Florida WMD	Environmental Policy/C & ED

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evalutation and is categorized as one of the following:

— Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.

X Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.

— Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.

— Federal Licensing or Permitting Activity (15 CFR 930 Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.

Project Description:

U.S. Department of the Interior - Draft Recreational Off-Road Vehicle Management Plan - Supplemental Environmental Impact Statement - Big Cypress National Preserve - Florida.

C3

To: Florida State Clearinghouse
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100
(850) 922-5438 (SC 292-5438)
(850) 414-0479 (FAX)

EO. 12372/NEPA
☐ No Comment
☑ Comments ~~Attached~~
☐ Not Applicable

Federal Consistency
☑ No Comment/Consistent
☐ Consistent/Comments Attached
☐ Inconsistent/Comments Attached
☐ Not Applicable

UNDER REVIEW AND WILL FOLLOW.

From:
Division of Forestry
Forest Resource Planning
& Support Services Bureau
3125 Conner Blvd., Mail Stop C23
Tallahassee, FL 32399-1650

Division/Bureau:
Reviewer:
Date: 9-23-99

C4

Mayor

CC[illegible]TY: State

DATE: 09/08/1999
COMMENTS DUE-2 WKS: 09/23/1999
CLEARANCE DUE DATE: 11/12/1999
SAI#: FL9909080738C

Mc[illegible]age:

STATE AGENCIES	WATER MANAGEMENT DISTRICTS	OPB POLICY UNITS
Agriculture Community Affairs Environmental Protection Fish & Wildlife Conserv. Comm Health State Transportation	South Florida Water	Environmental Policy/C & ED

The [illegible]ched document requires a Coastal Zone Management [illegible]ation/[illegible]
Coas[illegible] Management Program consistency evaluation and [illegible]ogorie[illegible]
as ou[illegible]d the following:

— Federal Assistance to State or Local Government[illegible] (15 CFR 93[illegible] Subpart F). Agencies are [illegible]plied to evaluate the consistency [illegible]ing activity.

_X_ Direct Federal Activity (15 CFR 930, Subpart C). [illegible]al Agen[illegible] are required to furnish a consistency determination for [illegible] State's concurrence or objection.

— Outer Continental Shelf Exploration, Development [illegible]Production Activities (15 CFR 930, Subpart E). Operators are [illegible]ired to [illegible]vide a consistency certification for state concurrence/objection.

— Federal Licensing or Permitting Activity (15 CFR [illegible] Subpart [illegible]. Such projects will only be evaluated for consistency wh[illegible]ere is [illegible]an analogous state license or permit.

Project Description:

U.S. Department of the Interior - Draft Recreational Off-Road Vehicle Management Plan - Supplemental Environmental Impact Statement - Big Cypress National Preserve - Florida.

To: Florida State Clearinghouse
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100
(850) 922-54[illegible] (SC 292-5438)
(850) 414-047[illegible] (FAX)

EO [illegible]12372/NEPA

[ ] No [illegible]mment
[ ] Co[illegible]ents Attached
[ ] No[illegible]pplicable

Federal Consistency

[✓] No Comment/Consistent
[ ] Consistent/Comments Attached
[ ] Inconsistent/Comments Attached
[ ] Not Applicable

RECEIVED
SEP 14 1999
BUREAU OF WATER AND ONSITE SEWAGE PROGRAMS

From:
Division/Bureau: [illegible]

193

[illegible] 8509226963 09/16/1999

C5

Florida Department of Transportation

JEB BUSH
GOVERNOR

THOMAS F. BARRY, JR.
SECRETARY

October 25, 1999

Ms. Cherie Trainor, Director
State Clearinghouse
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100

[illegible]
State of Florida Clearinghouse

RE: ICAR REVIEW
SAI# FL9909080738C
BIG CYPRESS OFF-ROAD VEHICLE MANAGEMENT PLAN (EIS)

Dear Ms. Trainor:

District One, Florida Department of Transportation (FDOT), has reviewed the above-referenced Intergovernmental Coordination and Review (ICAR), and offers the following comments:

1. According to information contained in Tables 1 and 2, as well as the *ORV Access Points* graphic on page 21 of the document, the Applicant intends to provide hard-surface parking areas and associated access points along segments of US 41 (SR 90) that traverse Big Cypress National Preserve in Collier County. Some of the proposed improvements will be modifications to existing points of access, and some will involve the installation of new access points. All of the Applicant's plans for these access points/areas will require Department review and driveway connection permits, pursuant to Rule 14-96 and 14-97, Florida Administrative Code (F.A.C.).

   The Applicant will need to provide site plans and drawings that show locations of all proposed connections and parking areas, surrounding roadway features and connections, and trip generation data. This will enable the Department to determine any needed safety and operational improvements (e.g., pavement markings, acceleration/deceleration lanes, left-turn lanes, signs, signals, etc.) to US 41. Plans may be sent to Mr. John Vliet, Maintenance Engineer (941-417-6320), at our Naples Maintenance Facility at 4800 Davis Boulevard, Naples, Florida 34104.

2. These same segments of US 41 (Tamiami Trail) have also formally been designated recently as a National Scenic Highway. Because the Department has programmed extensive improvements (FM #1954301) to US 41 (in FY 2000) in support of this designation, it will be very important for the Applicant to closely coordinate ORV access

District One, Planning and Public Transportation Office
801 North Broadway Avenue • Post Office Box 1249 • Bartow, FL 33831-1249
Internet Address: www.dot.state.fl.us
(863) 519-2378 • (863) 534-7172 (Fax) • MS 1-36

www.dot.state.fl.us

RECYCLED PAPER

C6

facilities with the Department in order to avoid planning, design, operational, and aesthetical conflicts. The Applicant should contact Ms. Susan King, District One Scenic Highway Coordinator, at (863) 519-2394, for further guidance on this issue.

US 41 is also scheduled to undergo engineering and resurfacing (from CR 839 to the Collier/Dade County line) in FY 2001 (FM #1953611/FM #1953621). Coordination may be directed to Mr. Rick MacCalla, Project Manager, at (863) 519-2258, in Bartow.

3. Because existing, and *future*, wildlife underpasses/culverts could be utilized by some types of ORVs to traverse State Highway System facilities to the potential detriment of flora and fauna, particularly endangered species such as the Florida Panther, the ORV Management Plan should include such considerations in determining which trails and areas will be barred from ORV access. John Vliet's office may be contacted for underpass locations.

Thank you for allowing us the opportunity to review this document. Should you have any questions, please contact Larry Slayback, Policy/Procedures Coordinator, at Suncom 748-2341 or (941) 338-2341.

Sincerely,

Kimberly D. Warren
District Planning Manager

KDW/LGS/cw
KDW-LI27-99

Attachment

cc: Sandra Whitmire, MS 28B
Debbie Hunt, MS 1-41
Norman Feder, MS 1-98
Chuck Lovell, MS 1-8
Debra Snyder, MS 1-8
Gary Amig, MS 1-22
John Vliet, MS 1-95
Don DeBerry, MS 1-98
Paul Stancati, MS 1-98

Rick MacCalla, MS 1-28
L.M. Caraway, Jr., MS 1-28
Susan King, MS 1-36
Kim Warren, MS 1-36
Byron Swartsel, MS 1-36
Larry Slayback, MS 1-98
John Limbaugh, MS 1-98
Gavin Jones, MPO

C6 (cont.)

Department of
Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

November 12, 1999

RECEIVED
NOV 18 1999
State of Florida Clearinghouse

Ms. Cherie Trainor
Florida State Clearinghouse
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100

Re: U. S. Department of the Interior, Draft Recreational Off-Road Vehicle Management Plan. Supplemental Environmental impact Statement, Big Cypress National Preserve

SAI: FL9909080738C

Dear Ms. Trainor:

This Department has reviewed the above-described project proposal and based on the information provided, we submit the following comments and recommendations.

Background

The purpose of the Off-Road Vehicle Management Plan is to guide the National Park Service (NPS) in managing off-road vehicles (ORV) use in Big Cypress National Preserve and to implement the direction set in the 1991 General Management Plan for the Preserve.

The NPS developed and evaluated two alternatives (proposed action and no-action) for managing ORV use in the Preserve. Under the proposed action alternative, the NPS will adopt a process for ORV management and will be guided by specific ORV management procedures and criteria. Methods to avoid or minimize negative ORV impacts will include stricter regulation of ORV use, implementation of preserve-wide and unit-specific management objectives, and mitigation of previous impacts. The NPS will only issue permits for ORVs that meet requirements for vehicle weight and tire size, vehicle width, noise control, and other equipment.

The no-action alternative would continue current NPS programs for ORV management and natural resources management within the Preserve. The agency would respond to needs and problems but no major change in management direction would be initiated.

195

Comments

Previous damage to the Preserve terrain by ORVs is documented in the Environmental Consequences Section (pages 55-77) of the report. The proposed management plan is expected to provide benefits to natural resources including water quality, surface water flows, soils, vegetative communities and wildlife by limiting the mileage of ORV trails, creating designated trails and access points and restricting ORV size, weight and tires and other equipment. ORV user fees will increase and vehicle modifications may be required under the proposed management program.

The proposed ORV management plan appears to be consistent with the need to manage activities within the Preserve that adversely impact natural resources and other visitors' recreational experiences. We offer no objections to the proposed management plan. Any activities associated with the construction of parking areas at ORV access points should be coordinated with our South Florida District Office in Ft. Myers and the South Florida Water Management District Field Office in Ft. Myers.

Thank you for the opportunity of commenting on this proposal. If you have any questions regarding this letter please give me a call at (850) 487-2231.

Sincerely,

Robert W. Hall
Office of Intergovernmental
Programs

cc: John Outland
Ron Blackburn

C7

196

STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS
"Dedicated to making Florida a better place to call home"

JEB BUSH
Governor

STEVEN M. SEIBERT
Secretary

December 14, 1999

RECEIVED
DEC 20 1999

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

RE: U.S. Department of the Interior - Outdoor Recreation, Acquisition, Development and Planning - Draft Recreational Off-Road Vehicle Management Plan - Supplemental Environmental Impact Statement - Big Cypress National Preserve - Florida
SAI: FL9909080738C

Dear Mr. Hibbard:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended, has coordinated a review of the above-referenced project.

The Department of Environmental Protection (DEP) notes that the proposed plan appears to be consistent with the need to manage activities within the Preserve that adversely impact natural resources and other visitors' recreational experiences. DEP offers no objections to the proposed management plan. Any activities associated with the construction of parking areas at off-road vehicle access points should be coordinated with DEP's South Florida District office in Ft. Myers and the South Florida Water Management District Field office in Ft. Myers. Please refer to the enclosed DEP comments.

The Department of Transportation (DOT) notes that all of the applicant's plans for access points/areas will require DOT review and driveway connection permits. The applicant should provide site plans and drawings to the DOT's Naples Maintenance Facility.

2555 SHUMARD OAK BOULEVARD • TALLAHASSEE, FLORIDA 32399-2100
Phone: 850 488 8466/Suncom 278 8466 FAX: 850 921 0781/Suncom 291 0781
Internet address: http://www.dca.state.fl.us

FLORIDA KEYS
Area of Critical State Concern Field Office
2796 Overseas Highway, Suite 212
Marathon, Florida 33050-2227

GREEN SWAMP
Area of Critical State Concern Field Office
205 East Main Street, Suite 104
Bartow, Florida 33830-4641

In addition, the DOT has programmed extensive improvements to US 41 in support of its designation as a National Scenic Highway; therefore, the applicant must closely coordinate off-road vehicle access with the DOT in order to avoid planning, design, operational and aesthetical conflicts. The applicant should coordinate with the DOT's District One Scenic Highway Coordinator. US 41 is also scheduled to undergo engineering and resurfacing and coordination may be directed to the DOT's Bartow office. The DOT also may be contacted regarding underpass locations for use in determining which trails and areas may be barred from off-road vehicle access. Please refer to the enclosed DOT comments.

Based on the information contained in the supplemental environmental impact statement and the enclosed comments provided by our reviewing agencies, the state has determined that the above-referenced project is consistent with the Florida Coastal Management Program.

In addition, the Southwest Florida Regional Planning Council (SWFRPC) has submitted comments indicating that the project is considered regionally significant and consistent with the adopted goals, objectives, and policies of its Strategic Regional Policy Plan. The comments received from the SWFRPC are enclosed for your review and consideration.

If you have any questions regarding this letter, please contact Ms. Cherie Trainor, Clearinghouse Coordinator, at (850) 414-5495.

Sincerely,

Chris McCoy

for Ralph Cantral, Executive Director
Florida Coastal Management Program

RC/cc

Enclosures

cc: Robert Hall, Department of Environmental Protection
Kimberly Warren, Department of Transportation
Wayne Daltry, Southwest Florida Regional Planning Council

C8

STATE OF FLORIDA

DEPARTMENT OF COMMUNITY AFFAIRS

"Helping Floridians create safe, vibrant, sustainable communities"

JEB BUSH
Governor

STEVEN M. SEIBERT
Secretary

RECEIVED
NOV 17 1999
BIG CYPRESS NATIONAL PRESERVE

November 12, 1999

Mr. Wallace Hibbard, Superintendent
Big Cypress National Park Service
HCR 61, Box 110
Ochopee, FL 34141

Dear Superintendent Hibbard:

Thank you for the opportunity to review the proposed plan for the Operation of Off Road Vehicles (ORVs) within the Big Cypress National Preserve which is located within the Big Cypress Area of Critical State Concern. The report reflects that current O ff Road Vehicle use is resulting in channelized areas within marshes, degradation to water quality in wet prairies, disturbance of wildlife, and conflicts with other users. Some areas of the Big Cypress Preserve have already been closed to off road vehicles due to the compression of soils and inability of the soil to reestablish vegetation. The study does not quantify the magnitude of the existing damage in some of the wetter units. Additional studies are needed to determine this level.

Two proposals have been presented: a No Action Plan and a plan with numerous strategies for management. The Department recommends adoption of the action plan which calls for the designation of trails in certain areas. The Department supports the closure of trails within the Bear Island Unit which contains a significant habitat for the Florida Panther. A time frame should be established to assess the results of mitigation.

The plan proposes the addition of approximately 14 acres of fill to provide access points and parking areas for Off road Vehicles. Pursuant to the Department's authority under Chapter 28-26.00, Florida Administrative Code, site alteration is limited to 10 percent of a site under common ownership. Prior to initiation of the plan, it would be helpful to receive a summary of filled areas for the entire park

2555 SHUMARD OAK BOULEVARD • TALLAHASSEE, FLORIDA 32399-2100
Phone: (850) 488-8466/Suncom 278-8466 FAX: (850) 921-0781/Suncom 291-0781
Internet address: http://www.dca.state.fl.us

FLORIDA KEYS
Area of Critical State Concern Field Office
2796 Overseas Highway, Suite 212
Marathon, Florida 33050-2227

GREEN SWAMP
Area of Critical State Concern Field Office
205 East Main Street, Suite 104
Bartow, Florida 33830-4641

197

Thank you for the opportunity to comment. If additional information is needed, please telephone Rebecca Jetton at our field office (941)534-7290 in Bartow.

Sincerely,

Mike McDaniel

Mike McDaniel, Administrator
Areas of Critical State Concern

/mm

C9

198

Southwest Florida Regional Planning Council

4980 Bayline Drive, 4th Floor, N. Ft. Myers, FL 33917-3909 (941) 656-7720

P.O. Box 3455, N. Ft. Myers, FL 33918-3455 SUNCOM 749-7720

FAX 941-656-7724

October 18, 1999

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
OCHOPEE, FL 34141

OCT 21 1999

State of Florida Clearinghouse

RE: IC&R Project #99-389
State Clearinghouse #FL9909080738C

Draft Off-Road Vehicle Management Plan for the Big Cypress National Preserve

Dear Mr. Hibbard:

The staff of the Southwest Florida Regional Planning Council reviews various proposals, Notifications of Intent, Preapplications, permit applications, and Environmental Impact Statements for compliance with regional goals, objectives, and policies, as determined by the Strategic Regional Policy Plan. The staff reviews such items in accordance with the Florida Intergovernmental Coordination and Review Process (Chapter 29I-5, F.A.C.), and adopted regional clearinghouse procedures.

These designations determine Council staff procedure in regards to the reviewed project. The four designations are:

Less Than Regionally Significant and Consistent no further review of the project can be expected from Council.

Less Than Regionally Significant and Inconsistent Council does not find the project of regional importance, but will note certain concerns as part of its continued monitoring for cumulative impact within the noted goal area.

Regionally Significant and Consistent project is of regional importance, and appears to be consistent with Regional goals, objectives, and policies.

Regionally Significant and Inconsistent project is of regional importance and does not appear to be consistent with Regional goals, objectives, and policies. Council will oppose the project as submitted, but is willing to participate in any efforts to modify the project to mitigate the concerns.

Printed on Recycled Paper

The above referenced document has been reviewed by this office, based on the information contained in the document, and on local knowledge, has been found Regionally Significant and Consistent with adopted goals, objectives, and policies of the Strategic Regional Policy Plan.

Should you or any other party request this finding to be reconsidered, please contact Nichole L. Gwinnett, IC&R Coordinator, with this request, or any questions concerning staff review of this item. This recommendation will be discussed at the next scheduled Council meeting. Should Council action differ from the staff recommendation, you will be notified.

Sincerely,

SOUTHWEST FLORIDA REGIONAL PLANNING COUNCIL

Wayne E. Daltry
Executive Director

WED/NLG

cc: Cherie Trainor, Florida State Clearinghouse

D1

RECEIVED
OCT 04 1999
BIG CYPRESS NATIONAL PRESERVE

Southwest Florida Regional Planning Council

4980 Bayline Drive, 4th Floor, N. Ft. Myers, FL 33917-3909 (941) 656-7720

P.O. Box 3455, N. Ft. Myers, FL 33918-3455 SUNCOM 749-7720

FAX 941-656-7724

October 1, 1999

Mr. Wally Hibbard
Superintendent
Big Cypress National Preserve
HCR 61, Box 110
OCHOPEE, FL 34141

RE: IC&R Project #99-389
Regional Staff Review of Draft Recreational Off-Road Vehicle Management Plan Supplemental Environmental Impact Statement for Big Cypress National Preserve, Broward, Collier and Monroe Counties, Florida.

Dear Mr. Hibbard:

The staff of the Southwest Florida Regional Planning Council reviews various proposals, Notifications of Intent, Preapplications, permit applications, and Environmental Impact Statements for compliance with regional goals, objectives and policies, as determined by the Strategic Regional Policy Plan. The staff reviews such items in accordance with the Florida Intergovernmental Coordination and Review Process (Chapter 291-5, F.A.C.), and adopted regional clearinghouse procedures.

The following designations determine Council staff procedure in regard to the reviewed project. These four designations are:

Less Than Regionally Significant and Consistent: No further review of the project can be expected from Council.

Less Than Regionally Significant and Inconsistent: Council does not find the project of regional importance, but will note certain concerns as part of its continued monitoring for cumulative impact within the noted goal area.

Regionally Significant and Consistent: The project is of regional importance, and appears to be consistent with Regional goals, objectives and policies.

Regionally Significant and Inconsistent: The project is of regional importance and does not appear to be consistent with Regional goals, objectives and policies. Council will oppose the project as submitted, but is willing to participate in any efforts to modify the project to mitigate the concerns.

Regional staff finds that the proposed activities are **Regionally Significant and Consistent** with the adopted Southwest Florida Strategic Regional Policy Plan. Regional Significance is based on the identified status of the Big Cypress National Preserve as "Area of Critical State Concern". Consistency is based on the following staff recommendations:

1. Regional Staff supports the proposed recommended alternative management plan. Staff does not support the "No Action" alternative.

2. Vehicular and non-vehicular access points and activities should be clearly separated. In areas where the two types of activities are in close proximity, some type of buffering should be provided.

Should you, or any other party, request this finding to be reconsidered, please contact Nichole Gwinnett, IC&R Coordinator, with this request, or with any questions concerning staff review of this item. This recommendation will be discussed at the next scheduled Council meeting. Should Council action differ from the staff recommendation, you will be notified.

Sincerely,

SOUTHWEST FLORIDA REGIONAL PLANNING COUNCIL

for Wayne E. Daltry
Executive Director

WED/geh

cc: Mr. James Beever III, Florida Fish and Wildlife Conservation Commission
Ms. Kim Dryden, U.S. Fish and Wildlife Service
Mr. Ron Clark, Big Cypress National Preserve
Mr. James T. Carnes, Planning Department, South Florida Water Management District
Ms. Rebecca Jetton, Areas of Critical State Concern, Florida Dept. Of Community Affairs
Mr. Vince Cautero, Community Development & Environmental Services, Collier County

D2

200

DEC 13 1999

COMMENTS ON THE DRAFT RECREATIONAL OFF-ROAD VEHICLE MANAGEMENT PLAN SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT BIG CYPRESS NATIONAL PRESERVE

DECEMBER 13, 1999

FLORIDA BIODIVERSITY PROJECT
P.O. BOX 220615
HOLLYWOOD, FL 33022

FLORIDA BIODIVERSITY PROJECT
P.O. BOX 220615 HOLLYWOOD, FL 33022 (954) 922-5828

December 13, 1999

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

DEC 13 1999

Dear Superintendent Hibbard,

Enclosed are the comments of the Florida Biodiversity Project (FBP), Biodiversity Legal Foundation (BLF), and the Sierra Club Calusa Group (collectively the FBP) on the draft ORV Management Plan and Supplemental Environmental Impact Statement (Plan). In accordance with the settlement agreement, the Plan represents the National Park Service's (NPS) purported compliance with the agreement.

The comments of the FBP will be presented separately in two parts. First, our attorney Meyer and Glitzenstein will provide comments on behalf of FBP specifically addressing legal compliance issues of the Plan. Second, the FBP will provide comments addressing environmental analysis and other issues described in the Plan.

The comments are organized in the following manner. To facilitate review and response by the NPS major issues have been identified and analyzed. Generally, this follows the format of the Plan. Included in some of the issue discussions will be a list of recommended actions. We request that the NPS address each identified issue in the Final Plan.

In addition, we have organized specific referenced documents as attachments contained in two separate binders. We request that these documents along with the comments by FBP and Meyer & Glitzenstein be included in the administrative record.

Sincerely,

Brian Scherf

Brian Scherf
Boardmember
Florida Biodiversity Project

E1

for Sidney B Maddock

Sidney B. Maddock
Environmental Analyst
Biodiversity Legal Foundation

for Gary Beardsley

Gary Beardsley
Conservation Chair
Sierra Club Calusa Group

201

INTRODUCTION

The FBP cannot support the Draft Off-Road Vehicle Management Plan Supplemental Environmental Impact Statement (Plan)[Attachment 1] as currently written. The Plan is ambiguous and speculative, violates statutes and regulations, violates the settlement agreement between the FBP and federal defendants, does not adequately analyze environmental impacts of ORV use, and fails to identify specific management actions to avoid and/or minimize adverse impacts of ORV use.

After the settlement agreement was signed in 1995, the FBP was cautiously optimistic that an effective ORV Management Plan could be produced to avoid and/or minimize resource damage. Now, after more than three long years in preparation, the FBP is disappointed at the level of legal non-compliance and impertinence of the Plan. The Plan is a superficial and self-serving environmental review that attempts to justify decisions already made and continues the NPS bias of recreational access over resource protection. While it makes some explicit admissions of serious resource damage from ORV's it does virtually nothing to avoid and minimize these impacts.

Most importantly, it is not a plan with required specific management actions but a simplistic, vague decision making process associated with a potential of broad menu of optional strategies that is devoid of any meaningful level of accountability or implementation by the NPS. To further emasculate the Plan, it is not science based since it lacks supporting data and analysis, a comprehensive monitoring and research program, fails to define ecological integrity, fails to analyze fragmentation and edge effects, and is not congruent with the precautionary principle.

The University of Georgia Center for Remote Sensing and Mapping Science (CRMS) documented an astounding 29,799 miles of ORV trails and over 148,000 acres of impacted habitat (Welch and Madden 1998)[Attachment 2]. Through a monumental blunder by the NPS, the ORV database was not ground-truthed raising concerns about whether the NPS even wanted to more accurately identify the scale of ORV disturbance.

E1 (cont.)

202

Specifically, the Plan:

- Is ambiguous and speculative and does not present supporting data and analysis to support conclusions.
- Fails to identify specific management actions to avoid and minimize ORV impacts.
- Violates the settlement agreement between the FBP and federal defendants.
- Violates relevant environmental statutes and regulations.
- Does not analyze a reasonable range of alternatives as required by NEPA.
- Is not science based and does not have comprehensive and scientifically justifiable goals and objectives.
- Does not present a comprehensive program for ORV management.
- Fails to analyze specific criteria for the development of a designated trail system.
- Does not contain specific threshold criteria for unacceptable ORV impacts.
- Fails to present supporting data and analysis for the 2 PSI ground pressure standard.
- Fails to incorporate the best available information.
- Fails to incorporate best management practices (BMP's) designed to avoid and/or minimize impacts from ORV use.
- Fails to analyze management practices for particular vehicle types.
- Does not contain a detailed and comprehensive implementation schedule including a dedicated non-discretionary funding plan to assure that all management actions including monitoring, research, and adaptive management are enacted in a timely manner.
- Fails to adequately analyze methods of monitoring impacts of ORV use and mechanisms for taking remedial action.
- Fails to analyze procedures and considerations for closing, opening, or reopening ORV trails.
- Fails to adequately analyze the direct, indirect, and cumulative impacts of ORV impacts.
- Ignores the analysis of ORV impacts on non-listed and listed species.
- Does not contain a comprehensive program for research to identify the long-range ecological effects of ORV use.

Further, the Plan avoids discussion of past management problems and fails to address adverse ORV impacts despite the fact that Preserve resource management documents explicitly describe widespread ORV damage.

To summarize, according to the settlement agreement the overall objective of the ORV Management Plan is to establish a comprehensive system for management of ORV use in BICY with the goal of assuring the natural and ecological integrity of natural resources in accordance with the establishing legislation. The Plan has not met this standard. The FBP concludes that there is insufficient evidence to substantiate the claims of avoidance and minimization of ORV impacts. Rather, we find there is substantial, credible and compelling evidence to the contrary. The comments by other agencies such as the FWS and the EPA have reached a similar conclusion (USFWS 1999a) [Attachment 3] (USEPA) [Attachment 4]

The FBP concludes that the Plan must be rewritten to fully comply with the settlement agreement, relevant statutes and regulations, and include comprehensive and specific management actions to avoid and/or minimize resource and recreational impacts.

Because of the overwhelming amount of evidence of serious degradation of natural resources and the concern over whether these impacts may be permanent and thus irreversible, the FBP recommends that ORV use be minimized to the maximum extent practicable until comprehensive peer reviewed research can be conducted establishing cause and effect relationships and long-term ecological consequences of ORV use.

BACKGROUND OF 1995 SETTLMENT AGREEMENT

The FBP has been very concerned about the serious natural resource impacts of the increasing proliferation of ORV trails and ineffective ORV management in BICY. In 1991 The Big Cypress General Management Plan and Final Environmental Statement (GMP) was released (NPS 1991) [Attachment 5]. The GMP recognized that it was inadequate to deal with the management of ORV's and required the preparation of a separate ORV management plan.

E1 (cont.)

In May of 1994 the FBP sent an enforcement petition to the Corps and EPA requesting enforcement of the Clean Water Act in respect to damage from ORV in the Preserve (FBP 1994a) [Attachment 6]. A supplemental enforcement petition was sent to the EPA documenting adverse natural resource impacts and again requested enforcement action of the Clean Water Act (FBP 1994b) [Attachment 7]. In August 1994 the FBP filed a 60 day notice of intent letter noting violations of environmental statutes and regulations and describing resource damage to Preserve soils, hydrology, vegetation and wildlife (FBP 1994c) [Attachment 8].

After an inadequate response by federal agencies to our natural resource concerns the FBP filed suit in 1995 against the NPS and other federal agencies alleging violations of environmental statutes and regulations (FBP 1995) [Attachment 9]. Additionally, in August 1995 the FBP filed a motion for partial summary judgement exhaustively detailing evidence of adverse impacts to Preserve natural resources (FBP 1995a) [Attachment 10]. In October 1995, the FBP and federal defendants reached a settlement agreement (FBP 1995b) [Attachment 11]. The settlement agreement required the NPS to draft an ORV Management Plan/Supplemental Environmental Impact Statement, required completion of a draft within two and a half years, and required certain plan elements be analyzed in the ORV Management/SEIS (FBP 1995b). In September 1998 the NPS released a Review Draft [Attachment 12] of the ORV Management Plan. In response to a revised federal register notice, the FBP submitted detailed scoping comments (FBP 1999) [Attachment 13]. These comments urged the NPS to draft a plan that is comprehensive in nature and fully analyzes the direct, indirect, and cumulative impacts of the ORV trails documented in the ORV Trail Database report by the University of Georgia (Welch and Madden 1998).

GENERAL COMMENTS ON THE FAILURE TO INCORPORATE SCIENCE BASED MANAGEMENT

ISSUE: The Plan does not contain comprehensive and scientifically justifiable conservation goals and objectives.

The settlement agreement gives direction for the overall goal and objective of the Plan. The goal of the plan is to "assure the natural and ecological integrity of ORV use in BCNP . . ." The overall objective is "to establish a comprehensive system for management of ORV use in BCNP . . ." The Plan contains no specific clear goals, objectives, or performance measures that allow a determination whether compliance is being achieved in avoiding and minimizing impacts of ORV use. The only reference to management objectives in the Plan is on page 13 which refers to a vague group of management objectives for natural resources. These are:

- The natural and ecological integrity of the preserve is assured by protecting identified important resources areas including water quality, surface water flow, soils, vegetation, wildlife, and wildlife habitat.
- Endangered plant and animal species are protected.
- Prairies retain native species diversity and productivity.

First, the ORV Plan does not provide any academic or operational definition of "ecological integrity". If the NPS cannot define ecological integrity then how can it know when it has been achieved or when it is threatened? See issue section below for further discussion. Second, the Important Resource Areas may be not be the relevant ecological indicators to assure ecological integrity (NPS 1991).

In place of clear goals and objectives is an ambiguous and speculative decision making process that allows the NPS maximum management latitude with minimal accountability that will further institutionalize an agency culture of reactive and ineffective ORV management.

A conservation strategy is more likely to succeed if it has clearly defined and scientifically justifiable goals and objectives (Noss 1991). Goal setting is the first step in the conservation process. A series of increasing specific objectives and action plans should follow these goals and be reviewed regularly to assure compliance with primary goals and objectives (Stankey 1982).

The lack of specific clear goals and objectives is probably the greatest single obstacle in implementing a management plan. Many agencies operate with two sets of goals. One set of goals is set in legislation and agency regulations. The second is largely

E1 (cont.)

unwritten and relates to satisfying political expediency, special interest groups, and others. The NPS has a statutory conservation mission and goals and objectives must be consistent with that mission. If the NPS has unclear or inconsistent goals, then all objectives for natural resource management are equally flawed (Noss and Cooperrider 1994). Goals and objectives should be linked with specific indicators, performance measures, threshold levels, management actions, and adaptive management to increase the probability of successful implementation.

NPS Directors Order 2, Park Planning clearly states the critical elements of long-term goals (NPS 1998):

- are outcomes, stated as desired future conditions,
- for natural and cultural resources and visitor experiences,
- are quantifiable, with clear indicators, performance targets, and completion dates,
- are understandable to the general public

Recommendations

1. Develop specific goals and objectives specifically for the Plan to avoid and minimize impacts of ORV use.
2. Connect these goals and objectives to specific indicators, threshold levels, and performance measures.

ISSUE: The Plan is not consistent with principles of conservation management plans.

The primary goal of the Plan according to the settlement agreement is to assure the natural and ecological integrity of BICY resources in accordance with the BICY Establishment Act and other statutes. This then makes it primarily a conservation plan rather than a recreation plan. Noss (1999) lists the key features of good management plans and these features are compared against the draft ORV Plan.

Table 1. Green light and red flags for ecosystem management plans. Adapted from Noss (1999).

Green Lights for Ecosystem Integrity	Red Lights in ORVMP/SEIS
Biocentric or ecocentric, guided by a strong land ethic	Primarily anthropocentric, concerned with "balancing" recreation and resource protection
Has explicit clearly stated goals and objectives that are consistent with well established conservation principles	Lacks comprehensive and scientifically justifiable goals and objectives
Science based	Science informed - science promised at back-end of process
Scientifically credible and defensible	Not scientifically defensible
Map based with management zones based on natural boundaries and monitoring & research needs	Management zone boundaries determined by roads, not by biological criteria. No maps of specific designated trail design
Includes adequate control areas for monitoring and research; designates substantial new reserves	No new control, restoration, buffer areas, or non ORV recreation areas are specifically designated
Demonstrates adequate consideration of the spatial and temporal context of management decisions; addresses cumulative impacts.	Fails to consider spatial and temporal context; primarily concerned with direct impacts and short term effects. Cumulative impact analysis inadequate.
Estimates the natural range of variability of key ecological processes and attempts to emulate or restore processes	No estimates of the natural range of variability of soils, hydrology, vegetation, and wildlife.
Emphasizes protection and restoration of natural as opposed to anthropocentric conditions	Dismissed naturalness concept as impractical and illegal, manages primarily for recreation
Includes comprehensive inventories of natural communities and species	Tiered on GMP, missing comprehensive species lists. No G1, G2, G3, S1,S2,S3 listings
Recognizes needs of all species	Inadequate species analysis, no appropriate indicator species. Analysis is restricted to protected species only
Does not attempt to balance recreation with conservation, but constrains recreation by biological needs —biology is the "bottom line"	Attempts to "balance" ORV recreation with conservation; agency bias of recreational ORV access over resource protection.
Fully upholds all relevant environmental laws and regulations	Compliance is inconsistent with major environmental laws and regulations
Allows appropriate & compatible human uses and recreation and eliminates incompatible uses	Permits ORV recreational activities that are incompatible with established conservation goals; fails to fully examine impacts of ORV recreation
Constructs no new roads or ORV trails; decommissions and restores old roads and trails	Continues to allow dispersed use. Fails to adequately restore soil and vegetation impacts of extensive ORV trail network
Does not treat all stakeholder opinions as equal; demands credibility and commitment to	Opinions of ORV recreationists are given increased weight with interviews and surveys; uses a consensus approach and largely minimizes science;

E1 (cont.)

conservation goals	avoids self interest issues
Provides opportunity for scientific input throughout process and for peer review	Scientific input is throttled until late in the public comment process; no opportunity for peer review.
Makes all data, models, and analysis available to the public in a "user friendly" format	Refused to release much ORV impact data under FOIA. Release of data requires litigation; attempts to marginalize scientific data, fails to disclose model design for PSI
Is adaptive and applies rigorous monitoring and research to test effects of management actions and adjusts management decisions on the basis of new knowledge	Fails to design or implement an adequate monitoring and research program; results of management are not clearly connected to adaptive management decision making process
Is adequately funded so that all management actions including monitoring, research, and adaptive management can implemented as planned	Funding is vague and speculative. Management actions are likely to go unfunded. Research plans are ambiguous. Implementation is questionable.

From the general overview in the table above, the draft ORV Plan is clearly inadequate and must be rewritten utilizing the best available science and full compliance with statutes and regulations.

ISSUE: The Plan has failed to analyze and utilize the best available scientific data and technology.

The Plan fails to analyze the best available scientific information. This violates the NEPA, the ESA, the National Parks Omnibus Management Act, and the settlement agreement.

First, NEPA requires that information be of high quality, have accurate scientific analysis, expert agency comments, and public scrutiny. 40 C.F.R. § 1500.1(b). Further, NEPA requires that the SEIS be supported by evidence the agency has made the necessary environmental analysis. 40 C.F.R. § 1502.1. "Agencies shall also insure the professional integrity, including scientific integrity, of the discussions and analysis. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other methodologies used and shall make specific reference by footnote to the scientific and other sources relied upon for conclusions in the statements." 40 C.F.R. § 1502.24.

Second. Section 7 of the Endangered Species Act (ESA) requires under formal consultation, the action agency must provide the FWS with "the best scientific and commercial data available . . . for an adequate review of the effects" the proposed action may have on listed species. 50 C.F.R. § 402.14(d).

Third, the National Parks Omnibus Management Act of 1998 requires the use of high quality science and information. Section 202 states, "The Secretary [of the Interior] is authorized and directed to assure that the management of units of the National Park System is enhanced by the availability and utilization of a broad program of the highest quality science and information" In other words, NPS managers must demonstrate how decisions have been supported by scientific information.

Fourth, the settlement agreement states that "Supplemental analysis of issues and impacts previously considered in the FEIS will be conducted to the extent required by NEPA or other federal laws, in light of newly available data, information submitted by members of the public through the SEIS process, and all other information available to the NPS." Settlement Agreement at 3. Further, it states, " Any decision by NPS which will modify the management of ORV use from that described in the GMP will be based on all available information." Id.

The Plan either completely ignores relevant scientific information or technology, or references the information but then fails to analyze it. One NPS reviewer stated in reviewing a previous draft, the Plan should reek with science, but it doesn't.

Further, comments from the FWS and EPA on the draft Plan state that the conclusions reached by the NPS are not supported by available data. For example, there is also no scientific justification or rationale for an ORV permit ceiling. General conservation biology concepts such as fragmentation and edge effects are not discussed.

UGA ORV Trail Database. The Plan references but fails to analyze the UGA ORV trail database (Welch and Madden 1998) and the Clark panther study (Clark and Janis 1999) [Attachment14]. The environmental consequences section reveals no "in depth" analysis of these reports. Despite the evidence of a massive amount of ORV trails the NPS still proposes more dispersed use. Also, despite the best scientific evidence that panthers tend to move out of Bear Island during the hunting season, the NPS proposed no reduction of ORV trails or hunting levels.

The Plan has failed to use the best scientific technology to ground truth the UGA ORV trail database. This was a monumental blunder that compromises the credibility of

E1 (cont.)

this study. This information is still relevant. There is also no scientific data or analysis for the PSI ground pressure standard nor the effectiveness of new technologies such as geotextiles or new types of ORV technology that can reduce impacts.

Resource Management Reports. In addition, virtually none of the "in house" studies or reports from BICY staff are not included in the Plan. It is vital that these reports be included in the Plan since these reports contain relevant data on ORV issues and impacts. In contrast, the main thrust of the Plan seems to rely on the Duever studies which were not peer reviewed and did not analyze cumulative ORV impacts over large spatial and temporal scales.

Scientist or analyst comments are not included. Notably missing, is much of the commentary and citations on environmental effects of ORV's drafted by Dr. Jeff Marion of Virginia Tech for the 1998 review drafts. Additionally, relevant comments on ORV impacts by Dr. Aust, Dr. Snedeker, Dr. Smith, Dr. Doyle, Mr. Yamataki, and Dr. Jones are missing. Particularly troubling is that the work and comments of Dr. Stuart Pimm and Sonny Bass - noted Cape Sable seaside sparrow experts have not been included, despite urgings from the Preserve's wildlife biologist.

Particularly disturbing is that senior management at the Preserve has attempted to keep scientist comments out of the public record. In August 1997, Dr. Mike Aust of Virginia Tech made a field visit to the Preserve and commented on the level of resource damage from ORV's. Dr. Aust (1997) [Attachment 15] stated that rutting was more extensive than most logging operations, and believed the level of rutting was unacceptable because it: 1) reduced plant productivity; 2) denied use to foot traffic; 3) disturbed the algal mat; 4) killed trees around hammocks; and 5) caused long-term effects.

Rather than thanking Dr. Aust, Superintendent Hibbard (1997) [Attachment 16] stated,

> This has no business being included as part of the public record in any of the planning effort. As I stated earlier, the impacts of ORV use has been documented in the GMP/EIS. The task at hand is to develop a plan to manage the use of ORV's. No matter how credible Dr. Aust may be, it is not appropriate to seek an impact analysis from him, nor, even if unsolicited, to use it as a matter of record (emphasis added).

Assistant Superintendent Carolyn Kriz (1997) [Attachment 17] follows with the same perception:

> It seems as if every time someone new is associated with this project we have to go through teaching them how to be effective with our users and stakeholders. I cannot imagine how he can write #s 1 and 2 and then expect the outside world to cooperate with this project. And, #2 remark is not a correct assumption in all cases. His ideas (bullets) may be o.k. but, his lead explanations will not motivate anyone to buy in to the whole thing.
>
> It seems that Dr. Aust did, or is doing, an impact analysis, and not advising us with BMP's (emphasis added).

These comments raise serious questions regarding the Preserve's senior management and the degree of objective evaluation of ORV impacts. The issues are not keeping information out of the public record, or getting people to "buy into the whole thing" but of using the best available science and information to accurately analyze the alternatives and associated ORV impacts that also fully complies with relevant statutes, regulations, and the settlement agreement.

The Plan fails to reference other relevant research and reports. When substantial information on a particular area or impact is not available, management should be based on empirical generalizations or principles derived from other studies (Noss 1999). For example, as Noss (1999) notes, we know in the vast majority of cases, with all things being equal, it is better to avoid habitat fragmentation and maintain large well connected areas of natural habitat. Relevant conservation biology references and principles are not found in the Plan.

GIS Technology. The Plan fails to use the best available scientific technology. Notably missing is any discussion of how the Preserve's GIS technology can be incorporated into ORV management. Utilization of GIS overlays of the Preserve's vegetation, wildlife, soil, and hydrology, along with the UGA ORV trail database would likely provide new insights of ORV impacts. As noted in the section below, the NPS fails

E1 (cont.)

to use GIS suitability analysis which would provide a scientific and rational basis for protecting resources by avoiding and minimizing ORV impacts.

GIS Suitability Analysis. The FBP believes the ORV Plan must be grounded in sound science. The use of GIS suitability analysis is one of the best ways to avoid and minimize impacts from ORV use within a scientific framework. The former Preserve vegetation specialist recognized the need for a proactive approach, "A logical way to minimize the need for reaction ORV management is through positive planning efforts based on resource information (soils, vegetation, wildlife, etc) to reduce potential problems" (Pernas1994).

In contrast, the overall approach of the proposed action is to essentially keep the existing reactive and dysfunctional system (with minor modifications) of ORV management; designated trails in Bear Island, dispersed use in the Turner River, Corn Dance, and Stairsteps units, and closure of the Loop and Deep lake units. The NPS basically institutionalized the preexisting trail system and resource suitability was not taken into account for designated ORV areas. The FBP strongly objects to the dispersed use of ORV's and believes a comprehensive designated trail system developed through GIS suitability analysis is required to avoid and minimize impacts.

To avoid and minimize ORV impacts the FBP believes that building from a grounds up approach is needed. Utilizing existing GIS technology, ORV use can be matched to resource areas that have the tolerance to sustain some level of ORV use. Existing GIS data for soils, vegetation, wildlife, and hydrology would be utilized. This approach has several major advantages: 1) it is science based and provides a rationale for making natural resource management decisions; 2) it avoids and minimizes natural resource impacts; 3) the process is flexible and can be modified to evaluate and site other human activities such as oil and gas exploration; and 4) it saves money.

Sensitivity criteria would be developed and will be in some cases be subjective because of data gaps. The best available science should be utilized to provide justification for resource sensitivity designations. Specific threshold criteria will need to be developed. Research on the long-term ecological effects of ORV impacts will also be required for adaptive management. Despite these shortcomings implementation needs to

proceed. Noss (1992) states that putting off implementation until the science is complete would be foolhardy; the forces that degrade ecosystems will not wait for the advise of scientists. The most prudent course of action is to proceed on the basis of the best available information, rational inference, and consensus of what it takes to protect and restore ecosystems. The following table lists a recommended approach.

Table 2. Guidelines for identifying sensitive areas. Adapted from Mazzotti and Morgenstern (1997).

Category	Soil	Vegetation	Wildlife	Hydrology	Significance
Critically Sensitive	Marls, periphyton precipitates	Unique or rare habitat. Presence of rare, endemic, or listed species. Highly vulnerable to ORV impacts. Exotics.	Presence of critical habitat features, presence of breeding, rare, endemic, or listed species. Vulnerable to mortality, injury, or disturbance.	High water conditions that stress wildlife. Water levels exceed hydro criteria thresholds. Sensitive sloughs, creeks. Serious turbidity, flow impacts.	No ORV use, careful management and monitoring
Highly Sensitive	Exposed upper level soils, muck soils	Vulnerable native plant communities. Important resource areas.	Presence of rare, endemic, or listed species. Breeding areas of native species. Vulnerable to disturbance.	Water levels approach hydro criteria thresholds, cypress, Significant turbidity, flow impacts.	No or very limited ORV use, buffer zones, extensive monitoring & mitigation.
Moderately Sensitive	Sandy and other indigenous soils	Able to withstand moderate ORV impacts	Native wildlife populations. Tolerance of ORV activity.	Normal water levels, open marsh, prairie. Limited turbidity, flow impacts	Some ORV use with monitoring & mitigation
Not Sensitive	Limerock roads, severely disturbed soils, bedrock	Severely trampled or destroyed vegetation in corridors.	Exotic or nuisance species predominate. Non-sensitive species.	Hydro criteria met. Deeper marsh areas. Some uplands. Insignificant turbidity, flow impacts	ORV use with management & monitoring

E1 (cont.)

To aid in the decision-making process, numerical sensitivity rankings would be assigned to each of the four sensitivity categories. Assigned rankings are:

- Critically sensitive = 0
- Highly sensitive = 1
- Sensitive = 2
- Not sensitive = 3

The four resource rankings are then multiplied to get an overall ranking for each subsection. To produce a spatially oriented map of the overall sensitivity ranking, the GIS software would multiply the values. Designated trails could then be designed to avoid and minimize impacts to critically or highly sensitive areas. Lower ranked areas would prohibit ORV use. Trail design would also seek to maximize efficiency for monitoring, enforcement, and maintenance. Buffer zones, baseline control areas, and access points could then be designated using a scientific rationale. In the framework of adaptive management, ORV use would be adjusted as new information becomes available.

To summarize, the general steps involved in GIS suitability analysis include:

1. Define goals, objectives, and constraints.
2. Provide for scientific peer review.
3. Develop a spatially referenced natural resource database.
4. Define natural resource and other categories to be included.
5. Define sensitivity criteria for each natural resource category (i.e. tolerance to ORVuse).
6. Develop composite analysis of management areas.
7. Design trail system that is consistent with composite results.
8. Integrate suitability analysis with management plan or EIS.
9. Develop comprehensive monitoring and research programs linked to adaptive management.

Airborne Laser Terrain Mapper. The ORV Plan also fails to utilize the best available scientific technology such as the Airborne Laser Terrain Mapper system (ALTM) that would provide additional accurate data on the spatial extent of ORV disturbance (see discussion below). ALTM technology integrates accurate airborne GPS technology with a solid state laser sensor to collect 10,000 data points per second. Aircraft can be equipped with different powered lasers that would be suitable for wetland mapping. The swath width at altitude is as wide as 1.5 km with points every 1-3 meters on the ground. Horizontal accuracy is 15-20 cm while height accuracy is better than 10 cm (Shrestha and Carter 1998). Hundreds of kilometers can be mapped within hours. Data can also be processed and displayed in many formats. For example, data can be shown as shadow relief and false color maps, traditional contour maps, and 3-D perspective models. The formats would allow resource management personnel to comprehend the extent and intensity of ORV impacts.

The relevance of the technology is obvious since the spatial extent along with depth and height of linear features (ORV corridors, trails, and tracks) such as rutting can be measured with accuracy within a short amount of time. The depth and height data of rutting would enable resource management personnel to better evaluate potential secondary impacts on altered water flow and unnatural vegetative succession.

Comparisons can be made with other GIS data. First, the UGA study could be compared and corroborated. The ALTM data could be used to verify the trail mileage, trail classification, and acres impacted. Second, the ALTM data could be used in association with GIS suitability analysis to designate trails, buffer zones, restoration areas, and closed areas.

The ALTM system provides considerable time savings since flights can be completed in a matter of hours and visual models can be developed within a few hours. Pre and post hunting season comparisons would be possible.

Another component of ALTM is low altitude digital photography. An entire digital photographic record can be made of the Preserve while laser mapping is being conducted. Specific frames and locations can be easily identified using GPS. Digital photos can be enlarged or modified to provide enhanced detail. The low altitude digital

E1 (cont.)

photography could used to compare and contrast the UGA ORV trail interpretations. Digital photography flights would be especially useful to periodically to monitor the success or failure of ORV management actions.

The FBP strongly urges that the NPS immediately contract to have the entire Preserve mapped using ALTM technology. This should be done as soon as possible during the dry season next Spring when water levels are low. The NPS should utilize an independent contractor and the results should be peer reviewed and available to the public.

Low Altitude Photography. The NPS has also not utilized low altitude photography to document the spatial and temporal factors of ORV impacts. It is FBP's understanding that the Preserve does not possess a comprehensive low altitude photographic database of all 729,000 acres even though the Preserve has had an aviation division for sometime. Why the Preserve does not possess such basic monitoring information raises serious questions about whether senior management is trying to mask the extent of ORV resource impacts.

The entire Preserve should be mapped periodically so that the success or failure of ORV management actions can be evaluated. photographs could be compared to current photos. As discussed above, the Preserve should have the entire 729,000 acres digitally photographed while simultaneously conducting Airborne Laser Terrain Mapping (ALTM). This should be a critical priority item and dedicated funding should be obtained.

No Follow-up to Duever Research. The NPS has failed to conduct research on cumulative effects or recovery of ORVuse. One example is that follow-up research on the Duever (1981; 1986) [Attachments 18 & 19] studies was not conducted. The Plan states on page 64 that no further assessment [Duever] has been conducted to see if recovery is occurring on abandoned ORV trails. These sites should have been resurveyed to identify any recovery over the last ten years (USFWS 1999a).

ISSUE: The proposed action has failed to adhere to the precautionary principle.

The NPS fails to use a precautionary approach to natural resource management. An accepted principle of conservation biology is the precautionary principle, which states that if the effects of an action are unknown that management actions should be conservative. The principle consists of three parts (Meffe and Carroll 1997):

1. The humility principle: Agencies must recognize and accept the limitations and the human limits to manage ecosystems.
2. The precautionary principle: When it doubt (and uncertainty is more the norm than the exception) we must think and act very carefully.
3. The reversibility principle: We must not make irreversible changes.

When substantial information is unavailable on a specific area management should be based on empirical principles from research done elsewhere. The overarching theme in applying these principles is caution — in the face of doubt about the effects of a management proposal, it is better to err on the side of protection rather than change (Noss 1999). Therefore we should act cautiously and avoid and or minimize risks to species and ecosystems. The burden of proof should be on those who propose ORV use that involves unknown risks to natural ecosystems. Again, this principle suggests that we not do something that cannot be reversed later if our decisions are wrong (Meffe and Carroll 1997).

The precautionary principle is not new. The cornerstone of the principle has been captured in common-sense aphorisms such as "An ounce of prevention is worth a pound of cure," However, ORV management in BICY has been guided by entirely different principles: 1) permit wide-scale ORV recreation now; 2) deny and downplay any damage; 3) close areas only when they become severely damaged; 4) delay — take actions only when forced to do so; 5) study the ecological effects sometime in the future .

The lack of a precautionary approach is a systemic problem within the NPS. An audit report by the Department of Interior (USDOI 1992) [Attachment 20] determined that the protection of natural resources was not sufficient to mitigate against the degradation of those resources. These deficiencies occurred because the NPS emphasized

E1 (cont.)

visitor-oriented programs and therefore did not provide management emphasis, support, and funding to maintain a viable natural resources program. The NPS did not ensure that known threats to natural resources were addressed or corrected on a timely basis, and did not have a sufficient inventory and monitoring program.

It is clear from numerous documents that serious adverse impacts are occurring but the long-term effects of ORV use are not known and may not be reversible. The NPS and independent scientists explicitly admit the following examples:

- "It appears that once soils are displaced, there are few natural mechanisms capable of restoring the ground contour, and the ruts remain indefinitely. (Duever 1986);
- Oxidation losses of soils from rutting may reach as high as one inch per year (Yamataki 1994) [Attachment 21].
- "It is our professional opinion that if the current use levels go unchecked, irreversible resource damage will continue. The damage occurring in this area has already surpassed the damaged experienced a few years ago in the Ochopee Prairie "(Pernas 1997) (emphasis added) [Attachment 22].
- "... ORV ruts may be as much as 2 feet deep, can channel water and potentially alter natural water flow patterns. The extent, occurrence, and severity are largely unknown." Plan at 55 (emphasis added).
- "... the cumulative impacts may have permanent, long lasting effects on fish and wildlife populations in the preserve." Id. (emphasis added).
- Ground water flow patterns are not well understood and the extent of the potential threat is unknown. Id. at 57.
- ... "biological and environmental effects are neither well documented nor understood given the lack of study" (NPS 1993) (emphasis added).
- "The Preserve urgently needs to establish a comprehensive research program to address the impact of vehicle traffic on soils, vegetation and water flow" (NPS 1993) (emphasis added).

- "What happens to the habitat for countless other wildlife that depend on the tall grass for concealment, web building, egg laying, den and nest making? What other animals eat the frogs? What insect populations are going unchecked as fewer frogs prey on them?" (NPS 1996) [Attachment 23].
- "Animals are disturbed by ORV's but little is known about the significance of this stress... The real significance of ORV use to animal populations is unknown" (Duever et al. 1986a) [Attachment 24].
- "Additional documentation of ORV impacts on sheet flow is needed to assess more fully the their impacts on the normal flow patterns of the Preserve" (Schneider et al. 1996)[Attachment 25].

The Plan despite the numerous explicit admissions of ORV impacts and utter ignorance of the long-term ecological effects of ORV use, continues on the same path of allowing widespread dispersed ORV use in the proposed action. This ignores the precautionary principle, science based management, statutes, and regulations.

ISSUE: The Plan does not contain a definition of ecological integrity.

The FBP was unable to find a definition of ecological integrity in any NPS documents it has examined including the Preserve's Resource Management Plan. The ORV Management Plan Project Proposal by Virginia Tech clearly states that the plan will "define and describe the relevancy of ecological integrity ..." (Marion 1995) [Attachment 26]. The NPS admits: " Heretofore, the NPS has not defined the parameters of ecological integrity that can be applied to limits of acceptable change or cumulative impacts to wetlands from human activities authorized in P.L. 93-440 making the previous statement speculative at best" (Thackeray 1994) [Attach. 27]. No definition of ecological integrity is contained in the Plan nor is there a reason explaining why one is not included. If the NPS does not define ecological integrity, then you do not know what it is, what state it is in, or when it has been achieved or compromised. In a classic study, *Fauna of the National Parks of the U.S.* biologists Wright and Thompson (1935) observed that parks were not fully functional ecosystems "by virtue of boundary and size limitations".

E1 (cont.)

A fundamental lesson from the failures of piecemeal resource management is that ecosystems remain healthy only when their natural processes remain intact (Noss 1999). Therefore, managing for ecological integrity assumes critical importance in resource management.

An environmental decision making process requires a precisely defined and empirical concept of ecological integrity (Mazzotti 1995). Ecological integrity needs to be defined in an operational manner along with measures that indicate integrity and identify threshold levels that demonstrate lack of integrity. A monitoring program based on the same measures of ecological integrity and a feedback system into an adaptive management process is required.

Clearly, this is a critical concept since the enabling legislation mandates that the NPS administer Big Cypress in a manner that will "assure their natural and ecological integrity in perpetuity" 16 U.S.C. § 698i(a). Without a working definition of ecological integrity, scientifically valid threshold levels cannot be developed.

Conservation biologists have defined ecological integrity in slightly different ways. Most scientists discuss conservation of viable populations of all native species, maintaining natural disturbance regimes and ecological processes, reintroduction of native extirpated species, and representation of ecosystems across natural; ranges of variation (Grumbine 1994). Norton (1992) defines managing for ecological integrity as protecting total native diversity (species, populations, ecosystems) and the ecological processes that maintain that diversity. Additionally, plans should include human uses that are consistent with conservation of native diversity, and eliminate those that are not (Noss 1999).

There is general agreement in the scientific literature that maintaining ecosystem integrity should take precedence over any other management goal (Grumbine 1994). This may be due to the current rate and scale of ecosystem deterioration along with human's profound ignorance to make judgements about what ecosystem elements to manipulate in management.

Recommendations

1. Develop an empirical definition of ecological integrity.
2. Develop an operational definition of ecological integrity.
3. Develop specific procedures and measures for evaluating ecological integrity. These would include landscape, ecological, hydrological and biochemical measures.
4. Incorporate the above into a comprehensive monitoring program.

Summary. A science based ORV Plan is essential to effective management. One perceptive NPS reviewer notes the importance of having a scientifically justifiable ORV Plan (Sholly1999) [Attachment 28].

> Where is the science? We need good science in order to develop and defend the plan. Without good science we can't know if we are protecting the resource or the visitors (ORVers) right to use the resource. Furthermore, how can we determine if we are meeting the requirements of Federal laws and Executive Orders. If we are not complying with Federal law then we are setting ourselves to get shut down by a Federal judge.
>
> In years past (the old days) the NPS has gotten away with making major resource management decisions around the Service without research and supportive scientific information. Most of the time we had good intentions and some times we caused serious irreversible impacts. In today's world, we shouldn't attempt to make decisions that may have irreversible resource impacts without adequate and viable scientific information.
>
> This plan does not reek of science like it should.

PURPOSE AND NEED FOR THE PLAN

ISSUE: The Plan fails to establish a comprehensive system for management of ORV use.

The Plan states on page 1 it addresses only "recreational" ORV use in the Preserve with no accompanying explanation for this restriction. Also the Plan does not address ORV use in the addition lands. The FBP believes this illegally segments the analysis and is a violation of NEPA and the settlement agreement. Additional comments submitted by Meyer & Glitzenstein will comprehensively address this issue.

E1 (cont.)

212

The settlement agreement clearly states on page 3: "The overall objective of the ORV Management will be to establish a comprehensive system for management of ORV use in BCNP with the goal of assuring the natural and ecological integrity of BCNP resources in accordance with the BCNP establishment Act"(emphasis added). Comprehensive is defined by *Webster's Dictionary* as including much, inclusive.

Further, the settlement agreement states that the SEIS "will build upon the analysis of issues and impacts previously set forth in the Big Cypress National Preserve General Management Plan and Final Environmental Impact Statement (GMP/FEIS). Nothing in the settlement agreement restricts analysis to recreational ORV use or analysis of the original Preserve lands only.

The 1991 GMP clearly recognized that it was inadequate to manage ORV use and mandated that a separate ORV Management Plan was to be produced. The GMP states that: "More detailed actions concerning ORV management would be included in an ORV management plan, which would be developed once the general management was approved." There is no restriction that the future ORV Management Plan only analyze recreational ORV use or original Preserve lands. Now the Plan states on page 1 that only recreational use will be addressed and management of the Addition will be considered in the addendum to the GMP contradicting the earlier NPS rationale for a separate ORV Management Plan.

This Plan is the appropriate process to analyze ORV use under NEPA not an addendum to the GMP where ORV use will likely be given only limited analysis among a variety of other complicated management issues. The addition addendum process may take years to complete, allowing additional cumulative impacts and further postponing actions to avoid and minimize ORV impacts.

The FBP finds it unconscionable that the NPS has totally eliminated analysis of commercial ORV use involving airboat tours considering the serious impacts that have resulted from this type of ORV use currently and in the past (Pernas 1997). This would be a violation of NEPA and the ESA. Segmenting the environmental analysis by excluding the Addition and commercial use is improper under NEPA.

Specifically, the FBP and the Biodiversity Legal Foundation provided scoping comments to the NPS requesting that analysis of commercial ORV be included in the Plan. The Plan does not mention a single type of commercial ORV use much less an explanation of why it has been completely eliminated from analysis despite the preponderance of credible evidence that it is causing serious impacts (Pernas 1997).

The September 1998 Review Draft contained a detailed table listing of the UGA ORV trail database results including figures for the western and northern additions. Although the Plan alludes to a 29,000 figure on page 49, which includes the northern and western additions, the detailed quad and unit figures have been excised from the Plan.

The FBP believes commercial ORV use has been eliminated from the Plan to circumvent NEPA and avoid timely analysis of the direct, indirect, and cumulative impacts.

Past commercial use included airboat tours that operated in Ochopee Prairie and caused significant impacts to the soils, hydrology, vegetation and wildlife (NPS 1994a) [Attachment 29]; (Jansen (1994)[Attachment 30]; Pernas 1995; (Pernas 1999) [Attachment31]. These airboat tour operations are smaller in area but greater in intensity and duration. In Ochopee Prairie the NPS circumvented NEPA analysis by not preparing an EA or EIS resulting in impacts so severe that there has been no measurable recovery (Pernas 1999) and that the areas will likely never be opened again to commercial or recreational airboat operations (Kacer 1996) [Attachment 32].

Current commercial airboat operations are occurring in the western addition lands near Everglades City and causing significant resource damage to the area. Increased channelization, erosion of river banks, defoliation of mangroves, vegetation change, and reduction in wildlife have been documented (Jones 1997)[Attachment 33]; Pernas 1997; (Doyle 1998) [Attachment 34]; (Smith 1998) [Attachment 35]; (Snedaker 1999) [Attachment 36]. As discussed above, NPS staff determined: ". . . if levels go unchecked irreversible resource damage will continue. The damage occurring in this area has already surpassed the damage experienced a few years ago in the Ochopee Prairie" (Pernas 1997). Particularly egregious is that the area of operation is critical habitat for the West Indian Manatee, an endangered species (USFWS 1999) (NPS 1999)[Attachment 37].

E1 (cont.)

Conservation biologists have determined that the manatee's death rate is exceeding the birth rate and without effective management the species will become extinct (Marmontel et al. 1997). The NPS in the interim evaded required NEPA analysis and ESA compliance (Kenny 1997). In 1999, the NPS produced a draft EA on the airboat operations (NPS 1999). The FBP submitted comments on the EA and determined that it was completely inadequate and that an EIS is warranted (FBP 1999) [Attachment 38].

The NPS has been stalling making a decision on whether to issue a FONZI or complete a full EIS on the Everglades City operations. Numerous NPS documents explicitly reveal the primary management focus of the Superintendent has been to allow commercial operations to continue to despite significant resource degradation (Pernas 1999; Jansen 1999 [Attachment 39]; Kacer 1999 [Attachment 40]; Clark 1999 [Attachment 41]; Kenney 1999 [Attachment 42]. The FBP is seriously concerned that NEPA review will be illegally circumvented to the future addition addendum process allowing additional cumulative damage to occur and additional economic profit from these operations as sensitive Preserve lands are being degraded for private profit.

It is likewise inappropriate to exclude the northern addition from analysis. As stated above this violates the settlement agreement, NEPA, and the rationale for an ORV Management Plan as required in the GMP/FEIS. In 1990 the NPS produced the draft I-75 Recreational Access Plan/ Environmental Assessment (NPS 1990). This document preceded the GMP/FEIS and made no mention of delaying implementation of an alternative until a GMP addendum was produced. During the intervening years the NPS continued to promote development of the two ORV access points along I-75 despite the mandate for an ORV Management Plan. The settlement agreement references the NPS's September 2, 1992 letter that no ORV use will be permitted in the Addition lands until the NPS prepares a comprehensive recreation vehicle trail plan.

In reviewing the FDOT applications for these ORV access points regulatory agencies have raised serious objections. Both the FWS and EPA have questioned the purpose and need for the ORV access points and have recommended denial of the projects based on the evaluation of substantial and unacceptable impacts to aquatic resources of national significance (EPA 1998; USFWS 1998). Further, the September

1998 Review Draft listed three alternatives for the addition lands. Now the Plan eliminates analysis of alternatives and impacts for the western and northern additions entirely. It appears the NPS is trying to obfuscate and mask review of these highly questionable projects in the larger GMP addendum process rather than having them evaluated on their own merits now.

The FBP believes it is also inappropriate to exclude NEPA analysis of agency, inholder, and oil exploration ORV use. For example, official NPS ORV use includes significant operations for law enforcement, resource management, and fire management. There are 100 backcountry inholders that utilize ORV's to access their properties.

Additionally, there is also is significant oil development proposals being evaluated by the Collier Companies that if permitted would likely involve substantial ORV activity. While these types of ORV use may have less extensive direct impacts than recreational and commercial operations they can have significant cumulative effects over the years and therefore must be analyzed under NEPA.

Supplemental comments on this issue will be submitted by Meyer & Glitzenstein.

Recommendations

1. Include comprehensive NEPA analysis of the northern and western addition lands.
2. Include comprehensive NEPA analysis of commercial, agency, inholding, and oil and gas development ORV use.

ISSUE: The Plan violates the requirements of the settlement agreement

On page 8 the Plan discusses the 1995 settlement agreement. While it lists the main points it does not provide how the Plan complies with the settlement agreement. The NPS should specifically state in this section how the Plan complies with the settlement agreement.

213

E1 (cont.)

214

As stated in the introduction, the FBP is disappointed that the NPS has made the decision not to comply with many of the requirements of the settlement agreement. Specific comments regarding compliance of the settlement are referenced in the following sections of these comments. Additionally, more comprehensive comments on legal compliance will be submitted by Meyer & Glitzenstein.

ALTERNATIVES

ISSUE: The Plan does not clearly explain the origin of the No Action alternative.

The Plan does not clearly explain that the "No Action" alternative presented in the ORV Plan is the current incremental management actions of the approved "Proposed Action" of the 1991 GMP. A clearer explanation would help reviewers compare the GMP and ORV Plan analysis.

ISSUE: The Plan does not contain a reasonable range of alternatives as required by NEPA.

The Plan does not contain a reasonable range of alternatives as required by NEPA. The purpose of NEPA is "to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment." 40 C.F.R §1500.1 c. NEPA requires that agencies "rigorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. §1502.14.

The FBP strongly objects to restricting the alternatives to a "refinement" of the proposed alternative in the GMP." There is no restriction by NEPA that alternatives be limited to a variation of a proposed action. Under the NPS interpretation SEIS's would be restricted to some variation of a proposed action in a former EIS— compromising the very purpose for doing a SEIS. There is no reason why the NPS could not have included an alternative such as a No ORV alternative, or even Alternative B in the GMP that emphasized resource protection, especially considering that the best available information

indicates that the scale of ORV disturbance is potentially 24 times higher than previously indicated (Welch and Madden 1998). As one NPS reviewer notes:

> If there is any substance to any of my comments then I suggest that we consider adding another alternative that protects our resources until a very extensive, long term (at least 5-10 years), research program is established that will provide us the information that we need to know in order to make an informed decision. I cannot imagine that we would make such an important decision that has potentially irreversible impacts, without the benefit of the best and strongest scientific data possible (Kriz1998) [Attachment. 43].

As can be seen in Table 3 below there are few substantial differences between the proposed alternative and the no action alternative.

Table 3. Comparison of Alternatives

Management Action	Proposed Action	No Action Alternative
Vehicle Permit System	Permit fee $120 - $200.00 Required backcountry permits	Permit fee $35.00
Permit Ceiling	Not specified, assumed to be 2500 permits	2500 permits
Operating Standards	Restatement of C.F.R. 7.86	Restatement of C.F.R. 7.86
Vehicle Specifications	2 PSI standard, width restrictions, prohibits damaging equipment	9 inch tire width requirement, no tracked vehicles
Access Points	Same as GMP	GMP access points never implemented, 70 undesignated access used
Criteria For Closure	To be determined.	None
Education and Communication	Superficial enhancements	Education section missing
Enforcement	No new measures, need for additional staff.	Enforce existing regulations
Monitoring	Ambiguous & speculative monitoring program. No threshold criteria developed.	Limited "reactive" monitoring.

E1 (cont.)

Reclamation	Ambiguous reclamation & restoration program. No designated areas identified.	Continued closure of Loop & Deep Lake Unit
Unit Management	Unspecified "maintained" ORV trails to dispersal areas in 3 units, closure in 2, designated trails in Bear Island. Addition lands eliminated from analysis.	Dispersal in 3 units, closure in 2 units, designated trails in Bear Island.
Cost Estimates	$400,000 for administration, $2.7 million for access points	$70,000 for administration, $2.7 million for access points in "1999 dollars"

Recommendations. At the minimum the Final ORV Plan should include the following alternatives:

- No ORV use permitted (i.e. all ORV use is prohibited).
- A precautionary (science) alternative that avoids and minimizes ORV use to the maximum extent practicable until research can be conducted to identify the long-term ecological effects of ORV use (see explanation of the precautionary principle in the following section).

NEPA issues including the "reasonable range" of alternatives will be comprehensively addressed in comments submitted by Meyer & Glitzenstein.

PROPOSED ACTION

ISSUE: The Proposed Action does not contain specific ORV management procedures and criteria that would avoid or minimize ORV impacts.

The Plan states on page 1 that the purpose of the SEIS is to "analyze specific actions in the ORV plan", incorporate new information, and addresses new issues raised by the public. On page 16 the Plan again states the NPS would adopt a process for ORV management and would be guided by "specific ORV management procedures and criteria" (emphasis added).

"However on page it states; " . . . the proposed action would adopt a "new decision process and consider a range of ORV management practices described in an "Off Road Vehicle Management Practices Manual" (emphasis added). This is vague and speculative and gives the NPS the latitude and discretion to do virtually nothing at all. The FBP strongly objects to this type of management philosophy. If specific management actions are not authorized in the Plan, it is doubtful any meaningful avoidance, minimization, or reduction of ORV impacts will occur.

The Plan contradicts itself by stating it would adopt a "process" yet would be guided by "specific ORV management procedures and criteria". While the plan specifies a 2 PSI ground pressure standard, other specific criteria are completely missing, in essence making the ORV Plan impotent. For example:

- Permit costs are to be determined later.
- There is no permit ceiling identified.
- There is no supporting data or analysis for vehicle specifications.
- There are no criteria listed for street legal 4x4's.
- There are no supporting data or analysis for the location, number, and sizing of the ORV access points.
- There are no specific criteria for designated trails or areas.
- There is no criteria for "dispersed" use areas.
- There are no selection criteria for "BMP's".
- There are no threshold criteria for unacceptable impacts to soils, hydrology, vegetation, and wildlife.
- Criteria for closing, opening, and reopening trails would be determined later.
- The education and communication actions are superficial and inadequate.
- The monitoring program fails to list management threshold criteria and when, how, or where monitoring would be conducted.
- There is no detailed research program identified.

E1 (cont.)

215

- There is no dedicated funding program identified.
- There is no implementation schedule identified.

The Plan does not prioritize the implementation of specific actions. For example, the proposed PSI standard will be phased in over a five year period. Due to procrastination and economics most ORV users will likely choose to delay modifications until fifth year. Thus, the Preserve will have to endure another five or more years of serious resource degradation. This is unacceptable. See the section below for additional discussion of Plan implementation.

ISSUE: The Plan does not provide any supporting data or analysis for dispersed ORV use.

The Plan states it will use a combined strategy of dispersal and concentrated use of ORV's. We believe these strategies are contradictory. There is no rationale or scientific evidence presented in the Plan that dispersed use results in an overall reduction in impacts as opposed to concentrated use which requires a designated trail system.

The FBP is strongly opposed to the use of dispersed ORV use because of its widespread impacts. We believe there is substantial and compelling evidence to reject dispersed use and instead implement a designated trail in management units that allow ORV use.

First, the legislative history from House and Senate reports (S. Rept.93-1128 and H. Rept. 93-502 give additional guidance on how ORV's are to be managed. The reports note:

> While the use of all terrain vehicles must be carefully regulated . . . to protect natural wildlife and wilderness values of the preserve, the bill does not prohibit their use along designated roads and trails.

The legislative history clearly requires that ORV use of designated roads and trail and therefore would prohibit the use of dispersed use areas. The Final Plan should state the specific legal justification for dispersed use areas if they are still proposed.

Executive Orders 11644 and 11989 require that ORV trails and areas 1) minimize damage to soil, watershed, vegetation, and other resources; 2) minimize the harassment of wildlife or significant disruption of wildlife habitat. There is no information in the Plan that supports that dispersed use minimizes these impacts. In fact, the UGA ORV mapping study concludes that these dispersed use areas have a density of ORV trails and have been heavily impacted (Welch and Madden 1998).

Second, the NPS itself has recommended a concentrated use strategy using designated trails. The NPS states, "Management determined that concentrating impacts to designated trails and areas was, although more devastating in the confined areas, more acceptable than the unlimited potential damage over the entire preserve." (Pernas, undated). "NPS management had determined that concentrating impacts was more acceptable than unlimited potential damage over the entire area" (Pernas 1994). Further, discussing the rationale for a designated trail system in Bear Island the NPS (1994c) determined,

> In accordance with E.O. 11644, Use of Off-Road Vehicles on Public Lands, a designated trail system in the Bear Island Unit was established in 1989. The designation was based on evidence of unacceptable damage to wetlands and wildlife from uncontrolled use by swamp buggies and all terrain cycles. Since then management has adjusted the extent and location of the trail to avoid sensitive resources and minimize permanent damage. The practice of concentrating ORVs on a trail system sacrifices the footprint of the trail in favor of protecting the marshes, prairies, and mixed hardwood stands.

The NPS rationale for designated trails in Bear Island is stated on page 33, "These restrictions were initiated in 1989 to minimize potential disturbance to Florida panthers, to control hunting pressure on panther prey, and to protect important resource areas."

The reduction in impacted area with a designated trail system can be seen from the example of Bear Island. The Bear Island unit now has a total of 54 miles of

E1 (cont.)

designated trails while the UGA study noted current and historic trails total 1568 miles and impacted 8,643 acres or an astounding 22% of the unit (Welch and Madden 1998). Clearly, the designated trails (54 miles) reflect a sharp reduction of 96.5% in trail mileage. In contrast, a dispersed unit such as Turner River has a total of 8,260 miles and 54,369 impacted acres which correspond to a whooping 31% of the unit. The use of "maintained trails" for short distance "beauty strip" effects and then allowing dispersal would only marginally reduce total trail mileage and impacts. If designated trails are good for Bear Island, they will also be good for the other units that permit ORV's.

Third, other studies conclude that concentrated use with a designated trail system is more effective than a dispersed use strategy. The EPA notes, [Dispersed use] "is contrary to general consensus and studies that show designated trails as the best alternative to manage and control impacts" (USEPA 1999).

Fourth, the results of the UGA ORV trail database report make a convincing argument for eliminating dispersed use. The additive effects of dispersed use over the decades are clearly evident since approximately 29, 799 miles of ORV trails and 148,141 impacted acres or 20% of the Preserve have been identified in the Preserve (Welch and Madden 1998). Clearly the evidence of 122,000 impacted acres of high density trails is alarming (Welch and Madden 1998). Yet despite these disturbing figures and without any rational explanation, the NPS still proposes dispersed use. See aerials photos and GIS quads for trial density. The photo on page 48 of an ORV dispersed use area in a prairie is especially disturbing, since virtually all the area in the photo has been impacted. Over time, all drivable dispersed use areas will be totally impacted.

Fifth, a single pass of an ORV when water levels are at or near the surface or in fragile soils can cause severe rutting (Duever 1986)[See photo attachment 44]. Severe impacts can occur in a few minutes while recovery may take centuries. ORV's eat land. Consider the following two examples; 1) A swamp buggy with 18 inch tires will impact an entire acre of land in only three miles. 2) If each of the average 2000 permit holders added just one new mile of trail per year from 1984 to the present, the total would amount to 30,000 miles of trails.

217

Sixth, the Off Road Vehicle Management Practices Manual (Appendix B) Strategy 3: Encourage Dispersal of Traffic in Remote Areas states that effectiveness is "very low" and that ORV operators may ignore the recommendation and use the most popular or direct trail. Terrain features and vegetation may constrain traffic. The manual notes " . . . this strategy is rarely effective and often increases the total areas of disturbance" (emphasis added).

Seventh, dispersed use is not consistent with the precautionary principle. The long-term ecological effects of these trails are unknown. Therefore a vastly reduced designated trail system is consistent with the precautionary principle.

Eighth, "maintained" trails, "dispersal areas", and "no drive" areas are not defined or identified on any map nor is there any criteria listed for a comprehensive designated trails system or areas in violation of the settlement agreement.

ISSUE: There is no analysis of trail stabilization technologies.

The proposed action refers to "maintained" trails or "designated" but there is no analysis of how these trails would be maintained or what technology would be utilized to avoid excessive rutting. The FBP strongly recommends a designated trail system for all ORV's to minimize impacts. Therefore a designated trail system would need to be maintained to avoid excessive rutting and resulting widening.

It is FBP's understanding that the NPS is testing different trail stabilization technologies such as concrete blocks, corduroy, grading, limerock fill, and geo-textiles. With no analysis or supporting data in the Plan of whether the proposed "maintained" trails are practical given the results of field testing and the cost of initial purchase, construction, operation, and maintenance, the "maintained" trails becomes highly speculative. NEPA requires high quality information.

The NPS should utilize GIS suitability analysis as a primary method to select the location of designated trails. No practicable amount of trail stabilization technologies will contain rutting for long in a naturally boggy area that is prone to become a quagmire. A

E1 (cont.)

major selection criteria is to identify areas where natural soils can tolerate some reasonable level of ORV activity without using excessive engineering modifications.

Vehicle Permit System

ISSUE: The Plan's proposed action does not identify a scientifically justifiable permit ceiling.

The proposed action does not document a scientifically justifiable permit ceiling for the Preserve as a whole or for each management unit. In fact, no permit ceiling is designated at all in the proposed action. In the final GMP, the NPS stated that "no more than 2000 ORV permits would be issued" each year in the Preserve (NPS 1991). That decision was presumably made based on the NPS assessment of the degree of impact caused by the level of use as compared to 2500 permits as originally proposed. In 1992, the Record of Decision (ROD) indicated the NPS changed its mind by increasing the permit ceiling from 2000 to 2500 (NPS 1992) [Attachment 46]. This change was made without any additional Section 7 environmental analysis by the FWS or public comment. The only explanation in the ROD was that the level of 2500 permits was more "appropriate." Thus, environmental review in the GMP and subsequent tiering for this Plan is based on the 2000 permit ceiling and not the revised 2500 permit ceiling. Therefore, the environmental consequences of the no-action alternative are incorrect since they do not reflect the 25% increase.

Since the Plan is inappropriately tiered on the GMP, should reviewers assume that the 2500 permit ceiling would still apply? The FBP believes this change was illegal without addition NEPA review. An agency must supplement an EIS if the agency has made substantial changes in the proposed action that are relevant to environmental concerns. 40 C.F.R. § 1502.9(c)(1)(I).

It is clear that a 500 permit (25%) increase constitutes a significant change. A 500 ORV increase could have a substantial effect on sensitive resources of the Preserve. As the BICY vegetation specialist stated "if you have more vehicles, your going to have more cumulative damage." (Pernas 1995).

Additionally, BICY resource management staff explicitly admit that there is no coherent scientific and environmental basis for the 2500 permit ceiling. The consensus of the resource management staff is that there is "no rationally established ceiling" on ORV use (NPS 1994; [Attachment 46]; (Pernas 1995).

The Plan documents the number of ORV permits issued between 1980 and 1997. The 2000 permit level has been exceeded five times during that period. Because there is a general correlation between the amount of ORV's and the amount of resource impacts a scientifically-based permit ceiling must be mandated. The Plan's *Strategy 12: Reduce ORV Use in General* is vague and speculative in not specifying any particular permit level. Soil characteristics, water levels, trail width, and maintenance needs may require that specific ORV levels not be exceeded. The Plan must establish permit levels based upon sound ecological criteria to protect resources and avoid and/or minimize adverse impacts for the Preserve as a whole, each management unit, and for particular trails.

If a substantial number of large swamp buggies cannot meet a proposed PSI ground pressure standard, owners may shift to less expensive and more easily maintained ATV's. Without a scientifically justified ORV permit ceiling the Preserve management would have difficulty limiting the number of ATV's and the Preserve could be potentially overrun with these cheaper, popular ORV's, causing additional resource impacts.

Meyer & Glitzenstein will be providing additional comprehensive comments addressing this issue.

Recommendations

1. The Final Plan must designate a scientifically justifiable permit ceiling for the Preserve as a whole.
2. The Final Plan must designate a scientifically justifiable permit ceiling for each management unit that allows ORV's.
3. The permit ceiling must be communicated to the FWS for their Biological Opinion.

E1 (cont.)

Vehicle Specifications

ISSUE: There is no supporting data or analysis for the 2 PSI ground pressure standard.

The proposed action does not incorporate the best available information, supporting data, or analysis for the 2 PSI ground pressure standard. First, NEPA requires that information be of high quality, have accurate scientific analysis, expert agency comments, and public scrutiny. 40 C.F.R. § 1500.1(b). Further, NEPA requires that the SEIS be supported by evidence that the agency has made the necessary environmental analysis. 40 C.F.R. § 1502.1. "Agencies shall also insure the professional integrity, including scientific integrity, of the discussions and analysis. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and methodologies. They also shall make specific reference by footnote to the scientific and other sources relied upon for conclusions in the statements." 40 C.F.R. § 1502.24.

Second, the National Parks Omnibus Management Act of 1998 requires the use of high quality science and information. Section 202 states, "The Secretary [of the Interior] is authorized and directed to assure that the management of units of the National Park System is enhanced by the availability and utilization of a broad program of the highest quality science and information" In other words, NPS managers must demonstrate how decisions have been supported by scientific information.

Third, the FBP regards the settlement agreement as a legal commitment to sound science and full compliance with relevant statutes and regulations. The FBP believes that ORV impacts must be avoided and/or minimized to the maximum extent practicable. This sequencing has been reflected in the settlement agreement.

Fourth, besides the legal requirements, supporting data is needed because of the financial cost involved for conversion of swamp buggies to meet this 2 PSI standard. A clearly articulated, defensible, scientifically justified, and fully documented rationale will be needed for ORV operators to accept the need for, and fully comply with these requirements in order to minimize soil impacts.

219

Within the above framework, the NPS has not provided the required supporting data and analysis for the use of the 2 PSI ground pressure standard. There is no rationale presented for the 2 PSI standard other than they "are needed for ORV's to operate without difficulty in wet areas and to reduce soil compaction and rutting." Plan at 18.

The FBP understands that the NPS informally consulted with several ORV and tire manufacturers along with Rolligon Corps in proposing the 2 PSI standard (Pernas 1999a). But the Plan fails to provide any supporting data or analysis to justify the 2 PSI figure or why the 2 PSI standard should be used over a 1.75 PSI standard. How was this figure calculated? Has there been field tests with different types of ORV's, in different soil types, with different tire types, at different water levels, and at different traffic levels? Has there been soil shear testing? What is the rutting and soil compaction reductions achieved with this PSI standard? Clearly, these fundamental questions must be answered in the final Plan.

The FBP strongly supports the requirement for a low ground pressure standard for ORV's. In fact, with our recommended sequencing of avoidance and minimization — generally speaking the lower the PSI, the better. All other factors being equal, the lower the PSI – the less resource damage will likely result.

The NPS determined that "Soil disturbance may be more significant than vegetation loss because it demonstrates cumulative long-term effects that are linked to secondary effects on other natural resource components" (NPS 1998). Clearly, this tactic would be fundamental in keeping ORV's on a maintained designated trail system. The FBP recommends that the NPS contract with an engineering firm to provide the necessary technical supporting data for the proposed PSI standard.

ISSUE: The designated ground pressure standard should not be "grandfathered" in.

During the public hearings there was overwhelming opposition to the 2 PSI standard from the ORV community and comments were made suggesting that existing ORV's should be exempt from the requirement by "grandfathering" them. This of course

E1 (cont.)

would make a complete mockery of the PSI standard and result in no substantial reduction in rutting and improved ability to use designated trails. There is no technical reason why a 2 PSI standard cannot be achieved. Although ORV operators claim their buggies can't be modified, an ORV manufacturer knew of no buggy that couldn't be modified. It was basically a question of whether they wanted to modify it or not (Snyder 1999).

ISSUE: The weight calculation method is not justifiable.

The Plans' errata sheet for page 114 states that "all weights will be rounded down to the nearest weight on the chart." This is inappropriately rounding down numbers to achieve an artificially low PSI and make non compliant vehicles appear compliant. In one document the NPS recommends to an ORV operator that he reduce his buggy weight down to 1999 lbs so he could then round down and use the 1500 lb column in the chart (Snyder 1999b). This smoke and mirrors methodology is unacceptable. Standard mathematical procedure is to round up numbers that are half or over (ex. 2.51 to 3.00 or 2.45 to 2.00). The rounding down method advocated in the errata sheet should therefore be discarded.

In contrast, the example of two PSI calculations in the Plan uses a range from the charts or a formula. The formula method seems to be the most accurate.

In addition, the errata sheet for page 114 states "To establish the weights of All Terrain Vehicles, 200 pounds will be added to the manufacture weight"(emphasis added). There is no mention of adding additional weight onto swamp buggies to more accurately reflect actual field weights. The FBP strongly recommends that the NPS add 400 lbs (the weight of two people) to the weight charts for buggies. This of course still does not compensate for the substantial weight of fuel and additional cargo such as camping supplies.

ISSUE: The five year phase in period is too long.

The Plan is to be implemented over the next five years, yet, the ground pressure is not implemented until the last year of Plans' initial lifespan. Clearly, because of the conversion costs involved, opposition to the policy, and procrastination, most modifications will not occur until near the deadline. The FBP understands that the original phase in period was three years but was increased to five years in order to coincide with the five year cycle of re-weighing and inspecting vehicles (Hibbard 1999a). This is unacceptable. Because of the wide scale of ORV impacts and existing legal mandates the NPS is obligated to emphasize resource protection over agency convenience. An additional two years of substantial rutting from high PSI ORV's and dispersed use is unacceptable and unjustified. The FBP strongly urges that the NPS return to the original three year phase in period.

ISSUE: All users of swamp buggies and ATV's must meet the PSI standard.

As noted above, the ORV Plan is not comprehensive since it does not include ORV management for commercial use, oil and gas exploration use, grazing use, inholder use, and agency use. It is only fair, if recreational ORV operators are required to meet the 2 PSI standard and incur substantial conversion costs, so should all other ORV users. For example, the weight/PSI of the NPS Fire Division buggies with and without water is 8400 lb/4.03 and 6800 lb/3.27. Clearly these to not come even close to meeting the 2 PSI standard but law enforcement and resource management buggies should be converted to the new standard.

ISSUE: Street legal 4x4 vehicles must be restricted to above grade roads.

It is highly unlikely that street legal 4x4 vehicles will be able to meet the proposed 2 PSI standard. This vehicle type is considered to cause serious impacts. These vehicles are generally heavier, have narrower tires, and lack suitable gear ratios to negotiate soft substrates without causing serious soil impacts. If they get stuck, drivers

E1 (cont.)

have to try to power through tough areas often causing severe rutting. For the above reasons, they should restricted to above grade roads.

ISSUE: The vehicle specifications section fails to consider tire construction parameters.

The vehicle specifications fail to consider overall tire design, tread design, and inflation pressure to minimize soil and vegetation impacts. Although tire chains and bar gripes are prohibited nothing is said about tread design. There are basically two tire types used by buggies, tractor and balloon tires. Agricultural tractor tires with aggressive lugs dig into the substrate and tear through vegetation and the root mat. Significant damage can done by a single pass (FBP 1995c) [Attachment 44]. The NPS states, " Buggies with tractor tires cut deeper ruts in fewer passes than the other buggy types in Duever's study . . . " (NPS 1998). Once vegetation cover is lost significant rutting occurs (Duever 1986). In contrast, balloon or terra tires have a smooth surface and although they provide less traction they do not dig into the substrate and destroy surface vegetation and the underlying root mat. The FBP strongly urges the NPS to mandate "balloon" or "terra tires" for buggies and ATV's and prohibit tractor tires to minimize rutting.

The Proposed Action also does not analyze the use of lower inflation tires. Different tire designs may allow the use of very low inflation pressures that could further reduce ground PSI. The relationship of lower inflation tires in lowering ground PSI needs to thoroughly analyzed in the final Plan/SEIS to determine if low inflation pressure tires should be mandated.

Access Points

ISSUE: The developed access points are not justified scientifically, legally, or economically.

The FBP has serious concerns about the purpose and need for developed access points, the lack of analysis, the excessive cost of construction, and needless filling of functional wetlands.

Regarding the purpose and need for the access points the NPS states, " The intent of this action is to reduce the dispersal of ORV users in the frontcountry, areas, thus reducing the number of trails." Additionally, it is to help reduce impacts caused by informal parking along the roadways. In contrast, the 1991 GMP states, "Currently ORV access to the backcountry is relatively uncontrolled, and monitoring of ORV use is difficult . . . Access points would be designated to improve monitoring and to promote resource protection." The FBP is concerned that the access points strategy was principally developed to shield ORV impacts from the general public by utilizing a "beauty strip" approach using short "improved corridors" while dispersed use continues to cause substantial high impact areas in the backcountry. These high impact areas total a whopping 122,000 acres (Welch and Madden 1998). These backcountry impacts could be best addressed by a comprehensive dedicated trail system.

While the FBP believes in the access point concept in conjunction with a comprehensive designated trail system. The FBP believes these access points should be scientifically determined using GIS suitability analysis and be cost effective. Excessive development such as large hardened parking lots that "urbanize" the Preserve is inappropriate and should not be considered.

The GMP on page 8 states that the NPS envisions the Preserve "as a nationally significant ecological resource – a primitive area where ecological processes are restored and maintained..." In contrast, the NPS now attempts to surround the Preserve with a series of parking lots and trash cans with unsightly swamp buggies and trailers. If modern improved and secure access facilities were constructed they would encourage an increase in ORV use to maximum design capacity and will set a precedent for future use in these areas (USEPA 1999).

NEPA requires that information be of high quality, have accurate scientific analysis, expert agency comments, and public scrutiny. 40 C.F.R. § 1500.1(b). Further, NEPA requires that the SEIS be supported by evidence that the agency has made the necessary environmental analysis. 40 C.F.R. § 1502.1. "Agencies shall also insure the professional integrity, including scientific integrity, of the discussions and analysis. They shall identify any methodologies used and shall make explicit reference by footnote to the

E1 (cont.)

222

scientific and methodologies. They also shall make specific reference by footnote to the scientific and other sources relied upon for conclusions in the statements." 40 C.F.R. § 1502.24.

There is no supporting data or analysis for the number, location, and size of the access points. It appears the proposed 15 access points was derived from the GMP since the map on page 21 is a duplicate of the one in the GMP. The GMP on page 47 states, " Developed access points would be located at the most popular trailheads . . . " (emphasis added). Thus, the proposed access points simply institutionalizes the number of preexisting popular access points rather than doing a credible GIS suitability analysis to scientifically determine proper size limits and locations.

The number of access points is also not linked to any permit ceiling since the proposed action does not identify a permit ceiling for the Preserve as a whole of for each management unit.

The Plan also underestimates the number of access points since it eliminates analysis of commercial use and the proposed access points off of I-75 and the scenic highway designation for U.S 41. Additionally the ORV access point map on page 21 shows 22 unimproved access points and 7 boundary access points which are not discussed in the text. Access point number 10 in the Loop Unit seems to be an error since ORV use prohibited in this unit.

The Plan does not list any criteria for the location of access points. The location of the access points is apparently tied again to the most popular trailheads and no suitability analysis has been conducted. If one studies the map on page 21, it appears that the 15 access points are relatively equally spaced along Turner River Road and US 41 to provide easy access to all management units open to ORV use in the Preserve.

Executive Orders 11644 and 11989 require that only "suitable" areas for ORV use be designated and that areas and trails be located to minimize damage to soil, watershed, vegetation, and harassment of wildlife or significant disruption of wildlife habitats. How does the number of proposed parking spaces comply with the minimization requirement?

Additionally, under the Clean Water Act, the NPS would have to demonstrate that there are no other practical alternatives for the access points and then would have to follow the sequencing of avoidance, minimization, and mitigation. The FBP objects to the filling of functional wetlands for parking lots. Specific ORV access areas can be designated without the use of large ORV parking lots.

The Plan does not list the criteria used to determine the capacity of the access points for the maximum proposed parking of 360 spaces. This is especially relevant since there is no permit ceiling or criteria for the development of a designated trail system or use areas referenced for the proposed action. What are the criteria used to determine the parking capacity of each access area and the total for the entire Preserve? Examples of criteria include: density/fragmentation standards (mi./sq. mi.), carrying capacity, suitability analysis, sensitive areas, buffer zones, baseline or control areas, or "no drive" zones.

The access point proposal uses "cookie cutter" analysis in violation of NEPA. The number, location, and capacity of these access areas has remained identical since the 1991 GMP demonstrating that the NPS has done no analysis on this issue for the ORV Plan and that they not been modified to reflect information such as the Clark panther study and the UGA ORV trail database. This again demonstrates the lack of a reasonable range of alternatives and the failure to incorporate new information as required by NEPA.

The "developed" access areas or "hardened" parking spaces conflict with adaptive management. It would appear these hardened parking areas are relatively permanent considering the amount of fill and asphalt required. These areas could not be easily relocated if the adjacent backcountry areas were closed for long-term resource protection and would still act as a magnet for access into the area.

The FBP finds the cost of theses access points excessive at $2.7 million. In the public meetings there was widespread opposition to the developed access points. Permit holders surmised their permit fees would be raised in order to pay for these ORV parking lots. The FBP recommends that the funds be better utilized to pay for monitoring, research, and restoration.

E1 (cont.)

Finally, the Plan does not list how access will be controlled at these access points. Will areas be patrolled, gated, fenced, bridged, signed, etc? If demand exceeds parking capacity how is the area to be managed?

Monitoring

ISSUE: The Proposed Action fails to adequately analyze methods of monitoring impacts and taking remedial actions based on results of such monitoring.

The settlement agreement specifically states that: The SEIS will analyze "Methods of monitoring impacts of ORV use in BCNP and mechanisms for taking remedial action based on the results of such monitoring efforts. Methods of monitoring impacts may include, among other things, the use of control areas as a baseline." The proposed monitoring program in the Plan is both vague and speculative and does not provide adequate information to avoid and/or minimize adverse impacts to natural resources. The Plan does not adequately analyze specific monitoring methods for soils, hydrology, vegetation, wildlife, or recreational conflict. Further, the monitoring plan does not have any comprehensive objectives, is not linked to any threshold criteria, nor an adaptive management decision process.

The U.S. Department of the Interior (1992) has recognized the seriousness of the lack of monitoring in the NPS:

> The National Park Service has not effectively protected and conserved natural resources in certain national parks. Specifically the Park Service did not assure that known threats were addressed or corrected on a timely basis, did not have a monitoring program sufficient to assist park managers in managing their natural resources. The National Park Service's Management Policies of 1988 state the Park Service is "to maintain, rehabilitate, and perpetuate the inherent integrity of the park system's natural resources". The deficiencies occurred because the Park Service gave greater priority and emphasis to visitor-related issues and consequently was not able to provide adequate oversight and funding to protect and conserve natural resources. As a result, natural resources in some parks have deteriorated or have been irreversibly damaged or destroyed . . . (emphasis added).

223

Federal Statutes. The need to know the condition of natural resources (i.e., the status of resources compared to some reference) on a continuing basis in national parks was recognized and developed in public law as early as 1872. Executive proclamations and orders clarify and further the intent of these laws. For example, NEPA requires certain knowledge of resource conditions to direct and evaluate effects of management actions. Fish and Wildlife Coordination Acts, 1958 and 1980; Migratory Bird Treaty Act, 1974;Clean Water Act (33 USC 1251 et seq.); Executive Order 11900 (Protection of Wetlands).

National Parks Omnibus Management Act of 1998. The Plan does not comply with the inventory, and monitoring requirements of the National Parks Omnibus Management Act of 1998 (P.L. 105-391) Title II Sec. 204 states: "The Secretary shall undertake a program of inventory and monitoring of National Park Service resources to establish baseline information and to provide information on the long-term trends in the condition of National Park System." The following discussion identifies the inadequacies of the proposed monitoring program.

NPS Management Policies. The management policy of the NPS reflects the above legal mandates and directs that management be based on knowledge of resources and their conditions. The National Park Service has an obligation to "manage the natural resources of the national park system to maintain and perpetuate their inherent integrity" (NPS Management Policies, Chapter 4:1, 1988). NPS policy also states that "a program of natural and social science research will be conducted to support NPS staff in carrying out the mission of the National Park Service by providing an accurate scientific basis for planning, development and management decisions" (NPS Management Policies, Chapter 4:2, 1988).

NPS policy further states that "The National Park Service will assemble baseline inventory data describing the natural resources under its stewardship and will monitor those resources . . . to detect or predict changes. The resulting information will be analyzed to detect changes that may require intervention and to provide reference points

E1 (cont.)

for comparison with other, more altered environments" (NPS *ManagementPolicies*, Chapter 4:4, 1988). Thus, NPS policy requires that park managers know the nature and condition of the natural resources under their stewardship, have the means to detect and document changes in those resources, and understand the forces driving the changes, in order to fulfill the NPS mission of conserving parks unimpaired. Natural resources inventories tell us what resources are in trust. Monitoring is indispensable to determine desired resource conditions; to diagnose human impacts; to direct management intervention; and to measure subsequent success or failure of that intervention. Park management is directed to integrate scientifically valid resource inventories, monitoring, research, and restoration.

Soils Monitoring. The proposed action completely leaves out this vital section and fails to analyze <u>any</u> monitoring mechanisms for soils which are regarded as a critically important resource indicator that can lead to other indirect effects. This omission would obviously have severe resource consequences. As the NPS (1998) explains: "Soil disturbance may be more significant than vegetation loss or damage because it demonstrates cumulative and long-term effects that are linked to secondary effects on other natural resource components." Duever cited soil disturbance, particularly rutting as the most critical type of ORV impact. Further, Duever (1986) found that once heavy rutting has occurred there are few natural mechanisms capable of restoring the ground contour and the ruts remain indefinitely.

The Plan fails to analyze how the ORV Trails Database (Welch and Madden 1998) would be utilized in a soils monitoring program to evaluate the areal extent of soil disturbance. Since there is no analysis of monitoring soils there is no remedial actions listed.

Because of the importance of avoiding soil impacts there must be a comprehensive program to measure rutting depth, areal extent, soil oxidation, compaction, loss of soil integrity, etc. The FBP strongly urges the NPS to conduct a comprehensive soil survey of the entire Preserve utilizing digital laser swath mapping technology which can accurately detect small changes in soil topography. This survey should be done as soon as possible in order to coordinate and guide other monitoring efforts.

Monitoring measures would be linked to specific threshold criteria for unacceptable soil impacts. Criteria would be preventative in nature seeking to avoid and minimize damage before it becomes widespread or unremediable.

Water Resources Monitoring The proposed action unbelievably devotes only <u>one</u> sentence to water resources monitoring. Clearly, this is grossly inadequate and does not comply with the settlement agreement since the Plan does not analyze water resources monitoring methods. The Plan inappropriately directs the reviewer to consult the *Water Resources Management Plan* (NPS 1996). Few reviewers would have access to this document and therefore could not provide substantive comments.

Appendix D: *Use of Hydrologic Criteria to Prevent Damage of Natural resources Caused by Non-Commercial Airboat Activity in the Stairstep Unit of Big Cypress National Preserve* does discuss the proposed use of gage stations to monitor water levels. The appendix does not analyze methods for monitoring flow rates, flow direction, and water quality. Further, the section is not comprehensive since it deals with only one management unit — the Stairsteps, one type of ORV use — recreational, and one type of ORV — airboats.

Even the *Water Resources Management Plan* (Schneider et al.1996) is inadequate for monitoring ORV impacts. The stated objective of the program is to monitor ORV impacts and identify impacts which are significantly degrading the water resources. The obvious flaw is the Preserve has no threshold criteria for defining significant degradation. The Plan explicitly admits this on page 148 when it discusses *Defining a threshold.* No remedial actions are identified based on results of water resources monitoring.

Wildlife Monitoring The Plan inadequately analyzes methods for monitoring wildlife, limiting a complex subject and analysis to only <u>three</u> sentences. The section states that the Preserve staff would monitor species that are "especially sensitive" to ORV use but fails to identify which species these are or what defined a "sensitive" species. The section uses ambiguous jargon and appears to use outdated and inappropriate monitoring methods. For example, the section states that for sensitive species "standard habitat evaluation methods" such as the FWS's "Habitat Evaluation Procedures" (HEP) would

E1 (cont.)

be used "when possible." The FBP understands that these HEP are not used regularly for sensitive species monitoring but have been replaced by specific and more sophisticated computer models for individual species. These models have been used in Everglades National Park.

By failing to analyze monitoring methods and referring to another agency's outdated procedures that are not readily available for public examination allows the NPS to evade NEPA compliance and denies the reviewer any basis for weighing the pros and cons of a proposed monitoring program which is counter to the purpose of NEPA. No remedial actions are specified based on the results of wildlife monitoring.

Vegetation Monitoring. Limited analysis of vegetation monitoring is presented. The section is vague in stating that "standard evaluation methods" would be utilized "whenever possible." The FBP is concerned that baseline areas may not be of adequate size due to the density of the ORV trail network over the entire Preserve (Welch and Madden 1998). While photo points, aerial photography, and satellite imagery would be used to evaluate changes in land cover caused by ORV use this is clearly not enough. Specific indicators have to be identified and management thresholds chosen to minimize possible vegetation changes that may not be remediable.

There is no mention of how the comprehensive GIS ORV trail database and vegetative study (Welch and Madden 1998) would be utilized in the monitoring program or if ground truthing would be done to evaluate vegetation change near GIS identified ORV trails. Further, the vegetation monitoring program does not mention monitoring for fragmentation, edge effects, or exotic species.

Only one remedial action is identified – possible temporary closure, rather than a comprehensive list of other possible remedial actions such as removal of exotics, replanting, and reestablishment of normal species composition.

Recreational Conflict Monitoring. The Plan does not analyze <u>any</u> mechanisms for monitoring recreational conflicts. These impacts have been documented in the September 1998 Review Draft, commercial airboat operations in the SW Addition (Pernas 1997; (Hibbard 1999) [Attachment 47], and on page 75 of the Plan regarding the Florida Trail. Some impacts include unpleasing aestethics, vehicle noise, and user

displacement (Pernas 1997; Barcadaro 1988). The proposed action states on page 31 that "ORV operations must not cause noise levels that exceed 60 decibels measured on the A-weighted scale at 50 feet, except to the terms and conditions of the ORV permit (36 CFR 2.12)." Airboats are the loudest type of ORV and can reach levels of 120 decibels (NPS 1998) yet there is no noise monitoring methods analyzed.

Recommendations

An audit report by the Inspector General concluded that the NPS did not have an adequate inventory & monitoring program. Park managers lacked the information to make informed natural resource management decisions. Further, these deficiencies occurred because the NPS emphasized visitor access over resource protection (USDOI 1992).

Monitoring must be an essential part of resource management. By use of monitoring resource managers can determine which human practices harm ecological integrity. Damage or recovery of natural resources cannot be accurately measured if baseline and monitoring data does not exist. Monitoring must be linked to carefully chosen management goals and objectives (i.e. to assure the natural and ecological integrity of Big Cypress in perpetuity). The process of linking monitoring with management is called adaptive management (Holling 1978). Monitoring must also be proactive rather than reactive in nature to minimize ORV resource damage.

1. Specific goals and objectives need to set for the monitoring program. If goals and objectives are unclear then the monitoring program will not be effective.

2. Specific indicators have to be identified for each resource element. The indicators should be both sensitive and representative enough to serve as surrogates for ecological integrity. Indicators should also be sensitive enough to detect problems before it is too late.

3. Specific monitoring methods must be identified for measuring the above indicators.

E1 (cont.)

4. Management thresholds must be identified. Management thresholds are points where management must be changed to prevent an unacceptable risk to some element of biodiversity. Management thresholds are different from biological thresholds in that they are preventative in nature. Thresholds must be developed early in the process. If these decisions are deferred until after damaging ORV has already taken place, these decisions will be highly controversial and politicized. By adopting these management thresholds early in the process, resource management will be defensible for making ORV management decisions.

5. Management actions would be taken based on results from the monitoring program. Once management thresholds have been exceeded appropriate actions would be taken to minimize resource damage including partial or full closure or trails, reduced use, modification of ORV vehicle standards, etc.

Table 4. Monitoring indicator criteria. Adapted from Noss and Copperrider (1994). The example values below may be too permissive for Big Cypress.

Element	Objective	Indicator	Method	Management Threshold	Management Action
Soils	Detect increase in aerial extent of soil disturbance	Width of Trail Rutting	Transects and photopoints	20% increase in trail width	Closure of trail
Hydrology	Detect degradation in water quality	Total dissolves solids, N, P, turbidity, content sampled at monthly intervals	Water chemistry testing	Increase of over 5% in TDS, N, or P compared to control sites.	Suspension or elimination of ORV activity.
Vegetation	Detect loss and damage of vegetation	Observable loss and damage of vegetation compared to control sites	Aerial photography, transects and ground photo points	Change of over 10% in any vegetative community	Elimination of activity causing damage.
Wildlife	Detect adverse impacts on ground nesting birds	Abundance and distribution compared to control sites	Census from ground and aerial surveys	A decrease of 20% in abundance and distribution	Elimination of ORV activity in area.
Recreational Conflict	Detect recreational conflicts	Level of usage by other recreational groups, complaints	Staff census of use interviews with non ORV users	Staff observations, Complaints by public	Designation of buffers zones, closure of area to airboats

Research

ISSUE: The research program is vague, speculative, and does not comply with legal mandates.

The Plan's research section is clearly inadequate since it devotes all of three sentences to this important topic on page 26. The discussion does not specify what research will be done, when it will done and how long it will take, who will do it, how much it will cost, and how results will be linked with an adaptive management program. This alone speaks volumes about the NPS's lack of commitment to a science-based ORV management plan. The NPS refusal to provide funding for ground truthing the University of Georgia ORV Trail Database (Welch and Madden 1998) clearly illustrates the need for a high quality independent peer reviewed research program.

Research is probably the most important topic in the entire Plan because of it's potential to influence management decisions on the long-term ecological integrity of the Preserve. The lack of research science in the Plan is shocking. Most of the ORV research derives from just the two Duever studies (Duever 1981; 1986). While these research studies documented serious adverse impacts such as permanent soil displacement, unnatural vegetative succession, and hydrological alterations, the studies had serious limitations which are not acknowledged in the Plan. The Duever studies failed to analyze cumulative impacts over subsequent years, the spatial extent of impacts, and the long-term ecological effects.

Need. Numerous studies have revealed that the NPS has consistently failed to use ecological science in managing the natural resources of the National Park System (Sellers 1997). Studies such as the Leopold Report, Robbins Report, NPCA Research Needs Assessment, the Gordon Report, GAO reports and USDOI audits have all recommended the NPS give increased emphasis to research in order to manage natural resources.

High quality research is vital to the Preserve for the following reasons:

1. It would provide answers to many resource management questions regarding the environmental significance of ORV impacts on soils, vegetation, hydrology, and wildlife.

E1 (cont.)

2. It would have serious long-term implications on the ecological integrity of the Preserve by taking a proactive approach to avoid irreversible impacts before they occur.
3. It helps assure legal compliance with the NPS Organic Act, Big Cypress Enabling Legislation, NPS management policies, and the National Park Omnibus Management Act. Title II. (P.L. 105-391).
4. It would show a commitment of the NPS to high quality science–based management.
5. It provides objective "hard data" to substantiate controversial ORV management decisions.
6. It would help prevent research oversights and agency politics such as the lack of funding by the NPS for ground truthing in the UGA ORV Trail Database (Welch and Madden 1998).

Precautionary Principle. If there is uncertainty with respect to the effects of management actions then management should be conservative and be congruent with the precautionary principle (Meffe 1997; Noss 1999). As noted in the many examples in the above section on the precautionary principle and in the ORV Plan the long-term impacts of ORV use are unknown, thus raising red flags signifying the urgent need for research.

The need for a precautionary approach and high quality research on ORV impacts is best described by the NPS itself:

> If there is any substance to any of my comments then I suggest that we consider adding another alternative that protects our resources until a very extensive, long term (at least 5-10 years), research program is established that will provide us the information that we need to know in order to make an informed decision. I cannot imagine that we would make such an important decision that has potentially irreversible impacts, without the benefit of the best and and strongest scientific data possible (Kriz 1998).

Legal Compliance. The Plan does not comply with the National Parks Omnibus Management Act. Title II. (P.L. 105-391). Section 202 of the Act has a strong research mandate - "The Secretary [of the Interior] is authorized and directed to assure the management of units of the National Park System is enhanced by the availability and utilization of a broad program of the highest quality science and information." Further,

Section 206 states: "The Secretary shall take such measures as are necessary to assure the full and proper utilization of the results of scientific study for park management decisions. In each case in which the action undertaken by the National Park Service may cause a significant adverse effect on park resource, the administrative record shall reflect the manner in which unit resource studies have been considered. The trend in the condition of resources of the National Park System shall be a significant factor in the annual performance evaluation of each superintendent of a unit of the National Park System".

The ORV Plan does not incorporate the data and analysis of the ORV mapping database. There is virtually no analysis of the direct, indirect and cumulative impacts of the extensive spatial disturbance of ORV use documented in the UGA report. This clearly violates Sec 206 of P.L. 105-391.

Funding. The ORV Plan is inadequately funded; thus making it highly questionable that specific management actions will be completed. Research cannot be conducted without money. The research section does not contain any dedicated non-discretionary funding source. In contrast the NPS, proposes funding ORV access points at a cost of $2.7 million while not a penny is dedicated for specific research. Plan at 29. This once again shows the NPS bias of providing recreational access at the expense of resource protection (USDOI 1992). The NPS has its priorities backwards with its "pave first, ask questions later" philosophy. The FBP believes this approach is financially, legally, and ecologically improper. Research would likely be able to give management important data on ORV carrying capacity including analysis of the sizing and location of future ORV access areas. Once built, there will be strong pressure by ORV users to use the facilities at design capacity—even if they are later determined to be oversized or in the wrong location by future research. It makes no sense to spend millions of dollars in public funds if the access points cannot be used. The FBP strongly urges the NPS to redirect the $2.7 million proposed for access points to a comprehensive research program instead.

Peer Review. Peer reviewed science is required by Section 202 of the National Parks Omnibus Management Act of 1998 requires the use of the "highest quality

E1 (cont.)

science." Large scale internal Preserve resource studies should therefore be largely replaced by peer reviewed research with a detailed research design, formulation of hypothesis', and publication in professional journals.

Research should be independent and peer reviewed because of the controversial nature of ORV use and ORV management (NPS 1998; Marion 1995). For example, the Water Resources Plan notes that due to the controversial nature of ORV management, it is recommended that the Preserve contract an independent researcher to conduct the necessary studies (Schneider et al. 1996).

An additional reason for peer review is the recreational bias of the NPS (USDOI 1992). Monitoring and subsequent research may be prone to manipulation by senior management. For example, a primary motivation of monitoring the extensive resource damage of Ochopee Prairie was to reopen it in the future to ORV use (Hibbard 1999; Pernas 1999). After more than a year, the NPS has still not contracted to have the ORV Trail Database ground truthed, raising serious questions whether the NPS does not want to know the results of the ground verification because of its potential implications on ORV management and agency objectives.

Scope. The research program should be broad and have comprehensive yet specific objectives to determine the long-term ecological effects of ORV use on soils, hydrology, vegetation, and wildlife. Cumulative, additive, synergistic, fragmentation, and edge effects should also be studied. Baseline areas and restoration areas and techniques should receive analysis. Research results should lead to the recommendation of specific management criteria for unacceptable ORV impacts. Noss (1999) recommends the following research criteria:

1. Research questions are directed at specific biologically oriented goals and objectives.
2. Methodology that is rigorous, well documented, and replicable.
3. Analysis is objective as possible, with assumptions and limitations clearly acknowledged.
4. The interpretation and application of results are congruent with the principles of conservation biology and demonstrates a good command of the literature and scientific theory.

5. The data, models and analysis are available to the public.
6. The research is peer reviewed by independent scientists.
7. The entire process is iterative and adaptive.

Recommendations

1. The Plan should severely curtail ORV use to a minimum level while research is conducted at determining the long-term ecological effects of ORV use so that management is consistent with the precautionary principle.
2. Adequately fund the ecological research program for the long-term (5 –10 years) with the $2.7 million previously dedicated for ORV access points.
3. Implement the ecological research program immediately utilizing the above principles.
4. Develop a field research program on trail construction and maintenance. Some of this work is being done with an EPA grant investigating methods to reduce trail rutting with a variety of materials including geo-textiles.
5. Develop a research program testing improved technology vehicles that have lower weights and PSI's, less impacting tire designs, and new propulsion technologies. Currently, some of this work is being done.

Criteria for Closure

ISSUE: The Plan fails to analyze procedures and considerations for closing, opening, and reopening trails and areas.

The settlement agreement explicitly states that the SEIS will analyze the following elements: "procedures and considerations (including but not limited to ecology and recreational factors) for closing and opening and reopening areas and closing, relocating, opening, and reopening trails to ORV use." As noted above, under the terms of the settlement agreement the NPS was given the generous period of two and a half years to complete the draft Plan. Due to the inability of the NPS to meet the settlement

E1 (cont.)

agreement deadline the draft has been delayed by an additional 16 months. This is more than enough time for the NPS to develop these specific criteria, procedures, and considerations.

The Proposed Action states that "Criteria would be developed for determining if and when a unit should be closed or use of a unit should be restricted due to temporary conditions." Plan at 23. This omission is especially egregious because the NPS has historically taken a passive and reactive management strategy. Rather than developing objective criteria for closing ORV trails before damage becomes excessive the NPS waits until an area gets badly impacted — and potentially irreversibly before taking management action (Pernas 1995).

Only a draft proposal for the Stairsteps Unit is included in Appendix D which only addresses possible hydrologic criteria. The draft of hydrologic criteria is deficient in that it does not include specific threshold levels for other criteria such as soils, wildlife, vegetation, visitor uses, and fire. It also does not address procedures for reopening areas.

Recommendations

1. Develop specific procedures and consideration for closing, opening, or reopening areas or trails to ORV's.
2. Develop specific management threshold levels for ecological and recreational factors such as hydrology, vegetation, wildlife, soils, fire, and visitor uses.

   Develop specific criteria for closing opening, and reopening areas due to non - ecological and recreational factors such as inadequacy of general management, funding, enforcement, and monitoring.

229

Education and Communication

ISSUE: The Plan does not contain an adequate education and communication plan to avoid and minimize ORV impacts.

The Education and Communication section for the proposed action is a mere three sentences long and reflects little thought, effort, and analysis. This section includes only the most basic items and shows an unwillingness of the NPS to supervise and administer an effective educational program.

Some of the proposed features the Preserve already has in operation such as a user manual and web site. Page 23 states "additional forms of communication would be explored." This is unacceptable. Education should be a supplement not a substitute for regulation and enforcement. Considering the enormous amount of resource degradation that has occurred during the last 60 years the time has long since past for starting with a low key voluntary and vague education approach and then ratcheting up regulation due to noncompliance. The obvious flaw with this approach is it puts the burden on the resource. More damage has to occur before regulation is initiated.

Just publishing an ORV user manual will not ensure the ORV operators will read it nor comprehend the information. It is important to note that just one ORV operated in a reckless manner without regard to environmental consequences can do considerable amount of natural resource damage that may not be reversible. This is why a comprehensive education program is warranted with mandatory class instruction, an enhanced ORV manual, testing, law enforcement participation, and enhanced communication should be developed.

Class Instruction. The FBP strongly recommends the mandatory completion of an ORV operation class be required by all ORV permit holders, not just new permit holders. While a minority may only learn through citations or arrest most learn best in a class. The rationale for the required class is the exceptional concentration of endangered and threatened species, other sensitive resources, the potential for irreversible resource damage, minimal success in current ORV management, and the effective application of personal instruction combined with testing and licensing in modern society.

E1 (cont.)

Education expenses can be defrayed as part of the annual ORV permit fee. Because of the large number of ORV permit holders the class would be several hours long, held on nights and weekends for convenience, and be required every three to five years so that permit holders don't get lazy and "forget" about regulations.

The curriculum could be a major modification of the "Tread Lightly " program. Class topics should include Preserve regulations, methods to avoid and minimize resource impacts (low impact ORV operation), methods to avoid and minimize recreational conflicts, safety and emergencies, ORV maintenance, the ecological impacts of ORV use, navigation, a code of ethics, and other appropriate topics as time allows. An entertaining video with ORV operator production assistance summarizing key points would be helpful (USEPA 1999).

A short multiple choice test should be given near the end of the class to make sure the ORV operator has understood the material presented. After successful completion of the test an ORV manual would be issued and a certificate of completion would be awarded (suitable for framing).

ORV User Manual. A comprehensive ORV user manual should be produced and distributed to all ORV permit holders. It should be revised when new information becomes available or at a minimum annually. It would also include all topics covered in the mandatory class and updated information such as changes in regulations. The NPS may want to make this a "field manual" with a durable water proof cover that can be taken by ORV users into the backcountry for reference. A version of the manual with recent revisions could be posted on the Preserve web site for downloading.

Law Enforcement as an Education Tool. Law enforcement can be used as an educational tool that develops rapport between the ORV users and enforcement personnel. Special training on education techniques should be developed for LE personnel and details included in the Final ORV Plan. This may lead to more self-regulation by the ORV users themselves. An enforcement program that allows for more personal contacts and exchange of information in the backcountry about the rationale for regulation can be an effective education technique and should be implemented.

Communication. All reasonable means of communication should be utilized. Personal, classroom instruction, telephone, an enhanced Preserve web site, e-mail,

manuals, brochures, and regular mail. A toll free number seems like an unnecessary taxpayer expense and should be dropped from consideration. For example, telephone recordings should be utilized to give out the latest information on trail closures and other late breaking information.

Funding. Specific funding for this program should be identified. These education and communication expenses should also be largely offset by the ORV user and be included in the annual ORV permit fee.

Enforcement

ISSUE: The proposed action's enforcement requirements are inadequate.

The settlement agreement states that the ORV Management Plan must address a method for monitoring of enforcing plan requirements. Scoping comments have expressed serious concerns about inadequate enforcement in the backcountry and that if areas cannot be adequately enforced the areas should be closed (FBP 1999; BLF 1999).

The enforcement section is inadequate because it proposes no new or enhanced enforcement methods, no specific details and no dedicated funding. In short, there is no analysis or supporting data that ORV impacts would be avoided and minimized with this ambiguous and speculative enforcement scenario. The proposed action states " The new trail restrictions and permit program would require enforcement measured to ensure successful implementation and visitor compliance. Additional rangers and professional staff would be required". Plan at 24. Nothing new is being proposed over what is being done now despite the proposed action vague recommendations for new zoning including designated trails, dispersed use areas, closed baseline areas, and restoration areas. How are these proposed expansive areas going to be adequately enforced with what methods, how much staff, and when? Will there be physical barriers and gates to close areas? Will remote surveillance be used after hours?

Additionally, the draft states that that " . . . the proposed action would adopt a new decision process and consider a range of ORV management practices described in an Off-Road Vehicle Management Practices Manual." Plan at ii. Section 2 describes potential

E1 (cont.)

enforcement tactics. Only tactic 2.2 is alluded to in the proposed action. All of these tactics in Strategy 2 should be specifically adopted.

The FBP is particularly concerned that during lean funding years that ORV areas will be kept open with inadequate enforcement. If ORV areas cannot be properly enforced then they should be closed.

The large spatial area of the backcountry presents formidable law enforcement obstacles. One reason the FWS closed the ARM Loxahatchee NWR to private airboat use was because of an inability to enforce regulations in remote areas. These same problems have been acknowledged by the NPS. The statement that "Currently enforcement is not a problem because most of the Preserve visitors comply with regulations" is vague and misleading. Plan at 31. Vague enforcement schemes that are not realistically applicable given current fiscal and personnel constraints only give the illusion of control and purposely mislead the reviewer.

There is credible and compelling evidence that the Preserve experiences serious enforcement problems. For example, Preserve staff have noted "a very low compliance rate" in the designated trail system in Bear Island and in some areas the trail is in excess of 50 meters wide (Thackeray 1994) [Attach. 48]. In another document the staff notes "Opening the proposed trail will bring this favorable isolation to a certain end, thereby greatly increasing opportunities for poaching and illegal activity. Effective law enforcement in the area will remain extremely difficult if not impossible" (Thackeray 1994a) (emphasis added). In addition, despite known violations there has been no enforcement of regulations for commercial airboats in the SW addition (Hibbard 1999).

One Preserve manager notes problems in enforcing the addition "My staff is barely able to keep up with the general closure as it is. Based upon our experience with the Bear Island trail system, I expect problems in keeping the ORV's on the trail . . . Will there be a designated airboat trail in this area? (Keeping in mind the fact that we have never tried to make or enforce a designated airboat trail). I expect serious problems enforcing such a trail system" (Kriz 1999) [Attachment 49].

Enforcement with poaching is a problem. I have seen evidence of illegal alligator poaching in Bear Island and anecdotal evidence indicates substantial alligator poaching occurs preceding the Everglades City seafood festival.

Finally, penalties such as sanctions, revocations, and fines should fit the seriousness of the violation and be strong enough to act as a deterrent to the vast majority of operators. These penalties should be clearly stated to the ORV user in the ORV education class, ORV user manual, and other communication tools.

Recommendations.

1. Design a designated trail system. With carefully designed structural barriers, signs and remote surveillance would allow the trail system to be controlled in a modular fashion in response to natural resource conditions along with staffing and funding levels for enforcement, resource management, and maintenance.

2. Specific enforcement methods and levels, to avoid and minimize ORV impacts.

3. Specific adoption of all Strategy 2 tactics with details on enforcement implementation.

4. Specific details on how areas will be effectively closed. Sufficient physical barriers should be utilized at the first sign that administrative closure is not effective.

5. Specific details on funding and staffing levels and contingency plans for lean budget years. A system for accountability needs to be developed to assure adequate enforcement levels are maintained during lean budget years.

6. Funding for enforcement operations should be largely offset by the ORV user through the payment of the ORV permit fee.

7. Penalties for noncompliance of Preserve and other regulations should be strong and clearly stated in the Final Plan/SEIS.

E1 (cont.)

232

UNIT MANAGEMENT

ISSUE: The Plan does not adequately analyze the criteria for the development of a comprehensive designated trail system and/or use areas for ensuring the natural and ecological integrity of BICY resources in accordance with the Provisions of the BICY Enabling Act.

According to the requirements of the settlement agreement the SEIS and the ORV Management Plan are to analyze the "criteria for the development of a comprehensive designated trail system and/or use areas for ensuring the natural and ecological integrity of BCNP resources in accordance with the provisions of the BCNP Establishment Act". (FBP v. NPS et al 1995). The ORV/SEIS fails to discuss fundamental aspects of a comprehensive designated trail system or use areas. The NPS has had a very generous amount of time - three years and four months to analyze and develop these criteria. The discussion of the proposed action starting on page 16 only provides minimal analysis of trail criteria with a general discussion of proposed ORV access points which were previous proposed in the GMP back in 1991 and never implemented. This framework fails to analyze basic design criteria to avoid and minimize resource damage, the location and length of trails, designated access points, trail width, soil requirements, resource sensitivity, design criteria for maintenance, practicality of monitoring and enforcement, utilization of geoextiles and other trail measures to minimize rutting, fragmentation standards, designation of closed areas, control, specific buffer zoning, and restoration areas, criteria to enhance prescribed burning, and access to inholding and backcountry camps.

As noted in the above section, BICY has taken a reactive approach to ORV trail development. BICY has had no ORV management plan for over 25 years. Previous recreational trails were incorporated into management and the ORV trail network expanded over the decades (Deuver, et. al 1986; (Welch and Madden 1998). The trails allowed for use were not selected to avoid or minimize resource impacts but reflected pre-existing use patterns. When some popular trails were closed because resource damage levels were judged to be unacceptable, often a negative response was received by the

ORV community and the NPS was perceived as having a hidden agenda to eventually ban ORV use (Pernas 1994) [Attachment 50]

Trail Criteria Recommendations

1. Trail design criteria must avoid and minimize impacts.
2. ORV use should be confined to a designated trail system and dispersed use would be prohibited to prevent the proliferation of trails.
3. Specific threshold criteria must be developed for soil, hydrology, vegetation, wildlife, and recreational conflict elements. Trail design would have to meet these criteria. If these criteria are exceeded the proposed trail segment would be eliminated from consideration.
4. To assist in the design of a trail system, GIS technology must be utilized to identify all sensitive resource, cultural, and recreational areas. GIS layers for soils, hydrology, vegetation, wildlife, cultural resources, recreation areas, and inholdings would be included. Each specific resource segment would be assigned a sensitivity ranking (i.e. wildlife – known panther areas –high sensitivity). Then, a composite total ranking could be developed to identify sensitive areas when all layers are viewed or analyzed together. The ORV trail system could then be designed to avoid these areas using adequate buffer areas.
5. Trails should be closed unless designated open.
6. No new ORV trails should be constructed. Existing trails should be utililized to avoid damaging any additional areas.
7. Fragmentation criteria should be developed to minimize impacts. Current and desired fragmentation statistics should be presented in the Final Plan. For example, for large mammals a ratio of not more than .5 miles of trail/sq. mile of area is recognized by conservation biologists for roaded areas. ORV trails at BICY have an average of 26 miles of trail per square mile of area, well above any standard for roaded areas.

E1 (cont.)

8. Specific access areas should be designated to avoid and minimize impacts, enhance maintenance, enforcement, and monitoring.

9. A design should be implemented with simple loops or spurs to avoid and minimize impacts, enhance enforcement, maintenance, monitoring, and fire management. This type of design would allow large or small areas to be closed or opened depending on resource conditions.

10. To minimize rutting geotextiles should be utilized for entire length of trail that is subject to excessive rutting. The FBP is concerned that only the first quarter mile of trail will use geo-textiles to achieve a "beauty strip effect" and remaining trail will devoid of this material and will be subject to dispersed use with excessive rutting and widening processes continuing.

11. Designate closure areas. Specific areas or management units would continue to be designated for closure (i.e.. Loop, Deep Lake, and Northern Addition). Other areas that require designation closure include sensitive resource areas, restoration areas, buffer zones and non ORV recreation areas. Baseline or control areas must be designated and be representative of each major soil type and vegetative community.

Loop Unit. The FBP concurs that the Loop Unit remain closed to ORV's. Aerial photographs and GIS analysis indicate that approximately 2,203 miles of ORV trails comprising 4,532 impacted acres or 8 % of the unit (Welch and Madden 1998). Although the unit has been closed for 20 years ORV trails are still visible. It is believed that abandoned historic trails remain visible from the air for many years and trails can be interpreted from aerial photos even after detection on the ground is difficult (Welch and Madden 1998). This is why the ORV's are still so widespread. One can easily see old ORV trails from Loop road and in some areas the tree canopy has not recovered even after 20 years. It appears that damage is long-term if not permanent.

To ascertain the extent of any recovery and long-term or irreversible impacts of past ORV use the NPS should undertake a dedicated research program in the Loop Unit. This research should be peer reviewed.

233

Deep Lake Unit. The FBP concurs that this unit should remain closed to ORV's. Aerial photographs and GIS analysis indicate that approximately 1394 miles of ORV trails comprising 10,750 impacted acres or 36% of the unit (Welch and Madden 1998). Although the unit has been closed to ORV use for 10 years, historic trails remain visible from the air for many years and can be interpreted on aerial photos even after detection on the ground is difficult (Welch and Madden 1998). This may indicate that recovery is a very slow process and some impacts may be irreversible. Research should therefore be conducted to determine the extent of any natural recovery and any long-term or irreversible resource damage. This research should be peer reviewed.

Bear Island Unit. The NPS largely dismisses the UGA ORV trail study. While the GMP notes 54 miles of designated trails, the UGA study documented approximately 1,568 miles and 8,643 impacted acres comprising 22 % of the unit (Welch and Madden 1998). The ecological effects of these trails is serious. As the NPS determined, "once soil displacement has occurred there are no natural mechanisms for restoring the natural topography. Hence, the damage is permanent effectively altering hydrology and promoting unnatural vegetative succession" (NPS 1994).

Because the Plan is inappropriately tiered to the GMP, the NPS notes that ORV trail mileage is currently 54 miles but then speculates that ORV trail mileage could be increased in the future up to a total of 80 miles! The NPS acknowledged the Clark study but then completely dismisses its results for management. This is completely arbitrary. Since panthers have been statistically documented leaving Bear Island during the hunting season and because the panther is critically imperiled, a conservative management approach is warranted – reducing the amount of ORV use and hunting activity until natural behaviors are not affected. The FWS in its conservation recommendations for the GMP Biological Opinion concluded that ORV use should not be allowed in areas regularly used by the panther (USFWS 1991) [Attachment 51]. It is clear the NPS has disregarded this too.

The NPS then proposes actions that could include: changing access points, relocating designated trails, controlling daily ORV and hunting use levels, and modifying the hunting seasons. This is simply obfuscating the issue. No where are the words

E1 (cont.)

234

reducing or minimizing to be found. There is no supporting data or analysis to conclude that these vague and speculative actions would ensure that the panther would not be adversely affected.

Turner River and Corn Dance Units. These units have been the most heavily impacted by ORV use (Welch and Madden 1998). Specifically prairies are important for wildlife and have been most heavily impacted by ORV use. Plan at 38. This is due to the policy of dispersed use and relatively unobstructed prairie terrain.

The additive effects of dispersed use over the decades are clearly evident since approximately 29, 799 miles of ORV trails and 148,141 impacted acres or 20% of the Preserve have been identified in the Preserve (Welch and Madden 1998). The UGA report documented approximately 8,260 miles of ORV trails and 54,369 impacted acres comprising 31% of the Turner River Unit (Welch and Madden 1998). Additionally, the Turner River Unit had the highest acreage of high impact trails (48,810 acres). The Corn Dance Unit contains approximately 5,328 miles of ORV trails and 18,688 impacted acres comprising 14% of the unit (Welch and Madden 1998).

Despite these alarming figures the NPS still proposes dispersed use. The FBP is strongly opposed to dispersed use. A single pass when water levels are at or near the surface or in fragile soils can cause severe rutting (Duever 1986). Severe impacts can occur in a few minutes while recovery may take centuries. NPS management has determined that designated trails are more appropriate because although they sacrifice the footprint of the trail, they protect a much larger area (Pernas, undated).

The Off Road Vehicle Management Practices Manual (Appendix B) Strategy 3: Encourage Dispersal of Traffic in Remote Areas states that effectivess is "very low" and that ORV operators may ignore the recommendation and use the most popular or direct trail. Terrain features and vegetation may constrain traffic. The manual notes " . . . this strategy is rarely effective and often increases the total areas of disturbance."

The long-term ecological effects of these trails are unknown. Therefore a vastly reduced designated trail system is consistent with the precautionary principle.

Further "maintained" trails and "dispersal areas" are not identified on any map nor is there any criteria listed for a comprehensive designated trails system or areas in violation of the settlement agreement.

In addition there is no criteria listed for relocating ORV trails or the Florida Trail. There is no supporting data for the proposed buffer area. Because ORV use is closely associated with hunting activity, buffer zones should be generous to address safety concerns. What are the trail and buffer criteria for the Florida National Scenic Trail System that is used throughout the State.

Stairsteps Unit. The no action alternative describes four different management zones and notes that, "Airboats are prohibited from zone 1 because it sustained considerable natural resource impacts due to commercial airboat traffic." Plan at 33. Yet the proposed action makes no specific analysis or designation of management zones, designated trails or dispersed use areas in violation of the settlement agreement. Despite considerable previous damage there is no new restrictions for ORV's. Is the reviewer to assume that the same management zones will be carried over to the proposed action? Instead it states that the NPS would complete a plan for hydrologic based criteria some time in the future.

Additionally, while NPS reasserts a ban on "mashing' of vegetation, it does not prohibit airboat traffic in current habitat or potentially suitable habitat for the endangered Cape Sable seaside sparrow. This is unacceptable. Because the sparrow is critically endangered a very conservative management strategy is warranted and at a minimum airboats should be prohibited from these habitat areas.

Marshes and prairies communities have been impacted the most by ORV's. Plan at 38. The UGA study documented approximately 5,831 miles of ORV trails and 33,095 impacted acres comprising 23% of the Stairsteps Unit (Welch and Madden 1998). The disturbance of the soil structure can result in vegetation change (Duever 1986). The resulting vegetation change can then be detected in aerial photos.

In summary, in spite of the above documented impacts the NPS has ignored science and the precautionary principle. The NPS contrary to the best available information has proposed only the most minor modifications of ORV use in the Proposed

E1 (cont.)

Action. The Plan fails to specifically designate a single new acre for protection and baseline monitoring and largely continues the practice of dispersed use that has resulted in a massive network of trails totaling approximately 29. 799 miles (Welch and Madden 1998). There is no specific threshold criteria for unacceptable impacts to soil, vegetation, hydrology, or wildlife, nor is there any criteria for the development of designated trails or use areas.

COST ESTIMATES

ISSUE: The proposed action contains no dedicated funding plan or implementation plan to assure that the Plan will ever be fully enacted.

The Plan does not mention the amount and source of funding so that all management actions including enforcement, maintenance, monitoring, research, and restoration can be implemented as planned. No detailed funding plan is presented in the Plan and the FBP questions whether there will ever be any meaningful implementation. The NPS past track record is not good. A major reason why the NPS did not produce an ORV management plan is because of a lack of funding (Pernas 1995). The Plan should candidly discuss where funding will come and how much will be needed.

There is no supporting data or analysis to support the $400,000 figure for annual ORV management expenses. NEPA requires high quality analysis. 40 C.F.R § 1502.24. Since the proposed action does not estimate how many miles of ORV trails would be closed, restored, or maintained it appears this rounded figure is highly speculative. Additionally, this figure does not include the cost of the proposed ORV access points.

The Plan should include an itemized budget for each major category such as maintenance, research, enforcement, etc. Each category would include the amount, when funding would start, and from what source.

The Plan should also candidly discuss how ORV use would be managed if funds for operation and maintenance fall short during lean budget years. The FBP is seriously concerned that during lean budget years ORV management expenses will be cut back yet ORV trails and areas will remain open despite inadequate monitoring and enforcement to avoid conflict with ORV owners. In the past, there has been virtually no ORV closures

because of insufficent enforcement or monitoring (Pernas 1999). During lean or uncertain budget years, areas that cannot be adequately managed should be closed. Additionally, the Plan should fully disclose the ORV management implications of potential federal budget constraints.

ORV User Fees. A major controversial issue is who pays the substantial costs associated with ORV management. The FBP believes that ORV operator should pay the majority (>50%) of the substantial administrative and operational costs of ORV management. It is unethical to ask the American taxpayer to fully subsidize a recreational activity that seriously degrades public land. These large costs should be substantially offset by increased ORV user fees (Wilshire 1987).

To require the ORV operator to fully bear all the costs of ORV management would be potentially detrimental to Preserve management because; 1) it places the NPS at greater risk of dependency on ORV user fees for operational expenses and if ORV use had to be curtailed for resource protection there would be a financial conflict of interest; 2) ORV operators would feel a misguided sense of defacto ownership by paying all ORV management expenses (i.e. "Pay to Play") making enforcement and rapport more difficult. The central principle is that no one has a right to damage natural resources no matter how much money is paid by ORV operators or received by the NPS.

The Plan refers on page 16 to NPS-53, Special Park Uses which states "that direct costs are those that occur because of an activity and if the activity did not occur, the expenditure of funds would not be necessary." Therefore, it is only fair that ORV permit holders pay the majority of costs such as trail maintenance, enforcement, monitoring, research, education, communication, restoration, access point development, staff salaries, and other ORV management expenses. These expenses would be included in the yearly ORV permit fee and not amortized to artificially lower permit fees.

The FBP strongly objects to the proposed expenditure of $2.7 million for ORV access points while the research program has no dedicated funding. Considering the potential ecological impacts revealed in the ORV Trail Database (Welch and Madden 1998) the access points funds should be redirected into a research program so that irreversible impacts can be prevented.

E1 (cont.)

The Plan also does not discuss commercial use in violation of the settlement agreement and NEPA. All commercial users should also pays fees to substantially offset (>50%) ORV management expenses.

The FBP has serious concerns that the Plan will have only superficial or token implementation like the GMP. These same concerns have been echoed by a number of agency staff and conservation organizations. The historical record of ORV management by BICY does not inspire confidence for timely and adequate implementation. The administrative record provides ample evidence of the lack of political will to adequately regulate ORV use by senior BICY management. The most telling example is that the Preserve has had no ORV management plan since its establishment --- an incredible period of 25 years!

The 1991GMP required that an ORV Management Plan be prepared. After four years no ORV plan was forthcoming and the FBP had to initiate legal action to force the NPS to draft the required ORV Management Plan. During the mid 1990's four different areas have had to be closed due to serious ORV degradation. Under terms of the settlement agreement with FBP the NPS was given a generous period of two and a half years to complete a draft ORV plan and the NPS violated the agreement by missing the specified deadline by 16 months. Further, during the planning process the NPS refused to provide funds for ground truthing the ORV trail database (Welch and Madden 1998). These examples raise serious concerns about whether the NPS has any commitment to manage ORV in an manner consistent with applicable statutes and NPS regulations.

The Plan should not be a "paper tiger" that largely collects dust on a shelve like the GMP. Some plans are overly broad, conceptual in nature, or provide a just framework for later actions. Plans may not be implemented because there is: 1) no political will; 2) no practical means are available; and 3) there are not adequate financial resources available.

Without implementation a plan becomes just a hollow academic exercise. Management plans are notorious for not being implemented and the GMP provides a vivid example of how many planned projects receive lip service and token implemention.

The Plan is supposed to be a "management" plan that deals with specific management actions to avoid and minimize adverse effects of ORV use to ensure the

natural and ecological integrity of BICY in perpetuity. Therefore, a detailed implementation plan with specific management actions and timelines is imperative to avoid and minimize adverse effects.

Recommendations.

1. To help assure implementation of the Plan a itemized dedicated non discretionary funding program should be presented for each component and the role of the NPS funding process fully explained.
2. Essential activities related to ORV management such as enforcement, inventory & monitoring, research, restoration, and trail maintenance, etc should be classified as non discretionary obligations and itemized.
3. The proposed $2.7 million expenditure for the ORV access points should be redirected for research on ORV ecological impacts. The NPS "build now – study later" approach should be rejected.
4. ORV user fees should pay the majority (>50%) of ORV management expenses including monitoring, research, maintenance, access points, etc.
5. If designated ORV trails/areas cannot be adequately monitored and regulations enforced the trails/area should be closed.
6. The Plan should include a timeline with specific milestones to be achieved. This would include specific management actions to be initiated and time schedules for the beginning and end of each task.
7. Estimate costs and a designated funding source for each task.

ALTERNATIVES CONSIDERED BUT DISMISSED

See discussion in alternatives section.

E1 (cont.)

AFFECTED ENVIRONMENT

ISSUE: The Plan should consider the needs of all species and communities not just federally listed species or Important Resource Areas.

The Plan should include comprehensive inventories of all and distribution maps of natural communities and easily surveyed species groups. The Plan should list all potentially impacted plant and animal species and identify focal species for special attention such as keystone species, endemic species, areas sensitive species, and disturbance sensitive species.

ISSUE: The Plan inappropriately suppresses data from the University of Georgia ORV Trail Database.

The FBP is believes the NPS has purposely attempted to mislead the reviewers by suppressing relevant statistics, information, and maps from the University of Georgia (UGA) ORV Trail Database (report) in order to avoid disclosing potentially embarrassing information to the NPS. These are not national security secrets but relevant GIS data that allow reviewers to understand the spatial extent of ORV use.

This deliberate attempt to withhold or slant information from the reviewer so they would conclude that only marginal impacts occur is illegal under NEPA. NEPA requires that information be of high quality, have accurate scientific analysis, expert agency comments, and public scrutiny. 40 C.F.R. § 1500.1(b). Further, NEPA requires that the SEIS be supported by evidence the agency has made the necessary environmental analysis. 40 C.F.R. § 1502.1. "Agencies shall also insure the professional integrity, including scientific integrity, of the discussions and analysis. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other methodologies used and shall make specific reference by footnote to the scientific and other sources relied upon for conclusions in the statement. An agency may place discussion of methodology in an appendix." 40 C.F.R. § 1502.24.

The Plan fails to adequately discuss the importance of the ORV mapping and its relevance to ecological impacts. Welch and Madden (1998) explain the importance of the

mapping, " The development of a management plan for continued ORV use with minimized effects on natural vegetation requires information on trail locations and summary statistics documenting the magnitude of ORV use within BICY." The Plan notes, " . . . ORV trails for this effort were defined as any discernable track of vehicles to more thoroughly estimate the extent of ORV effects" (emphasis added). Yet these statistics are excised from the Plan and analysis of the direct, indirect, and cumulative impacts of this large spatial extent of trails is not conducted. The UGA report is a centerpiece of the Plan because it provides a foundation to assess environmental impacts of the two alternatives despite the fact it has not been ground truthed (see following section).

Incredibly, the ORV mapping section is only three paragraphs long and contains only one trail statistic from the UGA mapping project, with this statistic even being inappropriately rounded down. One NPS reviewer notes "need to bulk up UGA information, use exact numbers, especially since this information will be used by people/organizations, submitting comments."

In contrast, the September 1998 Review Draft contained a two and a half page summary of the UGA report. Unfortunately, during the late winter or Spring of 1999, the Virginia Tech product was largely discarded by the NPS including the UGA data. Further, to obfuscate inquiring minds, the report was inappropriately not included in the appendix.

The Plan contains no itemized listing of ORV statistics by trail width, trail mileage, and acreage impacts for each management unit. These are relevant statistics that need to be included. The FBP strongly urges the following summary Tables be included in the Final Plan.

E1 (cont.)

Table 5. ORV Trail miles by class and management unit. Welch and Madden (1998).

Management Unit	Tertiary Trails (mi.)	Secondary Trails (mi.)	Primary Trails (mi.)	High Impact Trails (mi.)	All Trails (mi.)
Bear Island	987.3	25.0	0	555.6	1,568
Deep Lake	639.6	1.7	0	752.9	1,394
Turner River	4,543.0	34.8	0	3,682.2	8,260
Corn Dance	4,293.8	15.6	0	1,018.4	5,328
Loop Road	2,045.2	0	0.1	157.6	2,203
Stairsteps	3,599.5	79.7	7.3	2,144.4	5,831
Addition: West	478.6	3.3	0	411.8	894
Addition: Northern	3,686.0	67.5	32.9	535.5	4,322
Totals	20,273	228	40	9,258	29,799

Table 6. ORV trail related disturbance in acres by trail class. Welch and Madden (1998).

Management Unit	Tertiary Trails (acres)	Secondary Trails (acres)	Primary Trails (acres)	High Impact Trails (acres)	All Trails (acres /%)
Bear Island	1,177.9	99.6	0	7,365.2	8,643 / 22
Deep Lake	763.0	7.2	0	9,979.6	10,750 / 36
Turner River	5,420.0	138.4	0	48,810.4	54,369 / 31
Corn Dance	5,122.6	62.0	3.0	13,500.7	18,688 / 14
Loop Road	2,440.0	0	3.0	2,088.8	4,532 / 8
Stairsteps	4,294.3	317.0	58.3	28,425.6	33,095 / 23
Addition: West	571.0	13.1	0	5,454.2	6,038 / 31
Addition: Northern	4,397.5	268.6	261.9	7,098.4	12,026 / 9
Totals	24,186	906	326	122,723	148,141 / 20

The FBP is very concerned that the NPS attempts to dismiss the UGA ORV trail database by arguing that the difference in mileage between the GMP figure of 1240 miles and the current 29,799 figure can be solely attributed to mapping technique and the definitions of what is an ORV trail. This completely misleads the reviewer. Consider the following three examples:

1. **If one were to dismiss 50% of the estimated 29,799 miles of ORV trails from analysis, this would still result in more than a whole order of magnitude increase in ORV trail mileage than was previously documented in the 1991 GMP. In other words, this would be 12 times the amount of ORV trails documented in the 1991 GMP.**
2. **If one were to dismiss all the tertiary ORV trails (<33 ft.) from analysis it would still leave 9,526 miles of ORV trails or 7.68 times the amount documented in the 1991 GMP.**

E1 (cont.)

3. **If one were to dismiss all the tertiary ORV trails (<33 ft.) from analysis it would still leave 123,954 impacted acres.**

At a minimum, these shocking statistics should set off alarm bells in the minds of NPS resource managers. Welch and Madden (1998) documented a dramatic increase in recreational ORV use since the 1970's. Further evidence of the long-term effects of ORV trails is indicated as the NPS noted on page 49 that "residual" ORV trails were still observed in the Loop Unit over 20 years after it had been closed to ORV use. The researchers note, " it is believed that the trace of abandoned trails remains visible from the air for many years and trails can be interpreted from aerial photographs even after detection on the ground is difficult" (Welch and Madden 1998). If the Loop Unit has been closed for over 20 years, but the past ORV trails are still evident, this indicates the permanent nature of the impacts (USEPA 1999).

There is substantial supporting data of the long-term impacts of ORV use. First, the NPS concludes, "soil disturbance may be more significant than vegetation damage loss or damage because it demonstrates cumulative and long-term effects that are linked to secondary effects on other natural resource components. ORV's alter soil physical and biological properties" (NPS 1998) (emphasis added).

Second, these historic ORV trails remain because once rutting has occurred there are few natural mechanisms to restore the ground contour and ruts largely remain indefinitely potentially causing unnatural vegetative succession and altering hydrology (Duever 1986; NPS 1994). Damage is long-term if not permanent.

Third, in the Duever study very few heavily rutted areas recovered after seven years and little recovery was noted with preexisting ORV trails. Once soil disturbance occurs, the recovery rate of visual and vegetation impacts is appreciably slowed (Duever 1986).

Fourth, exposure of organic soils to the air can result in rapid oxidation that could reach a rate of one inch per year (Yamataki 1994). The rate of accretion of these soils is unknown but may take centuries to recover.

Fifth, ORV ruts displace soil and sidecasting can create berms of soil above grade (NPS 1998). A difference of only a few inches in elevation subsequently changes the

hydroperiod and leads to the establishment of totally different plant communities (NPS 1991).

The Plan notes, " The researchers caution that linear features other than ORV trails may be included in the new map and that active and abandoned ORV trails were indistinguishable" (emphasis added). The NPS spin doctor leaves out the fact the researchers conclude that these other linear features "would account for only a small percentage of the total number or lengths of trails" (Welch and Madden 1999) (emphasis added). The FBP printed the quad maps to show the extreme density of ORV trails (Welch and Madden 1998) [Attachment 52]. The average trail density for the Preserve is approximately 26mi/sq. mi.

Additionally, the FBP is concerned about about the quality and placement of the UGA map to obfuscate data. First, the Plan places the 1998 map on the backside of the 1991 map rather than facing each other so reviewers can easily compare the two maps. Second, the Plan places color photos of ORV's directly opposite the 1998 UGA map to apparently draw the eye away from the UGA map. Why do we need color photos of ORV's? If anything justifies the use of color it would be the UGA map. The UGA ORV trail map should be a fold-out design with trail classes in color in the final Plan.

Finally, because the UGA study is central to the Plan the full report should be included in the appendix of the final Plan. NEPA requires the utilization of high quality scientific information but the Plan also excises the entire vegetation section of the UGA report so that reviewers are unable to make any determination of vegetation impacts.

ISSUE: The Plan does not discuss why the University of Georgia ORV Trail Database was not ground truthed or when it will be completed.

The Plan fails to discuss why the UGA ORV trail database was not ground truthed in the first place, when ground truthing will be conducted, who will do the ground truthing, and the goals, objectives, assumptions and limitations of ground truthing. The Plan in its typical ambiguous and speculative prose states, "To more accurately assess the changes in ORV impacts over the last 15 years, the recently mapped trails will be ground

E1 (cont.)

truthed to determine the extent of impact measurable from the ground and to better separate ORV tracks from wildlife trails and other non-ORV effects."

It should have been clear to the NPS that the mapping effort would be central to the development and credibility of the Plan and high confidence levels using sound science would be required. Welch and Madden (1998) explain the rationale, " The development of a management plan for continued ORV use with minimized effects on natural vegetation requires information on trail locations and summary statistics documenting the magnitude of ORV use within BICY." Yet in a monumental blunder the NPS allowed the University of Georgia ORV Database to be only partially completed since ground truthing was not undertaken contrary to standard GIS protocol. The UGA report (Welch and Madden 1998) gives the following explanation:

> During the ORV mapping project, ORV trails were observed on the ground in BICY and aerial observations of heavy ORV use were recorded during helicopter missions conducted for ground truthing the on-going Everglades vegetation mapping project. Specific helicopter flights verifying ORV trail interpretations, however, were not included in this study due to budgetary constraints. The magnitude of the ORV mapping effort and the large number of trails that were visible on the aerial photographs constrained the use of funds to the preparation of the extensive ORV trail database.

It is clear that both the NPS and UGA underestimated the scale and cost of the project. In retrospect, postponing and manipulating the ground truthing issue has reflected badly on the natural resource management credibility of the NPS and created needless controversy among interest groups, thus further diminishing a scientifically impotent Plan. The UGA researchers further note that it was "determined that any detailed ground checks deemed necessary to verify trails would be conducted by Big Cypress National Preserve personnel" (Welch and Madden 1999).

The NPS had the opportunity to ground truth the ORV trail database during the Spring of 1999 when water levels have receded. But the NPS chose not to do so. This raises valid serious concerns that the NPS may not want to know the full spatial extent of ORV impacts because of potential agency criticism. Clearly the lack of funds could not be a factor because the NPS has already invested approximately $400,000 in developing

the ORV Management Plan and ground truthing would likely be a relatively small percentage of this total.

The Plan does not state when ground truthing will be conducted. The FBP strongly urges the NPS to find ground truthing next spring during the dry season, to reduce the potential of high water masking existing ORV trails. Ground truthing should not be conducted by the NPS because of 1) the controversial nature of ORV management and 2) the complex technical issues involved. A neutral contractor such as UGA should do the ground truthing since it is common practice for the GIS contractor to also conduct ground verification.

The required ground truthing protocol is beyond the scope of Preserve staff. Since entire books have been written on the field and statistical procedures of ground truthing remote sensing data. The results must be statistically valid and stand up to rigorous analysis with the assumptions and limitations clearly acknowledged. The NPS is mandated to use high quality scientific information according to the National Park Omnibus Management Act of 1998.

Because of the large scale and high confidence levels needed this work needs to be conducted by specialized GIS professionals with the assistance of Preserve personnel in the field. More complex stratified random sample models will likely have to be developed to attain higher confidence levels. Unknown or questionable areas will be incorporated within this methodology.

The ground truthing methodology should have clear scientifically justifiable goals and objectives that are linked to future ecological research. The FBP opposes the apparent limitation "To more accurately assess the changes in ORV impacts over the past 15 years. . . . " older ORV trails need to be ground truthed. The appropriate historical environmental baseline is when ORV's were first used rather than the historic conditions since the Preserve was established or even the last 15 years. Long-term as well as multiple interim periods can still be used to assess the rate of spatial increase of ORV tracks.

Assumptions and limitations should be clearly acknowledged such as errors of commission, and omission and statistical confidence levels. Field verification may cause statistical anomalies since additional trails may be located under canopy areas, areas

E1 (cont.)

masked by previous high water conditions, or the cumulative increase of trails since the 1994/1995 aerial photography. Biologists need to work with UGA personnel to determine if wildlife trails have been previously mapped.

Finally, ORV trail ground truthing should be included in a detailed implementation schedule with dedicated funding.

ISSUE: The description of the affected environment doe not analyze global, national and regional processes that impact the South Florida Ecosystem and Big Cypress National Preserve.

Context

The Plan states that this section establishes the basis for the environmental consequences section and that cumulative impacts of each alternative, are discussed using the south Florida ecosystem as a frame of reference. This limited analysis fails to consider the Preserve in relation to global, national, and regional processes that lead to loss of ecological integrity and biodiversity decline. Concepts such as island biogeography and basic principles of conservation biology are vital to understand these processes. Because of the increasing rate and scale of ecosystem decline on private lands; public lands such as Big Cypress will represent the best chance to preserve biodiversity at the landscape level (Noss, et al.1995). One must consider the scope of ecosystem and biodiversity loss on large temporal and spatial scales to understand the importance of preserving the physical and biological resources. Natural ecosystems can be easily destroyed, but they cannot be created, and at best can only be partially restored (Meffe et al. 1997).

Global Processes

The earth is now experiencing the fastest rate of extinction in its history. The rate of extinction is estimated to be 1,000 to 10,000 times the normal background rate (Wilson 1988; Pimm 1995). While earlier extinction episodes were likely caused by catastrophic events and most plant diversity survived providing a base for future speciation, now for the first time mass extinctions are being caused by man (Wilson 1985). Other ecologists

researching the rate of habitat destruction and poaching say the earth may lose one quarter to one third of all species within the next twenty years. The situation in the one of the Earth's most biologically rich areas is alarming. Tropical rainforests which may contain up to one half of all living species are losing more than 38 million acres per year (USFWS 1998a).

The root cause of biodiversity loss is over population. The world's population has reached six billion people and may double in only 40 years. The world is adding 11,000 people per hour. Biologists agree that the major causes of ecological decline are habitat loss, degradation, and fragmentation (Ehrlich and Ehrlich 1981). Other direct causes include introduced species, exploitation and over-harvesting, pollution and toxification, and secondary and synergistic effects (Meffe and Carroll 1997). Not only is population growth and resulting habitat destruction destroying natural communities, ecosystems, and associated species but human activities are beginning to have systemic effects upon the global life support system – resulting in global warming, destruction of the ozone layer, the spread of acid rain, and wide-scale pollution of the oceans, freshwater systems, and terrestial environments (Noss et al. 1995). Indeed biologists have recently warned that vertebrate evolution may be at an end due to the activities of humans (Soule 1980).

In regards to habitat loss and fragmentation, the spatial extent of an area is a critical factor in the variety of species that may be found. In a landmark study, MacArthur and Wilson (1967) developed the theory of island biogeography which predicts that smaller areas tend to have fewer species. The study made the analogy that remaining large undeveloped areas act as similarly like islands in a sea of development. Additionally, relatively small landscapes managed for resource production seldom maintain native biodiversity for long (Harris 1984).

North America

Over 200 species of plants plus additional varieties and 71 species and subspecies of vertebrates have become extinct just in North America (Nature Conservancy 1992). Approximately 1142 species of plants and animals in the U.S. are federally listed as

E1 (cont.)

endangered or threatened (USFWS 1999). Over 300 species are candidates for listing. Only a handful of species have recovered enough to be removed from the list.

Loss of forests in the United States has proceeded as rapidly as any region in the world. By 1920 some 96% of virgin forests of the United States had been logged (Reynolds 1923). By 1980 approximately 85% of virgin forests had been destroyed, with an estimated loss of 95-98% for the lower forty eight states (Postel and Ryan 1991). It is estimated that one in ten native plants in the U.S. is endangered (CPC 1999).

Biologists Wright and Thompson (1935) observed that national parks were not fully functional ecosystems because of small artificial boundaries. They recommended increasing the size of the parks by modifying the boundaries to reflect the biological requirements of large mammals. Newmark (1985) came to a similar conclusion when he observed that many wide ranging species had been extirpated from large western North America national parks.

Florida

The population of Florida has doubled every 20 years since 1830 with the population of Florida approaching 15 million. This has caused Florida to have one of the highest risks of ecosystem loss of all 50 states.

Of the nation's 21 most endangered ecosystems, 9 are in Florida. According to a National Biological Survey report (Noss *et al.* 1995) Florida has lost :

- 88% of longleaf pine forests
- Virtually all of the dry praires
- 64% of Florida sand pine scrub on Lake Wales, Lake Henry, and Winter Haven ridges
- 98% of pine rockland habitat
- 60 to 80% of tropical hardwood hammock on the central Florida Keys.
- Greater than 50% of pre-settlement wetlands
- 56% of marsh (herbaceous wetland) habitat
- 51% of freshwater marshes in southwest Florida
- 75% of seagrass meadows in Tampa Bay

- 92% of mangrove swamp and salt marsh along Indian River Lagoon in Brevard, Indian River, and St. Lucie counties.

Florida has 97 species listed as threatened or endangered of which 65 are in south Florida (FWS 1998). Florida has no virgin forests. Few examples of old growth forest remain in the once vast forests that covered the state. Since 1936, Florida's forests declined 21% in the last 54 years (Kautz 1993). In a study of land uses in Florida between 1936-1987 researchers found that commercial forest lands comprised 90% of all forest land in Florida. Numerous scientific studies have indicated that wildlife habitat values of natural pine stands are far superior to pine plantations (Repenning and Labisky 1985). Florida's National Forests have suffered from over harvesting timber, suppressed natural fire regimes, edge effects of clearcuts, high road density, and loss and degradation of natural econtones (Noss 1987).

South Florida Ecosystem and the Big Cypress Swamp

The appropriate baseline for analysis of the South Florida Ecosystem and Big Cypress is the condition of the region prior to European settlement and massive alterations in the hydrology of the watershed and development of uplands. Several studies lists the consequences of these alterations of the South Florida Ecosystem: soil subsidence, nutrient enrichment, mercury contamination, loss and fragmentation of habitat, uncoupling of uplands and wetlands, uncoupling of wetlands from rainfall, altered hyrdoperiods, altered fire regimes, decline in marine and fishery resources, decline in landscape and wetland species, increase in generalist and weedy species, invasion of exotic species (Harris 1991; Science Sub-Group Report 1993; Ogden and Davis 1994; Lodge 1994; Mazzotti 1995; Duever 1998; USFWS 1999). Duever (1998) [Attachment **] used a flow chart approach that shows the interrelationships of ecological stressors.The magnitude of these threats must be recognized by land managers in order to assure ecological integrity and to protect and restore biodiversity.

Population Growth. Rapid population growth is regarded as a root cause of environmental decline. Florida in general and south Florida especially has experienced

E1 (cont.)

incredibly rapid population growth. The region is expected to have up 10 million people by 2020.Two of the ten fastest growing metropolitian areas Naples and Ft. Myers are located near Big Cypress. Population modeling indicates that the population in Lee, Hendry, and Collier Counties is expected to almost double from 512,000 residents in 1990 to 975,000 by 2010. Impacts of population growth include destruction and fragmentation of upland and wetland habitat, water diversion, and pollution.

Loss of Forests and Vegetation Types. The Everglades/Big Cypress region has lost major portions of its vegetation types that contributed to habitat heterogeneity. For example, the Everglades has lost the entire Pond apple forest south of Lake Okeechobee, and the Cypress Forest to the east (Davis and Ogden 1994). Big Cypress has lost virtually all of its old growth cypress due to logging from the 1930's to the 1950's (Duever 1986). Southwest Florida has lost much of the pine forest landscape. The limited areas of pine forests that remain have been extensively fragmented with patches less than 100 ha (Mazzotti, et al. 1993). Extensive conversion of remaining uplands and wetlands in the region to citrus groves and vegetable farming is expected to continue. Currently 60 to 70 plant species in Big Cypress are listed as endangered, threatened, rare, or in need of protection (NPS 1991).

Hydrology. Massive alterations in the hydrologic regime has occurred with the construction of the Central and Southern Florida Project and its 1500 miles of canals. Virtually every major hydrologic linkage has been severed. The result has been the loss of 50% of wetlands in the region (Davis and Ogden 1994). Numerous canals in the Big Cypress region such as the Barron, Turner River, L-28, L-28 Interceptor, Golden Gate, and Faka-Union have reduced the hydroperiod and lowered water levels by almost two feet. Water quality has been compromised with massive amounts of nutrients flowing from northern agricultural lands to the Everglades and this same scenario poses a threat to the water quality and quantity of Big Cypress.

Decline of Wildlife. Many species of native wildlife are in severe decline within the South Florida Ecosystem. The South Florida Ecosystem now has 68 species classified as endangered or threatened. The Preserve has a total of 37 species listed as endangered, threatened, or species of special concern by various agencies (NPS 1991). Some species are critically endangered such as the Cape Sable seaside sparrow and the Florida panther.

Because of massive hydrologic alterations, wading bird populations have declined by 90% since the 1930's. In addition, Everglades National Park has lost 14 species of upland birds and mammals. This has profound implications for Big Cypress National Preserve. The erosion of biodiversity is continuing as more sensitive interior species are being replaced by more generalist and weedy species while canals levees, roads create barriers to the movement of many species (Harris et al. 1991).

Summary of Ecological Decline. Both rapid and gradual processes are adversely impacting the natural and ecological integrity at the global, national, and regional levels. There is general agreement in the literature that maintaining ecological integrity should take precedence over any other management goal (Grumbine 1994). Due to the accelerated rate and massive scale of environmental decline globally, nationwide, and within the South Florida Ecosystem combined with our profound ignorance of ecological processes, we are in no position to make judgements that may have irreversible consequences, therefore a conservative precautionary management approach is warranted.

ENVIRONMENTAL CONSEQUENCES

Statutory Framework

National Environmental Policy Act

The FBP is seriously concerned about the superficial and self-serving environmental analysis presented in the Plan. Numerous environmental impacts citations have been eliminated from the September 1998 Review Draft and the few references are made to resource management staff reports. The FBP believes the NPS has engaged in post-hoc rationalizations in the Plan that serve to support decisions already made contrary to NEPA regulations. An EIS must serve as the means of assessing the impacts of a proposed action, rather than justifying decisions that have already been made. 40 C.F.R. § 1502.2 (g).

The National Environmental Policy Act (NEPA) requires that an EIS or SEIS analyze the "environmental impact of the proposed action," alternatives" that entail less

E1 (cont.)

environmental harm, and any "irreversible" commitment of resources which would be involved in the proposed action. 42 U.S.C. § 4332(c).

Specifically, the EIS must analyze the direct, indirect, and cumulative impacts of the alternatives.

Direct effects are defined by the CEQ regulations as "caused by the action and occur at the same time and place." 40 C.F.R. §1508.8.

Indirect effects are defined as being "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems." 40 C.F.R. § 1508.8.

Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7.

Additionally, an EIS must provide full and fair discussion of significant environmental impacts. The EIS must also be concise, clear to the point, and supported by evidence that the agency has made the necessary environmental analysis. 40 C.F.R. § 1502.1.

When evaluating reasonably foreseeable significant adverse effects on the environment in an EIS and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking. 40 C.F.R. § 1502.22. In addition, the regulations state:

1. If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the EIS.

2. If the information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known, the agency shall include within the environmental impact statement:

   a. A statement that such information is incomplete or unavailable;
   b. A statement of the relevance of the incomplete or unavailable information to evaluating reasonable foreseeable significant adverse impacts on the human environment;
   c. A summary of existing credible scientific evidence which is relevant to evaluating the reasonable foreseeable significant adverse impacts on the human environment, and the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community. For the purposes of this section, "reasonably foreseeable" includes impacts which have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.

General Impacts of ORV use.

General Methodology

ISSUE: The methodologies cited do not reflect all the relevant environmental documents.

For the administrative record, the FBP would like to reassert that it is seriously concerned that many of the references relevant documents and comments from experts have been excised from the Plan. This issue was also discussed above in the science section. In addition, virtually none of the "in house" studies or reports from BICY staff are included in the Plan. It is vital that these reports be included in the Plan since these

E1 (cont.)

reports contain relevant data on ORV issues and impacts. In contrast, the main thrust of the environmental consequences section seems to rely on the Duever studies which were not peer reviewed and did not analyze cumulative ORV impacts over large spatial and temporal scales.

Scientist or analyst comments are not included. Notably missing, is much of the commentary and citations on environmental effects of ORV's drafted by Dr. Jeff Marion of Virginia Tech for the 1998 review drafts. Additionally, relevant comments on ORV impacts by Dr. Aust, Dr. Snedeker, Dr. Smith, Dr. Doyle, Mr. Yamataki, and Dr. Jones are missing. As noted above, comments of Dr. Stuart Pimm and Sonny Bass which are regarded as Cape Sable seaside sparrow experts have not been included, despite urgings from the Preserve's wildlife biologist.

ISSUE: The Plan does not adequately analyze the direct, indirect, and cumulative natural resource impacts because of an ambiguous and speculative decision process of possible management scenarios.

The plan cannot in specifically analyze the direct, indirect and cumulative effects of ORV use unless it describes specific management actions. As currently drafted, the Plan defines a decision making process with a broad menu of possible strategies. The Plan notes ". . . The proposed action would adopt a new decision process and consider a range of ORV management practices described in an "Off Road Vehicle Management Practices Manual." The continuum of possible management scenarios is therefore broad and specific effects cannot be analyzed unless one knows the specific management actions that will be implemented.

As discussed above in the Proposed Action section there is no specific criteria for opening and closing trails identified, no criteria for designated trails or areas, no management threshold levels, and no dedicated funding and implementation schedule.

The FBP concludes that as currently written the environmental consequences section analysis would be speculative and would not comply with NEPA.

General Comments on ORV Impacts. ORV use is one of the most controversial and impacting uses in the Preserve. ORV use has been increasing in recent decades (Duever et al. 1986; NPS 1991; Pernas 1995; Welch and Madden 1998). Over the

decades an expansive unplanned ORV trail network has developed (Duever et al. 1986). In fact, the Plan states on page 59 that "ORV use causes the most extensive effects of any other human activity in the Preserve." The current estimated spatial extent of ORV use covers approximately 29,799 miles of ORV trails and 148,000 impacted acres, which represents 20% of the Preserve (Welch and Madden 1998). The NPS currently allows up to 2500 ORV permits a year (NPS 1992). At present, there is no rationally or scientifically established permit ceilng (NPS 1994; Pernas 1995).

The NPS has been aware for many years that "virtually all natural and cultural resources are vulnerable to degradation from continued and restricted ORV use" (NPS 1994). Additionally, the NPS states that "ORV impacts include: interdiction of water sheet flow, promoting unnatural plant succession, distribution of exotic seeds (Melaleuca), altering wildlife feeding habitats, and facilitating the harvest of game species" (NPS 1994). Duever (1986a) notes the indirect impacts of ORV trails.

> "ORV's have many of the same indirect effects on the BCNP as roads do. They provide poachers, arsonists, litter bugs, plant collectors, and assorted other undesirables access to relatively undamaged wilderness habitats and lead to increased hunting pressure and harassment of wildlife in backcountry areas. Therefore, ORV activity should be minimized in areas where there are areas of populations of rare and endangered plants and animals."

In addition to cumulative impacts on natural resources, the ORV expansive trail networks produce a negative aesthetic situation degrading the quality of the visitor experience.

Historically, the Preserve has taken a "patchwork" approach to its management and attempts to minimize impacts on natural resources have met with disappointing results (NPS 1994). Incremental attempts to manage ORV's have included trail and unit closures, dispersed use areas, a designated trail system for Bear Island, limits on the use of number of ORV, and a prohibition of tracked vehicles.

Unfortunately, the environmental consequences section fails to a "hard look" at ORV use and does not adequately analysis the direct, indirect, and cumulative impacts of ORV use. Rather, it attempts to justify decisions already made and process in an incremental reactive "damage control" mode.

E1 (cont.)

IMPACTS ON WATER RESOURCES

Surface Water Flows

ISSUE: The Plan does not adequately analysis the direct, indirect and cumulative impacts to water flows.

There is substantial and credible evidence that ORV causes adverse impacts to quality water flows. Hydrology is the heart of any wetland system. The Preserves' Water Resources Management Plan has determined that "the wetland ecology of the Preserve is finely tuned to the seasonal flow of water of unpolluted water and any interference can alter this sensitive habitat" (Schneider et al. 1996). The plan recommended the site specific studies regarding topographical alterations, surface water flows, and velocity alterations in an attempt to analyze the extent and magnitude of ORV impacts.

Topographic Alterations. Topographic alterations may alter flow rates and direction. Duever (1986) states: ". . . It appears that once soils are displaced, there are few natural mechanisms capable of restoring the ground contour, and the ruts remain indefinitely." The NPS (1994) further elaborates:

> "ORV impacts include interdiction of sheet flow . . . .One result of ORV use is permanent soil displacement along it's path, altering the natural topography. Research conducted in 1978 and 1985 (Duever et al.) has shown that once soil displacement has occurred, there are no natural mechanisms capable of restoring the natural topography. Hence the damage is permanent, effectively altering hydrology and promoting unnatural vegetative succession." (emphasis added).

Emphasizing the 1986 Duever study once again the NPS explains that ORV use may displace soil in such a way so that no natural mechanism may is capable of restoring the ground contour (NPS 1996). Aerial photography indicates both damage and permanent changes in the land surface (Sschneider et al. 1996) (emphasis added). ORV ruts can be as much as two feet deep and can channelize water and alter flow patterns. The extent and occurrence of such effects are unknown. Plan at 55.

The Plan does not analyze the potential effects of unnatural exposure of the water table by ORV ruts that may cause an artificially shortened hydroperiod and increased evapo-transpiration. Preserve resource management staff have determined that deep ORV ruts actually "brings the water to the surface" where it otherwise would be submerged (Pernas 1995). Airboat trails can alter both the direct and velocity of local surface water flows. Plan at 9.

Water Quality

ISSUE: The ORVMP/SEIS does not adequately analyze the direct, indirect and cumulative impacts of ORV use to water quality.

There is substantial, credible, and compelling evidence that ORV's cause or may cause significant impacts to water quality. Sheridan (1979) has reported that ORV ruts can contribute to water pollution. An audit report by the Department of Interior determined that one of the primary threats to natural resources at the Preserve was to water quality and flow (USDOI 1992). Additionally, water quality is a major ORV impact identified by the Preserve's Water Resources Management Plan (Schneider 1996). Water quality impacts include turbidity, sedimentation, nutrient loading, temperature changes, concentration of compounds and minerals, salinity changes, and chemical pollutants.

Turbidity and Sedimentation. Turbidity is caused by ORV's traveling through wetlands and open water areas and churning up and suspending soil particles in the water column. The churning up of sediments can be accomplished by the rotation of ORV tires cutting through soft substrate or hull pressure from high-speed airboats. Turbidity is regarded as a chronic problem because once these light particles eventually settle on the bottom they are prone to be resuspended by ORV activity, tidal influence, etc.

For example, airboats have been shown to churn up sediments and increase turbidity (Snyder 1994). Additionally, observations of commercial airboat operations by Preserve staff in the SW Addition reveal conditions of high turbidity (NPS 1999). Airboat traffic has increased channel width and depth by several feet (NPS 1999a). Airboats have also created new artificial channels and destabilized and eroded creek banks (Jones

E1 (cont.)

1997). Snedaker (1999) determined "there is evidence of that turbidity is causing new and significant damage. Each time an airboat traverses shallow upon water heavy turbidity plumes become evident in their wakes." Each of these activities places more soil in the water increasing the probability of turbidity.

Photos of water in ORV ruts show turbid conditions and water quality may decrease to the point where the water becomes a slurry (Duever 1981). Areas down gradient may experience contamination and siltation problems due to increased sediment loading from ORV use (NPS 1998). A study of airboat use in the vicinity of Halfway Creek determined that airboat use caused turbidity levels to exceed standards set by state law, created visual turbidity plumes, and caused considerable erosion which created sediment islands to appear downstream (Weeks 1988).

Turbidity can also cause substantial impacts on vegetation. The turbidity that results from ORV use decreases the amount of sunlight penetration and thus decreases primary production (Weeks 1988; Beardsley 1995) [Attachment 53].

Turbidity can also have adverse effects on fish and wildlife. Extended periods of turbidity can affect fish and wildlife mortality (NPS 1999). Impacts may be so severe as to cause stress or completely eliminate bottom dwelling organisms (Beardsley 1995). Snedaker (1999) determined that turbidity "has a damaging effect on the benthic substrate and biota, as well as any young-of-the-year and juvenile estuarine organisms that may be present in the water column."

Nutrients. The Plan does not adequately analyze the potential for increased nutrients in the water column from ORV use. Beardsley (1995) determined that extensive vegetation impacts from ORV use may inhibit nutrient uptake, causing greater levles of nutrients to remain in the water. Wetland plants produce up to two times as much biomass as upland plants and absorb large amounts of nutrients from the water. Plan at 56 (emphasis added). The stirring up of sediments has been implicated in increased nutrients in the water column and the increase of cattails in airboat trails (Pernas 1995).

Oxidation. The Plan fails to analyze water quality impacts due to the oxidation of soils. There are water quality implications of soil loss. For example, the loss of soil in the EAA may have resulted in the concentration of compounds and minerals in the remaining soil (Science Sub-Group Report 1993).

Yamataki (1994) determined that organic soil loss from exposed airboat ruts could be as high as 1 inch per year. This same oxidation process may be occurring at other areas of the Preserve where rutting has caused exposure of soils due to vegetation loss and displacement onto exposed berms (Yamataki 1999). The potential for water quality impacts is of serious concern due to the large spatial extent of ORV impacts which have been estimated to be 148,000 acres (Welch and Madden 1998; 1999). The Plan provides no monitoring data on the concentration of compounds and minerals.

Salinity Changes and Hydraulics. The Plan fails to analyze the effects of ORV's on salinity gradients and tidal influence. Airboats in the SW Addition are cutting new trails and widening existing channels thereby increasing tidal flushing and salinity, thus altering natural vegetative composition in salt marshes and prairies. Facilitating the movement of saltwater into salt marsh habitats profoundly changes the ecological structure of the area. Salt marsh vegetation would be converted to open water pools and mangroves. Increased salinity and hydraulics from tides and boat wakes would contribute to mangrove recruitment. Airboat tour traffic and the practice of exaggerated spin-outs have likely increased the recruitment process and marsh degradation along the tour route (NPS 1999).

Vegetative changes to prairies due to salinity changes are particularly important to the endangered Cape Sable seaside sparrow. Salinity changes have been implicated in the extirpation of the Cape Sable seaside sparrow from the Ochopee Prairie area (USFWS 1999). Given appropriate restoration of hydrology and suitable habitat, the sparrow may repopulate the area on its own (NPS 1994a).

Water Temperature. The Plan fails to analyze ORV impacts on water temperature. ORV use can affect water temperature by destroying or reducing vegetation exposing water to more direct sunlight. Water temperature within ORV ruts was found to be 6 to10 degrees F higher than in adjacent vegetated areas (Schemnitz and Shortemeyer 1972). The temperature differences may unnaturally alter biological activity (NPS 1998). In an Environmental Assessment of commercial airboat operations in the SW Addition, the NPS concluded the deepening of ruts causes the water and soil temperature to be greater than surface water and soils immediately adjacent to the trail (NPS 1999).

E1 (cont.)

Chemical Pollutants. The contamination of water resources by discharges from ORV's is not analyzed in the environmental consequences section. ORV's can leak petroleum products such as fuel, oil, grease, as well as anti-freeze, and other chemicals (Smith 1998). Pollutants have the potential to adversely affect soils, soil organisms, and plants which often end up in aquatic habitats (Geological Society of America 1977). Additionally, refueling and on-trail maintenance of ORV's can all lead to chemical contamination of water resources.

The NPS has avoided the analysis of direct, indirect, and cumulative impacts of these pollutants. The NPS admits that "ORV use may . . . result in some discharges, leaks, or spills of petroleum products in localized areas." Plan at 9. ORV storage areas show signs of chemical drips beneath vehicles and it is reasonably to assume that these discharges also occur while ORV's are being driven through wetlands. In the past, ORV permits have averaged approximately 2000 permits per year so cumulative impacts on water quality over the years could be significant. The proposed action makes no mention of a permit ceiling.

Compliance with Statutes and regulations. The Plan does not analyze compliance with the standards of the Outstanding Florida Waters designation.

Conclusion. Because of the continued policy of dispersed use, failure to identify specific management actions, and the lack of supporting data and analysis the FBP concludes that the proposed action will not avoid, minimize, or substantially reduce hydrology impacts.

IMPACTS ON SOILS

The Plan explicitly mentions soil impacts approximately 40 times but provides virtually no specific measures to avoid or minimize these impacts. Many additional relevant impacts on soils found in the previous review draft (NPS 1998) were excised from this public draft. These impacts included soil displacement, rutting, oxidation, degradation, altered macroporosity, aeration, temperture, biotic productivity, moisture, and erosion. In addition the GMP, does not contain a separate section for the analysis of soil impacts, which is more evidence that the GMP is outdated and that the ORV Plan should not be tiered on this document.

Soils play an extremely important function in ecosystems. ORV's attack the relatively thin layer of disintegrated rock and organic matter to which all terrestrial life clings — soil — which is why they can have such an adverse effect on natural resources (Sheridan 1979). In essence soils are the foundation of the food chain and affect other resource parameters such as vegetation, hydrology, and wildlife. These soils evolve in response to the entire ecosystem. Their physical, chemical, and biological properties depend on the associated plants and animals. Impacts that kill the living organisms or change the natural stability can destroy the soil. Soil sensitivity to ORV's is variable, but the data indicate that the natural stability of soils is damaged by ORV use (Webb and Wilshire 1983).

The NPS determined that "Comparisons of current and past aerial photography indicated both damage and permanent changes in the land surface" (Schneider et al. 1996). Soil disturbance is thought to be more significant than vegetation impacts because it demonstrates "cumulative and long-term effects on other natural resource components" (NPS 1998). The GIS study by Welch and Madden (1998) noted the considerable area of documented ORV disturbance in the Preserve (144,000 acres / 20% of Preserve).

ISSUE: The Statutory and regulatory framework for soil impacts is misleading.

The statutory and regulatory framework for the NPS is broad and includes NEPA, the ESA, the NPS Organic Act, and the Big Cypress Enabling legislation among many others. While the NPS acknowledges EO 11644 it fails to mention the other relevant requirements such as to minimize damage to soil and that areas exhibiting considerable adverse effects must be closed.

ISSUE: The methodology for soil impacts is construed too narrowly.

This section fails to acknowledge and address other relevant reports and information. The entire methodology section discusses nothing but the two Duever studies. Other relevant references on soil impacts such as oxidation (Yamataki 1994), recovery rates of soil impacts in Ochopee Prairie (Pernas 1995), creek bank erosion (Jones 1997; Smith 1998) and the most obvious omission -- the spatial extent of soil impacts (Welch and Madden 1998) are missing.

E1 (cont.)

ISSUE: There is no scientific definition of soil recovery in the Plan.

Throughout this section the Plan refers to soil recovery but does not present a scientific definition of soil recovery or any definition of soil recovery for that matter. Nor does the Plan state the NPS is even working on a definition of soil recovery for the final Plan. It appears the NPS regards soil recovery as some vague amount of reduction in rut depth. Reduction in rut depth or return to original topography is only one of many components of soil recovery. Soils have complex physical, chemical, and biological properties. Microorganisms in the soil are essential for soil productivity.

As Duever (1981) determined, soils in some lanes were still a loose slurry one year later. One soil disturbance occurs, the recovery rate of visual and vegetation impacts is slowed and it takes a very long time for ORV tracks to disappear (Duever 1986). Soil disturbance in Ochopee Prairie has shown no recovery since being closed in 1994 (Pernas 1999). Even if the majority of loose or sidecast soil eventually slumps back into a rut many of the original physical, chemical, and biological properties of soil may still have been seriously altered or destroyed.

A scientifically justifiable definition of soil recovery must be developed and the NPS should consult with appropriate soil scientists and review the scientific literature. The definition should be comprehensive and include the physical, chemical, and biological properties of soil. For example, parameters for recovery may include natural biotic productivity, rut depth recovery, top soil and crust formation, soil composition, structure, and stratification, soil temperature, moisture, aeration, macroporosity, reformation of soil stabilizers, natural accretion, and esthetic values.

ISSUE: The Plan does adequately analyze the spatial extent of ORV disturbance and soil displacement.

Of particular concern are the large spatial and long-term or permanent effects. The spatial aspect is determined by the large network of trails that is continually growing due to the widening of trails. This is characteristic of ORV use in the Preserve. ORV use is associated with deep rutting that created troughs and ridges of displaced soil as the weight of the vehicle sinks the tires into the wet soft soils. Soil rutting has been extensive

in some areas and major "mud highways" have developed (Lodge 1994). Duever (1986a) explains the typical rutting process.

> "Progressive widening is characteristic of ORV trails through some part of the preserve. This is not just a recent phenomenon caused by an increase in the numbers of vehicles using the area; it can be seen in early aerial photographs taken when few vehicles used the area. Widening takes place when the soil becomes do extensively rutted that vehicles can no longer maintain traction in the trail and must go around difficult spots, making a new set of ruts which in turn eventually become impassable. In some parts of the preserve this process has resulted in a 0.4km (0.25mi)-wide corridor barren of most vegetation."

Big Cypress resource management staff also note this same process. Pernas (1995) further elaborates on trail widening:

> "Well, you have one trail made by one buggy. And [then]....after several passes by other buggies, the trail becomes impassable, and the next buggy goes around it and widens the trail as to avoid the spot that's already been impacted. So after a while as a natural habit just to avoid getting stuck, the trail starts widening until.... It can get to be as wide as like five hundred feet, not the actual one trail, but the series of trails combined."

Two research studies have attempted to document the long-term effects of ORV soil rutting (Duever 1981: 1986). Duever (1986) states: " It appears once soils have been displaced, there are few natural mechanisms capable of restoring the ground contour, and the ruts remain indefinitely." As characterized by the NPS, the research confirms that once ORV use displaces soil, "there are no natural mechanisms capable of restoring the natural topography. Hence the damage is permanent, effectively altering hydrology and promoting unnatural plant succession" (NPS 1994).

The amount and depth of rutting has generated concern among scientists. In fact the Plan notes that some ruts can be as deep as two feet! On a site visit to the Preserve Dr. Mike Aust (1997) of Virginia Tech describes his impressions of soil rutting:

> "I was amazed at the depth and extent of buggy ruts in the Big Cypress National Preserve. The level of coverage was more extensive than most of the logging operations I have seen on Forest Service, State, company, and private lands. The level of impact

E1 (cont.)

250

> caused by the buggies would exceed the BMP's used in most southeastern states (most of which specify a maximum rutting depth of 6 inches). I believe the level of rutting caused by the buggies was unacceptable."

Most egregious is that virtually all of the UGA ORV Trail Database has been removed from the Plan in violation of NEPA. As noted in the Affected Environment section of our comments the extent of estimated mileage of ORV trails- 29,799 and impacted acres – 144,000 is unprecedented. One NPS reviewer noted the lack of analysis (Kriz 1998):

> I think we have a major credibility problem . . . if we select the proposed alternative as written. As an example the noted ORV trail miles (29, 799) and the ORV trail-related disturbance in acres (148,141) is shocking! This data is especially egregious when compared to the 1985 estimates of 1240 miles of trail and 2,230 miles of disturbed acres. It is clear that technology has made our data more accurate. However, isn't this the data (1,240 miles/2,230 acres) that was used in the 1991 GMP/GIS that guides our present day ORV use/policies? (Would we have made or could we support making the same decision knowing what we know now?) – On pages 60/61, we state "A dramatic increase in ORV trail miles over previous estimates is attributed to the larger photograph scale used in this work. Vegetation damage from ORV traffic shows very clearly in color infrared photographs so many of the tertiary trails could be of very low use, perhaps even from single passes. In addition, ORV use can cause long-term changes in vegetation composition and/or soils, effects which remain clearly evident on color infrared photographs even following many years of nonuse and recovery." If this statement is true (I'm not doubting it), haven't we told ourselves that we have a MAJOR PROBLEM? How could we authorize additional use with this kind of indicator?

There is no analysis of environmental effects. no analysis of trail density, fragmentation effects, or edge effects.

The Plan does not analyze the surface area or volume of soil disturbance an ORV creates. Although large numbers of walking human beings can also create substantial damage in sensitive habitats, ORV's do damage on a much larger scale. When it comes to

sheer recreational destructiveness, ORV's far surpass other recreational machines such as powerboats (Ehrlich & Ehrlich 1981).

ORV's essentially adversely affect lots of land. Standard ORV's with knobby tires are ideal devices for crushing plant life and degrading soil. For comparison, even driven with care, a dirt bike will degrade about an acre of land in a twenty-mile drive. In contrast, a four-wheel drive vehicle will have the same impact in just six miles (Ehrlich and Ehrlich 1981). Of relevance here, a swamp buggy with 18 inch wide tires would impact an acre of land in only three miles of dispersed use travel. This considers only surface disturbance and not the volume of disturbed soils from rutting. Already, approximately 20% of the Preserve has been impacted by a policy of dispersed ORV use over the last several decades.

The Plan fails to calculate trail density and analyze the environmental consequences of the current and future trail density. Analysis by the FBP indicates that overall, with the data provided by Welch and Madden (1998) there is a trail density of 26 mi./sq. mi. for the Preserve. Clearly, this is unacceptable. The biological effects of this degree of trail density are unknown. For comparison, a road density of .5mi./sq. mi. or less is generally recommended to avoid displacing large mammals. Area figures reveal that approximately 148, 141 acres or 20% of the Preserve have been impacted. Most disturbing is the large amount of high density areas – 122,723 acres (Welch and Madden 1998).

ISSUE: The Plan fails to analyze the effects of soil loss.

Yamataki (1994) determined that organic soil loss from exposed airboat ruts could be as high as 1 inch per year. Yamataki also concluded that "pressure created from airboat hulls and water velocities may cause compaction of calcium rich surface layers and loss or displacement of organic matter. These soils are fragile." This same oxidation process may be occurring at other areas of the Preserve where rutting has caused exposure of soils due to vegetation loss and displacement onto exposed berms (Yamataki 1999). This is especially relevant because of the large amount of impacted area (144,000 acres) and high density areas documented (122,000 acres) (Welch and Madden 1998)

E1 (cont.)

The Plan also notes that periphyton precipitate soils are susceptible to being destroyed by ORV's. Yet, without any explanation, the proposed action does not prohibit ORV's in this soil type.

While the oxidation rate of organic soils has been studied (Ogden and Davis 1994), the rate of accretion of has not been referenced in the literature. Accretion rates may be on the order of decades or even centuries to restore the historic topography. For example if may take 50 years for periphyton precipitate soils to recover 5 cm (Norland, per comm.). In order to determine the oxidation and accretion rates of different soils in the Preserve, the NPS should contract with certified soil scientists. Core samples and "Carbon 14" dating should be undertaken.

In the absence of reliable data on oxidation and accretion rates of different soils, NPS management should be congruent with the precautionary principle and avoid and minimize ORV impacts. Fragile soil areas should be off-limits to ORV's.

ISSUE: The Plan fails to analyze soil erosion.

Soils can be eroded from the actions of airboats wakes. Stream or canal bank erosion can occur from airboat generated wave action (NPS 1998). Airboats can cause organic particles to become suspended in the water column. After repeated airboat passes, soil is displaced, creating a channel (Duever 1986). A study of airboat operations near Halfway Creek determined that airboats caused turbidity levels to exceed standards of state law and created turbidity plumes. The erosion level was so high that it created "sediment islands" to appear downstream (Weeks 1988). Snedaker (1999) also noted that commercial airboat operations create heavy turbidity plumes in airboat wakes.

Jones (1997) noted the potential impacts of commercial airboat operations which include widening of natural channels, the creation of new artificial channels, river bank erosion, and destabilization. Other scientists have determined this airboat traffic is casing significant creek bank erosion. Surface materials are not allowed to naturally accrete along the banks because of airboat wakes. As a result "mass wasting" of creek bank

sediment continues to occur (Snedaker 1999). Pernas (1999a) determined the extent of creek widening can be in excess of three feet and depth levels can be two or three feet.

Commercial airboat operations over time also allow sediment to be moved from one area to another whereby a channel and berm type system is formed. This will alter the surface hydrology as sheet flow becomes channel flow (Smith 1998). Commercial airboat tours are also resulting in marsh erosion caused by progressive ponding and airboat overwash (Doyle 1998). This is resulting in marsh habitat being converted into open water ponds and mangroves.

ISSUE: The cumulative soils impact analysis is inadequate.

The purpose of cumulative impact analysis is to determine the effects of the action when added to other past, present, and reasonably foreseeable future actions. C.F.R. § 1508.7. Further, environmental impact statements shall serve as the means of assessing the environmental impact of the proposed agency action, rather than justifying decisions already made. C.F.R. § 1502.2(g).

There is no adequate quantitative, qualitative, or narrative description of cumulative soil impacts. The analysis, in fact, downplays the cumulative impacts. The Plan notes the Preserve experienced extensive farming operations and that fields were burned, and that oil and gas operations along with grazing will continue to impact soils. These impacts are not quantified. The Plan also acknowledged continuing agricultural and commercial development and that the Everglades has lost an astounding 50% of its historic acreage.

First, the analysis makes no mention of ORV effects such as the massive 144,000 acres impacted (Welch and Madden 1998) or of soil loss due to oxidation (Yamataki 1994).

Second, there is no adequate analysis of the effect of drainage on soils. Substantial soil subsidence may have occurred from water levels being lowered by approximately two to three feet from historic levels due to a series of drainage projects in

E1 (cont.)

the Big Cypress Swamp including the Tamiami, Barron River, Turner River, Golden Gate, Faka-Union, L-28, and L-28 Interceptor canals.

Third, the Plan also underestimates the massive conversion of natural habitat to citrus groves and vegetable farms along with the surrounding explosive population growth in SW Florida.

Fourth, and most importantly, it does not state what the final cumulative effect is.

With the past and current catastrophic losses of wetland habitat in south Florida, the need for high quality habitat largely requires that public lands serve this role. Considering the massive amount of cumulative impacts on soils listed above, it is clearly arbitrary to propose widespread ORV use with virtually no specific management actions to minimize impacts.

Conclusion. Because of the continued policy of dispersed use, failure to identify specific management actions, failure to define soil recovery, and the lack of supporting data and analysis the FBP concludes that the proposed action will not avoid, minimize, or substantially reduce soil impacts.

IMPACTS ON VEGETATION

ISSUE: The vegetation impact methodology fails to include the best available information.

The FBP notes that the Plan does not adequately analyze the direct, indirect and cumulative effects of ORV use on vegetation. Many of the conclusions are not supported by adequate information and analysis. As discussed above, the best available data and information is required under NEPA, the ESA, the National Omnibus Management Act of 1998, and the settlement agreement.

First, there is virtually no analysis of the potential impacts of the UGA ORV Trail Database (Welch and Madden 1998). The estimated 29, 799 miles of ORV trails and 148,000 impacted acres would be expected to cause significant adverse impacts to vegetation especially since 122,000 where classified as high impact areas.

Second, the Duever (1981;1986) studies are not referenced in this section. These studies note unnatural vegetative succession and reduced species diversity in ORV impact areas.

Third, many of the reports and memos from other independent scientists are not referenced.

Fourth, relevant Preserve in-house documents are not included.

General Comments on Vegetation Impacts

Devegetation. ORV's can cause direct mortality from impact or indirect by severe damage that results in death later. In regularly used trails vegetation is eliminated and some devegetated areas can be as much one quarter mile wide (Lodge 1994). The methodology utilized in the Duever studies (1981;1986) did not capture the scope of vegetative loss.

The University of Georgia study (Welch and Madden 1998) found considerable amount of high density areas (areas that have such a concentration of braided trails that they cannot be individually distinguished). These high density areas comprised 122,000 of the 148,000 impacted acres. This density would likely cause considerable vegetative loss.

Unnatural vegetative succession

ORV use has altered the vegetative composition of the Preserve's wetlands by devegetating wide ORV trails areas, reducing the diversity of plant species, and faciliting the spread of exotic seeds (NPS 1991; Beardsley 1995). Specifically, Duever (1981) found:

> Taxonomic composition was altered with the gain or loss of one or more dominant species in at least the medium and heavy impact lanes in virtually all plots. Small cypress plots had both the missing taxa and reduced numbers of other taxa . . . New taxa had appeared and/or the frequency of others had increased to levels greater than were present in the controls in all the wheeled vehicle plots by the end of the first growing season.

E1 (cont.)

In the follow-up to the original ORV study Duever (1986) determined:

> In the heavy impact lanes the disturbed soil generally supported a much reduced plant community, at least during the first year following the creation of the impacts. In the fall 1985 sampling period, some of these (experimental) lanes were difficult to see, not because of recovery within them, but because vegetation rooted adjacent to the lanes had overgrown them. However, others were still obvious due to . . . differences in amount, height or taxonomic composition of vegetation in and adjacent to the lanes.

Airboat use facilitates the spread of cattails. Areas of heavy airboat use have been associated with cattail establishment and cattails even invade abandoned or lightly traveled trails (Lodge 1994). This same effect has been noted in the Preserve by an NPS scientist (Snyder 1994). As Preserve resource management staff observed: "Photo points established along with the (airboat trail) sampling site reveal that cattails are rapidly becoming the dominant species displacing sagitaria and spartina."

Cypress Strands and Domes, Mixed Hardwood Swamps.

ISSUE: The Plan fails to adequately analyze the direct, indirect and cumulative impacts of ORV use in cypress strands, domes, and hardwood swamps.

The Plan notes that ORV's cut "multiple trails" through these communities. Tree canopies can mask the trails and lead to an under-estimation of their extent (NPS 1991). The Plan fails to utilize the "best available data" such as extensive trail and vegetation data provided by the UGA report to determine the direct, indirect, and cumulative impacts to these communities. The NPS has also failed to have these areas ground truthed according to scientific standards.

The Plan notes that ORV tracks may cause impacts to these communities such as altered water quality, water flow, altered fire patterns, and the introduction of exotics. ORV's may be preventing tree regeneration along the margins of cypress domes (NPS 1998).

A reduction in trail mileage is proposed but no supporting data is provided such as where, when, how many miles, etc. The described management action therefore is ambiguous and speculative.

While Duever (1986) determined that after seven years, former trails had a ground cover of herbaceous plants, this is no substitute for a natural tree canopy. The Plan then speculates that former trails would likely succeed to the condition of the surrounding swamp. Where is the supporting data for this statement? From Loop Road one can clearly see historic ORV trails where the tree canopy still does not cover the former trail area despite the fact that the area has been closed to ORV's for 20 years!

The UGA ORV Database also had a vegetative component, whereby ORV trails could be overlayed on the vegetation database to determine potential impacts (Welch and Madden 1998). Several quads where also analyzed for vegetation impacts. None of this information is referenced and analyzed in violation of NEPA. Other reports from scientists and the resource management are also not noted.

Cumulative Impacts. This section consists of just two sentences! Clearly, this is totally inadequate. There is no adequate quantitative, qualitative, or narrative description of cumulative cypress strands, domes, and swamp forest cumulative impacts. The analysis, in fact, downplays the cumulative impacts and vaguely alludes to pressure from agriculture and development.

First, massive reductions in Cypress strands and domes have taken place in the Big Cypress Swamp and the Everglades yet these are even noted. Old growth cypress has been virtually completed eliminated in the Preserve. Historically, the Preserve contained pristine cypress stands but by 1950 virtually all the cypress strands of commercial value has been logged. The young cypress strands and mixed-hardwood swamps are still recovering (NPS 1991). Because of massive logging, the Big Cypress Swamp has only small old-growth stands remaining in Fakahatchee Strand State Preserve and Corkscrew Swamp Sanctuary.

Second, in the Everglades, Swamp Forest and Cypress Strand landscapes have been eliminated.

E1 (cont.)

Table 7. Landscape loss of Swamp Forest and Cypress Strand in the Everglades. Ogden and Davis (1994).

Landscape type	Predrainage (ha)	Current (ha)	Percent loss
Swamp Forest	60,000	0	100
Cypress Strand	12,000	0	100

Third, explosive population growth and massive conversion of cypress forests to citrus groves and vegetable farms is occurring in SW Florida.

Fourth, there is increasing concern that cypress forests are at risk due the logging of these forests on private lands for landscape mulch.

Rare and endangered birds and mammals are likely to be found in cypress swamps and mixed hardwood swamps. In the Big Cypress region, six of nineteen birds listed as rare, threatened, or endangered use these swamps for breeding and feeding (Duever 1986a).

Conclusion. Because of their high value as wildlife habitat and massive historic losses, a higher standard of avoidance and minimization of ORV use is warranted. The conclusion fails to state what the overall cumulative effect is.

Because of the continued policy of dispersed use, failure to identify specific management actions, and the lack of supporting data and analysis the FBP concludes that the proposed action will not avoid, minimize, or substantially reduce ORV impacts to Cypress strands, domes, and mixed hardwood swamps.

Marshes

ISSUE: The Plan fails to adequately analyze the direct, indirect, and cumulative impacts on mangrove forests.

Marshes are considered an Important Resource Area since they "provide essential habitat for wading birds, including feeding habitat for the endangered woodstork, and the endangered Cape Sable seaside sparrow" (NPS 1991). Therefore, ORV impacts to marshes should be avoided and minimized to the maximum extent practicable.

The Plan explicitly admits that: 1) marshes have received the greatest impacts from ORV's; 2) rutting is extensive; 3) there is an extensive network of braided trails; 4) that recovery is "very slow"; 5) there is unnatural vegetative succession; 6) there is reduced plant diversity; and 7) there is reduced plant density. This of course does not include other additive impacts such as alteration of water quality and flows and disturbance to wildlife and associated habitat. Trail density is very high in marsh areas (Welch and Madden 1998).

First, the section fails to analyze UGA data. Vegetation data could have been overlayed with ORV trail data for a numerical analysis of ORV trails(Welch and Madden 1998). This would allow reviewers to determine the amount of marsh areas impacted and the trail density in marshes. As discussed earlier, the FBP has determined that there approximately 26 miles of ORV trails per square mile in the Preserve.

Second, There is also no mention of other direct and indirect effects such as vegetation damage in other marsh areas of the Preserve. In Bear Island, Thackeray (1994) determined, "Impacts to soils, vegetation, and aesthetics observed in the marsh are due to widening of the designated trail due to poor trafficability caused by prior ORV passes. Thackeray (1994) recommended closure so it will "leave intact one of the last freshwater marshes in the preserve for the time being" (emphasis added).

There is also no analysis of marsh degradation in the SW addition. Doyle (1998) has determined that previous marsh habitat is being converted into open water ponds and mangroves due to commercial airboat tours. Mangrove recruitment was clearly evident in underneath the marsh grass. Marsh erosion indicates process of progressive ponding related to airboat overwash and staging. Doyle (1998) concludes by stating; "The long-term ecological integrity of this coastal segment from adverse human impact by airboat traffic remains in doubt until further qualitative assessment" (emphasis added).

Smith (1998) determined that airboat wakes are creating new channels in marshes within the SW addition. Over time sediment is moved onto adjacent areas and a berm is formed. This will eventually alter the surface hydrology and sheet flow is transformed to channel flow. Smith (1998) concludes, " It is probable that vegetation will be altered. It doesn't take much of a difference in elevation to result in major changes in the vegetative community in the Big Cypress" (Duever 1986) (emphasis added).

E1 (cont.)

The SW Addition EA determined that the current condition (Alternative B) would result in salt marsh vegetation being converted into open water pools and mangrove (NPS 1999). The creation of artificial channels would increase salinity and hydraulic action from tides and airboat wakes would further contribute to mangrove recruitment. The FBP has expressed strong objections to allowing airboat tours that would result in altered vegetative succession. This would violate NPS Organic Act 16 U.S.C. § 1, the Preserves enabling legislation 16 U.S.C. § 698i(a), and E.O. 11644 and 11989 which require minimization of ORV impacts.

While the section mentions "recovery" of vegetation, it does not scientifically or operationally define the term. Is recovery something "green" growing in the trail or is vegetation that is nearly identical to the original density, composition, and growth of the site?

Cumulative Impacts. Cumulative effects are those that result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions. 40 C.F.R. § 1508.7.

The cumulative effects analysis consists of only three sentences. Half of the language in this section was lifted from the GMP and reflects "cookie cutter" analysis which does not comply with the requirements of NEPA.

First, as discussed above, the analysis fails to consider the UGA ORV Trail Database and the companion vegetation study.

Second, massive destruction and alteration of marshes and other wetland habitats in the south Florida ecosystem has resulted in the $ 8 billion Restudy which will attempt to rescue the system from near ecological collapse. The analysis fails to note that 50% of the Everglades has been lost to development and substantial losses are still occurring due to altered hydrology, agricultural pollution, invasion by melaleuca and other exotics, and agricultural and urban development. Sawgrass plains have declined by 74% and southern marl forming marshes have declined by 24% since the predrainage era in the Everglades (Ogden and Davis 1994). The FWS concurs on the scale of destruction: "throughout South Florida, there has been progressive loss of total functional coverage of freshwater marshes and wet prairies due to development, excessive drainage, exotic plant

infestations, water management restrictions on volume and timing of flow, and eutrophication" (USFWS 1999).

Third, the Plan fails to incorporate the past and current impacts of ORV activity in marsh areas and other cumulative impacts in the Big Cypress basin such as altered hydroperiod, fire patterns, etc (Duever 1999. Reasonably foreseeable future actions such as oil and gas exploration are not considered

Finally, the section fails to state what the overall cumulative effect on marshes is.

Conclusion. The section does not state how the proposed action is consistent with the analysis of the direct, indirect, and cumulative impacts on marshes. The FWS commenting on marsh impacts determined, " Since no additional area closures are proposed with the proposed action, the conclusion that the proposed action would reduce impacts to marshes is only supported by the changes in the ORV specifications" (USFWS 1999a).

While it alleges that the proposed action will "reduce" ORV impacts - this is the wrong standard. E.O. 11644 and 11989 requires that areas and trails shall be located to "minimize" damage to soil, vegetation, watershed, and other resources of public lands.

Because of the continued policy of dispersed use, failure to identify specific management actions and trails, and the lack of supporting data and analysis the FBP concludes that the proposed action will not avoid, minimize, or substantially reduce ORV impacts to marshes.

Mangrove Forests

ISSUE: The Plan does not adequately analyze the direct, indirect, and cumulative impacts on mangrove forests.

As discussed earlier, the Plan does not comprehensively address management of ORV use since it segments the analysis and eliminates the addition lands and commercial use in violation of NEPA. Mangrove forests therefore must be included in the SEIS analysis.

E1 (cont.)

256

The Plan does not adequately analyze the direct, indirect, and cumulative impacts of ORV use on mangrove forests. The Plan on page 60 explicitly acknowledges that Mangroves are protected by Florida's Mangrove Trimming and Preservation Act from trimming, removal, defoliation, and destruction. Despite the fact that mangroves are a protected species under Florida law, there is substantial evidence that commercial airboat operations have caused serious resource impacts to mangroves and other sensitive components of this vegetative community.

First, airboats have defoliated mangroves from the powerful prop wash as the airboat round bends in channels within the SW Addition. Jones (1997) describes the impacts of the commercial airboats operations on mangroves:

> The negative effects on the mangrove vegetation of airboats plying the waterways in the same area were quite obvious. The vegetation occupying the outer curves of bends in the water course is heavily impacted by the blast of air and water produced by airboats making the turns. The result – a broad band of defoliated (and dead) mangrove vegetation several feet deep at just about every bend – is disheartening to look at. In addition to red, black, and white mangrove species, buttonwoods, bromeliads and ferns are directly impacted by these activities.

Smith (1998) a research ecologist with the USGS, determined on a site visit to the Preserve that mangrove mortality and damage was occurring in the SW addition due to the propwash from commercial airboat tours. This included "continuing chronic defoliation" of leaves and an erosion of sediment along creek banks from the high energy of airboat wakes.

Snedaker (1999) also determined that commercial airboat tours in the SW Addition has caused "continuing episodes of turbidity, creek-bank erosion, mangrove recruitment failure on creek banks, and mangrove defoliation by airboat tail winds." Snedaker (1999) describes significant creek bank erosion:

> Each time an airboat passes through the narrow creeks, any loose sediment of organic debris that may have accumulated since the last airboat passage is swept off into the open water. As a result, the surface materials are not allowed to naturally accrete on the creek banks as they would in the absence of wave action. Such accretions

> typically form terms [sic] which are not present along the airboat trails. Mass wasting of creek bank sediment continues to occur as evidenced by the appearance of exposed live mangrove roots and rootlets protruding from the remaining sediment and peat in some areas (emphasis added).

Yet another ecologist, Dr. Doyle (1998) determined that regarding the impacts of commercial airboat tours, "there is mangrove branch and leaf dieback evident on nearly every bend of narrow tidal creeks and passages along the designated tour route . . . Damage appears to be caused by a combination of propwash and wave energy" (emphasis added).

Additionally, Preserve staff have documented the intensity of ongoing resource damage. Severe damage to Red mangroves is occurring from the propwash of airboats. The propwash defoliates the mangroves resulting in branch dieback and mortality (Pernas 1997). The damage is so severe that Pernas (1997) determined:

> It is our professional opinion that if the current use levels go unchecked, irreversible resource damage will continue. The damage occurring in this area has already surpassed the damaged [sic] experienced a few years ago in the Ochopee Prairie (emphasis added).

Although the NPS took administrative control of SW addition in December 1996 it waited until March 1999, before it finally released a draft Environmental Assessment (EA) of commercial airboat operations in the SW addition (NPS 1999). The EA analyzed a variety of adverse effects including mangrove defoliation, soil displacement, tidal flushing, impacts to manatees, and water quality. Despite the preponderance of evidence of serious resource impacts, the proposed action recommended continuing commercial airboat operations with minimal mitigation.

In April 1999, the FWS commented on the SW Addition EA. The FWS determined that the detrimental effects of airboat operations to fish and wildlife resources include: crushing and elimination of vegetation, disturbance to periphyton mats, mangrove defoliation and dieback, soil displacement, channelization, turbidity, and noise pollution (USFWS 1999a) [Attachment 54].

E1 (cont.)

In June 1999 the FBP submitted detailed comments regarding commercial airboat operations in the SW addition (FBP 1999b). These comments noted a multitude of adverse effects on mangrove forests that included devegetation of areas, mangrove mortality, mangrove defoliation, mangrove damage, and reduced growth and general health. In addition to impacts on the red, black, and white mangroves, airboats impacted associated species such as ferns, bromeliads, and buttonwood trees.

The most recent commercial airboat statistics document an astounding 22,364 commercial airboat trips from November 98 to October 1999 (Kacer 1999a). During a nine hour business day this would amount to approximately one trip every ten minutes, every day, for 365 days a year. Clearly, this extreme level of use would not be consistent with the minimization of ORV impacts, and thus is completely in violation of EO 11989 minimization requirement.

Cumulative Impacts. This section provides virtually no cumulative impacts within the context of the south Florida ecosystem. These impacts include habitat loss and fragmentation, oxidation of soils, introduction of exotic flora and fauna, altered hydrology, introduction of toxins, and altered fire regime (Duever 1999; Ogden and Davis 1994; Lodge 1994; Science Sub-Group Report 1993).

Conclusion. Currently, the NPS still has not released a Final EA, FONZI, or Notice of Intent to prepare an EIS. Presumably, the NPS will delay the NEPA review process even longer since they state these impacts will be addressed in a future addendum process to the GMP which is scheduled to begin this fall.

ISSUE: Because of considerable mangrove damage the NPS is in violation of Executive Orders 11644 and 11989.

As discussed above, there is substantial, credible, and compelling evidence that the NPS is violating Executive Orders 11644 and 11989. The best available data indicates that the NPS has not minimized the impacts of ORV use based on the extreme number of airboat trips documented (Kacer 1999a), substantial damage to mangroves (Jones 1997; Pernas 1997; Doyle 1998; Smith 1998; Snedeker 1999; Pernas 1999; USFWS 1999a; NPS 1999), and blatant recreational conflicts and safety violations (Jones 1997; Pernas 1997; Pernas 1999).

257

Therefore, the FBP reasserts the impacts and violations described in FBP's 1999 comments on the SW Addition EA. EO 11989 states:

> . . . whenever[s]he (the land manager) determines that the use of off-road vehicles will cause or is causing considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat or cultural or historic resources of particular areas or trails of the public lands, immediately close such areas or trails to the type of off-road vehicle causing such effects, until such time as [s]he determines that such adverse effects have been implemented to prevent a future recurrance (emphasis added).

Because of the above evidence that commercial airboat operations are causing considerable adverse effects on the mangrove community, the NPS, pursuant to EO 11644 and 11989 must immediately close the SW addition to commercial airboat use.

Old Growth Pinelands

ISSUE: The Plan fails to adequately analyze the impacts on Old Growth Pinelands.

Proposed Action. On page 62 the Plan alludes to 54 acres of old-growth pinelands while on page 38 it states there are 23,500 acres of uncut pinelands. Which number is correct? There is no map showing the location of the old-growth pinelands. There is no data or reference for the 30 miles of ORV trail. A reduction of 5 miles of ORV trail amounts to only 17%. There is no closure of specific trails in the proposed action. Additionally, the proposed action does not designate any closure criteria, trail density standards, or buffer zones. Where is the data to support this closure? Why not close 10 miles or 20 miles? Finally, there is no data to support the long-term recovery of pinelands from ORV impacts.

Cumulative Impacts. The section does not adequately analyze the cumulative impacts within the context of the south Florida ecosystem. These impacts include habitat loss and fragmentation, oxidation of soils, introduction of exotic flora and fauna, altered hydrology, introduction of toxins, and altered fire regime (Duever 1999; Ogden and Davis 1994; Lodge 1994; Science Sub-Group Report 1993). The GMP notes that logging, grazing, and drainage have considerably affected pinelands. Pinelands are a fire

E1 (cont.)

dependent community and habitat for the endangered red cockaded woodpecker. The FBP is concerned about the adverse effect of ORV trails on the spread of natural fire and prescribed burns. The Plan states that the effects of ORV trails on the behavior of natural fire has not been studied. The NPS (1998) notes that ORV tracks can act as natural barriers to the spread of ground fires and interference with natural fire cycles can have a pervasive negative impact.

The high amount of trail mileage and high density areas documented (Welch and Madden 1998) raise concerns about the effects of fragmentation and edge effects. Some quads had up to 30% of trail mileage in pine savanna as high density trails.

Another cumulative impact is the spread of invasive species which can be distributed by ORV's (NPS 1998; NPS 1994). Therefore, ORV trails should avoid old-growth pinelands.

Finally, the GMP and Plan note the Preserve's old growth pinelands represent one of the largest stands left in south Florida and with continued population growth in south Florida will become even more important. Given the above factors, a conservative management strategy is warranted and a designated trail system should avoid old-growth pinelands.

Conclusion. The precautionary suggests that if effects of an action are unknown then a conservative management strategy is warranted. The NPS alleges that the proposed action would "reduce" impacts. This is the wrong standard. E.O's 11644 and 11989 require that ORV impacts be "minimized".

Because of the continued policy of dispersed use, failure to identify specific management actions, and the lack of supporting data and analysis the FBP concludes that the proposed action will not avoid, minimize, or substantially reduce impacts to old-growth pinelands.

Hardwood Hammocks

ISSUE: The Plan fails to adequately analyze the direct, indirect, and cumulative impacts to hammocks.

The Plan fails to analyze the direct and indirect impacts to hammocks. The Plan fails to not vegetation loss, vegetation damage, unnatural vegetation succession, and ecotone impacts. Aust (1997) determined, " considerable evidence existed around the edges of hammocks that the buggies are killing trees either by cutting trails through the edges of hammocks or by rutting so near the trees that root severing was occuring." The NPS (1994) determined that important resource areas are receiving heavy ORV use due to the preference of ORV operators to traverse areas such as hammocks that are also preferred habitat of listed species. ORV's may also be preventing tree regeneration along the margins of hardwood hammocks. The encirclement of these smaller upland areas to flush out game is a common hunting method (NPS 1998). The ORV tracks around hammocks are clearly visible on aerial photos.

Duever (1986) determined that after seven years abandoned trails were vegetated by an opportunistic species. This is another example of unnatural vegetative succession. There has been no follow-up by the NPS to determine if recovery is progressing as speculated by Duever. These areas should have been resurveyed during the interim ten year period (USFWS 1999a).

The Plan also fails to analyze the UGA ORV Trail Database. The UGA study had a companion vegetation study whereby with GIS software ORV trails could be overlayed on different vegetation communities such as hardwood hammocks to evaluate the intensity and location of ORV impacts.

The Plan states that the proposed action would "limit" the number of trails through hammocks. The FBP is strongly opposed to ORV's traveling in hammocks and destroying or damaging vegetation. While the Plan prohibits "stumpknockers" it is apparently perfectly fine with the NPS that ORV's pummel the vegetation in hammocks with their large tractor tires. ATC's are also able drive under the hammock tree canopy and between large trees crushing understory plants.

E1 (cont.)

The section fails to state that hardwood hammocks are recognized as an "Important Resource Area" and that hammocks contain the majority of archeological sites known in the Preserve, contain many plant species that are rare, threatened, or endangered, and are also habitat for the critically endangered Florida panther and state protected species of Liguus tree snails (NPS 1991). Additionally, the Plan notes on page 38 that hammocks are recognized as important areas for nesting and breeding of wildlife. Hammocks are also susceptible to invasion by many exotic plant species (USFWS 1999) and ORV's can facilitate the distribution of exotic vegetation (NPS 1994). For the above reasons, ORV 's should be prohibited in and from encircling hammock areas. Adequate buffer zones should also be provided to protect hammocks from fragmentation and edge effects.

The USFWS (1999) has determined that roads and fire breaks which separate hammock edges from surrounding communities should be removed, and prescribed fire should be used as a tool to re-establish historic hammock edges. Roads which dissect and fragment tropical hardwood hammocks should be removed and restored. Additionally, exotic species must be controlled with the ultimate goal of extirpating as many invasive exotic species as possible, and restoring historic hammock structure and composition.

The no-action alternative uses the same language as the old growth pinelands section including the word "pinelands". This is "cookie cutter" analysis and does not comply with NEPA standards.

Cumulative Impacts. The section does not adequately analyze the cumulative impacts within the context of the south Florida ecosystem. These impacts include habitat loss and fragmentation, oxidation of soils, introduction of exotic flora and fauna, altered hydrology, introduction of toxins, and altered fire regime (Duever 1999; Ogden and Davis 1994; Lodge 1994; Science Sub-Group Report 1993).

While the Plan makes a broad statement about how hammocks have little protection and thus it will become "more and more important to preserve these communities", it does not state what the overall cumulative effect is. This is poor substantive analysis. The USFWS (1999) determined that cumulative impacts on hardwood hammocks include: ongoing destruction, logging, plant extirpations, illegal collecting, fragmentation, flooding, and drainage, and invasions of up 162 species of exotics. Extensive flooding and damage of tree islands/hammocks has occurred in the Water Conservation Areas. Additionally, the FBP understands that hammock areas may be destroyed for the proposed Loop Road interpretive trail.

Conclusion. The analysis does not state how the proposed action is consistent with the direct, indirect, and cumulative impacts on hammocks. Because of the continued policy of dispersed use, failure to identify specific management actions, and the lack of supporting data and analysis the FBP concludes that the proposed action will not avoid, minimize, or substantially reduce impacts to hardwood hammocks.

Prairies

ISSUE: The Plan fails to adequately analyze the direct, indirect, and cumulative impacts to Prairies.

The Plan does not adequately analyze impacts to soils, vegetation loss and change, noise, and aesthetics in prairies. The Plan explicitly admits serious impacts including "vegetation loss and exposed soils" and that areas where so heavily trafficked that mapping individual trails was "impossible". Clearly, this would also include the impacts of unnatural vegetative succession (NPS 1994; Snyder 1994). A difference of only a few inches can lead to the establishment of totally different plant communities (NPS 1991; Duever er al. 1986a). (Yamataki 1994) determined that oxidation of soils could reach one inch per year. Airboat trails in Ochopee Prairie increased in depth by an average of over two inches since 1990 (Pernas 1994a)(Attachment **). These impacts are not analyzed.

The Plan does not analyze the amount of prairie in the Preserve nor the amount impacted by ORV's. Since the UGA also developed a comprehensive companion vegetation study, this data should have been calculated and included. Overlays of trails on vegetation would provide an analysis of vegetation impacts and trail density. While the Preserve, may wish to quibble over the numbers, the sheer magnitude of high density trails in the prairies of Turner River and Corn Dance units cannot be denied. From a review of the quad maps one can clearly see the magnitude of high density areas.

E1 (cont.)

260

The Plan does not analyze the impacts of altered fire patterns. ORV tracks in some plant communities can act as barriers to the spread of ground fires (NPS 1998). With extensive vegetation loss and exposed soils fire patterns would likely be altered. Prairies require natural or prescribed fire to maintain species composition.

The GMP does not include any analysis of ORV impacts to Prairies for the proposed action thus making any comparison between the GMP and the ORV Plan very difficult for reviewers. This is one more reason why the ORV Plan should not be expressly tiered to the GMP.

There is no analysis of prairie impacts in the Stairssteps Unit. During 1996 substantial prairie areas of the Stairsteps Unit were impacted by commercial frogging operations. These grasses were flattened by "mashing" down with airboats in able to facilitate frogging operations. The NPS (1996) determined, "In many areas where a discernable trail used to take you to your destination, is now unrecognizable due to the trail being absorbed into the general annihilation of the once viable standing grass areas. In short, there is no standing grass habitat left in those areas". (emphasis added)

The prairie analysis fails to include recovery data. Since Ochopee Prairie was closed to airboat activity in 1994 a monitoring system was established. So far no measurable recovery has occurred.

Since the proposed action does not state any management threshold criteria, maps showing the location of trails and other areas, criteria for designated trails or areas, nor closure and opening criteria there is no data or analysis to support claims of substantial improvement.

The no-action alternative states that "severely impacted" areas would be closed and reclaimed to more natural condition over time. This is an irresponsible "damage control"since remedial actions for "severely impacted" areas may not be successful. A preventative approach must be used.

Cumulative Impacts. Cumulative impacts include, past, present, proposed, and reasonably foreseeable effects. The section does not adequately analyze the cumulative impacts within the context of the south Florida ecosystem. These impacts include habitat

loss and fragmentation, oxidation of soils, introduction of exotic flora and fauna, altered hydrology, introduction of toxins, and altered fire regime (Duever 1999; Ogden and Davis 1994; Lodge 1994; Science Sub-Group Report 1993). First, while the Plan makes a vague statement about development, it does not state what the overall cumulative effect is. The Plan downplays historical losses and fails to note the loss/serious damage in Ochopee Prairie or that the area was once suitable habitat for the Cape Sable seaside sparrow. Additionally there has been widespread loss of wet prairies in the SW Addition. Peripheral wet prairie has declined from 117,000 ha in the predrainage Everglades to 0 today (Ogden and Davis 1994). The USFWS (1999) notes the loss of wet prairies in south Florida:

> Throughout South Florida, there has been progressive loss of total functional coverage of freshwater marshes and wet prairies due to development, excessive drainage, exotic plant infestations, water management restrictions on volume and timing of flow, and eutrophication. While many isolated freshwater marshes and wet prairies still occur in South Florida, they are usually degraded and isolated from connections with upland habitats that are so critical to the interspersion of habitats required for complete ecosystem structure and function (Hartman 1992, Weller 1994). In the Everglades region, vast amounts of peripheral wetlands are being invaded by exotic pest plant species.

Conclusion. The analysis does not state how the proposed action is consistent with the direct, indirect, and cumulative impacts on prairies. The NPS concludes that the proposed action would "reduce" impacts on prairies. Again, this standard does not comply with EO's 11644 and 11989 which require "minimization" of ORV impacts.

Because of the continued policy of dispersed use, failure to identify specific management actions, and the lack of supporting data and analysis the FBP concludes that the proposed action will not avoid, minimize, or substantially reduce impacts to prairies.

E1 (cont.)

WILDLIFE

ISSUE: The Plan does not analyze the direct, indirect, and cumulative impacts on other potentially sensitive species.

The Plan inappropriately restricts its analysis to federally protected species. There is no restriction by NEPA on the analysis of other potentially impacted species. Land management planning should consider the needs of individual species, area sensitive species, and disturbance sensitive species (Noss 1999). The species that warrant the greatest individual attention are those with large areas requirements, specialized habitat needs, keystone species, or those with high sensitivity to human activities, including but not limited to endangered and threatened species (Noss 1999) (emphasis added).

Few studies have been conducted on the effects of ORV use on wildlife. Direct or potential harm on federally endangered, threatened species is based largely on BICY resource management reports. The scientific literature generally concludes that ORV use can negatively affect wildlife. Direct impacts may include death or injury from contact, particularly small animals such as fish and amphibians (NPS 1998). ORV's may also disturb wildlife, leading to changes in their behavior. Wildlife may be displaced from preferred habitats by ORV's. Disruptions to behavior can cause reduced vigor, reproduction, or lead to death. Human disturbance can alter abundance, distribution, or demographics of wildlife populations. Human activities can impact animals through four primary ways – exploitation, disturbance, habitat modification, and pollution. Recreation activities can modify vegetation, soil, water, and microclimates, which can impact species dependent on these habitats (Knight and Cole 1995).

ORV use in BICY has been shown to have an adverse effect on endangered, threatened, and sensitive species. The FWS has concluded that there is ample evidence that ORV use significantly effects wildlife. The BICY resource management staff found that airboat use in Ochopee Prairie could reasonably have an undesirable effect on seven federally listed species which was one the main reasons why the areas was closed to ORV use (NPS 1994a; NPS 1994b).

Other Listed Species

The FBP has serious concerns that other species may be affected by ORV use such as ground nesting birds, wading birds, small mammals, amphibians, reptiles, and invertebrates. At the minimum the Plan should evaluate the direct, indirect, and cumulative impacts of all listed species in the GMP not evaluated. These include:

American alligator
Eastern indigo snake (see discussion below)
Everglades mink
Big Cypress fox squirrel (see discussion below)
Florida black bear
Bachman's sparrow
Swainson's hawk
Reddish egret
Swallow-tailed kite
Southeastern kestrel
Migrant loggerhead shrike
Mangrove clapper rail (see discussion below)
Roseate spoonbill (see discussion below)
Limpkin (see discussion below)
Marsh hawk or American harrier
Little blue heron
Snowy egret
Tricolor or Louisiana heron
Merlin or pigeon hawk
Eastern kestrel
Florida sandhill crane
Tree snails
River otter
Bobcat
Osprey

E1 (cont.)

Ground Nesting Birds

The FBP is seriously concerned about the adverse effects of ORV's on ground nesting birds. For example, many ground nesting birds nest between March and June which also coincides with part of the busy winter tourist season when airboat operations are at peak frequency. Commercial airboat frequencies may reach as high as seven passes per hour producing a chronic effect. Ground nesting birds and nests may get run over by recreational airboats as well.

Airboat operations may result in direct mortality or serious injury of young and/or adult birds, destruction and damage to nests, degradation of habitat, and interference with sensitive pre-nesting behaviors (Minasian 1992). It is important to note that these same effects can occur when high velocity prop wash is directed at trees that contain nests.

Fragmentation by airboats may have adverse effects on ground nesting birds. Wilcove et al. (1986) determined that ground nesters are highly vulnerable to opportunistic mesopredators that frequent landscapes with high ratios of edge to interior habitat.

Potentially sensitive species that have not been analyzed include (Kale, et. al. 1990):

Pied-billed Grebe – The eggs are laid in a floating nest and the bird may be seen floating buoyantly or swimming partially submerged. It has a long breeding season that extends from March to December. Floating nests, possibly belonging to this species has been observed in the Ochopee Prairie. In a briefing paper the NPS discloses; "Species such as these have been unknowingly impacted by increased airboat activity" (NPS 1994a).

Purple Gallinule - Loosely constructed nests are placed over water and marsh vegetation. Eggs are laid in spring but nesting may last through the summer.

King Rail –Nests in dense marsh vegetation near the water's surface. Eggs are laid from late January to July.

The Clapper Rail - Nesting habits are similar to the King Rail with breeding extending from March to July.

Limpkin - Eggs are laid in a nest made of matted aquatic vegetation placed near the water or up to fifteen feet above in a tree.

Common Moorhen – Moorhens construct nests on floating tussocks. Eggs are laid between March and May.

Florida Mallard – Commonly found from late September to early March.

Wading Birds

Wading birds may also be adversely affected by ORV use by direct impacts such as flushing or indirect impacts such as degradation of habitat. While South Florida wetlands have been reduced by one half, wading bird populations have been reduced to less than 10% of their former size. (Science Sub-Group 1993; Davis and Odgen 1994). This may indicate that the remaining wetlands are so degraded that their carrying capacity for wading birds is only 20% of its historic condition. The requirement for safe and undisturbed habitat areas for wading birds places a higher burden of protection on public lands such as the Preserve (NPS 1994a).

The peak nesting time for wading birds coincides with the busy winter tourist season and higher airboat tour frequencies. Airboat operations can reach up to 16,000 trips per year by just one airboat company (Clark 1999) Flushing of wading birds by airboats and other ORV's can cause altered behaviors and reduced energy reserves. A study of minimum buffer zone requirements for nesting bird colonies concluded that all species flushed at greater distances to airboats than any other disturbance. For colonies of water birds subject to disturbance by airboats, the minimum recommended setback should be 300 meters (Rodgers 1991).

Wading birds have been observed being flushed by airboats. ORV's were found to be "repeatedly flushing" woodstorks and other wading birds which have a "need for

E1 (cont.)

secure and undisturbed areas for foraging", particularly in view of the continued loss of wetland habitat in south Florida (NPS 1994a). Commercial airboat operators may deliberately flush wading birds to provide in-flight photographs for passengers. Populations of wading birds have been observed to be smaller than would be expected in airboat areas (Kacer 1996). Degradation of habitat by ORV's may cause decreased prey availability and if wading birds to not find sufficient prey they may abandon young.

Big Cypress Fox Squirrel

Several different agencies and organizations have classified the Big Cypress fox squirrel as a threatened species. The Big Cypress Fox Squirrel is listed as a threatened species by the Florida Fish and Wildlife Conservation Commision. Sec. 39-27.004(24), F.A.C. The Florida Natural Areas Inventory (FNAI) ranks the Big Cypress fox squirrel as "S2" and "G5T2". This designation indicated the squirrel is "Imperiled in Florida, rare" and that it is "demonstrably secure globally" with the subspecies being "imperiled globally, rare". The Florida Committee on Rare and Endangered Plants and Animals (FCREPA) classifies the Big Cypress fox squirrel as threatened. Because of declining population trends and increasing habitat loss the Biodiversity Legal Foundation and the FBP have petitioned the FWS to list the squirrel as threatened and designate critical habitat under the ESA (BLF 1998).

The vast majority of ORV use is associated with hunting (NPS 1991). ORV's allow humans to travel deeper into the swamp and facilitate the harvest of game. The Big Cypress Fox squirrels have been traditionally been valued as game animals due to their large size and colorful coat. Since 1973, the fox squirrel has been protected from hunting. However, Jodice and Humphrey (1993) note that "there is no evidence that the 1950's levels of fox-squirrel hunting were sustainable" and that it is possible that more recent populations have been "suppressed by hunting."

Jodice and Humphrey (1993) noted that since the establishment of the Preserve in 1974, "the staff has recorded progressively fewer fox squirrel sightings." It has been noted that the size and inaccessibility of the Preserve and the small staff of enforcement officers make enforcement "almost impossible," and further observed that poaching of

the fox squirrel "is significant in the BCNP and may well be the species major limiting factor" (Duever, et al 1986).

The management plan for BCNP confirms there is "some illegal hunting" of the fox squirrel (NPS 1991). Studies of other subspecies of fox squirrel have raised similar concerns. Complete elimination of these small populations may result if excessive hunting occurs. "Because of the inherently low density of the Big Cypress fox squirrel, destruction of even a few individuals in a given area may render disastrous effects to that population" (Williams 1979).

Because of the wide-scale destruction of habitat the Preserve as public land has an obligation to prevent threats and enhance existing habitat so that the squirrel can recover. The Plan should fully analyze the indirect, connected, and cumulative effects of ORV use (including poaching) on the Big Cypress Fox Squirrel and require that designated ORV trails avoid areas known to contain fox squirrels, reduce possible illegal hunting pressure, and restore habitat.

Pig Frog

The FBP submitted comments for the proposed rule on frogging (FBP 1997) [Attachment 56]. While the proposed action recommends a ban on "mashing" this does not excuse the NPS from analyzing the impacts on the Pig Frog (*Rana grylio)*. There is substantial and compelling evidence that Pig frogs have suffered adverse impacts due to frogging operations.

The Preserve wildlife biologist recommended that all commercial frogging activities in Ocopee Prairie cease until studies can be conducted on the long-term effects of frogging and regulations are established and enforced so that no commercial frogging occurs. (Jansen 1994). Between January and May 1996 the Stairsteps Units suffered serious resource damage from commercial frogging. Airboats facilitate the take of frogs by providing access to interior marsh areas and by "mashing" vegetation allowing frogs to perch. The final Plan should analyze this species.

E1 (cont.)

Other Animals

As discussed above, the Plan should also analyze other potentially sensitive or impacted species. The FBP is concerned about small ground animals, particularly the Round tailed muskrat. Impacts from frogging operations have been documented by Almerico (1996). If information is unknown, then the Plan should admit data gaps and apply the precautionary principle.

Fish and Invertebrates

Relatively little research has been conducted on the effects of ORV use on fish and invertebrate populations. NPS biologist Dr. Jim Snyder observed during an inspection of airboat damage to Ochopee Prairie that "it is also possible that the disturbance of the periphyton may disrupt food chains and alter habitat structure for small fish and invertebrate populations" (Snyder 1994). Snyder also noted that increased turbidity and churned sediments by airboats are sources of potential impacts on fisheries.

PROTECTED SPECIES

Florida Panther

ISSUE: The Plan does not adequately analyze the direct, indirect, and cumulative impacts of the Florida panther.

Background. The Florida panther (panther) was listed in 1967 as an endangered species under the Endangered Species Preservation Act of 1966, and that listing status has continued under the ESA. See 50 C.F.R. § 17.11(h). The panther once ranged from eastern Texas or western Louisiana and the lower Mississippi River valley east through the southeastern states including Arkansas, Mississippi, Tennessee, Alabama, Georgia, South Carolina, and Florida (USFWS1999). Now, the only known, reproducing population is located in the Big Cypress Swamp/Everglades region of South Florida. The population is estimated to number between 30 and 50 adults and is regarded as one of the most critically endangered animals in the United States. The Florida panther is threatened by both rapid and gradual extinction processes. Threats to the panther include: habitat loss and fragmentation, environmental contaminants, prey availability, human related disturbance and mortality, disease, and genetic erosion (Dunbar 1994).

As the U.S. Fish and Wildlife Service notes in the recently issued Recovery Plan for the panther, its survival and recovery is dependent upon the successful completion of three tasks: 1) protection and enhancement of the extant population, associated habitats, and prey resources; 2) improving genetic health and population viability; and 3) reestablishing at least two additional populations within the historic range. (USFWS 1999).

The panther population in south Florida is found on approximately 3.1 million acres; however, of that amount, 47 percent of this habitat is in publicly owned and 53 percent is privately owned as of 1991. (Logan et al.1993) [Attachment 57]. The "rapid and extensive loss of panther habitat is a result of Florida's flourishing human population, which has doubled nearly every 20 years since 1830."(USFWS 1999; Logan, et al. 1993). Only 5 percent of the states resident's lived in 1900 in the south Florida area reviewed by the HPP; today, 50 percent live there, and the area has nine of the ten fastest growing metropolitan areas in the nation according to the 1990 census. Id. at 15. Regional planners predict that the doubling of the human population in the next 20 years will create the need for another 292 square miles of urban land. Id. at 16. In addition, agricultural development continues to replace and fragment panther habitat (USFWS 1999). Between 1980 and 1990, citrus acreage in southwest Florida increased from 53,298 acres to 128,379 acres, an increase of 141% (Logan et al. 1993).

Occupied panther habitat is about evenly divided between public and private land (USFWS 1999). If panther habitat on private lands is destroyed, the existing public lands in south Florida are capable of only supporting only 9 to 22 panthers (Maehr 1990) [Attachments 58] . This amount is insufficient to maintain a viable population, as current estimates indicate that 50 adult panthers are necessary (USFWS 1999).

Proposed Action Impacts. The Plan fails to adequately analyze the direct and indirect impacts on the panther. The FBP strongly objects to the statement: "There have been no studies thus far to indicate that ORV use alone causes change in panther behavior

E1 (cont.)

or other effects". This statement is self-serving and mischaracterizes the issue of human disturbance. ORV use is highly correlated with hunting and there is substantial evidence of human disturbance to panthers.

The Plan does not analyze the impacts of how ORV's and related hunting activity can adversely affect the panther in four basic ways -- habitat degradation, human disturbance, reduced prey base, and increased probability of illegal shooting.

First, a major threat is the degree of panther habitat degradation that ORV use and associated actions such as hunting causes. The quality of panther habitat is related to the panther prey base and the amount of human disturbance. ORV's can destroy and damage vegetation, reduce protective cover, and facilitate the spread of exotic vegetation (NPS 1994). The FWS has determined that " encroachment of exotic vegetation constitutes a major threat to panther habitat in major areas" (USFWS 1993). These factors are not consistent with the NPS vision of " a primitive area where ecological processes are restored and maintained" (NPS 1991).

One GFC biologist stated the Big Cypress region continues to shrink because the increase in roads and ORV's. "Habitat disturbance has been so extensive that little wilderness remains. The remaining wilderness character in panther habitat is an attraction to recreationists and poses a threat to their preservation." (Belden 1990).

Welch and Madden (1998) have determined that ORV disturbance covers a substantial area of the Preserve and the FBP is seriously concerned about the effects of habitat fragmentation on panther habitat and the Plan fails to provide adequate analysis.

A second major threat is that human disturbance (ORV use and associated hunting activity) is adversely affecting panthers and causing them to alter their natural behavior. In it's Biological Opinion on the GMP, the FWS "regards hunting and ORV use as the principle activities that may affect the panther" (USFWS 1991). The NPS estimates that up to 90% of ORV use is associated with hunting and that hunting and ORV use are virtually inseparable (NPS 1991).

Studies of western mountain lions indicate that even temporary human presence will reduce habitat value for the species, and more persistent or concentrated human presence will result in total loss of the area as suitable habitat, even without physical alternation of the habitat (Van Dyke et al. 1986). In referring to the Van Dyke study, the

NPS notes, "This indicates a very low tolerance to human activity by western panthers, and Florida panthers may share this sensitivity" (NPS 1991).

In a reintroduction experiment with Texas cougars, scientists further noted that the "fact that T-14, T-15, and T-16 left their established home ranges coincidentally with the beginning of hunting season leads us to hypothesize that the intense human activity associated with hunting exceeded the lions' tolerance for disturbance and caused them to leave their home ranges." Once leaving an established home range, they wandered (Belden, et al. 1990a).

In the GMP, the NPS explicitly admits:

> The effects of disturbance to Florida panthers from recreational and commercial activities are difficult to quantify but are potentially far reaching. Florida panthers are believed to be sensitive to human intrusion into their habitat, and the decline of the panther has been attributed to the loss of habitat quality due to increasing hunting, ORV use, and other backcountry recreation . . . Studies of disturbance effects on another subspecies of Felis concolor in Arizona indicate a very low tolerance to human activity . . . The primary threat to the panther has been human encroachment into panther habitat (NPS 1991)

Research by the GFC shows a correlation between increased human activity and altered panther movements. Maehr (1990a) [Attachment 59.] determined:

> Panthers used Bear Island (part of a Type I Wildlife Management Area) less during hunting season than any other time of year. Further, while not statistically tested , panther use was lowest in November (Fig. 26). This month traditionally has been the start of the general-gun hunting season and marks a precipitous rise in the level of use in wildlife management areas. Man-days of hunting ranged from 3,060 to 4,855 during the general gun season (approximately 60 days) from 1986 to 1988 (Shortemeyer et al. 1989). While no cause and effect relationship could be established between hunting season and a reduction in panther use, activities associated with hunting must be considered a possible factor in lower panther use. Further while natural environmental influences such as water level changes or variation in prey availability may have some impact on panther habitat use, we have not documented changes in environmental influences that appear to correlate as well as hunting season does with low panther use (emphasis added).

E1 (cont.)

The FWS has voiced similar concerns, "Past research by the GFC and the NPS indicates that some panthers may have altered their home ranges in response to hunting seasons" (USFWS 1991).

Additionally, the FWS notes "the south Golden Gate Estates, which is generally unregulated in terms of human access, is presently only occasionally used by panthers, despite containing over 40,000 acres of suitable panther habitat" (USFWS 1993).

In the most recent and comprehensive research, Clark and Janis (1999) studied the effects of human activity associated with hunting. They determined that panthers increased their distance from ORV trails by 180 meters during the hunting season. The researchers state, " This response would indicate that panthers found trails or the areas near them less desirable during the hunting season. So, in effect, the quality of these areas was lowered." Additionally, the researchers determined that panthers tended to leave Bear Island during the hunting season and that private lands to the north served as refugia. The researchers determined:

> The decreased use of Bear Island and the absence of a similar trend on the FPNWR should be considered good evidence of a negative response to Bear Island during the hunting season . . . therefore my results most likely indicate a direct aversion by panthers to human activity. . .The reduction in use suggests a lowering of the quality of the habitat in Bear Island, and, in effect, may temporarily reduce the amount of suitable panther habitat in Bear Island. . . However, private lands north of Bear Island appear to be serving as "refugia" during the hunting season.

Of particular importance is that the hunting intensity observed during the study period was almost five times lower than the maximum allowed under present hunting regulations, yet panthers still left Bear Island during the hunting season (Clark 1999a) [Attachment 60]. This suggests that there should be at a minimum substantial reductions in ORV and hunting activity in Bear Island. The consultation requirements of these actions will be addressed in comments by Meyer & Glitzenstein.

In the management implications section the researchers identify the potential for serious impacts of intraspecific aggression, roadkill, and habitat loss. Clark and Janis note,

> If cats use Bear Island less by concentrating their activity at the periphery of their home ranges, they may be more likely to encounter other panthers and, subsequently, increase the risk of intraspecific aggression and mortality. . . Likewise, panthers might be more likely to cross roads if they are trying to avoid an area, which would increase their risk of death from collisions with vehicles. . . areas to the north of Bear Island appear to be serving as "refugia" during the hunting season, so additional loss of habitat on these private lands could have serious consequences, and the availability and quality of habitat on the public lands becomes even more important. Habitat loss is a key reason for the imperiled status of the Florida panther, and making habitat on the public lands less usable because of human activity, while not appearing to have any negative energetic consequences under current, certainly cannot benefit panthers.

Finally the researchers conclude, " The Florida panther is one of the most critically endangered species in the world and decisions made today could have irreversible effects." It is apparent that the NPS has ignored the above evidence in its proposed alternative which does not even reduce trail mileage or hunting levels. To be consistent with the above evidence, the NPS should undertake a very conservative management strategy in its proposed alternative.

The FBP is also seriously concerned about attacks on the study by the FFWCC and hunters when research results do not conform to recreational hunting bias. Dr. Clark in response to these attacks vigorously defends the research methodology (Clark 1999a). This study should not become politicized but should be regarded as high quality scientific research that must be considered when making management decisions. The FBP strongly believes that management decisions regarding the panther should be based on the best available science, not political expediency.

The results of Clark and Janis (1990) are consistent with other studies and evidence (Van Dyke 1986; Belden 1990a; Maehr 1990; NPS 1991). Despite this preponderance of evidence that panthers are sensitive to and avoid human activity the NPS inexplicably continues to propose concentrated ORV activity in areas used regularly by panthers.

Despite the critical importance of the reintroduction effort to the conservation of the panther, the NPS has continued to take actions that fail to conserve the panther. As

E1 (cont.)

discussed above, despite the importance of low road densities to the panther reintroduction effort, the NPS has not ground truthed the vast number of ORV trails (Welch and Madden 1998) nor has it analyzed or developed a comprehensive designated trail system. The NPS has also refused to establish an ORV trail density standard for the Preserve. The management area descriptions give no indication of the density of ORV trails in each unit. Of course, if the agency does not know the amount of ORV trails, you cannot know the density; the lack of basic analysis strikes the FBP as non-responsive to the basic biological questions.

Third, the Plan does not analyze the impacts of how ORV assisted hunting may reduce the prey base for the Florida panther. According to the NPS estimates, as much as 90% of ORV use is associated with hunting. The two most popular game species sought by hunters are deer and feral hogs. These two species are also the principle prey of the panther. The availability of prey is one important limiting factor in the size of the panther's home range and population. ORV- assisted hunters compete with the panther for prey. The biological effect of the reduction of the panther potential prey base has been a matter of controversy for years. As one NPS funded study stated:

> Findings from this study suggest that the potential for over-harvesting the male population in the wet prairie of BCNP is high, particularly during the wet years when hunting with airboats is facilitated. Diminished male densities, in turn, would reduce female fecundity within BCNP, and could significantly impact prey availability for the Florida panther (Sargent 1992).

The FWS has stated it is "extremely concerned that as a result of ORV's, hunters are able to travel deeper into the swamp and are more effective in killing deer and hogs, which directly impacts the panther's primary food source" (USFWS 1994). In the GMP the NPS has admitted similar concerns. ORV use in Bear Island was restricted to designated trails "to contain potential disturbance to panthers, to control hunting pressure on panther prey (deer and hogs) . . ". (NPS 1991) (emphasis added). ORV use was also prohibited in the Deep Lake unit to reduce hunting pressure on panther prey species (NPS 1991).

Fourth, the Plan fails to analyze the indirect impacts of illegal shooting. The NPS determined that "Illegal shootings are primarily a function of the frequency of encounters between panthers and humans. Three panthers were known to no illegally shot in south Florida between 1981 and 1986" (NPS 1990a). As Duever et al. (1986a) noted : "it is important to remember whenever you make it easier for people to get into a remote part of the Preserve, you unavoidably also make it easier for the irresponsible few to shoot panthers and collect rare orchids."

Two reintroduction studies in north Florida have been plagued by illegal shootings. Two of the seven cougars in the 1988 study were illegally killed. Of the ten cougars introduced in the 1993 study, one cougar died from a gun shot wound, a second died from an arrow shot, and a third was wounded by an arrow.

The FWS notes, "Six Florida panther shootings, five fatal and one non-fatal, occurred between 1978 and 1986--an average of one every 2 years. These data do not include the more recent shootings of introduced Texas cougars; however, it should be noted that all subspecies of *Puma concolor* that occur in Florida are protected by a "similarity of appearance" provision in the Endangered Species Act" (USFWS 1999).

A recent shooting also has occurred. One of the Texas cougars involved in the 1995 genetic augmentation program was found fatally shot in a Collier County citrus grove April 18, 1998 despite the similarity of appearance provision and being radio collared.

Cumulative Impacts. This section does not adequately analyze the impacts of the past, present, proposed, and reasonably foreseeable future actions on the panther If panther habitat on private lands is destroyed, the existing public lands in south Florida are capable of only supporting only 9 to 22 panthers (Maehr 1990). This amount is insufficient to maintain a viable population, as current estimates indicate that 50 adult panthers are necessary (USFWS 1999). As discussed above panther survival is affected by a wide range of rapid and gradual extinction processes and is regarded as one of the most endangered mammals in the world.

In an environmental assessment, the NPS provides a more explicit analysis of cumulative impacts (NPS 1990a):

E1 (cont.)

268

> The odds for the long-term survival of the panther are not good. The human population in the region continues to increase, resulting in urban growth and expansion of the regional highway network into former panther habitat. The demand and use of panther habitat for outdoor recreation has also increased and will continue to do so. Trends in agriculture are towards more intensively managed systems, such as citrus orchards (which decrease habitat for panther), and away from grazing and other low intensity management systems that are less destructive of panther habitat. Petroleum development in the region has grown significantly in the past 20 years and continues to contribute to the occupation of panther habitat in the region.

The FWS has stated proposed actions "should be compared against a base condition that would provide the least risk to the panther, rather than the historic conditions since the establishment of the Preserve. The possible alternative of banning all hunting and ORV use in the BCNP would provide the maximum assurance of protection of panthers from disturbance, and is the appropriate bais of comparison in determining possible adverse effects of the proposed alternative . . . The FWS and the NPS should recognize that, given the precarious situation of the panther, all available measures should be considered in future management decisions if actions in the total range of the panther lead to an even greater risk of its possible extinction" (USFWS 1991).

The statement that "implementing either alternative would help address these trends by reducing disturbance related to ORV activities and improving habitat conditions in the preserve" is not corroborated by supporting data or analysis since the plan is so ambiguous and speculative.

Conclusion. . The FWS made specific recommendations to the NPS on the content of the ORV plan (USFWS 1991). These recommendations include:

1. Except where determined essential for the Preserve to comply with the mandates of its enabling legislation, public ORV use should be prohibited in areas used on a regular basis by panthers.
2. The plan should provide details on how the NPS will ensure that permitted ORV use will be maintained below levels that would limit panther use.
3. The plan should provide details on the process for selecting specific trails and areas for public use.

4. The plan should provide details on how the restricted regulation will be enforced (emphasis added).

The Plan ignores these recommendations and does not provide specific management actions, supporting data, or analysis to support its conclusions that the proposed action would not likely affect the panther. As noted above there is substantial and credible evidence to the contrary. The Proposed Action states that unit management of Bear Island allows up to 60-80 miles of ORV trails. Yet based upon the results of Clark (1999) the NPS does not even recommend that trails and hunting activity be reduced in Bear Island or that ORV use be prohibited in areas regularly utilized by the panther as recommended by the FWS (USFWS 1991).

The NPS conclusion that "The no-action alternative would not be likely to adversely affect panthers" is contradicted by the recent human activity study (Clark 1999) and the FWS Biological Opinion (USFWS 1991).

Recommendations.

1. The Plan should provide for the greatest possible protection of the Florida panther and work on ways to improve habitat for the species, including closure of ORV trails and areas, restoration of degraded habitat examination of roads, and enhancement of deer populations.
2. The FWS has recommended that "except where determined essential for the preserve to comply with the mandates of its enabling legislation, public ORV use should be prohibited in areas used on a regular basis by panthers" (USFWS 1991). Based upon the preponderance of evidence provided above the FBP concurs with the FWS recommendation and recommends that ORV use be prohibited in Bear Island.

E1 (cont.)

Cape Sable Seaside Sparrow

ISSUE: The Plan does not adequately analyze the direct, indirect, and cumulative impacts to the Cape Sable Seaside Sparrow, does not provide adequate protection to sparrow habitat and fails to use the best available information.

The Plan does not adequately analyze the direct, indirect, and cumulative impacts from airboat use in sparrow habitat and potentially suitable habitat, fails to protect and restore sparrow habitat, and does not utilize the best available information from sparrow experts.

The Cape Sable seaside sparrow (sparrow) is one of the most endangered bird species in the United States and was listed as endangered under the ESA in 1967 (USFWS 1999). It is found almost exclusively within the boundaries of Everglades National Park and Big Cypress National Preserve. During the last decade the sparrow population has declined approximately by half to 3500 birds. Successful reproduction is essential for sparrow recovery and requires quality breeding habitat. The sparrow preferred habitat is the short hydro-period marl prairies (USFWS 1999).

The sparrow is regarded as an indicator species providing a vivid warning that past and current water management has seriously degraded ecosystem function. The sparrow is not a "single species management" issue but is a major multiple species and ecosystem management concern since short hydroperiod prairies support a rich variety of species including 14 endangered species and 9 threatened species (Lodge 1994; Nott 1999).

The principle threat to the sparrow continues to be water management impacts that have flooded habitat in the western subpopulation and excessive drainage in the eastern sub-populations (USFWS 1999). Over the last eight years the sparrow has experienced a dramatic population decline of approximately 60%. Of extreme concern is the drastic drop in subpopulation A west of Shark River Slough that includes habitat in the Preserve. This sub population has declined by 90% since 1992 and is far too small to serve as a core breeding population. As long as there is only one viable subpopulation, the sparrow is in eminent danger of extinction from a single catastrophic event such as a fire or hurricane.

Table 8. Population estimates for the Cape Sable seaside sparrow (USFWS 1999).

Population	1981	1996
Total population	6656	3056
Subpopulation A	2688	192

Massive water releases from the S-12's have flooded and degraded sparrow nesting habitat. To address the continued degradation of habitat the BLF and FBP have filed a rule making petition to revise critical habitat for the sparrow to include all current and historical known breeding areas for subpopulation A (BLF 1999). A recent lawsuit by the Natural Resources Defense Council, the BLF, and the Sierra Club claims the Corps and SFWMD have violated the ESA by flooding its nesting habitat.

The sparrow was discovered in Ochopee Prairie in 1942 and has been extirpated from the area since 1979. Recent population surveys reveal that populations of sparrows in the southeastern Stairsteps Unit have dramatically declined threatening to extirpate the species from the entire Preserve.

Especially egregious is that the NPS senior management evaded NEPA analysis and ESA compliance in the permitting of the commercial airboat operations in the SW Addition which contains potential sparrow habitat. Kenney (1997) [Attachment 61] correctly determined "we should not have authorized the commercial airboat rides without conducting a NEPA analysis and conducting Section 7 consultation with the USFWS."

The FWS Multispecies Recovery Plan calls for specific recovery actions for the sparrow that include 1) restoring the core population west of Shark River Slough; 2) recolonizing former habitat; 3) prevent degradation of habitat; and 4) restoring disturbed habitat (USFWS 1999).

A major concern is that airboat activity is degrading sparrow habitat. The Plan fails to disclose that past airboat operations in Ochopee Prairie have effectively removed sparrow habitat by "expanding the already extensive network of trails and the practice of knocking down nesting grasses to facilitate frog harvesting." (NPS 1994a). The Ochopee Prairie areas has been so degraded by airboat use that it had to be closed in order to comply with E.O. 11989 [Attachment 62].

E1 (cont.)

Everglades National Park biologist Orin Bass commented that given suitable habitat the sparrow could repopulate the Ochopee prairie on its own (NPS 1994a). The Plan also fails to document that potential sparrow habitat is being degraded by commercial airboat operations in the SW addition. In the SW Addition EA, the NPS states, "Alternative B may result in avoidance of the affected area by the sparrow . . ." (NPS 1999).

Under the proposed action, ORV operation would occur in areas used by sparrows, potential sparrow habitat, and historical sparrow habitat. The FBP strongly objects to airboat use in these three important habitat areas given the precarious state of the sparrow and the NPS explicit admission that "the effects of ORV use of Cape Sable seaside sparrow habitat have not been studied". This type of reckless management is not congruent with the precautionary principle. The 48,000 acres of sparrow habitat documented in 1981 should be immediately closed to ORV use.

Another major concern is the effects of fragmentation. On page 48, the Plan states, "Prairies appear to be the most impacted vegetation community in the preserve and existing impacts are easily distinguished by aerial photography. The tracks made by ORV's persist and are even visible on larger scale aerial images. The prairie areas within the preserve have experienced the heaviest use of ORV traffic resulting in vegetation loss and exposed soils . . . many of the prairie areas were so heavily trafficked that mapping the trails was impossible . . . " Analysis of the UGA ORV data reveals extensive ORV trails in areas adjacent to western boundary of ENP in potential sparrow habitat (Welch and Madden 1998). This level of impact is unacceptable.

Additionally, the sparrow is considered a ground nesting bird since nest height averages 18 cm above grass tussocks (Pimm 1999). Ground nesters are highly vulnerable to opportunistic mesopredators that frequent landscapes with high ratios of edge to interior habitat (Wilcove et al. 1986).

This proposed action also states " it is assumed the proposed measures. . . would have a positive impact . . ." This is a shockingly speculative determination for such a critically endangered species. Other proposed measures remain ambiguous and speculative. There is also no supporting data to conclude that vegetation would recover. For example, preliminary results indicate that there has been no recovery in Ochopee Prairie since being closed since 1994 (Pernas 1999a).

The Plan states that "nesting sites for Cape Sable seaside sparrow appear more dependent upon structure of habitat rather than composition" (Lockwood et al. 1999). In contrast, airboats are largely incompatible with sparrow conservation since they flatten vegetation and associated frogging activities result in widespread "mashing" of vegetation (NPS 1994a). Airboats break or crush plants as they are being run over and erode soil due to the energy of their wakes (NPS 1999). Although mashing is prohibited this activity still occurs. The FBP concludes that the proposed action is so ambiguous and speculative that it will not have any meaningful positive impact on sparrows.

The Plan also did not seek the best available information on sparrow conservation and does not comply with NEPA. NEPA requires that information be of high quality, have accurate scientific analysis, expert agency comments, and public scrutiny. 40 C.F.R. § 1500.1(b). Further, NEPA requires that the SEIS be supported by evidence the agency has made the necessary environmental analysis. 40 C.F.R. § 1502.1. "Agencies shall also insure the professional integrity, including scientific integrity, of the discussions and analysis. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other methodologies used and shall make specific reference by footnote to the scientific and other sources relied upon for conclusions in the statements." 40 C.F.R. § 1502.24.

Despite several admonitions from Preserve staff to seek the advise of Dr. Stuart Pimm and Orin Bass, the leading sparrow researchers, the Plan shows no reference to them (Janzen 1999a; Kenney 1999a). These researchers would have likely provided specific recommendations for management actions to protect and restore current, potential, and historical sparrow habitat.

Conclusion. The Plan does not provide even the most basic protections to the sparrow. Airboats can still run through sparrow current habitat, potential habitat, and historical habitat causing serious degradation.

Because of the continued policy of dispersed use, failure to identify specific management actions, and the lack of supporting data and analysis the FBP concludes that

E1 (cont.)

the proposed action will not avoid, minimize, or substantially reduce ORV impacts to the sparrow.

Recommendations

1. Airboats should be prohibited in sparrow habitat, potentially suitable sparrow habitat, and historical sparrow habitat.
2. Airboats must be required to use designated trails with a sufficient protective buffer zones that avoid sparrow habitat.
3. The prohibition of "mashing" vegetation should be strictly enforced.
4. Restoration of sparrow habitat, potential habitat, and historical habitat should be a management priority.
5. Habitat and hydrologic monitoring should be carefully coordinated with Everglades National Park.
6. Management reviews and recommendations should be regularly sought from the leading sparrow researchers such as Dr. Stuart Pimm, Orin Bass, and others.
7. The NPS must initiate formal consultation with the FWS immediately on ORV use that may affect the sparrow.

Additional comments on the sparrow will be submitted by Meyer & Glitzenstein.

Wood Stork

The Plan does not adequately analyze the direct, indirect, and cumulative impacts on the Wood Stork.

The analysis of impacts on the wood stork is misleading and superficial. Wood storks are regarded as a key indicator of the South Florida ecosystem. The U.S. population of the wood stork was listed as endangered under the ESA in 1984 because the population has declined more than 75%. Most authorities agree that since the 1930's, the number of wood storks have declined by more than 90% and the rate of decline in south Florida accelerated in the 1960's and 1970's (USFWS 1999).

271

The habitat level recovery actions in the Multi-Species Recovery Plan require that at a minimum degradation of existing wood stork habitat be prevented for continued survival of the population (USFWS 1999).

A second major recovery action is to protect sites from disturbance. Human disturbance causes wood storks to leave nests, exposing eggs to predation or exposure (USFWS 1999).

A third major recovery action is to restore and enhance habitat. The deterioration of the Everglades and Big Cypress basins has resulted in decreased nesting by wood storks in south Florida (USFWS 1999). The wide-scale spatial extent of ORV trails (Welch and Madden 1998) raises serious concerns about the quality of wildlife habitat including wading birds such as the wood stork.

There is no data or supporting analysis to conclude that; " It is very unlikely that ORV use activities would occur in wood stork nesting areas". Plan at 71(emphasis added). Nesting activities are not the only relevant criteria. The NPS explicitly admits that ORV's were found to be "repeatedly flushing" wood storks and other wading birds which have a "need for secure and undisturbed areas for foraging", particularly in view of the continued loss of wetland habitat in south Florida (NPS 1994a; Kenney 1995).

In fact, the areas where these activities occurred in Ochopee Prairie were so degraded by ORV use that they had to be closed. Nesting activities are just one example of wood stork behaviors. ORV's may disturb roosting, feeding, and reproduction behaviors. Repeated flushing may significantly reduce energy reserves. Degradation of habitat may also reduce prey abundance and availability.

The analysis of direct, indirect, and cumulative impacts from ORV's must include the full range of normal behavioral activites of the wood stork and include impacts noted by the resource management staff. A vastly reduced designated trail system should be implemented that would avoid areas known to utilized by wood storks.

E1 (cont.)

272

West Indian Manatee

ISSUE: The DORVMP/SEIS fails to adequately analyze the direct, indirect, and cumulative impacts of the West Indian Manatee.

As stated earlier, the Plan inappropriately restricts the analysis to recreational ORV use and thus completely ignores the analysis of commercial ORV use and ORV use in the Addition. The NPS has documented that commercial airboat tours are likely causing significantly adverse effects to the West Indian manatee, *Trichechus manatus*, in the SW addition (Jones 1997; Pernas 1997; NPS 1999). The FBP has submitted comments in response to the commercial airboat tours recommending that the airboat tours be terminated (FBP 1999).

The West Indian manatee, was listed in 1967 as an endangered species under the Endangered Species Preservation Act of 1966, that listing status has continued under the ESA. 50 C.F.R. § 17.11(h). According to the Florida Manatee Recovery Plan, the manatees in Florida waters constitutes a separate subspecies, the Florida manatee (*T. manatus latirostris*). (USFWS 1996). Florida manatees constitute the largest known group of West Indian manatees anywhere in the species' range. Id. at 4. While manatees also occur in the Greater Antilles, on the east coast of Mexico and Central America, along the north and northeastern coast of South America, and Trinidad and Tobago, these populations are believed to be much smaller than the U.S. population and are subject to poaching for food, incidental take in gillnets, and habitat loss. Thus, the conservation of the Florida population takes on international significance. Id.

The manatee is one of the most endangered marine mammals in coastal waters of the United States. *Id.* Despite research, it has not been possible to develop a reliable estimate of manatee abundance in Florida, but the highest two day count is 2,639 manatees in 1996. Id. at 2. That number decreased to 2,229 manatees in 1997according to the *Multi-Species Recovery Plan* (USFWS 1999) At 4-34.

The major threats to manatees are collisions with watercraft, which account for about 25% of known manatee deaths in Florida annually, and destruction and degradation of habitat caused by widespread development throughout much of the species' Florida range. Florida Manatee Recovery Plan at 4. In addition to direct collisions with boats, secondary effects from boating activity include such stresses as disruption of normal

breeding behavior, disruption of cow-calf bonding, interference with migration routes and patterns, and the loss of feeding areas (USFWS 1999) at 4-37. Marinas, boat ramps and other boating facilities increase local boat traffic. They therefore influence the frequency of watercraft collisions with manatees in areas where manatees are common. Faculty construction and resulting traffic also can degrade habitat features, such as grassbeds, which are important to manatees. Entrapment in flood gates and navigation locks is the second largest cause of human-related manatee deaths. In some cases, manatees appear to have been crushed in closing doors; in others, they may have been drowned after being pinned against narrow door openings by water currents rushing through openings. The threats of collisions by watercraft and habitat destruction are two of the consequences of the rapid growth in Florida's population, and as long as the trend in population growth continues, "the long term survival of manatees in the U.S. is in serious jeopardy." In addition, disturbance and harassment by boaters, divers, fishers, and others can alter manatee behavior and reduce the suitability of some areas as manatee habitat. Public feeding of manatees may alter natural behavior in ways that ultimately change manatee distribution patterns or place individual animals at risk. People often chase after manatees that are trying to avoid them, which constitutes harassment, and may cause animals to leave preferred habitats. These harmful activities are occurring in the SW Addition (Jones 1997; Pernas 1997).

In addition, there have been three manatee deaths in the immediate area (NPS 1999). According to the NPS between 1979 and 1997 the FWS documented 76 manatee deaths due to watercraft in Collier County. Fourteen of these (18%) have occurred in the surround area of Everglades City. *Id.* at 10. In 1998 the highest rate of manatee mortality was recorded with 66 deaths. Conservation biologists have determined that the manatees' death rate is exceeding its birth rate and without effective protective management actions the species will go extinct (Marmontel et al. 1997).

The complete lack of any management action in the Plan is inconsistent with the listed actions of the FWS Multi-species Recovery Plan (MSRP) (USFWS 1999). According to the MSRP "species level" recovery actions require that agencies enhance existing populations by minimizing the causes of manatee mortality, injury, and disturbance. Additionally, management actions should minimize collisions between

E1 (cont.)

manatees and watercraft. The MSRP also lists "habitat level" recovery actions which require that agencies prevent the degradation of existing manatee habitat and take actions to restore habitat.

The FBP questions why there is no protection for the manatee in the Plan. Since the main threat to the manatee is mortality and injury from powerboats it is unconscionable for the NPS to permit high-speed airboat operation in designated manatee critical habitat (NPS 1999).

The Plan fails to discuss the degradation of aquatic and wetland habitat in the SW Addition that commercial airboat use has caused; provide a desired future condition for Manatee habitat, or discuss the manatee deaths in the Preserve and adjacent areas, much less require the NPS to implement actions that would protect and conserve manatees by eliminating or reducing their take due with the elimination, or modification of the commercial airboat tours.

Conclusion. Because of the continued policy of dispersed use, failure to identify specific management actions, and the lack of supporting data and analysis the FBP concludes that the proposed action will not avoid, minimize, or substantially reduce ORV impacts to the manatee. In fact, the continued status quo management is likely resulting in an unauthorized "take" of the Manatee.

Recommendations

1. Include a detailed analysis of the direct, indirect, and cumulative impacts to the West Indian Manatee.
2. Immediate closure of commercial airboat operations in manatee habitat.

Issue: The Plan does not analyze the direct, indirect, and cumulative impacts of the Eastern indigo snake.

The FBP objects to the determination that impacts to the Eastern indigo snake would be negligible and that the species could be dismissed from analysis. All species that could potentially be affected by ORV use should be analyzed.

273

Duever (1986) notes that whenever you make it easier for people to get into a remote area, you also make it easier for people to collect rare plants and animals. Although the indigo snake has suffered from habitat loss, collecting from the pet trade has been a major factor of its decline (NPS 1990a). The current risk to indigo snakes from collecting is unknown. Although the present status of the species is unknown, it is believed to be common in hammocks and pineland habitats where drier soils are available for burrows (NPS 1990a). These habitats are also popular with ORV operators (NPS 1994). The weight of ORV's could potentially collapse burrows.

Indigo snakes are known to avoid roads. The expansive ORV trail systems that in places can reach a quarter mile wide are a concern as well as the high density areas that comprise approximately 122,000 acres (Welch and Madden 1998). These habitat modifications by ORV's may present serious obstacles to the dispersal of indigo snakes.

Recreational Conflict

The Plan contains virtually no analysis of the direct, indirect, and cumulative impacts of recreational conflict. The more extensive discussion of recreational conflict in the September 1998 Review Draft has been completely excised in the Plan.

Methodology. While the NPS conducted an extensive survey of ORV visitors, no such survey was conducted for non-ORV visitors. Plan at 50. We believe this indicates a bias on the part of the NPS. The FBP questions whether the NPS wanted to analyze the impacts of ORV use on non-motorized visitors. This type of one-sided methodology reinforces the belief that the NPS caters to the ORV user. There is also no information on non-ORV visitor comments nor attendance numbers for hikers on the Florida Trail.

A fundamental purpose of the NPS Organic Act is to "conserve the scenery and the natural and historic objects therein and to provide for the enjoyment and of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations" 16 U.S.C. § 1 (emphasis added).

The protection of scenic values is one of the reasons why the Preserve was established. The Big Cypress Enabling Act states the purpose for establishing the Preserve: " the preservation, conservation, and protection of the natural, scenic, hydrologic, floral and faunal, and recreational values of the Big Cypress watershed . . . 16

E1 (cont.)

U.S.C. § 698f(a) (emphasis added). While Congress anticipated that some recreational uses would continue, it emphasized that "public uses and enjoyment would be limitied to activities where, or periods when, such visitation would not disrupt the values which the area is created to Preserve." H. Rep No. 502, 93rd Cong., Sess 7 (1973). Additionally, the NPS is required to comply with NPS Visitor experience regulations.

Traditional outdoor recreation values such as solitude, tranquility, quiet, and escape from urban life have become increasingly more difficult to achieve in relation to the proliferation of ORV's. In general noisier activities such as ORV use will preempt and eventually displace recreational activities that are more contemplative (Sheridan 1979). Non-motorized users suffer impairment of recreational enjoyment when forced to compete with ORV's. Continued impairment may result in the reduction of non-motorized recreational use. One major study states that eventually these users are displaced and this process follows a pattern called the "ISD syndrome" Impairment – Suppression- Displacement (Badaracco 1976).

Recreational conflict and eventually displacement by ORV's can be caused by unpleasing aesthetics, noise, altered physical environment displacement of wildlife, conflicting values, and concern for human safety.

As noted above, the protection of scenic values is one of the reasons why the Preserve was established. Aesthetic impairment can result from deep rutting, vegetation loss and damage. Even when ORV are not present they leave reminders of their passage with ruts, soil erosion, defoliated trees, turbid water, flattened vegetation, reduced wildlife populations, and litter. Jones (1997) observes on a reconnaissance trip to the SW Addition:

> Airboaters are limiting the appreciation of the natural beauty of the area by visitors who enter by canoe, kayak, or small boat. Signs regulating river and creek traffic, e.g. "airboat exit only", "slow" to meet the requirement of airboats are detracting from the wilderness experience this area should offer. Trash (plastic bags, beer cans, buckets, floatation devices) appeared to be more abundant than comparable, unimpacted habitats elsewhere.

The NPS has included in an earlier draft other specific user conflicts (NPS 1998). These include:

- Conflicts at campground routinely occur between ORV visitors and non-ORV campers. Complaints include ORV noise, competition for camping spaces, highly impacted ORV trails that make hiking difficult. ORV activities and noise lessen solitude and quiet of the campground.

- Conflicts with hikers along the Florida Trail where ORV travel along the trail or cross it. ORV rutting makes hiking difficult and degrades the beauty of the area. Noise from ORV's also diminishes the hikers experience.

- Conflicts with mountain bike riders where the natural beauty of the area is degraded by rutting. ORV activity and noise can degrade the solitude and potential for wildlife observation

Following is a comment from Preserve hiker on December 28, 1996 that illustrate the intensity of recreational conflict (name withheld NPS 1996a) [Attachment 63] :

> "We hiked about 4 miles north on your trail system. I train protected area personnel in many parts of the hemisphere and have never witnessed such extreme off-road vehicle (swamp buggy and 4 wheelers) damage in 30 years of professional and recreation travels. It is a shock to be expecting a relatively primitive foot trail and to encounter increasing evidence of such damage the farther one walks. NPS has experienced cut-backs, against which I lobby continually but I can also tell that the field staff have gotten the brunt – if trail conditions and off-road vehicle trail proliferation are any indication. I feel sad when I see such unique ecosystem treated this way on public lands. Respectfully _____"

E1 (cont.)

Another letter sent by Mr. Don Kendzior [Attachment 64] further illustrates the intensity and scope of recreational conflict:

> "Having viewed the preserve by both land and air, I am appalled by the destruction that has occurred due to ORV's and hunting. It is my understanding that the Organic Act of 1915 created the preserve to protect the natural beauty and wildlife for perpetuity. It is also my understanding that the National Trail Systems Act and the Florida National Scenic Trail Comprehensive Plan prohibit use of motorized vehicles by the general public along any national scenic trail. Mr. Hibbard, the destruction resulting from ORV's and hunting that I witnessed and photographed, is unacceptable for an inner city park let alone a national preserve. As the person the public holds in good faith as the protector of these precious lands, I demand that you take immediate steps to 1) reduce ORV and hunting access to the Big Cypress Preserve by at least 75% and 2) reserve a six by six square mile area of the preserve exclusively for hiking and prohibit ORV's and hunting within this area."

Specific examples of complete displacement of non-motorized visitors is evident in the SW addition by commercial airboat operations (NPS 1999). There have been reports of illegal denial of access to areas in the Preserve. For example areas in the SW addition have been illegally closed off to canoeists, kayakers, and other boaters by airboat operators. Aust (1997) determined that the extensive level of rutting in some areas of the Preserve "basically denied use of the area" to potentially less disrupting foot traffic.

Natural quiet is a resource and the noise of ORV's is a major source of conflict (NPS 1998). Noise can impairs the non-motorized visitor experience. Baldwin and Stoddard (1973) state that noise levels from ORV's can be disruptive for visitors seeking peace and natural quiet. For example airboats can produce noise levels in excess of 120 dB when accelerating. At cruising speeds airboats produced noise levels from 86 to 92 dB within 3 meters and 63 to 75 dB at 100 meters (Duever 1981). Airboat noise can be heard up to 2.6 nautical miles. Other ORV types such as ATV's and swamp buggies can produce disturbing noise. Noise from ORV's can also disrupt and displace wildlife, thus reducing viewing opportunities.

Public safety also has not been analyzed. Since most ORV use ORV use is associated with hunting some non-motorized visitors have expressed concern about safety and the fear of accidental shootings (Fleshler 1999).

Commercial airboat operation in the SW Addition has made the area unsafe for other users. Airboats traveling at high speed may hit canoes going around blind curves. Excessive wakes created by airboats may also cause canoes, kayaks, and small boats to capsize. Erratic and intimidating operation of commercial airboats have been observed by Preserve staff (Pernas 1997). The NPS (1999) explicitly admits:

> The primary type of other recreational users having the potential to be affected . . . are boaters and canoeists. In addition to the effects of airboat noise on these users they are currently displaced from the areas used by the commercial tour airboats. The frequency of use on the trails, the volume of airboat traffic, and the potential for collision renders use by other boaters and canoeists of the commercial tour route area, during the tour businesses' hours of operation impractical and unsafe.

ISSUE: The cumulative effect analysis does not consider the additive ecological interrelationships.

The Plan discusses each resource type separately and does not analyze how the cumulative impacts of how each resource category interrelates with each other. As the NPS explains: " . . . all resources are intertwined, and an impact on one will, in turn, affect the functioning of another" (Jansen 1994).

Table 9. Overall cumulative effect on selected Preserve resources.

RESOURCE	Past Actions	Present Action	Proposed Action	Future Actions	Cumulative Effect
Hydrology/Soils					
-Surface Water - Flows	Severe impacts on surface water flows due to C&SF Project	Continued alteration of water flows from ORV's	Little change because of no specific actions to avoid & minimize effects	Continued ag development to north. Restudy would eliminate some canals & levees	Overall substantial impacts on water flows
-Water Quality	Serious	Continued	Continued	Continued	Substantial

E1 (cont.)

	impacts from canals, ag, and runoff	tubidity	turbity with disperesed use	population growth and ag north of Preserve	decline of water quality in south Florida ecosystem
Soils	50% loss of wetland soils	Loss of soils from oxidation up to 1 inch per year	Rate of soil loss slightly reduced	Continued loss of soils from development and ORV recreational use	Substantial loss of productive wetland soils
Vegetative Communities					
-Cypress -Strands/ -Mixed Hardwood -Swamps	Loss of old growth cypress in Big Cypress, complete loss in Everglades	No improvement, multiple paths cut through these areas.	Little improvement because of few actions to avoid & minimize effects	Continued loss due to urban development	Substantial loss of Cypress Strands/Domes and Mixed Hardwood Swamps
- Marshes	50% loss of spatial extent	Highly impacted	Reduced rate of degradation	Continued development - unknown results of Restudy	Substantial cumulative loss in Everglades
- Mangrove Forests	50% loss	Significant defoliation & death of trees	No Management Action	Some continued loss due to coastal development	50% loss from historic levels
-Old Growth Pinelands	Massive loss due to logging and development	Continued impacts from dispersed use	Slight reduction in impacts with continued dispersed use	Purportedly protected only on public land	Massive historical losses
- Hardwood Hammocks	Substantial decline due to development	Degradation of hammocks from ORV's	Minimal reduction in impacts	Purported protection of remaining hammocks on public lands. Degradation in WCA's	Massive historical decline
Prairies	Substantial losses from development	Heavily impacted	Minimal reductions	Continuing losses from development	Large scale losses
Listed Wildlife					
Florida Panther	Massive loss of habitat plus persecution	Substantial degradation of habitat	Very minimal reduction in impacts	Continued loss of habitat due to development	Critically imperiled, high risk of extinction
Cape Sable Seaside Sparrow	Substantial loss of Muhly grass Prairie. Flooding of habitat	Degradation of potential habitat in Ochopee & SW Addition	Ambiguous minimal reduction in impacts	Continued alteration of habitat	Critically imperiled, high risk of extinction
West Indian Manatee	Dramatic population decline due to human caused	Degradation of habitat from airboats potential for	No Management Action	Population growth & associated boat traffic	Unsustainable rate of mortality. Species may go extinct

	mortality	additional mortality		increases. Continued high rate of mortality	
Ground nesting birds	Loss and degradation of habitat.	No Analysis	No Analysis	Unknown	Probable decline.

From the above table, the Plan fails to integrate the substantial cumulative effects and ecolofical stressors of the South Florida ecosystem (Mazzotti 1995; Ogden and Davis 1994; Science Sub-Group 1993; Lodge 1994). Additive and synergistic effects are not analyzed. Duever (1998) [Attachment 65] utilized a ecological flow chart to determine the cumulative impacts and relationships in the Big Cypress Basin.

CONCLUSION

In discussing natural resources planning, Ruth (1990) described two basic philosophies or approaches - damage control and anticipation/prevention. Damage control driven planning reacts to negative criticism and clearly demonstrated problems. Ruth (1990) terms this type of philosophy a "dinosaur". In contrast, management driven by anticipation/prevention is proactive – capable of avoiding or minimizing conflicts before they become intractable problems. Proactive management is characterized by identifying goals and objectives, natural resources, and the regulatory framework.

Clearly, the draft ORV Management Plan is a "dinosaur" and a throwback to crisis driven damage control planning. Specific ORV management actions are ambiguous, weak, and in many cases non-existent. Comprehensive ORV management is delayed yet again, while resource damage continues unabated. Frome (1992) describes this NPS bureaucratic response:

> The National Park Service, as we know it now, cannot provide the necessary leadership. The influence of the director has steadily declined, he follows orders from assorted political supernumeraries

E1 (cont.)

> in the Interior Department. Consequently, the Park Service fails to speak on the issues that degrade the parks; it pussyfoots around the issues and answers in cautious, politically acceptable terms. The bureau has lost its professional stature and its respect in resource management . . . It postures and plans, but plans go on the shelf, to be updated with more postulating a few years later. It dreads opening the planning process to full public participation and the accountability attendant to the process. The bureau hierarchy dreads the input of its own people (emphasis added).

The FBP has exhaustively detailed the numerous failings of the Plan in the previous 150 pages. The above comments along with the Plan itself explicitly documents substantial, credible, and compelling evidence that ORV's cause substantial natural resource impacts, yet the Plan does virtually nothing to avoid and minimize these impacts.

The NPS has now developed an extensive public record of delay, obfuscation, and reactive damage control management. The Preserve has been without an ORV Management Plan for 25 years and when the NPS promised in the GMP to produce such a plan in 1991 it did not do so and the FBP had to as a last resort, undertake litigation in 1995 resulting in the settlement agreement. Then the NPS violated the deadline for the draft plan by 16 months. Now after three years and four months of Plan preparation and over $400,000 of taxpayers money we still do not have an effective science based "management plan" that fully complies with the NPS's legal obligations. This 25 year pattern of non compliance is unacceptable.

The FBP has regarded the settlement agreement as a renewed commitment to legal compliance and the use of sound science. But the Draft Plan's flagrant violations demonstrate the opposite of such a commitment. It should be apparent to the NPS that the settlement agreement and relevant statutes are enforceable by the Courts. To avoid any misunderstandings, the FBP wants to make it crystal clear that it intends to fully enforce the terms of the settlement agreement.

The bottom line — the Plan is fundamentally flawed and unacceptable. It must be substantially rewritten. Because of the serious inadequacies, the final ORV Management Plan/SEIS must:

277

1. fully comply with all statutes, Executive Orders, and relevant regulations including the settlement agreement.
2. identify and incorporate the best available science and analysis including research.
3. identify and incorporate specific management actions to avoid and minimize ORV impacts to the maximum extent practicable.
4. specify dedicated funding and an implementation schedule.
5. analyze the no ORV alternative and an alternative that would avoid and minimize ORV impacts to the maximum extent practicable to protect natural resources until research can determine the long-term ecological effects of ORV use in the Preserve.
6. Immediately close areas where adverse effects may be occurring to listed and sensitive species.
7. Immediately close areas where considerable adverse effects are occurring.

The FBP expects the Final Plan to be published in June 2000. The NPS should utilize all available resources to produce the Final Plan on time. The FBP, the BLF, and the Sierra Club Calusa Group request a copy of the Final Plan and an opportunity to submit written comments.

E1 (cont.)

278

REFERENCES

Aust, M. 1997. Memorandum: General Impressions Regarding Off-Road Vehicle Use in Big Cypress National Preserve. August 1997.

Badaracco, R. 1976. Conflicts Between Off-road Vehicle Enthusiasts and Other Outdoor Recreationists – The ISD Syndrome. Southern California Academy of Sciences Symposium on Social, Recreational , and Environmental Impacts of Off-Road Vehicles. Santa Barbara, California .

Baldwin, M.F., D.H. Stoddard Jr. 1973. The off-road vehicle and environmental quality. Washington D.C. The Conservation Foundation.

Beardsley, G. 1995. Affidavit of Gary Beardsley. Florida Biodiversity Project v. Roger Kennedy et al. Civ. No. 95-50-CTV-FTM-24D.

Belden, R.C. 1990. The Florida Panther. Audubon Research Report 1988/1990. pp. 523-524.

Belden, R.C. 1990a. Panther Captive Breeding Reintroduction Feasibility, Final Performance Report 23. Florida game and Fresh Water Fish Commission.

Biodiversity Legal Foundation. (BLF) 1998. Petition for a rule to list the Big Cypress Fox Squirrel, *Sciurus niger avicennia,* as a threatened species and to designate critical habitat pursuant to the Endangered Species Act.

Cairens, K. 1999. Comment letter re; the Draft Environmental Assessment Operation of Airboat Tours from Everglades City, Florida Within the Southwest Addition of Big Cypress National Preserve. USFWS to NPS.

Center for Plant Conservation (CBC) 1999. www.mobot.org/chc

Clark, R. 1999. Deposition of Ron Clark. Miccosukee Tribe of Indians v. NPS, et al. 98-521-CIV-Nesbitt.

Dean, T. 1999. Non-Breeding Season Ecology of Cape Sable Seaside Sparrows Project Summary.

Department of Interior. 1992. Office of Inspector General. Protection of Natural Resources, National Park Service. Report 92-I-1422. September 1992.

Doyle,T.W. 1998. Memorandum: Qualitative Assessment of Mangrove/Marsh Damage from Commercial Airboat Tours of Big Cypress National Preserve. April 16, 1998.

Duever, M.J., J.E. Carlson, and L.A. Riopelle. 1981. Off Road Vehicles and Their Impacts in the Big Cypress National Preserve. National Park Service T-614. National Audubon Society.

Duever, M.J. L.A. Riopelle, and J.M. McCollom. 1986. Long-term Recovery of Experimental Off-road Vehicle Impacts and Abandoned Old Trails in the Big Cypress National Preserve. SFRC-86/09. National Audubon Society.

Duever, M.J., J.E. Carlson, J.F.Meeder, L.C. Duever, L.H. Gunderson, L.A. Riopelle, T.R. Alexander, R.L. Myers, and D.P.Spangler. 1986a. The Big Cypress National Preserve. National Audubon Society Research Report No. 8.

Duever, M. 1999. Big Cypress Regional Ecosystem Conceptual Model. South Florida Water Management District. Referenced in the appendix of the Restudy.

Dunbar, M.R. 1994. Florida panther biomedical investigation. Final report to Florida Game and Fresh Water Fish Commission. Study No. 7506.

Ehrlich, P.E. and A.H. Ehrlich. 1981. Extinction: The causes and consequences of the disappearance of species. Random House. New York, New York.

Florida Biodiversity Project (FBP) 1994.Comments on the Proposed Recreational Access Points/Rest Area along the I-75 Corridor. January 13, 1994.

Florida Biodiversity Project (FBP) 1994a. Request for Enforcement Action against Non-Permitted Discharged Dredged Materials into Waters of the United States. May 19, 1994.

Florida Biodiversity Project (FBP) 1994b. Supplemental Petition Regarding the Applicability of the de minimus Exemption to Off-Road Vehicle Discharges under Sec 404 of the Clean Water Act.

Florida Biodiversity Project (FBP) 1994c. Notice of Violations of the Clean Water Act and the Endangered Species Act in connection with the National Park Service's Recreational ORV Permit Program in the Big Cypress National Park [sic] and Addition Lands.

Florida Biodiversity Project (FBP) 1995. Complaint for Declaratory and Injunctive Relief. FBP v. Roger Kennedy, Director, National Park Service, et al. February 15, 1995

Florida Biodiversity Project (FBP) 1995a. Plaintiffs' Motion for Partial Summary Judgement. FBP v. Roger Kennedy, Director, National Park Service, et al. Civ. No. 95-50-CIV-FTM-24D.

Florida Biodiversity Project (FBP) 1995b. Settlement Agreement. FBP v. Roger Kennedy, et al. No. 95-50-CIV-FTM-24D. October 25, 1995.

E1 (cont.)

Florida Biodiversity Project (FBP) 1999. Scoping comments on the Draft ORV Management Plan/SEIS. April 1999.

Florida Biodiversity Project (FBP). 1999a. Comments on the Draft Environmental Assessment: Operation of Airboat Tours From Everglades City, Florida Within the Southwest Addition Area of Big Cypress National Preserve. June 3, 1999.

Frome, M. 1992. Regreening the National Parks. The University of Arizona Press. Tucson, Arizona

Geological Society of America. 1977. Committee on Environment and Public Policy. Impacts and Management of Off-road Vehicles. Boulder, CO 8pp.

Grumbine, E. 1994. What is Ecosystem Management? Conservation Biology 8: 30-31.

Harris, L.D. 1984. Bottomland: Hardwoods, Valuable, Vanishing, Vulnerable. Florida Cooperative Extenstion Service, University of Florida. Gainesville, Florida.

Harris, L.D., Lynn C.Badger, Tom Hoctor, and Philip M. Hall. 1991. Everglades Biodiversity Decline, and Implications for the Big Cypress National Preserve. University of Florida. Gainesville, Florida.

Hibbard, W. 1997. Memorandum: Wally Hibbard to Ron Clark. Subject: Comments ORV Plan. September 5, 1997.

Hibbard, W. 1999. Deposition of Wally Hibbard. Miccosukee Tribe of Indians v. US et al. United States District Court. Southern District of Florida. 98-521-CIV-Nesbitt.

Hibbard, W. 1999a. E-mail. Plan update. June 25, 1999.

Jansen, D. 1994. Impact of CUL Airboat Activities and Frogging on the Wildlife Resources of Ochopee Prairie.

Jansen, D. 1999. Deposition of Deborah Jansen. Miccosukee Tribe of Indians v. US et al. United States District Court. Southern District of Florida.98-521-CIV-Nesbitt.

Jansen, D. 1999a. Memorandum: Comments on Wildlife Aspects of ORV Plan. July 21, 1999.

Jodice, P. and S.R. Humprey. 1993. Activity and Diet of an Urban Population of Big Cypress fox Squirrels: A reply. J. Wildl. Manage. 57: 930-933.

Jones, D. 1997. E-mail Memorandum to T. Pernas re: reconnaissance trip to the SW corner of the Preserve. Spring 1997.

Kacer, K. 1996. E-mail Memorandum. Subject: Doug House Florida Tours.

279

Kacer, K. 1996. E-mail to Wally Hibbard. Subject: Record of Meeting. December 6, 1996.

Kautz, R.S. 1993 Trends in Wildlife Habitats. 1936-1987. Florida Scientist 56: (1) 7-24.

Kenney, P. 1995. Deposition of Patrick Kenney. Florida Biodiversity Project v.Rodger Kennedy, et al. 95-50-CIV-FTM-24D.

Kenny, P. 1999a. Memorandum; Comments on ORV Plan.—July Review Draft.

Kriz, C. 1997. Comments from Assistant Superintendent at NP-BICY. September 9, 1997.

Kriz, C. 1998. Memorandum: Draft ORV Management Plan (Revised Comments). November 25, 1998.

Logan, T., Andrew C. Eller, Ross Morrell, Donna Ruffner, and Jim Sewell. 1993. Florida Panther Habitat Protection Plan

Lodge, Thomas. 1994. The Everglades Handbook. St. Lucie Press. St. Lucie, Florida

MacArthur, R.H. and E.O. Wilson. 1967. The Theory of Island Biogeography. Princeton University Press. Princeton, New Jersey.

Maehr, D. 1990. The Florida Panther and Private Lands, Conservation Biology: 4: 167-170.

Maehr, D. 1990a. Florida Panther Movements, Social Organization, and Habitat Utilization. Final Research Report. Florida Game and Freshwater Fish Commission.

Marion, J. 1995. Off-Road Vehicle Management Plan for Big Cypress National Preserve, A Project Proposal. Virginia Tech. Blacksburg, Virginia

Marmontel, M., S. Humprey, and T.J. O'Shea. 1997. Population Viability Analysis of the Florida Manatee (Trichechus manatus latirostris), 1976-1991. Conservation Biology 11: 467-481.

Mazzotti, F., Laura A. Brandt, Leonard G. Pearlstine, Wiley G. Kitchens. 1993. Final Report, An Evaluation of the Regional Impacts of New Citrus Development on the Ecological Integrity of Wildlife Resources in Southwest Florida. South Florida Water Management District

Mazzotti, F. 1995. A Comprehensive Plan for Conserving the Ecological Integrity of the South Florida Ecosystem. South Florida Water Management District. West Palm Beach, Florida.

E1 (cont.)

Mazzotti, F.J. and C. Morgenstern. 1997. A Scientific Framework for Managing Urban Natural Areas. University of Florida Cooperative Extension Service. Publication SS-WEC-74.

Meffe. G., C. R. Carroll, and Contributors. 1997. Principles of Conservation Biology. Sinauer Associates. Sunderland, Massachusetts.

Minasian, L. 1992. Airboats in Water Conservation Areas. Memorandum to Jim Stevenson. DNR.

National Park Service (NPS) 1990. Draft I-75 Recreational Access Plan / Environmental Assessment. April 1990.

National Park Service 1990a. Draft Biological Assessment. I-75 Recreational Access Plan.

National Park Service 1991. General Management Plan and Final Environmental Impact Statement, Big Cypress National Preserve. 427pp.

National Park Service. 1993. Big Cypress National Preserve Capsule Briefing Statement.

National Park Service (NPS). 1994. Project Statement Sheet, BICY ORV Management Plan.

National Park Service. 1994a. Ochopee Prairie Airboat Impact Briefing Paper. Big Cypress National Preserve. Ochopee, Florida

National Park Service. 1994b. News Release. Airboat Operations Closure Expected at Ochopee Prairie. Big Cypress National Preserve.

National Park Service. 1994c. Bear Island Trail System. April 18, 1994

National Park Service. 1996. Big Cypress National Preserve. Wildlife Resource Management Field Report. March 28, 1996.

National Park Service. 1996a. Big Cypress National Preserve Visitor Comment Form. December 28, 1996.

National Park Service. 1998. Review Draft Off-Road Vehicle Management Plan/Environmental Impact Statement. September 1998.

National Park Service 1999. Draft Environmental Assessment: Operation of Airboat Tours from Everglades City, Florida Within the Southwest Addition Area of Big Cypress National Preserve. U.S. Department of Interior, National Park Service. March 1999.

National Park Service. 1999a. Memo from Hydrologic Technician regarding Commercial Airboat Monitoring. July 28, 1999.

Nature Consevancy 1992. Extinct Vertebrate Species in North America. The Nature Conservancy, Arlington, Virginia.

Newmark, W.D. 1985. Legal and biotic boundaries of Western North America National Parks: A problem of congruence. Biological Conservation 33: 197-208.

Noss, R.F. 1999. A Citizens Guide to Ecosystem Management. Boulder, CO. Biodiversity Legal Foundation. 33pp.

Noss, R.F., E.T. Laroe III, and J.M. Scott. 1995. Endangered Ecosystems of the United States: A preliminary Assessment of Loss and Degradation. Biological Report 28. National Biological Service.

Noss, R.F. and A. Cooperrider. 1994. Saving Nature's Legacy. Defenders of Wildlife. Island Press. New York, New York.

Noss, R.F. 1992. The Wildlands Project, Land Conservation Strategy. Wild Earth Special Issue.Cenozoic Society.

Noss, R.F. 1987. Florida's National Forests: Our Last Chance. ENFO. Florida Conservation Foundation. Winter Park, Florida

Nott, P. 1999. Commons Everglades Listserve. October 29, 1999

Pernas, A. undated. Big Cypress National Preserve ORV Designated Trail and Area Monitoring Program Proposal.

Pernas, A. 1994. Memorandum, Closure of East Hinson Marsh ORV trail due to Resource Damage. February 6, 1994.

Pernas, A. 1994a. Ochopee Prairie Airboat Impacts: Soil/Vegetation/Recreation.

Pernas, A. 1995. Deposition of Anthony Pernas. Florida Biodiversity Project v. Rodger Kennedy, et al. 95-50-CIV-FTM-24D.

Pernas, Tony. 1997. E-mail message to Bill Carroll, Chief Ranger. Re: Commercial Airboat Activity. March 18, 1997

Pernas, Tony. 1999. Deposition of Tony Pernas. Miccosukee Tribe of Indians v. US et al.. United States District Court. Southern District of Florida. 98-521-CIV-Nesbitt.

Pernas, Tony. 1999a. Memorandum: Commercial airboat monitoring. September 7, 1999.

E1 (cont.)

Pimm, S. 1999. Cape Sable Seaside Sparrow Review/Workshop. Response to panel questions. January 21, 1999.

Pimm, S. 1995. Press Release. University of Tennessee.

Postel. S. and J.C. Ryan. 1991. Reforming Forestry. P.74-92 in L. Starke, ed. State of the World 1991. A World Watch Institute Report on Progress Towards a Sustainable Society. W.W. Norton, New York.

Repenning, R.W. and R.F. Labisky. 1985. Effects of Even age timber management on bird communities on the longleaf pine forest in northern Florida. Journal of Wildlife Management 49: 1088-1098.

Reynolds, R.V. and A.A. Pierson. 1923. Timber Cut of the United States. 1870-1920, U.S.D.A. Bulletin No. 1119. Washington, D.C.

Rodgers Jr., J. 1991. Minimum Buffer Zone Requirements to Protect Nesting Bird Colonies From Human Disturbance. Final Report. Florida Game and Freshwater Fish Commission. Tallahassee, Florida

Ruth, H.S. 1990. Risk Identification Techniques for Land Managers. Urban Wildlife Manager's Notebook – 18 Supp. To Urban Wildlife News XI(3) Nat. Inst. for Urban Wildlife, Columbia, Md. 4pp.

Sargent Jr., R. 1992. Movement Ecology of Adult male White-Tailed Deer in Hunted and Unhunted Populations in Wet Prairie of the Everglades.

Schemnitz, S.D. and J.L.Schortemeyer. 1972. The Influence of Vehicles on Florida Everglades Vegetation. Florida Game and Fresh Water Fish Commission. Fort Lauderdale, Florida.

Schneider, W., D. Weeks, and D. Sharrow. 1996. Water Management Plan. Big Cypress National Preserve. National Park Service.

Science Sub-Group Report. 1993. Federal Objectives for the South Florida Restoration by the Science Sub-Group of the South Florida Management and Coordination Working Group.

Sellers, R. 1997. Preserving Nature in the National Parks: A History. New Haven Yale University Press.

Sheridan, D. 1979. Off-Road vehicles on Public Lands. Council on Environmental Quality, Washington D.C.

Sholly, D. 1999. Memorandum: Comments on draft ORV Annotated Outline and Section 2. July 16, 1999.

Shrestha, R. and B. Carter. 1998. Instant Evaluation of Beach Storm Damage. EOM Magazine. March 1998.

Smith, J. 1998. ORV Pollution. The Road-RIPorter. Wildlands Center for Preventing Roads. Vol. 4, No. 1.

Smith, T. 1998. Letter to Pat Kenney. Commercial airboat operations in the Big Cypress. April 13, 1998.

Snedaker, S.C. 1999. Affadavit of Samuel Snedaker. Miccosukee Tribe of Indians v. NPS United States District Court, Southern District of Florida. 98-521-CIV-Nesbitt.

Snyder, J. 1994. Memorandum from J. Snyder, NPS to Tony Pernas, NPS regarding Ochopee Prairie Tour.

Snyder, W. 1999. Conversation Record. Personal conversation with Harold Young on 8-22-99 concerning the proposed ORV Management Plan swamp buggy regulations.

Snyder, W. 1999a. E-mail: phone conservation. August 23, 1999

Soule, M. 1980. Conservation Biology: its Scope and Challenge. In M.E. Soule and B.A. Wilcox, eds., Conservation Biology. p 166.

Stankey, G.H. 1982. The role of management in wilderness and natural area preservation. Environmental Conservation 9:149-153.

Thackeray, B. 1994. Memorandum: Closure of East Hinson Marsh Vehicle Trail. April 4, 1994.

Thackeray, B. 1994a. Memorandum: Proposed Additions to Designated Trail System in Bear Island Unit. Big Cypress National Preserve.

U.S. Department of the Interior (USDOI). 1992. Office of Inspector General. Audit Report. Protection of Natural Resources, National Park Service. Report No. 92-1-1422. Washington D.C.

U.S. Environmental Protection Agency (EPA) 1998. Letter from John Hankinson, EPA to Col. Joe Miller, ACOE . April 27, 1998.

U.S. Environmental Protection Agency (EPA) 1999. EPA Review and Comments on Draft Off-Road Vehicle (ORV) Management Plan Supplemental Environmental

E1 (cont.)

Statement Big Cypress National Preserve, Florida CEQ No. 990285. November 12, 1999.

U.S. Fish and Wildlife Service (USFWS) 1991. Biological Opinion. Big Cypress General Management Plan. FWS Log No. 4-1-91-232. February 11, 1991.

U.S. Fish and Wildlife Service (USFWS) 1994. Letter from Acting Regional Director to Eric Glitzenstein. November 4, 1994.

U.S. Fish and Wildlife Service (USFWS). 1996. Florida Manatee Recovery Plan.

U.S. Fish and Wildlife Service (USFWS) 1998. Letter from James Slack, FWS to Col. Joe Miller, ACOE. March 27, 1998.

U.S. Fish and Wildlife Service (USFWS) 1998a. Why Save Endangered Species? Pamphlet.

U.S. Fish and Wildlife Service (USFWS) 1999. Draft Multi-Species Recovery Plan for the Threatened and Endangered Species of South Florida. Volume I & II. Atlanta, GA.

U.S. Fish and Wildlife Service (USFWS) 1999a. Comment letter on the Big Cypress Off-Road Vehicle Management Plan, Supplemental Environmental Impact Statement (SEIS). November 12, 1999.

Van Dyke, F.G. R.H. Brocke, H.G. Shaw, B.B. Ackerman, T.P. Hemker, F.G. Linsay. 1986. Reactions of mountain lions to logging and human activity. J. Wildlife Management 50(1):95-102.

Webb, R.H. and H.G. Wilshire. Eds.1983. Environmental Effects of Off-Road Vehicles. Springer-Verlag. New York.

Weeks, D. 1988. Turbidity Investigation on Halfway Creek. Resource Management Report. National Park Service.

Welch, R. and M. Madden. 1999. Photogrammetric Engineering and Remote Sensing. 65 (11): 168-170.

Welch, R. and M. Madden. 1998. Off Road Vehicle trail Database for Big Cypress National Preserve. Final Research Report. University of Georgia Center for remote Sensing and Mapping Science, Athens. GA, 30pp.

Wilcove, D. S., C.H. McLellan, and A.P. Dobson. 1986. Habitat fragmentation in the temerate zone. In M.E. Soule (ed.) Conservation Biology: The Science of Scarcity and Diversity, pp. 237-256. Sinauer Associates, Sunderland, MA

Williams, K.S. 1979. Big Cypress Fox Squirrel. Florida Naturalist. April 1979. April 1979. Pp. 16-17.

Wilson, E.O. 1988. Biodiversity. National Academy Press. New York, New York

Wilson, E.O. 1985. The Biological Diversity Crisis. Bio Science 35: 700-706.

Wright, G.M. and B. Thompson. 1935. Fauna of the National Parks in the United States. U.S.D.A., Dept of Interior. Washington D.C.

Yamataki, H. 1994. Soil Survey Site Visit to Ochopee Prairie. Memorandum from USDA SCS to NPS.

Zaneski, Cy 1999. Ecologists fear airboat damage in national preserve. The Herald. May 10, 1999.

E1 (cont.)

Meyer & Glitzenstein
1601 Connecticut Avenue, N.W.
Suite 700
Washington, D.C. 20009-1035

Katherine A. Meyer
Eric R. Glitzenstein
Howard M. Crystal
Jonathan R. Lovvorn

Telephone (202) 588-5206
Fax (202) 588-5049

Wally Hibbard
Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

RECEIVED
DEC 13 1999

December 13, 1999

Re: Comments on Big Cypress National Preserve Draft Recreational Off-Road Vehicle Management Plan and Supplemental Environmental Impact Statement

Dear Mr. Hibbard:

On behalf of the Florida Biodiversity Project (FBP) and the Biodiversity Legal Foundation, we submit the following comments on the Big Cypress National Preserve Draft Recreational Off-Road Vehicle Management Plan and Supplemental Environmental Impact Statement (Draft ORV Plan). This comment letter supplements any individual comments submitted by FBP or its representatives.

The Draft ORV Plan is the most recent chapter in an epic saga: it is a story of agency neglect of express statutory duties, of mismanagement, and of unmet promises made by the National Park Service (NPS), with respect to the Big Cypress National Preserve (Preserve) and the use of off-road vehicles (ORVs) therein. For the reasons discussed in this comment letter, FBP finds the Draft ORV Plan to be wholly inadequate. In particular, there are several substantive issues involving NPS' failure to comply with its statutory mandates under the Organic Act, Establishment Act, and the Endangered Species Act. In addition, NPS has failed to comply with several Executive Orders. Moreover, NPS has failed to comply with the procedural directives of the Endangered Species Act and the National Environmental Policy Act. Finally, the Draft ORV Plan does not comply with the binding terms of the 1995 Settlement Agreement between NPS and FBP.

Background

Established by Congress in 1988, the Preserve is a unique national treasure. NPS has noted:

> First-time visitors to the Big Cypress see a flat, wet, primitive land. The area was named Big Cypress because of its extent, not because of the size of its tress, and visitors drive for miles through an expanse of open prairies dotted with cypress trees, distant pinelands, and tree islands broken at intervals by dark, forested swamps. Wildlife is abundant--great blue herons, anhingas, kingfishers, and alligators line the roadside canals and

recycled paper

283

EL1

284

give visitors and exciting visual focus. NPS, General Management Plan and Final Environmental Impact Statement (September 1991) (GMP/EIS) at 3. The Preserve is dominated by wetlands. In addition to serving an important function as a large natural reservoir and nutrient filter, the Preserve is home to an exceptional concentration of rare and protected species. Id. at 4; Draft ORV Plan at 9-10. There are 34 animal and 60 plant species receiving some form of special protection or recognition under international, federal, or state law in the Preserve, including the endangered Florida panther, Cape Sable seaside sparrow, red-cockaded woodpecker, Everglades snail kite, West Indian manatee, and wood stork. Id. Most of these species exist only in South Florida and are imperilled due to habitat destruction and degradation caused by water management projects, urbanization, and agricultural expansion. GMP/EIS at 175.

ORV use in the Preserve has increased in recent decades. Depending on who does the counting, there are somewhere between about 1240 and 30,000 miles of ORV trails in the Preserve. See Draft ORV Plan at 42 (In 1984, ORV trails were "conservatively estimated at 1240 miles"); compare Roy Welch & Marguerite Madden, Center for Remote Sensing and Mapping Service, Off-Road Vehicle Trail Database for Big Cypress National Preserve (September 1998) at 5 (Welch & Madden) ("All trail classes together totaled 47,958

km of ORV trails in BICY").

Hunters use ORVs for Preserve access and hunting. NPS currently permits up to 2,500 ORV users in the Preserve each year. See NPS, Record of Decision: General Management Plan, Big Cypress National Preserve (January 27, 1992) at 3 (ROD); Draft ORV Plan at 30. ORVs include various kinds of vehicles, including street-legal four-wheel drive vehicles (4x4s), all-terrain vehicles ("ATVs"), swamp buggies, and airboats. Draft ORV Plan at 41. Swamp buggies and ATVs are wide-wheeled vehicles which dig up and redeposit soils and destroy vegetation. Airboats are driven in shallow water; these also destroy vegetation. ORVs are generally used by hunters looking to access difficult areas of the Preserve. GMP/EIS at 248 ("hunting and ORV use are almost inseparable"). Hunters in the Preserve principally target white-detailed deer and feral hogs, which are also prey species central to the diet of the Florida panther, an endangered species. Id. at 180, 186.

The Draft ORV Plan is the result of almost a decade-long NPS promise to generate a comprehensive management plan for ORVs in the Preserve. In 1989, NPS recognized that past ORV use had resulted in significant adverse effects to Preserve resources, including "excessive degradation of soils and vegetation" as well as impacts on imperilled species of wildlife and plants. NPS, Draft General Management Plan/Draft Environmental Impact

EL1 (cont.)

Statement (July 1989) at 45 (Draft GMP/EIS). To deal with these effects, NPS issued the Draft GMP/EIS and solicited public comment; the plan was supposed to provide management direction for all uses of the Preserve.

However, the final plan, issued in 1991, involved only minor restrictions on ORV use. In most of the Preserve, ORVs were allowed to enjoy continued unrestricted access. GMP/EIS at 46. No reduction in the total number of ORVs was proposed; and without any analysis, NPS arbitrarily determined in 1991 that the Preserve could withstand up to 2,500 ORVs each year. In the Corn Dance unit, where NPS had proposed to limit ORV use, the agency opted for a "broad" "network of designated trails and areas" totaling "approximately 90 to 120 miles." GMP/EIS at 48. An alternative which would have closed four management units with particularly sensitive resources completely to ORV use was scrapped altogether, despite the fact that a majority of the public favored this alternative. Id. at 303.

In order to deal with the lack of mechanisms in the Draft GMP/EIS to limit ORV impacts, NPS determined that there were two ways in which to address these impacts in the future. First, NPS decided that, as part of the final plan, no more than 2,000 ORV permits would be issued, or 500 less than the level proposed in the Draft GMP/EIS. Id. at 46. Second, NPS also determined that "[m]ore detailed actions concerning ORV management" should be

included in a specific "ORV management plan"; such a plan would be developed "once the [GMP/EIS] has been approved." Id. at 44.

These promises have yet to be realized. NPS did not adhere to its decision to establish a ceiling of 2,000 permits; the agency modified the plan three months after issuing its GMP/EIS to increase the ceiling to 2,500 ORVs without any scientific justification or analysis of environmental impacts. ROD at 3. Meanwhile, the agency closed portions of the Preserve out of concern for adverse environmental impacts caused by humans, including the East Hinson Marsh and Ochopee Prairie, both of which were closed in 1994.

The ORV Management Plan issued this year has been a long time coming to fruition. In October 1995, in the face of pending litigation over the lack of a plan, FBP and NPS entered into a legally binding settlement agreement (Settlement Agreement). Pursuant to that agreement, NPS agreed to prepare, finally, an ORV management plan; of which the "overall objective" would be to "establish a comprehensive system for management of ORV use in BCNP with the goal of assuring the natural and ecological integrity of BCNP resources in accordance with the BCNP Establishment Act." Settlement Agreement at 3. Under the terms of that agreement, NPS agreed to issue a draft plan by April 25, 1998 and a final plan by January 25, 2000. Clearly, even this basic feature of the agreement has not been met, and the fact

EL1 (cont.)

that the 16-months-late Draft ORV Plan has numerous substantive and procedural flaws only further undermines its utility.

Throughout this saga, NPS has not been the sole federal agency to express concern over the presence of ORVs in the Preserve; so too have the Fish & Wildlife Service (FWS) and the Environmental Protection Agency (EPA). In 1990, NPS prepared a biological assessment addressing the impacts from ORV use with 2,000 ORVs in mind, to which FWS responded in 1991 with a biological opinion which also based its conclusions in part (including, among other things, that the proposed level of ORV use might "adversely affect" the Florida panther but that there would be "no jeopardy" to the continued existence of the species) on the assumption that only 2,000 ORVs would be allowed every year. See NPS, Biological Assessment: Big Cypress National Preserve, General Management Plan (Sept. 1990) at 5 (Biological Assessment); FWS, Biological Opinion: Big Cypress General Management Plan (February 1991) at 6 (Biological Opinion).

I. The Draft ORV Plan is inadequate because it does not comply with NPS' overarching substantive mandates; NPS has an ongoing affirmative obligation to manage its public lands in such a manner as to conserve the resources and wildlife found therein in perpetuity, such that all other uses of NPS public lands must be secondary to this overarching mandate.

NPS' founding principles and ongoing affirmative obligations under four separate statutes and several Executive Orders require

the agency, as a fundamental matter, to manage the public lands within its jurisdiction in such a manner as to conserve natural resources and wildlife. All other uses of public lands within its jurisdiction, including recreational and commercial uses, must be allowed and managed only inasmuch that those uses do not conflict with this overarching mandate.

Within the Preserve, there are many considerations at issue, including the ecology and many species of wildlife which require heightened protection. However, despite this mandate, clear and non-discretionary as it is, NPS has failed to issue an ORV Plan with conservation of natural resources and wildlife as a primary consideration and allowance of ORVs only to such extent as conservation is not jeopardized. Instead, the Draft ORV Plan is a plan which allows nearly unrestricted ORV use to continue and in which conservation of the Preserve's natural resources and wildlife is merely an afterthought.

The affirmative duties are discussed below.

A. NPS has an affirmatives duties under the Organic Act, the Redwood Act, and the Big Cypress National Preserve and Addition Lands Establishment Acts to conserve resources and wildlife in perpetuity.

When Congress established both the National Park Service and the Preserve, it made very clear that NPS was to make the

EL1 (cont.)

conservation of natural resources a prime priority, to be placed above all other competing uses of the Preserve, including ORV use.

The National Park Service Organic Act (Organic Act) created the NPS as an agency within the Department of the Interior. The Organic Act "is a law of general applicability [] govern[ing] the [NPS's] management of the National Park System..." Conservation Law Foundation of New England v. Clark, 590 F.Supp. 1467, 1479 (D.Mass. 1984); see also Southern Utah Wilderness Alliance v. Dabney, 7 F.Supp.2d 1205, 1211 (D.Utah 1998).[1] The Organic Act directed NPS to "promote and regulate the use of the Federal areas known as national parks...by such means and measures as conform to the fundamental purpose of the said parks...which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." 16 U.S.C. § 1 (emphasis added).

[1] Applying the Organic Act to an NPS decision to implement a backcountry management plan for national parks which allowed [ORV] access, the Southern Utah court stated that "Congress has issued a clear answer to the question of whether the Park Service is authorized to permit activities within national parks that permanently impair unique park resources. The answer is no. As set out in the statutes discussed above, the Park Service's mandate is to permit forms of enjoyment and access that are consistent with preservation and inconsistent with significant, permanent impairment." Id. (emphasis added).

The Organic Act's "basic tenets" are affirmed in the Redwood Act of 1978, which "provides additional guidance on national park system management." Draft ORV Plan at 2. The Redwood Act states that "[t]he authorization of activities shall be construed and the protection management and administration of these areas shall be conducted in light of the high public value and integrity of the National Park system and shall not be exercised in derogation of the values and purposes for which there various areas have been established." 16 U.S.C. 1a-1. National park areas are to be "preserved and managed for the benefit and inspiration of all the people of the United States." Id. (emphasis added). Should there be any question, "[t]he restatement of these principles of park management in the Redwoods Act is intended to serve as the basis for any judicial resolution of competing private and public values and interests in the national park system." Draft ORV Plan at 2, citing S. Rep. No. 95-528 on S. 1976 p. 7.

In 1974, Congress passed the Big Cypress National Preserve Establishment Act, which added the Preserve to the National Park System for the specific purposes--in order of priority--of ensuring "the preservation, conservation and protection of the natural, scenic, hydrologic, floral and faunal, and recreational values of the Big Cypress Watershed..." 16 U.S.C. § 698f(a). Congress directed the NPS to administer the Preserve lands "as a unit of the National Park system in a manner which will assure

EL1 (cont.)

288

their natural and ecological integrity in perpetuity." 16 U.S.C. § 698i(a). Indeed, the "principal thrust" of national preserves "should be the preservation of the natural values which they contain." S.Rep. 1128, 93rd Cong., 2d Sess. 5572 (1974). "Thus, the natural and ecological integrity of the preserve is the fundamental natural value that Congress directed the National Park Service to protect." Draft ORV Plan at 2 (emphasis added).

Within this mandate, the Secretary was directed to develop "rules and regulations" which are "necessary and appropriate to limit or control" potentially destructive practices on the Preserve, including the use of "motorized vehicles," "hunting, fishing, and trapping." 16 U.S.C. § 698i(b)(emphasis added). Congress was careful to provide direction to NPS on the establishment of controls for ORV use, stating that: "the use of all-terrain vehicles must be carefully regulated...to protect the natural wildlife and wilderness values of the preserve" (emphasis added). S.Rep. 1128, 93rd Cong., 2d Sess. 5571 (1973).

Certainly, Congress anticipated that some recreational uses in the Preserve would continue, but it stressed that "public uses and enjoyment would be limited to activities where, or periods when, such human visitation would not interfere with or disrupt the values which the area is created to preserve." H. Rep. 502, 93rd Cong., 1st Sess. 7 (1973) (emphasis added). Indeed, "[h]unting...subject to reasonable regulation by the Secretary,

could be permitted to the extent compatible with the purposes for which the area is established." S.Rep. 1128, 93rd Cong., 2d Sess. 5571 (1973) (emphasis added). "All management activities within [national preserves] should be directed toward maintaining the natural and scientific value of the area, including the preservation of the flora and fauna and the reestablishment of the indigenous plant and animal life, if possible." Id. As one of the House sponsors said, the "ecosystem of the Big Cypress area is fragile indeed and must be given every protection if we are to avert the elimination of the wildlife forever." 119 Cong. Rec. H32838 (Oct. 7, 1973)(Statement of Rep. Fuqua); see also id. at H32833-34)(Statement of Rep. Saylor)("The proposed preserve will be managed so as to retain its prevailing natural condition with the provision for public use in such manner as to not destroy or unduly disturb the natural resources").

In 1988, Congress established the "Big Cypress National Preserve Addition," which added another 146,000 acres to the Preserve. See Pub.L. 100-301 (April 29, 1988); 16 U.S.C. § 698m-1. These "Addition Lands" must be managed by NPS in the same fashion as the original Preserve lands. Id. at § 698m-1(c). Congress regarded this addition to the Preserve as essential for the same basic reasons that the Preserve was established in the first place: to "enhance[] the protection of Everglades National Park which is dependent on the natural flow of water through the

EL1 (cont.)

Preserve for its ecological health," and to "protect a number of endangered species which are present in the area, most importantly the Florida panther which is in serious danger of extinction..." Hearing Before the House Subcommittee on National Parks and Recreation, 99th Cong., 2d Sess. 129 (May 13, 1986) (emphasis added).

Thus, it is quite clear that Congress has directed NPS to allow ORV use in the Preserve only to the extent the impacts from such use do not conflict with the fundamental affirmative duty of conservation. There is no "mandate" that ORV use must be allowed in the Preserve, as some have claimed. Rather, as stated in the GMP/EIS, the NPS "envisions the Preserve as a nationally significant ecological resource--a primitive area where ecological processes are restored and maintained and where cultural sites are protected from unlawful disturbance." GMP/EIS at i (emphasis added). In accordance with this policy, NPS predicted in the GMP/EIS that "[t]he number of hunters and total ORV recreational users would probably decrease." Id.

B. NPS has an affirmative duty under the Section 7(a)(1) of the Endangered Species Act to develop programs for the conservation of each listed species.

289 To the extent there are listed species located within the Preserve, NPS is also bound by the affirmative duty of Section

7(a)(1) of the Endangered Species Act (ESA). 16 U.S.C. § 1536(a)(1).

Section 7(a)(1) of the ESA imposes an affirmative duty on all federal agencies to develop programs for the conservation of each endangered and threatened species. Id.; see also Sierra Club v. Glickman, 156 F.3d 606, 616 (5th Cir. 1998)("Given the plain language of the [ESA] and its legislative history, we conclude that Congress intended to impose an affirmative duty on each federal agency to conserve each of the species listed pursuant to [this Act].") "Conserve" means literally "to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary." 16 U.S.C. § 1532(2); see also Tennessee Valley Authority v. Hill, 437 U.S. 153, 180 (1978); Sierra Club v. Glickman, 156 F.3d at 615 ("We find the Supreme Court's examination of the meaning of "conserve" to be instructive as to the meaning of "conservation" under § 7(a)(1).")

Thus, it is not acceptable for federal agencies to turn a blind eye to what endangered species need for survival and recovery. "[Section 7] substantially amplifie[s] the obligation of [federal agencies] to take steps within their power to carry out the purposes of this act...[T]he agencies of the Government can no longer plead that they can do nothing about [extinction].

EL1 (cont.)

290

They can, and they must. The law is clear." TVA v. Hill, 437 U.S. at 183-84, citing Rep. Dingell, 119 Cong. Rec. 42913 (1973). The duty imposed by Section 7(a)(1) is not merely a general and precatory duty, but a specific and mandatory one. Sierra Club v. Glickman, 156 F.3d at 615.

C. **NPS has an affirmative duty under Section 7(a)(2) of the Endangered Species Act to ensure that an agency action will not jeopardize the continued existence of the Florida panther, Cable Seaside Sparrow, West Indian Manatee, and other listed species within the Preserve.**

In addition to its duty under Section 7(a)(1), NPS also has an affirmative duty under Section 7(a)(2) to ensure that the continued existence of any endangered or threatened species not be jeopardized. The process through which this affirmative duty is met is discussed on pages 32-34.

D. **Section 9 of the Endangered Species Act makes it unlawful for "any person" to "take" any endangered species.**

Under Section 9 of the ESA, federal agencies have a duty to comply with the Act's prohibition on "takings." 16 U.S.C. § 1538(A)(1). If a proposed federal agency action will result in a "take" of a listed species, then the Service must provide a "take

statement," as part of a biological opinion, identifying both what level of take will be permitted and any necessary conditions to reduce the impacts of the project on listed species. 16 U.S.C. § 1536(b). If a private party's action is [?] a "take," that action can proceed only if the party procures an "incidental take permit" under Section 10(a)(1)(B) of the Act.

"Take" has been broadly defined by the ESA. "The term 'take' means to harass, harm, pursue, hunt, shoot, would, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532(19) (emphasis added). "Harm" within this take definition has been broadly defined to include "significant habitat modification or degradation that actually kills or injures wildlife." 50 C.F.R. § 17.3 (emphasis added). This regulation has been in place since 1975 and was upheld by the Supreme Court in 1995. See Babbitt v. Sweet Home Chapter of Communities For A Great Oregon, 515 U.S. 687, 697-700 (1995).

E. **NPS has a duty under Executive Orders 11644, 11989, and 11990 to manage ORV use in such a manner as to *minimize* ORV damage to the environment.**

Not only has the legislative branch of the U.S. Government made the objective of conservation of public lands for the enjoyment of all in perpetuity--so too has the administrative branch.

EL1 (cont.)

In 1972, President Nixon issued Executive Order No. 11644, which "sets forth in unambiguous and mandatory language the criteria that are to be employed in the designation of areas and trails for use or non-use of ORVs" on federal lands. Conservation Law Foundation v. Clark, 590 F.Supp. 1467, 1479 (D.Mass. 1984), quoting National Wildlife Federation v. Morton, 393 F.Supp. 1286, 1295 (D.D.C. 1975). The Order provides that ORV use on public lands must be "controlled and directed so as to protect the resources of those lands," and that "[a]reas and trails [for ORV use] shall be located to minimize damage to soil, watershed, vegetation, or other resources...[and] minimize harassment to wildlife or significant disruption of wildlife habitats." Executive Order No. 11644, "Use of Off-Road Vehicles on Public Lands", 37 Fed. Reg. 2877 (1972), as amended by E.O. 11989, 42 Fed. Reg. 26959 (1977); E.O. 12608, 52 FR 34617(1987); 42 U.S.C. § 4321 note (emphasis added).

"Pursuant to Executive Order 11644, [agencies] are directed to: establish policies and provide for procedures that will ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various users of those lands." Northwest Motorcycle Ass'n v. U.S. Dept. of Agriculture, 18 F.3d

291

1468, 1472 (9th Cir. 1994) (emphasis added).[2]

In addition, Executive Order No. 11989, issued in 1977 and entitled "Off-road Vehicles on Public Lands," requires that the federal lands manager "shall, whenever he determines that the use of off-road vehicles...is causing considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat, or cultural or historic resources of particular areas or trails of the public lands, immediately close such areas or trails to the type of off-road vehicle causing such effects, until such time as he determines that such adverse effects have been eliminated to prevent future recurrence" (emphasis added). 42 Fed. Reg. 26959; See, e.g., Fadem v. U.S., 13 Cl.Ct. 328, 329 (1987).

In addition, Executive Order No. 11,990--issued by President Carter in 1977--"imposes a nondiscretionary duty on the heads of agencies to 'take action to minimize the destruction, loss or degradation of wetlands'" when carrying out their responsibilities for managing federal lands. National Wildlife Federation v. Babbitt, 1993 WL 304008, *1 (D.D.C. 1993), quoting Executive Order 11990, 42 U.S.C. § 4321 note; 42 Fed. Reg. 26961

[2] Northwest Motorcycle Ass'n involved a decision by the Forest Service to close forest trails in designated area to off-road vehicle (ORV) use. The Ninth Circuit held that the decision was not arbitrary or capricious; the Forest Service had rational and ample bases for its decision, including reliance on user comments, agency personnel professional judgment, and findings of interdisciplinary team, all of which showed that ORV presence created user conflict by hindering nonmotorized trail users' enjoyment of area. Id. at 1472-76.

EL1 (cont.)

292

(1977), as amended by Executive Order 12608, September 9, 1987, 52 Fed. Reg. 34,617 (1987). EO 11990 was issued "to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative..." 42 Fed. Reg. 26961. In addition, Director's Order 77.1 was promulgated to establish NPS policies, requirements, and standards for implementing EO 11990; it provides that, for proposed new development or other new activities, plans, or programs that are either located in or otherwise have the potential for direct or indirect adverse impacts on wetlands, the NPS will employ a sequence of: (1) avoiding adverse wetland impacts to the extent practicable; (2) minimizing impacts that could not be avoided; and (3) compensating for remaining unavoidable adverse wetland impacts via restoration of degraded wetlands.

"[A]n executive order is to be 'accorded the force and effect of a statute' when it has a 'distinct statutory foundation.'" NWF v. Babbitt, 1993 WL 304008 at *7, quoting Association for Women in Science v. Califano, 566 F.2d 339, 344 (D.C. Cir. 1977). These executive orders have been found to have the "force and effect of a statute" since they were promulgated by the President pursuant to his authority under NEPA. See NWF v. Babbitt, 1993 WL 304008 at *7; Conservation Law Foundation of

New England v. Clark, 590 F.Supp. at 1478.

F. The Draft ORV Plan entirely fails to satisfy these affirmative duties.

The Draft ORV Plan fails to meet the NPS' affirmative duties under the aforementioned statutes, regulations, and executive orders to conserve Preserve resources and wildlife in perpetuity, to ensure no jeopardy to nor taking of listed species, and to minimize ORV damage.

As stated, the Preserve is rich in natural resources and wildlife, home to a total of 34 animal and 60 plant species "that receive special protection or are recognized by the state of Florida, the U.S. government, or the Convention on International Trade in Endangered Species." Draft ORV Plan at 9, citing NPS 1997. Among these protected species are the Florida panther, the Cape Sable seaside sparrow, red-cockaded woodpecker, Everglades snail kite, West Indian manatee, and wood stork. Id. at 9-10.

However, the Draft ORV Plan provides for no minimization of ORV use so as to ensure the conservation of natural resources and wildlife. In fact, the Draft ORV Plan is noteworthy for its utter lack of controls, absence of specificity, and overall accommodation of ORVs at the peril of resources and wildlife.

Indeed, the Draft ORV Plan acknowledges the Park Service's

EL1 (cont.)

substantive mandate, stating that the "natural and ecological integrity of the preserve is to be assured by protecting important resources, including water quality, surface water flows, soils, vegetation, wildlife and wildlife habitat." Draft ORV Plan at 13. Then the Plan's Proposed Action implicitly continues the 2,500 permit ceiling level, omits any analysis of the findings contained in the Janis Study and asserts, without analysis, that the findings from Welch & Madden are false or misleading and therefore unworthy of analysis. Michael W. Janis, The Effects of Recreational Deer and Hog Hunting on the Behavior of Florida Panthers: A Thesis Presented for the Master of Science Degree, University of Tennessee, Knoxville (May 1999) (Janis Study); Welch & Madden. It relies on a unspecified system of monitoring and an untested educational campaign (complete with pamphlets) to mitigate the severe adverse impacts from ORV use. It assumes that amorphous, speculative measures will "minimize" the adverse impacts from ORV use, and thus completely contravenes the Park Service's legal responsibility.

There is a direct correlation between the ecological health of the Preserve and the health and abundance of the species which live there. Unfortunately, the precarious state of several species evidences serious problems with the ecological health of the Preserve. In particular, the aforementioned species are discussed in the Draft ORV Plan because "ORV use and management

activities could potentially degrade habitat preferred by these species, directly disturb individual animals, or reduce foraging opportunities." Draft ORV Plan at 9-10. Thus, meeting the affirmative duties to conserve these species necessarily means conserving the ecological health of the habitat upon which they depend.

The Florida Panther

The Florida panther is a subspecies of cougar which at one time roamed throughout most of the southeastern United States. Draft ORV Plan at 38. However, the panther's existence is now imperilled due to loss of habitat, hunting, and ORV use. "[U]rbanization and conversion of natural areas to agriculture have put increasing pressure on the habitat of the [] panther." Janis Study at 1. "Habitat quality is assumed to depend on the condition of the panther prey base and the degree of human intrusion into panther habitat." GMP/EIS at 229. Due to "intensive hunting of these animals as a pest species and the conversion of habitat to agriculture and residential areas severely reduced the original population." Draft ORV Plan at 38. The Florida panther has been listed under the ESA since 1967 and is now under "extreme risk of extinction" according to NPS. GMP/EIS at 25. As recently as 1995, there were between 30 and 50

EL1 (cont.)

panthers left in the wild; these remaining animals are confined to a small breeding population located in South Florida. Draft ORV Plan at 38-39. Meanwhile, it is estimated that 50 adult panthers are needed to sustain a genetically viable population, id. at 39; too few animals means reduced genetic diversity and thus a vulnerability to disease, parasites, and heart trouble. On the basis of genetic and demographic studies, the I.U.C.N. (World Conservation Union) Conservation Breeding Specialty Group warned in 1989 and again in 1992 that the panther would be extinct by 2055 without human intervention. To restore genetic diversity in the waning species, the Florida Fish and Wildlife Conservation Commission have engaged in an extreme "outbreeding" program--i.e., by introducing Texas cougars to Florida panthers in 1995. New York Times, Nov. 2, 1999.

NPS and FWS have both acknowledged the precarious existence of the panther. FWS has stated that "the loss of a single animal through illegal take could seriously jeopardize the survival of the subspecies." See 55 Fed. Reg. 34933 (Aug. 27, 1990). NPS has stated that "[t]he Florida panther is perhaps the most sensitive natural resource in south Florida, and many believe it to be on the brink of extinction. Any action that led to losses of individual panthers, their prey, or the quality of panther habitat would contribute to the loss of the species as an ecological and genetic resource." GMP/EIS at 259 (emphasis

added). NPS states in the Draft ORV Plan that "[t]he survival of the existing population of the Florida panther is severely threatened due to habitat loss and fragmentation, toxins in the environment, prey availability, human-related disturbance and mortality, disease, and genetic erosion." Draft ORV Plan at 39, citing USFWS 1999. "[I]mportant panther habitat is being lost daily," and cumulative human impacts "could reduce the available habitat to a level below the minimum threshold essential for a self-sustaining panther population." Habitat Preservation Plan at 2 (emphasis added).

Thus, in order to strengthen the remaining populations of Florida panthers, it is necessary to protect, preserve, and restore panther habitat. The FWS Recovery Plan for the species "identifies the preservation and restoration of habitat as one of the key actions that must be implemented to ensure the protection of the panther population."

Panthers prefer "native, upland forests, especially hardwood hammocks and pine flatwoods...[and] only 8% of the public land within south Florida is characterized as upland forests." Draft ORV Plan at 39. Indeed, the Preserve contains some of the last remaining habitat for the Florida panther, accounting for around one third of the land inhabited by the species. Janis Study at iv. Since humans also use the Preserve for many recreational purposes, including hunting of the same prey and ORV use, the

EL1 (cont.)

Panther not only has seen its habitat shrink to constitute a small remaining home range, but it must also share this remaining habitat with humans and their ORVs.

While human encroachment on panther habitat is, historically, the most significant human factor for the panther's decline and continuing struggle for survival, the introduction of the ORV into the panther's world is another catalyst on the path toward extinction. A clear connection exists between ORV use, hunting, and effects on panther behavior--a connection that has been acknowledged by NPS, FWS, and the author of a major biological study examining the effects of ORV use on panthers. NPS has acknowledged that "the decline of the Florida panther has been attributed to the loss of habitat quality due to increasing hunting, ORV use, and other back country recreation," and that "past telemetry data on Florida panther movements indicates that panthers tend to leave the Bear Island unit in the preserve during hunting season..." GMP/EIS at 231, citing Florida Game and Fresh Water Fish Commission 1985; FWS 1987 (emphasis added). NPS also recognized that "[p]anthers in the preserve addition and adjoining private lands north of I-75"--where there is far less hunting and ORV use--are "more abundant, heavier, and healthier than their counterparts south of I-75 in the preserve," where there is considerably more "pressure from humans." Id. at 179, citing Roelke et al. 1985. The FWS has stated that it "regard[s]

hunting and ORV use as the principal activities [in the Preserve] that may affect the panther," and that there is evidence that "Florida panthers may have altered their home ranges in response to activities associated with past hunting seasons in [the Preserve]." Biological Opinion at 4-5 (emphasis added). Indeed, the Park Service has conceded that the "[d]isturbance to Florida panthers[s]...is a special concern," and that the effects of ORV use are "potentially far-reaching" because "Florida panthers are believed to be sensitive to human intrusion into their habitat...." Biological Assessment at 30. FWS has considered "hunting and ORV use [to be] the principal activities that may affect the panther" in the Preserve because large areas of the Preserve are or could be "extensively used by panthers," and, therefore extensive human intrusion into these areas may "disrupt the Florida panther's behavior or alter its range." Biological Opinion at 5. Finally, a major biological study of the impacts of hunting and ORV use on the Florida panther recently documented this connection: "[i]n general, female panthers exhibit[] smaller movements, smaller home ranges, and higher predation success on large prey before the hunting season." Janis Study at v.

The Cape Sable Seaside Sparrow

The panther is not alone in this fight for survival in the

EL1 (cont.)

296

Preserve; so too is the Cable Sable Seaside sparrow. There are approximately 3,500 of these sparrows remaining in southern Florida.

The sparrow is a nonmigratory bird whose "restricted range...is found almost entirely within the Everglades National Park and the Big Cypress National Preserve." United States Department of the Interior, Fish and Wildlife Service and National Park Service, Balancing on the Brink: The Everglades and the Cape Sable Seaside Sparrow at 1 (Balancing on the Brink) [Attachment 1]. The sparrow has been listed as endangered since 1967. The remaining populations of the sparrow have declined by as much as 60 percent since 1981 and continue to decline steadily. Fish & Wildlife Service, Final Biological Opinion for the U.S. Army Corps of Engineers (February 1999) at 27. Like the panther, the sparrow suffers from human encroachment on habitat "posed by large-scale conversion of land in southern Florida to agricultural uses." Id. at 21. The Draft ORV Plan refers to four known subpopulations of the sparrow, two of which occur in the Preserve. Draft ORV Plan at 39. Of those two populations, "the subpopulation in the southeastern marshes of the preserve has experienced a drastic decline and the subpopulation in the Ochopee area is extinct." Id., citing FWS 1999. The specific causes of the sparrow's path toward extinction in the Preserve are vegetative changes resulting in increased salinity and fire

frequency, the introduction of exotic tree species, and altered hydrology attributable to land development. Id. "[E]mergency actions [are] needed to stave off extinction, and long-term actions [are] are required to assure its survival." Balancing on the Brink at 1 [Attachment 1]. The necessary actions are clear: "the survival and recovery of the Cape Sable seaside sparrow depends on the restoration of natural hydrologic patterns throughout its range." Id. at 11.

The West Indian Manatee

The West Indian manatee is also currently listed as an endangered species. NPS claims that "[n]o information is available...regarding the individual numbers, foraging locations, or frequency of occurrence" of manatees in the southwest portion of the Preserve, located in the Stairsteps unit. Draft ORV Plan at 40.

However, more information does exist with respect to the manatees located in the Preserve. For example, airboats have been suspected of causing harm to manatees, and Preserve resource management staff have noted irony that posted signs warn recreational boat launchers of possible impacts to manatees, yet formal consultation has not been initiated. Patrick Kennev, Memorandum to Resource Management Team Leader (April 9, 1997; May

EL1 (cont.)

22, 1997) [Attachment 2].

Clearly, the fate of the panther, sparrow, manatee, and other similarly situated species whose habitat is in the Preserve depend upon responsible actions by the federal agencies charged with the duty of conserving these species and their habitats. As discussed, this duty is required by several statutes and executive orders.

And yet, despite both the imperilled existence of these species and the affirmative duties to obviate the situation, the NPS refuses to implement the necessary controls on ORV use in the Preserve. Instead of a plan for the preservation of resources and wildlife, the Draft ORV Plan is a plan for just that: ORV preservation. It is a plan to facilitate ORV use with, at most, minor accommodation for endangered species as an afterthought.

NPS makes the necessary connection between panthers and the need for high-integrity habitat. However, the agency fails to make the next obvious link between the need for high-integrity habitat and the need to implement controls on ORVs. Rather than implement these controls, NPS is content to maintain the status quo. For instance, despite the fact that FWS "identified habitat restoration as one way of helping protect panthers[,]" and despite the fact that under the Draft ORV Plan's proposed action, ORV users and panthers would share habitat, NPS' proposed action

will "likely" increase "diversity and abundance of prey in some areas" over time through such amorphous measures as "reducing trail numbers, informing visitors about the benefits of confining use to established trails, and increasing ORV flotation requirements[.]" Draft ORV Plan at 66. These measures are translated into equally indistinct "tactics," or "best management practices," which seem to consist, at most, a compilation of NPS' ruminations on the subject to date.

Furthermore, the Draft ORV Plan will allow the continued habitat modification, "harassment," and "harming" of panthers to occur, thus violating the ESA prohibition on "taking" listed species. 16 U.S.C. § 1539. The Draft ORV Plan allows continued unlimited ORV access in the Bear Island Unit, which is precisely the location where the Janis Study documented panther movements--i.e., adverse habitat modification and harassment--in direct response to the presence of hunters and ORVs. The NPS has not obtained an incidental take statement or permit to account for these takings which will be allowed to continue unabated.

Moreover, NPS has chosen an approach which will ultimately require more agency resources for unproven management strategies. Resources will go toward educational workshops and pamphlets about low ORV impacts, marking access points, building more parking spaces for ORV users, and enforcing regulations. Yet there is no conclusive evidence provided in the Draft ORV Plan

EL1 (cont.)

that these resources will directly result in habitat preservation and restoration for these species. At the same time, a direct connection has been made between ORV use and harm to listed species. FWS Recovery Plan; Janis Study. It necessarily follows that fewer ORV impacts will, in all overwhelming likelihood, translate directly into greater protection of the species.

In sum, the fact remains that the Draft ORV Plan threatens to jeopardize the continued existence of the Florida panther and harm other species. In addition, the plan will violate the prohibition against "taking" an endangered species without authorization by the FWS. The plan also fails to comport with NPS' overarching substantive mandate to conserve natural resources and wildlife and it does not minimize impacts from ORVs, in violation of NPS duties under relevant executive orders.

II. The Draft ORV Plan fails to comply with NPS' procedural statutory obligations under the Endangered Species Act and the National Environmental Policy Act.

In addition to NPS' failure to comply with the substantive mandate--imposed by statute, executive orders, and agency-defined policy--to preserve and restore habitat for wildlife species within the purview of its management, NPS has also wholly failed to comply with the procedural mandates as well.

A. NPS, as a federal agency, must follow clear procedural guidelines and reinitiate formal consultation under Section 7(a)(2) of the Endangered Species Act.

Under the Endangered Species Act, NPS has a statutory and procedural duty to, "in consultation with and with the assistance" of the FWS, "insure that any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species." 16 U.S.C. § 1536(a)(2). ESA implementing regulations require "reinitiation" of formal consultation when "the identified action is subsequently modified in a manner that causes an effect to the listed species" that was not considered in the biological opinion." 50 C.F.R. § 402.16.

Despite this clear procedural mandate, the Draft ORV Plan continues a several-years-long NPS and FWS practice of dereliction with respect to the environmental impacts associated with a ceiling of 2,500 ORV permits per year. In other words, NPS and FWS have a statutory duty to reinitiate formal consultation to ensure that the environmental effects of this level of ORV use will not jeopardize the continued existence of listed species; this they have not done, and the Draft ORV Plan continues this neglect. In addition, the findings contained in the Janis Study, which show alterations in Florida panther behavior in response to the presence of ORVs, should prompt the

EL1 (cont.)

reinitiation of formal consultation pursuant to this statutory duty as well.

The procedure for the formal consultation process is as follows: under the regulations, "[e]ach agency shall review its action at the earliest possible time to determine whether any action may affect listed species or critical habitat." 50 C.F.R. § 402.14(a). If the agency makes such a determination in a document known as a "biological assessment," then it must enter into formal consultation with the FWS. 50 C.F.R. § 402.14(b). Following formal consultation, the FWS must issue a "biological opinion as to whether the action, taken together with cumulative effects, is likely to jeopardize the continued existence of listed species..." 50 C.F.R. § 402.14(g)(4); 16 U.S.C. § 1536(b). If it finds in the affirmative, the FWS "shall suggest those reasonable and prudent alternatives which [it] believes would not violate" the prohibition on jeopardizing the species. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(g)(5). Finally, the FWS and the agency must "reinitiate" formal consultation if the "action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion." 50 C.F.R. § 402.16.

Pursuant to this procedural duty, NPS and FWS entered into formal consultation under the ESA in 1990 to address the environmental effects of ORV use on Florida panthers in the

Preserve. At that time, NPS' 1989 Draft GMP/EIS proposed a ceiling level of 2,500 ORV permits per year for the Preserve. Draft GMP/EIS at 45. However, in response to concerns about the environmental effects to panthers in particular, NPS' 1990 Biological Assessment lowered the ceiling and addressed the impacts and risks to panthers from 2,000 ORVs per year. Biological Assessment at 5.

Yet even at a ceiling level of 2,000 ORVs per year, NPS recognized that ORVs and the hunting which accompanies them have substantial detrimental effects on panthers, admitting in the biological assessment that "[d]isturbance to Florida panther[s]...is a special concern," id. at 2, and that the effects of such use are "potentially far-reaching" because "Florida panthers are believed to be sensitive to human intrusion into their habitat..." Biological Assessment at 30. As mentioned, NPS recognized that "the decline of the Florida panther has been attributed to the loss of habitat quality due to increasing hunting, ORV use, and other back country recreation." Id. at 30-31. The agency "recognize[d] the potential" that its management plan would "adversely affect the panther" and therefore entered into formal consultation with FWS. Id. at 37.

In its 1991 biological opinion, the FWS determined that the Draft GMP/EIS' proposed level (2,500 permits) might "adversely affect" the panther, a species already on the brink of

EL1 (cont.)

300

extinction. Biological Opinion at 6. FWS considered "hunting and ORV use [to be] the principal activities that may affect the panther" because large areas of the Preserve are or could be "extensively used by panthers," and therefore extensive human intrusion into these areas may "disrupt the Florida panther's behavior or alter its range." Id. at 5.

However, despite these findings and without any explanation, FWS' Biological Opinion concluded that the proposed level of human intrusion into panther habitat was "not likely to jeopardize the continued existence of the species." Id. Moreover, when NPS inexplicably raised the ceiling to 2,500 within a matter of a few months--a 25% increase--neither agency reinitiated formal consultation.

The Draft ORV Plan makes no mention of all of this. In fact, the Draft ORV Plan's Proposed Action fails to mention a ceiling level at all, thereby implicitly continuing the 2,500 level without any scientific justification or rationale. Instead of entering into formal consultation with the FWS regarding the environmental effects of 2,500 ORVs, the Draft ORV Plan's Proposed Action tries instead to mitigate the effects of 2,500 ORVs through the implementation of such measures as a permit system (with regulations), ORV vehicle specifications, ORV "access points," and an ORV user manual. Draft ORV Plan at 16-29.

Yet speculative mitigation is not enough. The fact is that, despite the issuance of this Draft ORV Plan with its Proposed Action, NPS and FWS are still faced with a scenario whereby up to 2,500 ORVs will frequent the Preserve and remaining habitat for the Florida panther each and every year, further pummeling the fragile ecosystem on which the panther and other species depend. This is an entirely arbitrary management decision, especially when one considers the fact that, at present, there is no demand for that level of ORVs. See, e.g., FWS, Comments Letter (Nov. 12, 1999) (FWS Comments) [Attachment 3] at 2 ("[t]he current cap of 2,500 has never been requested or issued, therefore, the cap appears to be too high"). In addition, the decision is illogical considering the cumulative effects of decades of ORV use in the Preserve and the precarious existence to which this and other species now cling. See, e.g., Welch & Madden; Janis Study.

In addition to the failure to reinitiate consultation in light of NPS' arbitrary decision to raise the permit ceiling level, NPS has also failed to reinitiate consultation in light of the findings contained in the Janis Study. That study, the findings of which were presented in May 1999, revealed evidence that Florida panthers altered behavior in response to hunting activity (and hence, ORV use) in the Preserve. Janis Study at [illegible] ("In general, female panthers exhibited smaller movements, smaller home ranges, and higher predation success on large prey

EL1 (cont.)

before the hunting season."); see also id. at v-vi (Panthers appear to abandon Bear Island Unit for private lands during the hunting season). Despite these findings, particularly with respect to the Bear Island Unit, NPS opted not to alter the planned unlimited access to the unit for ORVs. Nor did NPS reinitiate formal consultation in light of this new evidence.

NPS has a procedural statutory duty to reinitiate formal consultation where, as previously stated, the "action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion." 50 C.F.R. § 402.16. The Janis Study findings implicate the agency decision to allow continued unlimited ORV access, especially through a designated trail system in the Bear Island Unit. This information was not considered in FWS' 1991 Biological Opinion. Thus, NPS has a statutory duty to reinitiate formal consultation in light of the Janis Study findings. The FWS agrees: "[s]ince the Clark and Janis study...concludes there is a correlation between Florida panther movements and hunting activities, this issue should be investigated and the proposed action modified to minimize the effects of human activities on this species. Consultation with the Service on the effects of hunting on the panther would be recommended." FWS Comments at 3.

NPS does acknowledge the significance of the Janis Study

findings in the Draft ORV Plan, stating that the study "found a correlation between panther movement and home range shifts and higher levels of human activity associated with hunting" and that "[b]ased on the study's findings, the National Park Service would continue to monitor the Florida panther and panther behavior in the Bear island unit." Draft ORV Plan at 27. However, NPS errs in concluding that based on the study's findings, "monitoring" is the appropriate and legal response, rather than reinitiation of formal consultation. Rather, the ESA implementing regulations plainly require reinitiation of formal consultation.

Even if monitoring were the proper response to the Janis Study findings, it is not clear what, exactly, meets the definition of "monitoring" under the Proposed Action. With the exception of the ORV vehicle specifications, the Draft ORV Plan states that the Proposed Action will be executed, monitored, and managed; however, the plan does not tell the public how. See, e.g., FWS Comments at 1.

FBP is disappointed by NPS' neglect of this basic procedural duty to reinitiate formal consultation in light of NPS decision to allow as many as 2,500 ORVs in the Preserve each year and virtually unlimited access to the Bear Island Unit, ignoring the findings of the Janis Study. NPS is the dominant agency whose management decisions have real implications for halting the panther's path toward extinction. Yet NPS seems content to allow

EL1 (cont.)

302

rampant ORV use to degrade the remaining habitat for this and other similarly situated species at almost any price, even at the ultimate price of driving species to extinction.

B. **NPS must comply with the procedural mandate under NEPA and consider a reasonable range of alternatives.**

Not only have NPS and FWS failed to follow the clear substantive and procedural mandates under the ESA, they have also failed to follow NEPA's procedural requirements for the preparation of an environmental impact statement (EIS).

NEPA requires that an EIS must: "describe the environmental impact of the proposed action; describe any adverse environmental effects which cannot be avoided should the proposal be implemented; describe any alternatives to the proposed action; describe the relationship between local and short term uses of man's environment and the maintenance and enhancement of long term productivity; and describe any irreversible or irretrievable commitment of resources." 42 U.S.C. § 4332.

NEPA regulations require that the EIS provide a reasonable range of alternatives; "[f]ederal agencies shall to the fullest extent possible...[u]se the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of

the human environment[.]" 40 C.F.R. §§ 1500.2(e). An EIS "shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts[.]" 40 C.F.R. § 1502.1 (emphasis added). NEPA regulations also require that an EIS be tiered to any previous analysis so as to eliminate repetitive discussions of the same issues. 40 C.F.R. § 1502.20. Thus, in essence, when circumstances change, new environmental issues become ripe for analysis.

Consideration of alternatives is the "heart of the [EIS]". 40 C.F.R. § 1502.14; see also Alaska Wilderness Rec. & Tourism Ass'n v. Morrison, 60 F.3d 647, 654 (9th Cir. 1995). Consideration of alternatives in the NEPA process is an important aspect of reasoned decisionmaking. The failure to consider reasonable alternatives "is antithetical to reasoned decisionmaking" and administrative law principles. International Ladies' Garment Union v. Donovan, 722 F.2d 795, 815 (D.C. Cir. 1983). See also Motor Vehicles Mfs. Ass'n v. State Farm, 463 U.s. 29, 46 (1983); California v. Block, 690 F.2d 753, 766 (9th Cir. 1982) (An agency must set forth a sufficient range of alternatives "to permit a reasoned choice"); Idaho Conservation League v. Mumma, 956 F.2d 1508, 1520 (9th Cir. 1992) ("An agency must look at every reasonable alternative, with the range dictated by the nature and scope of the proposed action, and sufficient to permit a reasoned choice").

EL1 (cont.)

Here, NPS did not consider a reasonable range of alternatives, but in fact considered only two alternatives: the proposed action and the no-action alternative. However, other "reasonable" alternatives existed--at least two other alternatives, in fact, one of which in particular would have gone much further to address the environmental effects of the agency action.

"Alternative B" was originally proposed in the GMP/EIS and rejected for analysis in the Draft ORV Plan. See GMP/EIS at 290-300. Alternative B would have "substantially increase[d] the protection of Florida panthers and their habitat within the preserve." Id. at 292. Hunting and ORV use in "units with known resident panther populations", such as the Bear Island Unit, would have been excluded. Id. In addition, under Alternative B, it was expected that populations of white-tailed deer and other native panther prey species would have increased due to the restriction on hunting and ORV use. Overall, it was expected that Alternative B "would provide the greatest level of protection for important resource areas, a potential decrease in hunting by up to 75 percent, [and] a decrease in ORV trails and use of ORVs for hunting[.]" GMP/EIS at i. In other words, Alternative B would have far better satisfied NPS substantive statutory obligations.

303 A "No-ORV" Alternative was also omitted from consideration

in the Draft ORV Plan, presumably because NPS has a long-standing commitment to allowing ORV use and would not, as a political matter, consider it. However, it goes without saying that such an alternative is both reasonable, given the current ecological integrity in the Preserve, and necessary, given the requirement that NPS consider a reasonable range of alternatives.

However, despite the history of litigation with respect to Florida panthers, despite the considerable amount of resources expended in order to reach a 1995 settlement agreement with environmentalists, and despite the connection between ORV use and hunting with panther behavior, NPS expressly decided not to include an analysis of the alternative most likely to result in greater environmental safeguards: Alternative B.

The Draft ORV Plan mentions this omission, but only to state that the plan considered only two alternatives. "All other alternatives, except for the required no-action alternative, were dismissed from further consideration because they would not fulfill the direction set by the [GMP/EIS] and 'Record of Decision.'" Draft ORV Plan at 34.

C. NPS has failed to properly tier its analysis to the GMP/EIS.

NEPA regulations provide that an EIS may be tiered in order

EL1 (cont.)

304

to eliminate repetitive discussions of the same issues. 40 C.F.R. § 1502.20. Thus, as with the requirement that an EIS consider a reasonable range of alternatives, when circumstances change, new issues may become ripe for analysis.

Certainly, the Draft ORV Plan purports to be tiered to the GMP/EIS. Draft ORV Plan at 13 ("This plan refines and expands on the GMP objectives and management actions related to ORV use.") However, many circumstances have changed since the GMP/EIS was completed in 1991 and, despite these changes, NPS has not analyzed the new issues.

For example, the permit ceiling level has changed from 2,000 in the GMP/EIS to 2,500 in the Draft ORV Plan, but the analysis has not changed to include this 25% annual increase in permits issued.

The Draft ORV Plan attempts to analyze and mitigate the environmental effects of ORV use based on a ceiling level of 2,500 permits granted every year. As mentioned previously, the original GMP/EIS Draft Plan of 1991 set the ceiling level at 2,000; the ensuing Biological Assessment (which reached a "not likely to adversely affect" conclusion) set the ceiling level at 2,000. The ceiling level remained at 2,000 until it was inexplicably raised again to 2,500 by NPS after the issuance of FWS' Biological Opinion in 1991. The number "2,500" is not mentioned in the Draft ORV Plan's section describing the proposed

action. The No-Action Alternative does mention that 2,500 permits would continue to be issued; thus, presumably this is also the Proposed Action's permit ceiling level.

The Draft ORV Plan essentially uses the same analysis for the proposed action as that contained in the GMP/EIS. Yet this same analysis is applied to changed circumstances; specifically, a 25% increase in the permit ceiling. Therefore, NPS' claim that the Draft ORV Plan is tiered to the GMP/EIS is incorrect with respect to the analysis of the environmental effects of ORVs.

In addition to the failure to account for the raised permit ceiling level, the EIS is not tiered to the GMP/EIS because the Janis Study findings have been issued since the completion of the GMP/EIS shedding new light on the behavioral patterns of Florida panthers. In addition, a recent analysis of Preserve ORV trails from the University of Georgia shows that NPS' management alternatives are based on erroneous, outdated information. See generally Welch & Madden.

First, there is the new data contained in the Janis Study regarding the behavioral patterns of Florida panthers. This year, eight years after the GMP/EIS was completed, the Janis Study was published. This document represents the most in-depth study to date on the effects of hunting, and thus ORV use, on panthers in the Preserve. The study contains information about home ranges, panther behavior, and habitat. In lieu of anything

EL1 (cont.)

comparable published by any of the federal agencies charged with studying the matter, this study is the best information there is on the subject and deserves consideration.

The Janis Study tested the null hypothesis that managed hunts do not affect panther activity rates. The study found evidence that panthers in the Bear Island Unit appeared to use private lands north of the area as refugia during the hunting season; there was general evidence that female panthers exhibited smaller movements, smaller home ranges, and higher predation success on large prey before the hunting season. Janis Study at iv-vi.

Circumstances have changed. NPS now has new information about the effects to panther behavior due to ORV use--that it did not have when it completed the GMP/EIS in 1991. New issues have become ripe for analysis--namely, in light of the Janis Study findings, whether to decrease the number of ORVs allowed in the Preserve, and, especially, in the Bear Island Unit. However, this analysis is totally missing from the Draft ORV Plan. All that the plan states is that in light of the Janis Study findings, NPS "would continue to monitor the Florida panther and panther behavior in the Bear Island Unit. Habitat availability and land use changes outside the preserve boundary would also be monitored. The Park Service would continue work with [FWS] and the Wildlife Conservation Committee to ensure that panthers would

not be adversely affected." Draft ORV Plan at 27-28. This response is woefully inadequate. NPS does not seem to understand the fundamental implications of the study. The Janis Study confirms what has been suspected all along--that due to ORV use, panthers are already being adversely affected. In other words, this is not a situation where further "monitoring" should occur in order to "ensure" that panthers will not be adversely affected at some point in the future--this is a situation where NPS now has information that panthers have been, are being, and will continue to be adversely affected by hunting and ORVs, and that new information requires new analysis in this EIS. A mere promise of unspecified "monitoring" is not sufficient in light of these findings. "Since the Clark and Janis study...concludes there is a correlation between the Florida panther...movements and hunting activities, this issue should be investigated and the proposed action modified to minimize the effects of human activities on this species." FWS Comments at 3.

Second, there is new information regarding the extent of ORV trails in the Preserve. NPS prepared both the GMP/EIS and the Draft ORV Plan under the assumption that 1240 miles of ORV trails existed in the Preserve, based on NPS mapping completed in 1985. While the Draft ORV Plan was being prepared, the Center for Remote Sensing and Mapping Science, University of Georgia at Athens, released a new assessment of the extent of trails in the

EL1 (cont.)

306

Preserve, re-mapping the area and determining that in fact, 30,000 miles (47,958 km) of ORV trails exist in the Preserve--more than enough to go around the earth. See Welch & Madden at 5.

The Draft ORV Plan summarily dismisses the new data, stating that the "mapping technique was quite sensitive, even indicating ORV tracks in the Loop unit that had been closed to vehicles for more than 20 years." Draft ORV Plan at 49. Thus the difference of 30,000 miles, according to NPS, can be dismissed by the fact that the two maps reflect a difference in "what constitutes an 'ORV trail' and mapping techniques." Id. However, NPS falls far short of stating how many ORV trails there actually are, choosing, again, further study of the issue over actual analysis.

This is not sufficient. NPS has to be willing to incorporate credible new information into its analysis. Choosing to dismiss this alarming study simply because of a possibly erroneous assumption that all of the trails reflected in the Georgia map are not technically "ORV trails," or are out of use, reflects a lack of agency objectivity. It appears that the agency is predisposed to an ORV-friendly outcome which forecloses it from the consideration of carefully researched and credible information. Otherwise, should this study receive so little examination or any less scrutiny than any other source of information considered by NPS?

Furthermore, what if NPS is wrong? It could very well be that the vast majority of trails on Georgia map are currently in use. Even if, as NPS asserts, the difference of 30,000 miles could be explained away by a difference in the definition of "ORV trail" and mapping techniques, what is the extent of the difference? 30,000 miles? 10,000 miles? 5,000 miles? How long before NPS has "ground-truthed" the Georgia data which should have been done in the two years before the Draft ORV Plan was issued? Draft ORV Plan at 49. Even assuming that NPS has the expertise or objectivity for such an enterprise, in the absence of any statutorily imposed mechanism to force such an effort, can the public expect ground-truthing anytime soon?

The point is, the Draft ORV Plan purports to be tiered to the GMP/EIS. Yet there are serious new questions about the assumptions upon which the plan's analysis is based. Until these questions are answered conclusively, the NPS cannot expect that the Draft ORV Plan will be taken seriously by the public.

D. NPS has improperly segmented its analysis.

NEPA regulations provide that in determining the scope of an environmental impact statement, the agency actions under consideration may be "connected" if they are "closely related and therefore should be discussed in the same impact statement." 40

EL1 (cont.)

C.F.R. § 1508.25(a)(1). In direct contravention of this requirement, the Draft ORV Plan improperly segments analysis of the Addition Lands and analysis of commercial ORV use, omitting analysis of both from the Draft ORV Plan.

It is inappropriate to omit analysis of the Addition Lands from the Draft ORV Plan. The Preserve's boundary was expanded in 1988 with the addition of 147,280 acres of adjacent lands. As previously stated, the Addition Lands must be managed by NPS in the same fashion as the original Preserve lands. 16 U.S.C. § 698m-1(c). Congress regarded this addition to the Preserve as essential for the same basic reasons that the Preserve was established in the first place: to "enhance[] the protection of Everglades National Park which is dependent on the natural flow of water through the Preserve for its ecological health," and to "protect a number of endangered species which are present in the area, most importantly the Florida panther which is in serious danger of extinction..." Hearing Before the House Subcommittee on National Parks and Recreation, 99th Cong., 2nd Sess. 129 (May 13, 1986).

The Draft ORV Plan does mention this omission, stating that "[t]he management of the addition lands will be addressed in a future addendum to the [GMP/EIS], scheduled to begin in the fall of 1999." Draft ORV Plan at 1. The plan states that until such time that the GMP addendum is complete and both a "wilderness

suitability study" and a "comprehensive recreational vehicle trail plan" are completed and approved, public use of ORVs in the Addition Lands will be closed. Id.

Again, NEPA regulations provide that all "connected actions" be considered within one document. The Addition Lands, and the uses which are to be allowed therein, are alike in kind and purpose to the original Preserve. Where significant federal agency actions are proposed in one, they affect the other. NPS has decided to allow the issuance of 2,500 ORV permits in the Preserve every year. At some point in time, NPS intends to analyze the "suitability" of allowing ORVs in the Addition Lands. There may be implications for allowing that many ORVs in the home ranges of panther habitat that affect the analysis of whether to allow ORVs in the Addition Lands. In sum, NPS simply does not know the answers to these issues. One could even say that NPS is not interested in gathering such essential information, especially in light of the agency's refusal to seriously consider such new information as the Janis Study and the findings of Welch & Madden.

NEPA is a procedural statute. Its provisions are intended to assist federal agencies in making reasoned choices based on thorough analysis of environmental effects of their actions. NEPA is not intended to be a checkmark an agency makes on its way to a preferable alternative. It only makes sense that,

EL1 (cont.)

308

especially when it comes to the endangered species like the Florida panther, the environmental impacts of allowing ORVs should be analyzed comprehensively, according to NEPA's provisions. That means the issuance of one EIS, which analyzes the environmental impacts of ORV use in the Big Cypress National Preserve, including the Addition Lands, and no "addendums."

Likewise, it is inappropriate for NPS to consider the commercial uses of ORVs, such as airboats, separately. Airboat tours have been a presence for some time in the Preserve. NPS has continued to authorize the tours (whereby vendors charge fares to take visitors on a tour through the Preserve) without completion of the environmental effects of airboats. Meanwhile, airboats have wreaked havoc on the Preserve's ecology and species.

For example, Ochopee Prairie was closed in 1994 due to the environmental impacts caused by airboats in the area, including "adverse impacts to vegetation, soils, and wildlife from increased airboat traffic." NPS Press Release (May 13, 1994) [Attachment 4]. "If this apparent degradation is allowed to continue, the result could be undesirable cumulative changes to the natural environment." Id. Airboats have been suspected of causing harm to West Indian manatees, an endangered species. In addition, Preserve resource management staff have witnessed "severe damage to [] Red Mangrove[s]", "severe erosion [] taking

place in the tributaries", and "[l]arge areas of damaged wet prairies". Tony Pernas, Memorandum Re: Commercial Airboat Activity (March 18, 1997 [Attachment 5] ("In our professional opinion the major contributing factor to the erosion problem is the presence of high speed air boat traffic and the resultant wake" and "[i]t is our professional opinion that if the current use levels go unchecked, irreversible resource damage will continue"). In addition, Preserve resource management staff have noted that posted signs warn recreational boat launchers of possible impacts to manatees, and yet commercial airboats continue to be authorized without environmental analysis under NEPA and/or formal consultation under Section 7 of the ESA. Kenney 1997 [Attachment 2] ("Until we are in compliance with [NEPA and ESA] rescinding our authorization to the tour boats would be the most prudent action we can take. I believe, in our present position we are very exposed to a legal action that would allege failure to comply with these two laws.").

It is clear that airboats are causing significant environmental effects to endangered species and the Preserve's ecosystems. To omit them from what is supposed to be a "comprehensive" analysis of ORVs in the Preserve is inappropriate for an agency supposedly charged, above all else, with the long term management of the Preserve's ecological integrity under the directives of several substantive mandates.

EL1 (cont.)

NPS' analysis, to be taken seriously, must re-visit the Draft ORV Plan and do what it purports to do--that is, a comprehensive analysis of the environmental effects of ORVs, including the environmental effects in the Addition Lands and from commercial airboat tours.

III. The Draft ORV Plan does not comply with the binding terms of the 1995 Settlement Agreement.

The 1995 Settlement Agreement was reached in good faith to avoid the prospect of litigation over the need for an ORV management plan. In issuing the Draft ORV Plan, the NPS for the first time acknowledges that there are adverse impacts attributable to ORV use, and the plan purportedly aims to manage ORV use in the Preserve so as to "minimize" those adverse impacts. However, NPS has failed to meet this objective and several of the agreement's specific conditions.[3]

The Settlement Agreement required that the Draft ORV Plan establish limits and controls on ORV use so as to "minimize

[3]In its comments on the Draft ORV Plan, the EPA states that "[t]he 1995 Settlement Agreement states specific requirements that are listed in the SEIS." EPA, Review and Comments on Draft Off-Road Vehicle (ORV) Management Plan Supplemental Environmental Impact Statement Big Cypress National Preserve, Florida (Nov. 12, 1999) at 5 (EPA Comments) [Attachment 6]. EPA then implies that the Draft ORV Plan lacks detailed compliance with the agreement, stating that "[f]or the benefit of the reader, the document should describe how the Plan addresses the requirements of the Settlement Agreement. Id. See also footnote 4, p. 55.

impacts to BCNP resources, including soil, hydrology, vegetation, recreational resources, and wildlife, including threatened and endangered species." Settlement Agreement at 3-4. For all of the reasons discussed in these comments, the Draft ORV Plan entirely fails to minimize these impacts from ORV use. Again, the ORV Plan is a plan for ORVs, with the consideration of preservation of resources merely an afterthought.

The Settlement Agreement was to compile "best management practices" which are "designed to avoid and/or minimize impacts from ORV use on BCNP's resources, including soil, hydrology, vegetation and wildlife, in a manner which will assure the natural and ecological integrity of BCNP resources in accordance with the BCNP Establishment Act[.]" Settlement Agreement at 4. Thus, the agreement specifically sought NPS' compliance with its pre-existing substantive duties. However, NPS has utterly failed to meet this condition since it does not "assure" the integrity of any of the resources which have been degraded by extreme ORV use. Indeed, NPS gave almost 60 percent of BMPs in the Plan "effectiveness" ratings of "very low," "low," "low-moderate," or "moderate."

The Settlement Agreement also required that NPS meet its pre-existing procedural duty to engage in consultation with the interested federal and state agencies. Settlement Agreement at 6. This included consultations with the FWS pursuant to the

EL1 (cont.)

310

procedural duty under Section 7 of the ESA (see p. 29, supra), input from the Environmental Protection Agency and the Army Corps of Engineers "to the extent required by statute and regulation", and consultation with pertinent federal and state officials in accordance with the Fish and Wildlife Coordination Act and the National Historic Preservation Act. Id. at 6. None of these required consultations has been completed.[4]

Furthermore, the Settlement Agreement provided that NPS would "develop criteria for the development of a comprehensive designated trail system." Settlement Agreement at 4. In addition, the Settlement Agreement provided that NPS develop specific "[p]rocedures and considerations...for closing, opening and reopening areas and closing, relocating, opening and reopening trails to ORV use." Id. at 5. Neither of these provisions has been met; NPS omits any discussion of a comprehensive designated trail system entirely and provides only a cursory, speculative, and unspecified set of criteria for closure in the Draft ORV Plan. Draft ORV Plan at 23. There, NPS

[4]However, the EPA did comment on the Draft ORV Plan, finding it wholly lacking in necessary detail, including management techniques, strategies to reduce ORV impacts, and protection of biological resources, among other things. EPA Comments at 1. In addition, EPA expressed concern that the Plan did not meet the requirements of the Settlement Agreement, stating that "we are concerned by the absence of a plan with specific steps/strategies[,]" "[the plan] does not provide a time table or specifics for implementing these actions[,]" and "it would be helpful to provide a description of how this document meets the settlement requirements." Id. at 1.

states that "[c]riteria would be developed for determining if and when a unit should be closed or use of aunti should be restricted due to temporary conditions." Id. NPS does not seem to understand that the Draft ORV Plan is not the place to state that criteria for closure "would be developed"--but that the Draft ORV Plan is the place to delineate precisely what those criteria are. As the FWS stated: "The [plan] should contain the criteria for unit closure. These criteria are essential components for any proposed action. Without them, review of the proposed action is not complete." FWS Comments at 3 (emphasis added).

NPS also misses the overall point of the agreement and ORV plan. "The overall objective of the ORV Management Plan will be to establish a comprehensive system for management of ORV use in BCNP with the goal of assuring the natural and ecological integrity of BCNP resources in accordance with the BCNP Establishment Act." Settlement Agreement at 3 (emphasis added); see also Draft ORV Plan at 8. "Comprehensive" typically is understood to mean "all-inclusive" or "complete." FBP did not anticipate that NPS would interpret "comprehensive" to mean that NPS would segment the analysis of environmental effects. How can the agency issue a purportedly "comprehensive" Draft ORV Plan, when that plan completely omits any analysis of the analysis of ORV use in the Addition Lands or any analysis of commercial airboat use?

EL1 (cont.)

Furthermore, where are the controls on ORV use? For example, with respect to the "monitoring" proposed to be implemented by the NPS, where are the details? Who will monitor? What will they monitor, precisely? Where will this monitoring take place? When and how often? What will be the criteria established for monitoring? For that matter, what will be the criteria for closing areas or enforcing regulations?

Similarly, what will be the scope of the "educational campaign?" How long does NPS expect to conduct it? Where does NPS expect to raise the necessary funds for such a campaign? Most importantly, how, precisely, does NPS support its implicit assertion that this educational campaign and other similar measures will result directly in the preservation and restoration of the Preserve and habitat for endangered species?

This is the kind of information NPS promised to provide in an ORV Plan; and the plan, in its current form, does not abide by this promise. At the very least, in the absence of such compliance, FBP and the public are entitled to a defined time frame for when such compliance will be forthcoming.

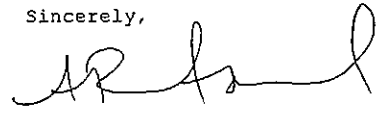
The public has a vested interest in seeing that the ecosystems in the Preserve survive in perpetuity. Ultimately, NPS must realize that the Preserve was not set up for the enjoyment of a few. Its management policies should reflect the use and enjoyment of all who wish to frequent it, including its

residents, such as the endangered Florida panther. As a federal agency charged with the management of public lands under the directive of statutes reflecting the will of the public, not the will of a few, and the public expects nothing less from NPS.

It is time for a sea change at NPS with respect to ORV use in the Preserve. FBP and the represented citizens of Florida expect nothing less than compliance with the law, and ultimately, the protection and restoration of the Preserve's natural integrity for the enjoyment of all who wish to see it, in perpetuity.

In sum, the Draft ORV Plan is unacceptable. NPS must issue a Final ORV Plan which is in full compliance with all relevant statutes, regulations, and the 1995 Settlement Agreement, including specific management strategies for ORV use and a defined time frame for implementation. As promised by NPS, an acceptable Final ORV plan must be issued by June, 2000. Compliance is long overdue.

Sincerely,



Amy R. Atwood
Eric R. Glitzenstein

EL1 (cont.)

312

FLORIDA WILDLIFE FEDERATION

Affiliated With National Wildlife Federation

Manley K. Fuller, III, President
2545 Blairstone Pines Drive, Tallahassee, FL 32301
Post Office Box 6870, Tallahassee, FL 32314-6870

Phone: (850) 656-7113
Fax: (850) 942-4431
e-mail: wildfed@aol.com

December 7, 1999

DEC 17 1999

FAXED 12/13/99

Mr. Wally Hibbard
Big Cypress National Preserve
HCK 61, Box 110
Ochopee, FL 34141

Dear Mr. Hibbard:

The Florida and National Wildlife Federations (Federations) appreciate this opportunity to provide comments on the draft Off Road Vehicle (ORV) Management Plan/Supplemental EIS for Big Cypress National Preserve. As you know, the Florida Wildlife Federation (FWF) and the National Wildlife Federation (NWF) have a long history of conservation action in and around Big Cypress National Preserve. The Federations worked closely with then Senator Lawton Chiles and actively lobbied for the Preserve's establishment and expansion. Also, several individual members of both organizations worked very hard to help create the Preserve.

One such FWF member was the late Calvin Stone, Past President of the Florida Wildlife Federation and author of "Forty Years in the Everglades." He was an active sportsman leader on behalf of the Big Cypress. For many years, he and his wife, Mary, maintained the hunting camp, "Calusa," in the middle of what is now the Preserve. This camp, now in a state of disrepair, should be maintained for its historical significance. It was at Calusa where Stone, Audubon leader Joe Browder, and many sportsmen met with Julie Nixon, the President's daughter, in the early 1970's and spearheaded the effort that led to the creation of the Preserve.

Calusa was also the site of a significant meeting in the late 1980's between then Senator Chiles, his staff including the current EPA administrator Carol Browner, Park Service Regional Director Bob Baker, Preserve Superintendent Fred Fargeren, Executive Director of the Florida Game and Fresh Water Fish Commission Colonel Robert Brantly, Calvin Stone, Franklin Adams, Jack Moller, Manley Fuller, and approximately 150 other outdoor enthusiasts and camp owners. The purpose of the meeting was to resolve concerns about Preserve management issues and to develop strategies to work cooperatively to solve problems.

The point of discussing the area's history is to show how important the Big Cypress Preserve concept is to us. FWF and NWF have been there since the Preserve concept was conceived and we are still there. Some of the Federations members are intimately familiar with the Preserve, its history and its problems. The Preserve is an extremely important part of their lives and their culture.

The Federations support innovative means of regulating ORV's within the Preserve. Ongoing, appropriate management of off road vehicles in BCNP is important to continued legally-authorized public access of the Preserve and to insure access for landowners to their privately-owned back country camps.

We are concerned about misinformation regarding off-road vehicles being distributed to the media and over the Internet by organizations who have little on-site familiarity with the Preserve or its history. This on-going campaign exaggerates the impacts of off-road vehicles (and hunting which is inseparable related to ORV use in BCNP) to the environment and wildlife. Opponents to ORV use allege the following:

1. *Off road vehicle operation results in permanent destruction of Big Cypress habitat.* This statement consistently fails to note that much of the "permanent destruction" is not related to ORVs but is historic in origin - the result of construction of logging roads, use of heavy equipment to clear other roads, oil and gas exploration operations, and impacts associated with cattle operations. Scientific research primarily conducted by ecologist Michael Duever for the National Audubon Society and documented through his publications and affidavit (Attachment 1) clearly state that the majority of ORV impacts are temporary.

2. *ORV use has extreme adverse impacts on wildlife.* Panther researcher Dr. David Maehr provided the affidavit (Attachment 2) regarding ORVs and hunting on wildlife. Maehr stated in his September 26, 1995 affidavit that "There is absolutely no published evidence that off road vehicles (ORV's) disturb Florida Panthers in the Big Cypress National Preserve or elsewhere. To target panthers as a natural resource that has suffered from the use of this equipment contradicts available information." The Florida Fish and Wildlife Conservation Commission comments on the ORV management plan also clearly support the concept that off road vehicle use and hunting as currently regulated within the Preserve have no known significant impacts to the area's wildlife. Some opponents of recreational ORV's allege that manatees are adversely impacted by ORV operations within BCNP. Because they have not produced any data to back up this claim, it is nothing more than an unsubstantiated claim. In fact, the vast majority of the Preserve's waters are too shallow for manatees to utilize. Any ORV regulation relating to manatees should be based on actual, not imagined, management problems.

3. *Hiking trails and hunting associated with ORV use are incompatible.* We recently posed the following question to the national organization, Rails to Trails Conservancy: "Aren't there numerous examples in the United States where hiking and biking trails cross or are adjacent to areas where legal hunting occurs?" After a brief review of the literature, Rails to Trail documented over 170 areas where recreational trails go through areas which are hunted with little if any user conflict.

The Federations recognize the need for intelligent management of ORV use and believe that by doing so we can eliminate or greatly reduce ORV problems, real or perceived. Through the ORV management planning process the Park Service, in conjunction with ORV users, can enhance current management practices to better manage the activity.

E2

An often cited example of the adverse impacts of ORVs and one for which an acceptable management solution exits, is the visible soil disturbance seen near designated ORV entrance points to the Preserve. This "impact," more of an aesthetic rather than an ecological issue, can be significantly reduced by restricting off road vehicles to designated entrance roads that are stabilized for an appropriate distance from the entrance points. Built at or close to natural grade, these "ORV-only entrance ramps" can be designed to minimize hydrological disruption and significantly reduce the visible impacts of ORV use. Funding for these improvements can come from existing federal transportation funding sources. In other parts of the country, trail users, hikers and bikers benefit from federal transportation dollars allocated for trail improvements and management from various federal and federal/state transportation grants. Why not seek and apply those funds within the Preserve? Applications should be made seeking enhancement funding for entrance points from the Federal Highway Aid Program - National Scenic Byway Program or from the State Surface Transportation Program, transportation enhancements for landscaping or environmental mitigation for trails construction and maintainence. FWF and NWF support the concept of user fees, but believe that the current proposal to raise the fee structure from $35 to $120 - $200 is excessive. The full cost of trail stabilization need not be borne solely by ORV users in the Preserve.

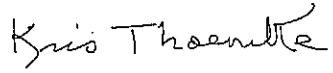
In addition to the "big picture" issues mentioned above, FWF and NWF have the following specific comments:

1. Access points, ORV and foot-only, should be clearly marked and maintained.
2. ORV user fees should be specifically earmarked for ORV management.
3. We do not understand the rationale and the justification supporting the decision that requires ORVs not to exceed 2 pounds per square inch of ground pressure.
4. The draft plan should clarify that the "no action" alternative may be misinterpreted to mean that nothing is being done to regulate ORV use. This clearly is not the case as the Preserve has developed many regulations designed to allow congressionally authorized ORV use while maintaining the environmental integrity of the area. The use of the term "current action" would clarify what the "no action" alternative actually means.
5. Under the proposed action alternatives it is necessary to explain the criteria used to determine whether or not a trail or an area should be closed for resource or visitor protection. This information is critical to properly evaluate the draft plan.
6. In the draft plan, there is a proposal to establish a cooperative educational effort between ORV operators and Big Cypress management staff. We support this idea and several of our members have indicated their desire to assist in establishing an educational program.
7. FWF and NWF concur with the specific comments of the Florida Fish and Wildlife Conservation Commission letter of October 13, 1999, (Attachment 3), specifically those noted regarding page 55 relating to hydrological effects and pages 56 and 57 relating to comments concerning water quality. These and other portions of the Commissions' analysis point out several inconsistencies which should be clarified in the final plan.
8. FWF and NWF also agree with the page specific recommendations made by Federation Vice-chair Franklin Adams, (Attachment 4)
9. Attached are page-specific comments on the draft plan for your consideration.

Maintaining a "culture of conservation" in which persons can have intimate contact with the resource is very important to members of the Federations. The Big Cypress is a perfect place for such an experience. With revisions to the draft management plan the Dept. Of Interior can balance a variety of public recreational activities, including ORV and other traditional uses, with resource conservation and protection. The Federations look forward to evaluating a revised draft of the Off Road Vehicle plan.

Yours truly,

Marley Fuller
President
Florida Wildlife Federation



Kris Thoemke, Ph.D.
Everglades Project Manager
National Wildlife Federation

Attachments (4)

E2 (cont.)

THE WILDLIFE LEGISLATIVE FUND OF AMERICA
To protect the Heritage of the American Sportsman to hunt, to fish and to trap

DEC 17 1999

December 10, 1999

Mr. Wally Hibbard
Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

RE: Comments of The Wildlife Legislative Fund of America: Off-Road Vehicle Management Plan/Supplement to the Final Environmental Impact Statement; Big Cypress National Preserve, Florida.

Dear Mr. Hibbard:

The following comments are made on behalf of the Wildlife Legislative Fund of America (WLFA). The WLFA is a coalition of national sportsmen's conservation and organizations and thousands of state and local hunting, fishing, and trapping clubs that represents over 1.5 million American outdoorsmen.

The WLFA opposes the Big Cypress National Preserve Off-Road Vehicle Management Plan in its current form. Big Cypress National Preserve was established in 1974 and Congress provided a clear mandate that traditional recreational uses of the area were to be protected and enhanced. Congress also directed the National Park Service to permit uses of the preserve associated with hunting, fishing, trapping. Because the use of off-road vehicles (ORVs) is necessary to pursue hunting, fishing and trapping, as well as other traditional recreational activities in the preserve, we maintain that the proposed management actions are in violation of that mandate.

When the Big Cypress Preserve was created as the first national preserve in 1974, sportsmen helped push for its establishment. As a condition of the creation of Big Cypress unit, it was clearly agreed and express promises made that traditional uses of the preserve, including ORV use could and would continue under reasonable regulations. This plan violates that promise.

We suggest that in finalizing this plan, you look back at the history of Big Cypress and create a plan consistent with the agreements made when the Preserve

National Headquarters:
801 Kingsmill Parkway, Columbus, OH 43229-1137
Ph. (614) 888-4868 Fax (614) 888-0326
E-Mail - info@wlfa.com
Website www.wlfa

Washington Office:
1155 Connecticut Ave., NW, Suite 1200
(Entrance on M Street)
Washington, DC 20036
Ph. (202 Fax (2 027

was created. We understand that some modifications to ORV use may be necessary to protect the habitat, but we suggest that, in working towards that conservation, you also keep in mind the traditional uses for which Big Cypress was intended.

Thank you for your consideration.

Sincerely,

William P. Horn
Director, National/International Affairs and
Washington Counsel

cc: Jack Moller
Barbara Jean Powell

NATIONAL RIFLE ASSOCIATION OF AMERICA
INSTITUTE FOR LEGISLATIVE ACTION
11250 WAPLES MILL ROAD
FAIRFAX, VA 22030-7400

RECEIVE

December 13, 1999 DEC 16 1999

Mr. Wally Hibbard
Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

Dear Superintendent Hibbard:

Because many of our south Florida members use off-road recreation vehicles (ORV) for hunting in the Big Cypress National Preserve, we would like to comment on the ORV Management Plan/Supplement to the Final Environmental Impact Statement (EIS).

We have received copies of comments submitted for the record on this subject by Big Cypress ORV users and believe that they reflect the depth of knowledge about the Preserve and its resources that can only come from long term, traditional users. Thus the NRA defers to the detailed comments submitted by sportsmen and women who engage in recreational activities within the Big Cypress. We encourage you to weigh carefully their comments and those of other ORV users.

In its present form, the plan is not supported by the NRA. For those of us who remember well the creation of the Preserve in the 1970's, we are fully aware of the emphasis that Congress placed on consumptive uses of wildlife and other traditional forms of recreation in the Preserve. Such uses distinguish management prescriptions of a preserve from that of a national park.

It is well understood that most of the traditional and, by law, protected recreational activities in the Big Cypress can only be pursued using ORVs. However, ORV users have had to struggle mightily to maintain recognition of a traditional use against the preservationist philosophy inherent within the National Park Service and the preservationist philosophy espoused by environmental groups who are unalterably opposed to recreation unless it can be conducted on foot. The plan points in the direction of furthering this philosophy. It violates the promises that were made when the Preserve was created. Rather than being supportive of traditional recreation activities, the plan seeks to restrict the use of ORVs in a manner that stigmatizes these activities. The plan turns its back on the history of the Big Cypress and the people who shaped that part of our country.

We strongly encourage you to implement a plan that imposes the absolute minimum management burden upon ORV users necessary to protect the resources of the Preserve. Management policies should accurately reflect the priority that was placed upon recreational activities that were in place at the time the Big Cypress was brought into the National Park System.

Thank you for the opportunity to comment.

Sincerely,

Susan R. Lamson
Director
Conservation, Wildlife and Natural Resources.

E4

PREDATOR 4-WD
2340 Montebello Square Drive • Suite D • Colorado Springs, CO 80918 • (719) 528-5790

Julie G. Panek
3085 Fuller Road
Colorado Springs, Colorado 80920

August 19, 1999

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 11
Ochopee, Florida 34141

Dear Mr. Hibbard:

A fee for using a managed National Preserve is a reasonable and appropriate alternative to closing or restricting public access. It is reasonable to require users to pay a user fee for access. It is also reasonable for the users to expect that the user fee would be a reasonable amount applied to all users and the resulting funds would be used to maintain the location that generated the funds. The funds should not be sent to Washington to be funneled down nor should any single user group be made to pay all fees.

It appears that asking a $125-$200 fee for ORV users in the Cypress National Preserve is unreasonable and biased. It would be more honest and direct to close the Preserve to ORVers than to eliminate the usage by such steep fees. Implementing a smaller baseline fee, with fee options for usage type (i.e., OHV, hunting, fishing, hiking) that would be used to maintain the resources could establish a resource fund. The fund could be used to provide education, resource maintenance, and user facilities all to reduce resource impacts. There is obviously a bureaucracy associated with funds and fund management, but the fund management cost could be drawn from the fund itself, with matching funds from State and Federal agencies.

I do not pretend to have all the answers, but I do know that continually restricting limited resources to a growing number of users is not the answer. Funneling a larger number of users into a smaller area will only increase the impacts to the smaller area ultimately resulting in the over use and closure of the smaller area. Unless the USA plans to restrict births and immigration, we are all faced with the problems of usage.

Give the people the opportunity for responsible stewardship of public lands.

Thank-you,

Julie G. Panek

Julie G. Panek

E5

FLORIDA WILDLIFE FEDERATION
Affiliated With National Wildlife Federation

Manley K. Fuller, III, President
2545 Blairstone Pines Drive, Tallahassee, FL 32301
Post Office Box 6870, Tallahassee, FL 32314-6870

Phone: (850) 656-7113
Fax: (850) 942-4431
e-mail: wildfed@aol.com

December 7, 1999

DEC 13 1999

Mr. Wally Hibbard
Big Cypress National Preserve
HCK 61, Box 110
Ochopee, FL 34141

Dear ~~Mr. Hibbard~~: Wally

The Florida Wildlife Federation appreciates this opportunity to provide comments on the draft Off Road Vehicle (ORV) Management Plan/Supplemental EIS for Big Cypress National Preserve. As you know, the Florida Wildlife Federation has a long history of conservation action in and around Big Cypress National Preserve. The Federation was actively involved and lobbied for the National Preserve's establishment and expansion. Individual members of the organization worked very hard to see that the Preserve was created. We worked closely with then Senator Lawton Chiles in the Preserve's establishment. The late Calvin Stone, Past President of the Florida Wildlife Federation and author of "Forty Years in the Everglades," was an active sportsman leader on behalf of the Big Cypress. He and his wife, Mary, maintained a hunting camp, "Calusa," in the middle of what is now the Preserve for many years. This camp, now in a state of disrepair, should be maintained for its historical significance. It was at Calusa where Stone and Audubon leader Joe Browder and many sportsmen met with Julie Nixon, the President's daughter, in the early 1970's and spearheaded the effort that led to the creation of the Preserve. Calusa was also the site of a significant meeting in the late 1980's between then Senator Chiles, his staff including the current EPA administrator Carol Browner, Park Service Regional Director Bob Baker, Preserve Superintendent Fred Fargeren, Executive Director of the Florida Game and Fresh Water Fish Commission Colonel Robert Brantly, Calvin Stone, Franklin Adams, Jack Moller, myself and approximately 150 other outdoor enthusiasts and camp owners. The purpose of the meeting was to resolve concerns about Preserve management issues and to develop strategies to work cooperatively to solve problems.

The point of discussing the area's history is to show how important the Big Cypress Preserve concept is to us. Our organization has been there since the Preserve concept was conceived and we are still there. Some of our members are intimately familiar with the Preserve, its history and its problems, and the Preserve is an extremely important part of their lives and their culture.

The sound management of off road vehicles is very important to public access to the

E6

Preserve, also as a means of access to individually owned Preserve back country camps. The Federation suppors innovative means of regulating ORV's within the Preserve. However, we are concerned that there has been misinformation regarding off road vehicles distributed to the media and over the Internet by organizations who have little on-site familiarity with the Preserve or its history. There is an ongoing campaign which exaggerates the impacts of use of off road vehicles to the environment and to wildlife. Essentially, the opponents have alleged the following:

1. Off road vehicle operation results in permanent destruction of the Big Cypress. This contention consistently fails to note that much of "permanent destruction" cited actually is what remains of historic modifications as part of former logging roads, historic use of heavy equipment to clear other roads, oil and gas exploration, cattle operations, etc. Scientific research primarily conducted by ecologist Michael Dueuer for the National Audubon Society and documented through his publications and affidavit (attachment 1) clearly state that the majority of ORV impacts are temporary.

2. Contentions by ORV opponents also exaggerate impacts of ORV operation upon wildlife. Panther researcher Dr. David Maehr provided the affidavit (attachment 2) regarding wildlife effects and ORV's and hunting. The Florida Fish and Wildlife Conservation Commission comments on the attached management plan also clearly support the concept that off road vehicle use and hunting as currently regulated within the Preserve have no known significant impacts to the area's wildlife. Allegations by opponents of recreational ORV's have been made that manatees are adversely impacted by ORV operations within the Preserve. Where is the data to document this problem? The vast majority of the Preserve's waters are too shallow for manatees to utilize. Any regulation relating to manatees should be based on an actual, not an imagined, problem.

Another issue of concern is that opponents of ORV use have exaggerated user conflicts totally out of proportion to their actual significance. For example, claims have been made that hiking trails and hunting are incompatible. We recently posed the following question to the national organization, Rails to Trails Conservancy: Aren't there numerous examples in the United States where hiking and biking trails cross or are adjacent to areas where legal hunting occurs? Their response: They were able to document, after a brief review, over 170 such areas where recreational trails go through areas which are hunted.

Our point is not that there are no problems, but that intelligent management of these activities will eliminate or greatly reduce problems, real or perceived. We believe that through the ORV management planning process, the Park Service in conjunction with the ORV users can enhance current management practices to better manage the activity.

Recent research has documented that a significant portion of the soil disturbance within the Preserve occurs near the entrance points. We believe that these disturbances can be reduced by restricting off road vehicles to a designated route which is stabilized for an appropriate distance from the entrance points. The stabilization should be approximately at natural grade, and should not allow street legal vehicles, but be restricted to permitted ORV's. These stabilized portions of the trail should be designed to minimize hydrological disruption. We believe that initial trail stabilization will reduce aesthetic impacts of ORV use. We believe that most of the concern of ORV impacts actually is based on aesthetic, rather than ecologically significant concerns. To fund this activity, we believe that there are federal transportation funding sources which can be utilized for this purpose. We do not believe that the cost of trail stabilization should be borne exclusively by the ORV operator. We do support the concept of user fees, but believe that the current proposal to raise the fee structure from $35 to $120 - $200 is excessive. Other trail users, hikers and bikers benefit from federal transportation dollars being allocated for trail improvements and management from various federal and federal/state transportation grants across the country. Why not seek and apply those funds within the Preserve?

We believe it critical to maintain diverse recreational activities within the Preserve. We also believe that with certain improvements the current management practices will continue to protect the Preserve's natural resources and its wildlife. To maintain a "culture of conservation", it is very important for people to have intimate contacts with the natural environment and the Big Cypress is a perfect place for such an experience. Access points should be clearly marked and maintained. We believe ORV user fees should be specifically earmarked for ORV management. We do not understand how the requirement that vehicles not exceed 2 pounds per square inch of ground pressure was selected or what the specific justification for this figure was.

We are also concerned that there appears to be a bias within the draft plan against ORV use which does not appear justified by objective scientific information. For example, impacts to panthers and their prey base are discussed, however the existing scientific data do not show statistically significant relationships. Analysis of these relationships is thoroughly discussed in letters from the Florida Fish and Wildlife Conservation Commission's review of the recently completed University of Tennessee studies (by Janis and Clark, 1999) of panthers and hunting and ORV use.

We believe that the draft plan should clarify that the "no action" alternative may be misinterpreted by the reader unfamiliar with the Preserve to mean that nothing is being done to regulate the activity. This clearly is not the case as the Preserve has developed many regulations designed to allow congressionally authorized ORV use while maintaining the environmental integrity of the area. The use of the term "current action" would clarify what the "no action" alternative actually means.

We believe that under the proposed action alternatives it is necessary to explain the criteria that would be used to determine whether or not a trail or an area should be closed for resource or visitor protection. This information is critical to properly evaluate the draft plan. We look forward to evaluating a revised draft of the Off Road Vehicle plan. We believe that it is possible to balance a variety of public recreational activities, including traditional ones, with resource conservation and protection.

In the draft plan, there is a proposal to establish a cooperative educational effort between ORV operators and Big Cypress management staff. We support this idea and several of our

E6 (cont.)

members have indicated their desire to assist in establishing an educational program.

The Florida Wildlife Federation concurs with the specific comments of the Florida Fish and Wildlife Conservation Commission dated October 13, 1999, (attachment 3), specifically those noted regarding page 55 relating to hydrological effects and pages 56 and 57 relating to comments concerning water quality. These and other portions of the Commissions' analysis point out several inconsistencies which should be clarified in the final plan. The Florida Wildlife Federation also is in agreement with the page specific recommendations made by Federation Vice-chair Franklin Adams, (attachment 4).

We have attached additional page-specific comments on the draft plan for your consideration.

Yours truly,

Manley Fuller

Manley Fuller
Florida Wildlife Federation

Attachments

Florida Fish and Wildlife Conservation Commission

James L. "Jamie" Adams, Jr., Bushnell; Barbara C. Barsh, Jacksonville; Quinton L. Hedgepeth, DDS, Miami; H.A. "Herky" Huffman, Deltona; Thomas B. Kibler, Lakeland
David K. Meehan, St. Petersburg; Julie K. Morris, Sarasota; Tony Moss, Miami; Edwin P. Roberts, DC, Pensacola; John D. Rood, Jacksonville

ALLAN L. EGBERT, Ph.D., Executive Director
VICTOR J. HELLER, Assistant Executive Director

OFFICE OF THE EXECUTIVE DIRECTOR
620 South Meridian Street
Tallahassee, FL 32399-1600
www.state.fl.us/fw
(850) 487-3796
TDD (850) 488-9542

October 26, 1999

Mr. Wallace A. Hibbard
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141-9710

Dear Mr. Hibbard:

Thank you for the opportunity to comment on the Draft Off-Road Vehicle (ORV) Management Plan / Supplemental Environmental Impact Statement (draft plan) for the Big Cypress National Preserve (Preserve). General comments based on the review of the draft plan are provided in this letter. More specific comments are provided in Attachment 1. All publications cited in these comments were originally referenced in the draft plan. We appreciate the opportunity to work with the Preserve to develop an ORV plan that protects the resources of the Preserve while providing public recreational opportunities in accordance with the enacting legislation for the area.

The draft plan evaluates two ORV management alternatives, the "proposed action" and "no-action" alternatives. Though NEPA regulations require a "no-action" alternative, this term suggests that no action is currently being undertaken to regulate ORV use on the Preserve which is clearly not the case. The Preserve has developed a complex set of area regulations designed to allow ORV use while still maintaining the environmental integrity of the area. A more appropriate and descriptive term for the second alternative would be "current action."

A critical component of the proposed action alternative is the criteria that would be used to determine when or if a trail or particular unit of the area should be closed for resource or visitor protection. This information was noticeably absent from the draft plan except for an example in the appendix which was included to demonstrate how criteria would be developed Preserve-wide. Without the actual criteria, a comprehensive and informed review of the draft plan is not feasible.

E6 (cont.)

A second critical component of the proposed action alternative is the new vehicle specification that would limit the ground pressure of ORV's to a maximum of two pounds per square inch (psi). Within the draft plan, there was no information or data to explain how the maximum ground pressure of two psi was derived, how it would be measured in the field, how this figure compares to the average ground pressure for current ORV's, and there was no analysis on how the proposed maximum ground pressure would reduce ORV impacts to soils and/or vegetation in comparison to existing ground pressures. Considering the financial cost this change could impose on ORV owners, the justification for proposing a maximum two psi ground pressure should be included in the draft plan to support the new vehicle specifications described in the proposed action alternative.

We recognize that implementation of an ORV plan could have significant impacts on public recreation on the Preserve. We believe that it is possible to balance traditional uses with natural resource protection, and in many ways the Preserve has already demonstrated this. We believe the comments provided in this letter will contribute to the development of a final comprehensive ORV plan that will maintain this balance between resource protection and traditional recreational use. We look forward to the opportunity to review a revised draft of the ORV plan, and thank you for the opportunity to review and comment on this version. Please contact me if you have questions or require additional information.

Sincerely,

Allan L. Egbert, Ph.D.
Executive Director

ALE/W201/nw
WLD 8-5-1
bwm/nick/hibbar05.let

Attachments

cc: Mr. Frank Montalbano
Mr. Mark Robson

319

ATTACHMENT 1

Specific Comments
October 13, 1999

The major topics discussed in the draft plan included the comparison of proposed action and no action impacts on natural resource issues including water resources, soils, vegetation, protected species, and white-tailed deer and feral hog populations. Visitor use issues included ORV operators, hunting and hunters, other visitors, and non-federal property owners. These specific comments are provided in the order the issues appeared in the draft plan.

Water resource issues discussed in the draft plan included factors that affected water flow and water quality. With respect to water flows, the draft plan states on page 55 that the extent, severity, and occurrence of ORV trails altering water flows in the Preserve is largely unknown. Additionally, the study conducted by Deuver et al. (1986) and referenced on page 56 indicated that although under certain circumstances ORV trails could act as drainage channels and potentially alter natural hydrologic patterns, in most parts of the Preserve the ground is sufficiently irregular to interrupt any channelizing effects and any potential hydroperiod impacts would be localized. The conclusionary statement for this section of the draft plan states "The no-action alternative would result in continued localized impacts to surface water flow." This statement confuses the issue of localized impacts on hydroperiod with the broader issue of surface water flow in the Preserve. It has not been substantiated that ORV trails alter surface water flow in the Preserve. The conclusion should be clarified to make the distinction between localized impacts and surface flow impacts and to more accurately reflect the actual information on ORV trails and surface flows. In addition, infrastructure such as U.S. 41, 11 Mile Road, Jetport, Loop Road, Turner River Road, oil pads and pipelines, water control structures, etc. which serve as impediments to natural water flow should be discussed in this section to place the potential impacts of ORV trails in proper perspective.

Sections of the draft plan related to water quality appear to contain contradictory information. On page 56, water quality in the Preserve is described as good although temporary water quality problems have occurred due to petroleum related spills (from oil exploration?) and illegal discharge of raw sewage from recreational vehicles such as camper trailers. On page 56, Duever et al (1986b) determined that the effects of ORV use on water quality were negligible and localized. In the discussion of the proposed action on page 57, however, these facts are ignored, and the draft plan includes statements such as "... impacts of ORV use to water quality, however localized, may be substantial" and "The implementation of the proposed action would improve water quality in certain marshes...". These statements differ considerably from the studies that were cited in the draft plan and should be revised to more accurately reflect the negligible impacts of ORV use on water quality and the current status of water quality within the Preserve. Similarly, the section on cumulative impacts goes into great detail on water quality issues on properties surrounding Big Cypress, even though these issues have no relevance to ORV use. This section should be revised and focused more closely on ORV use in the Preserve. If concerns exist over water quality issues outside the Preserve, monitoring activities should be conducted as recommended in the Water Resources

E6 (cont.)

320

Management Plan (NPS 1996) referenced on page 24, but should not be included or funded as part of the proposed action under the draft plan. The cumulative impacts section should be amended to state neither the proposed or no-action alternative would have cumulative effects.

The discussion on impacts to soil beginning on page 58 states the NPS is responsible for managing ORV's and prohibiting vehicle operation that could adversely affect the Preserve's resources. The pertinent question that needs to be addressed in this section is whether this type of use constitutes an adverse affect on the Preserve's resources or merely creates a temporary visual impact. In commercial operations, other soil impacts have been considered acceptable by NPS as demonstrated in the cumulative impact section: "Oil and gas exploration and operations, and grazing in the Preserve have and will continue to impact soils in the Preserve, but are limited in area...". The relative impacts of ORV use compared to other on-going activities should be discussed in this section.

In the studies conducted on Big Cypress and cited in this section, rutting was the most severe impact identified with respect to ORV use. The referenced studies demonstrated that in all study environments some recovery in rut depths occurred within months after impacts and in all but one habitat type "medium impact" ORV trails were completely filled in and no longer visible in $\leq$ 5 years. This information suggests the least amount of impact occurs under a scenario where ORV users are not restricted to designated trails. The conclusion statement for this section should also be revised to state under the no-action alternative some areas would be reclaimed to more natural conditions over time through the current use of temporary trail closures.

Impacts to vegetation collectively discusses ORV impacts in a variety of plant communities. While operating ORV's ultimately impacts vegetation to some degree, it is important to evaluate these vegetative impacts with respect to ecological function. For example, on old-growth pinelands (reported as 54 acres in size on page 62 and 23,500 acres on page 38) the reported 30 miles of existing trails encompasses approximately 1/10 of one percent of the total landscape for this plant community (assuming the correct acreage figure is 23,500 and the average trail width is 8 feet). The impact this has on the ecological function of the area and the ability of the area to support wildlife is negligible. This type of information is missing for all
plant communities in the draft plan and would be useful to better assess the possible impacts ORV use may have on ecological function.

The cumulative impacts section for most plant communities references the loss of habitat in south Florida due to development and agriculture and a resulting increase in the importance of protecting plant communities within the boundaries of Big Cypress Preserve.

While the loss of natural areas is concerning to all resource agencies, it should be recognized that more than 2.3 million acres of land surrounding the Preserve have been purchased by state and federal agencies to protect these types of plant communities in south Florida. The cumulative impacts sections seem to suggest that these plant communities are unique to Big Cypress which is misleading. In addition, the analysis of no-action impacts for all plant communities should include "severely impacted areas would be closed and reclaimed to more natural conditions over time." This statement is included for some plant communities but missing in others.

It was also noticed that for some plant communities the conclusion section references restricting ORV numbers as part of the proposed action alternative. The explanation of the proposed action alternative in the beginning of the draft plan does not include any restrictions on the number of ORV's allowed to operate on the area other than the current cap of 2500 permits which is already in place and described under the no-action alternative. The statement regarding restricting ORV numbers needs clarification.

The sections describing wildlife impacts (both protected species and white-tailed deer and feral hogs) contains a number of contradictions and needs careful review. For example, on page 66 in reference to Florida panthers it is stated as part of the proposed action impacts "The proposed reclamation program would likely increase diversity and abundance of prey in some areas " but under the white-tailed deer and feral hog section, which are important prey species for panther, it is stated "It is unlikely that the impacts on the deer and feral hog population would be significant under the proposed action." A second example exists under the discussion of red-cockaded woodpeckers . On page 66, it is stated that no studies or reports exist that demonstrate red-cockaded woodpeckers are sensitive or threatened by ORV use or similar activities. The following sentence, however, states that red-cockaded woodpeckers may benefit by the proposed action due to a reduction in disturbance. These types of contradictions and unsupported conclusions are found throughout the sections dealing with wildlife and necessitate revisions based on an objective overview of the best available scientific information.

A central theme that runs through the protected species section is that neither the proposed or no-action alternative would adversely affect listed wildlife species, but the no-action alternative is less desirable because "there would be fewer ORV restrictions and less effort to improve habitat." This statement needs to be explained in more detail. As previously discussed, there is no information in the draft plan that explains what, if any, relationship exists between ORV use, ecological function, and the ability of an area to support wildlife. The only place this topic is discussed is on page 73 where a lack of any measurable relationship is described for white-tailed deer and feral hogs. For the majority of these species, the most significant impacts on population and habitat have been altered hydrology as a result of

E6 (cont.)

development and the operation of water control structures. To suggest that adopting additional ORV rules would improve habitat and result in healthier wildlife populations is unrealistic in light of much larger impacts such as altered hydrology. A second suggested benefit of the proposed alternative mentioned in relation to several wildlife species is that the proposed alternative would improve water quality and flows. As discussed earlier, it is doubtful the proposed alternative would have a significant effect on water quality or flows throughout the Preserve. A more objective view is that if significant hydrological problems exist, they are related to regional water flows and existing infrastructure and not ORV use.

The University of Georgia ORV Map included in this draft plan and described in the affected environment section is referenced several times with respect to ORV impacts on vegetation without the authors qualifying statement that the map needs to be ground-truthed as linear features other than ORV trails may be included in the map. The accuracy concerns expressed by the map's authors appear valid as the Loop unit has been closed to ORV use for 21 years and yet the map shows a maze of "ORV trails" throughout this area. Studies conducted on Big Cypress and cited in the draft plan state that most moderate impact trails become indistinguishable in less than five years. Therefore, given that the Loop unit has been closed to ORV use for 21 years it appears many of the linear features represented on the map must be something other than ORV trails. A similar situation exists in Deep Lake unit which has been closed to ORV use for ten years. References made to this map in the vegetation section should include this type of information as well as the authors' cautionary note on interpretation. Preferably, the map should be ground truthed for accuracy before it is included in the draft plan.

The section on Florida panthers warrants special consideration due to the limited range of this endangered species in Florida. The discussion on panthers states the Janis and Clark study (1999) demonstrated a correlation between panther movement and home range shifts and higher levels of human activity associated with hunting. This is incorrect. The study demonstrated current levels of public use on Bear Island *did not* affect movement rates and home range shifts. The two variables that tested significant were distance to trails, which was considered biologically insignificant by the authors, and use of Bear island during fall and early winter. The overall results of the study indicated human activity during the hunting season did not produce negative energetic responses which were considered the most direct indicators of the well-being of the Florida panther. In fact, mean values for panther predation success were higher on hunted areas than on non-hunted areas.

White-tailed deer and feral hogs are important prey species for panthers as well as game species for recreational hunting. In the discussion of these species on page 73, it is stated "... the reduction in noise and other disturbances associated with ORV use would likely result in an

increase in the populations of the white-tailed deer and feral hogs." This statement is in need of further explanation and supporting documentation. The analysis of the proposed action also discussed deer movement in response to hunting and cited a dated study conducted by Downing et al. (1969) that suggested it is not uncommon for deer to temporarily abandon their home ranges to avoid hunters. More recent studies utilizing advanced telemetry equipment have been conducted by Sargent (1992) and Land (1991) on deer behavior relative to hunting in the Big Cypress Preserve. These studies indicated deer did not leave the Bear Island unit or the southern portion of Big Cypress in response to hunting or ORV use during the hunting season. These more current and site-specific studies should be cited and elaborated on in the discussion of deer movements in response to hunting, especially as they relate to the availability of panther prey. Both studies are referenced in the Janis and Clark panther report.

Visitor use issues discussed in the draft plan included impacts on ORV users, hunting and hunters, other visitors, and non-federal property owners. As with natural resource issues, impacts were analyzed for both the proposed and no-action alternatives.

The discussion on the impacts of the proposed action alternative fails to recognize social issues or issues related to the enjoyment of the area by ORV operators. Page 31 of the draft plan identifies approximately 70 undesignated access points currently used by the public to access the Preserve. The proposed action alternative would reduce the total number of access points to 15. This will undoubtedly cause at least localized crowding problems which should be identified as an impact to ORV users under the proposed action alternative. Another impact that should be included in the proposed alternative is that adopting the new ORV rules would reduce an individual's ability to explore new places and possibly reach favorite destinations. These factors were considered important components relative to the enjoyment of the Preserve by ORV owners according to the survey conducted by Farrel et al. (1998) and should also be listed as impacts under the proposed alternative. In the discussion of permit fees, the permit fee increase from $100 to $200 per year listed on page 74 does not correspond to the expected permit fee listed on page 16 in the beginning of the draft plan.

In reviewing the Off Road Vehicle Management Practices in Appendix B as it relates to ORV operators, it was disturbing to read that strategies being considered to reduce ORV use in general (Strategy 12, beginning on page 110) included "increasing ORV use fees to reduce visitation" and "increasing the difficulty of access, either by reducing the number of accesses or restricting parking lot sizes." Neither one of these appear to be appropriate management strategies for an area purchased and funded by public tax dollars. Both strategies would certainly cause difficulties in the future as they give an unfair advantage to individuals with a higher economic status and would promote confrontational situations at designated access points.

E6 (cont.)

Specific Comments
Page Seven

The discussion on hunting and hunters suggests the proposed action would likely result in a reduction in harvest for hunters utilizing ORV equipment and an increase in harvest for walk-hunters. While this suggestion seems logical for motorized hunters as they would no longer be able to access all portions of the Preserve, it is unlikely walk hunters would realize an increase in harvest "due to the reduction in disturbance from the ORV's and the reduced startle effect on the wildlife." The panther report produced by Janis and Clark indicates these types of reactions to vehicles are minimal and provides a measurement of 50 meters as the distance deer in northern Florida moved away from roads during the hunting season. The cumulative impact statement for this section which references future loss of habitat should be changed to "no cumulative impact" as the Preserve is surrounded almost entirely by state and federally owned property where the loss of habitat through development is not a threat.

The impact of ORV use on non-ORV users was one of the visitor use issues identified in the draft plan. The draft plan states that "noise and visual intrusions resulting from ORV use may adversely affect other Preserve visitors (non-ORV users)" but does not provide quantitative data to support this statement. Conversely, page 54 of the draft plan states "Many pass-through visitors do not see and are likely not affected by the Preserve's ORV use" and "...few non-motorized visitors venture off roads or other prepared surfaces or engage in back country recreation." Based on this information, it appears user groups already segregate themselves and the potential for conflict between user groups may be more of a perceived problem than an actual problem. This issue should be revisited and quantified as the supposition of user conflicts exists throughout major sections of the draft plan and forms one of the foundations for needing to place further restrictions on ORV use within the Preserve. In addition, when discussing visitor use issues, the draft plan should emphasize that Loop Unit and Deep Lake Unit have already been designated as non-motorized zones currently available for visitors who wish to utilize the area without encountering ORV use. This geographic separation of user groups has been implemented successfully on other wildlife management areas to address the same concerns.

Comments related to impacts to non-federal property owners are the same as the comments prepared for impacts to ORV operators.

n:\bwm\nick\orvplan.ltr

page 2. ORV COMMENTS: Franklin Adams

Summary- P.111. 4th paragraph, change "park" to preserve.

P. 1V- I fully support and volunteer to sssist in education and development of an ORV manual.

P. V- Increased enforcement administered with common-sense and fairness would not inconvience responsible ORV users. In fact it would be welcomed.

P. 10- Question that West Indian Manatee would be adversely affect by ORV use in anyway. Documentation?

P. 10- "Other visitors." I agree that noise and visual intrusion resulting from ORV use may? adversely affect other preserve visitors in a campground, or near Tamiami Trail, but I do not think this is a significant problem, especially, in the back country.

P. 16- Proposed action: "The proposed action would reduce impacts on the preserve by: protecting specific sensitive areas by establishing areas where ORV use would not be allowed."

Comment: Request examples of such known areas. What criter would N.P.S. use ?

P. 16- " Vehicle Permit System and Operating Standards."

Comment: I feel that the present fee structure is adequate. ORV use in the preserve is a congressionally authorized use As such it is my opinion that "Special Park Use Guidelines, NPS-53" do not apply to orv permits. Orv owners did not request that their activities become subject to further regulation or additional expenditures of N.P.S. funds. (Also we are talking abount a preserve-not a park.) The Bio diversity lawsuit "settlement" has resulted in the N.P.S. making a sincere effort to develop new ways of dealing wit orv use and impacts. If orv users had requested trail improvements, camp grounds, or staging areas to be construc then NPS-53 might have validity and higher permit fees mi be justified. Raising the permit fee to 120.00 to 200.00 i excessive and would be a hardship on those on a low or fixe income. Suggest that other sources of funding be explored. Hunters and orv users have always paid their way but in thi case raising the permit fee is unjustified.

P.19- "Other orv equipment."
Comment: Very few buggies have a braking system. Its just not necessary as low geared as they are. In addition brake increase the weight of the buggy and cannot be maintained in the environment in which they are used.

E6 (cont.)

P. 20- "Access Points." Strongly support identification of ORV crossings on US 41 for safety reasons. Reduce speed, signage and road striping. A very positive recommendation.

P. 55-56- "Impacts on water resources, surface water flows." Quote, " although impacts to surface water flows are localized (Duever et al. 1986) the cumulative impacts may have permanent, long-term effects on fish and wildlife populations in the Preserve."

Comment: While there "may" be localized negative impacts from orv trails, ruts or airboat trails, one must look at certain positive benefits created by trails and ruts.

While not naturally occurring features these areas none the less do provide some benefits to certain species of fish a and wildlife. Ruts in buggy trails since they are of lowe elevation than the surrounding areas serve as concentratio points for many aquatic organisms when water levels recede in the winter or spring dry seasons. Fish , crayfish, fro and snakes prey on those food species that are concentrate in the buggy trails deeper ruts. This is in a way analago to the concentrations that seasonally occur in the centers cypress heads(domes) and shallow ephemeral ponds. These concentrations serve as a biological "soup" for wading bir small mammals and reptiles. The same concentrations can be observed in the airboat trails in the Stairstep area of th Preserv south of US-41.

Orv trails, particularly on pine islands are habitually us as travel corridors by the Florida Panther and its primary prey species, white-tailed deer and hogs. The openess of the trail allows them to travel with less expenditure of energy and to most likely detect predators and prey more easily. Certain panthers regularly use buggy trails as evidenced by their tracks on a regular basis. Deer can oft be approached very closely on a quiet swamp buggy, whereas a person on foot would be more likely to spook them at a greater distance. Preserve mammals are use to vehicular motorized sounds and normally do not seem to associate the with danger. Based on my personal experience,orv trails d provide some positive benefits not only to people but also the critters.

P. 57- "Cumulative impacts, water quality."

Comments: There are several external threats to the water quality of the Preserve. Pesticides, herbicides and fert- ilizers to name the most obvious ones. We strongly suppor a preserve wide network of water quality monitoring statio A full-time hydrologist position must continue to be a pre serve priority.

P. 62-63- "Old growth pinelands etc."

Comment: N.P.S. needs to refine their "prescribed fire methods. Prescribed burns needs to be done when ground moisture levels and winds are conducive to "controlled burning." There are pine islands north of the Trail where so-called controlled burns have actually killed fairly mature pine stands. Also I have witnessed in the past couple of years, willow heads that have been in place for a long-time that were literally burnt out of the ground. Burning needs to be done more frequently and more acreage needs to be burned. Otherwise fuel loads are excessive and hot crown fires can occur. Burning of course whe properly done is of great benefit to both flora and fauna.

P.66-67- "Florida Panther, Impacts on Protected Species."

Comments:

Regarding panthers and prey. & ORV'S.

I have attached a copy of personal correspondence that I received from David Maehr in August 1995 regarding the Florida Panther. Mr. Maehr was the principal panther researcher for the Florida Game & Freshwater Fish Commission for over 8 years. I had requested that Mr. Maehr write down his thoughts on any possible adverse impacts that orv's or hunters might have on the panther. This later was used as a basis for his affadavit **in the Biodiversity lawsuit.** Mr. Maehr's opinion was orv's and hunters were not a significant concern in preserving the Florid Panther.

P. 72- "West Indian Manatee" "Analysis of proposed action impacts." "In the preserve, manatees only occur in the estuarine porti of Zone 1 of the Stairstepw unit; which is designated as critical habitat. Under the proposed action Zone 1 would remain closed to recreational airboating.

Comments: Recreational airboating poses no threat to the manatee. In fact I have never seen a manatee on the Stairst airboat trail. It is to shallow for a manatee to move about For a number of years I reported manatee sightings to the Florida Department of Natural Resourses (now DEP.) in the Turner River area. I have never seen a manatee above McKinne Mound on the Turner River. Also no sightings in the New Rive Where specifically is there a problem with airboats and mana

The manatee should not be used as a reason to keep the Ochop Prairie or the Stairstep Airboat Trail closed to recreationa airboats. This area is essentially the only area available t those living on the western side of the Preserve for airboat access. Commercial airboats should no be permitted. Recreati airboating during periods of adequate water levels should be permitted. What justification is there for this continued closure?

E6 (cont.)

Page 5. ORV COMMENTS: Franklin Adams

P. 73- "Impacts on white-Tailed deer & hogs."

"Analysis of No-Action Impacts."
"Preserve staff are of the opinion that increased prescribed burns would improve the habitat for the feral hog and deer populations far more than restricting orv use to designated trails."

Comment: I fully support an increase in burning throughout the Preserve as originally outlined in the "fire management plan". Regular burning will not only benefit deer, hogs and panthers it will also serve to maintain native vegetative communities that are fire dependent. It would also help to increase the population of the Osceola wild turkey and the Bob-White Quail which were once abundant in the Turner River unit of Big Cypress.

P. 81- "Organizations."

Comment: #14 on list should read Florida Wildlife Federation.
#22 should read National Wildlife Federation.

P. 92-#6. "Reduce or prohibit traffic in sensitive areas."

Comment: Have these sensitive areas been identified and mappe Has a preserve wide effort been completed to determine which areas are considered sensitive and which areas are not? What criteria will be used to determine degree of sensitivity

P. 93- "Reduce orv use in general."

12.2- "establish Quotas."

Comments: Quotas already exist for the number of orv's allow and numbers of hunters permitted in the Preserve during hunting season. It is important to remember that the permitt number of orv's are never in use in the Preserve at any one time. Opening (quota) of general gun season is the time of heaviest use and even then many orv's are not used in the Preserve for various reasons. Had to work, illness, major repairs required, family emergencies etc. I mention this because uninformed people comment that since there are over 2,000 orv's permitted it must be incredibly damaging with all of these vehicles running around at one time.

12.3- "MAKE ACCESS MORE DIFFICULT."

Comment: Its already difficult enough. Access points are already greatly reduced when compared to the many access points that existed when the Preserve was established 25 years ago.

Page 6. ORV COMMENTS: Franklin Adams

12.4- "Limit length of stay."

Comment: Why? This is not a problem. Very few people stay for any extended length of time, even in the exempt camps. For many hunting season is their once a year vacation. They plan their vacation to coincide with the opening of hunting season. Obviously, not every one that goes to the woods is a hunter. I personally know several individuals who rarely hunt. They just enjoy being in the woods.

12.5- "Require certain skills."

Comment: If you mean mandatory attendance at a class on responsible ORV operation and ethical outdoor behavior then I fully support this. Classes would have to be scheduled on Saturdays most likely.

12.6- "Regulate area of use to reduce conflicts."

Comment: What are the conflicts and where do they occur? I have never had any conflict with any other responsible user of the Preserve.

P. 94- Tactic 1.2-"Promote adoption of low impact orv use practices.

Comment: Fully support.

P.95- Tactic 1.4- "Require attendance at an orv low impact workshop

Comment: Strongly support.

P.96- Tactic 2.1"Prohibitparticularly damaging practices."

Comment: Support-but "high costs" need to be defined. Are we talking specifically monetary costs?

P. 96- Tactic 2.2. "Increase enforcement efforts."

Comment: Support. If N.P S. does not have the enforcement personnel to actively patrol the backcountry on a regular basis then at least be prepared to respond to notification that someone is breaking the law. Poaching, operating an orv ina purposely damaging manner etc. Flying over in a helicopter has its limitations.

P. 96- Tactic 2.3 "Prohibit practices that cause visitor conflict."

Comment: Again, is there a present problem with visitor confli I am not aware of any. Certainly we want to avoid creating a conflicts in the future.

E6 (cont.)

P.97- Tactic 3.1. "Encourage visitors to avoid existing trails in remote areas."

Comment: Sounds good in theory but may not be practical. In remote areas that receive light use there are frequently fewer available to travel. Many orv trail locations were established due to physical limitations to travel. Examples are trails crossing through cypress strands. Trails around deep low wetland areas. Trails on higher elevations due to not being able to traverse prairies during the wet season.

P. 98- Tactic 4.2. "Prevent or reduce resource damage by encouraging the repeated use of a common but limited set of orv trails."

Comment: If orv traffic is required to use a limited set of trails there will be heavier increased impact on these trails. Again, there may be areas where this is feasible. A common-sense approach recognizing that attempts to maintain these trails would not only be expensive it could actually cause new or increased impacts from the types of equipment that would be required to do the maintaince work.

P. 98- Tactic 4.3 "Concentrate use by designation access points."

Comment: If you provide us with a specific proposal as to location then we could respond as to whether or not this would permit access to exempt properties and camps. Seems dificult to manage and enforce.

P. 99- Tactic 4.4 "Select and mark resistant trails."

Comment: Willing to give it a try. Important to remember that these efforts are going to be much more restrictive than previous requiements. Implementation will require that NPS. personnel also be educated as to how requirements will be enforced. This process if implemented will need to phased in gradually with common sense enforcement efforts.

P. 99- Tactic 4.5 " Require use of designated trails in selected areas."

Comment: Would be willing to to explore this idea. The problem is that most trails of any length contain various degrees of resistant areas i.e. pine islands, cap rock areas, and non-resistent areas such as short stretches of marl prairie, muck substrate etc. May not be practical due to size of preserve and magnitude of maintaince.

P. 101-Tactic 5.2 " Make access to problem areas more difficult."

Comment: To quote the draft, if this policy is considered, then, "the policy must be communicated with supporting documentation of its rationale."

P. 101- Tactic 5.3. "Establish quotas for use in problem areas."

Comment: Inholder-exempt property owners should not be considered to fall under the quotas of discouragement. Its going to be a real challenge to figure this one out. Documentation and data probably dont exist. Probably not a viable idea.

P. 102- Tactic 5.4 "Prohibit traffic in problem areas."

Comment: Permanent prohibitions should only be considered in extremely rare instances. This would be to protect some endangered flora for example. Supporting documentation would be required. There already exists an example. The closure of the Ochopee Praire/Stairstep Airboat Trail access. The area was justifibly closed to airboat use as a result of overuse by commercial airboats. The resource impacts were not a result of recreational airboaters. However, the area remains closed to recreational airboaters even though the area has recovered its resource values. The feeling seems to be that if an area is temporarily closed for study or restoration that in effect it becomes a defacto permanent closure.

P. 104- Tactic 7.1 "Add fill material in problem areas."

Comment: Questionable. If native limerock material is used it must be placed and compacted during the dry season. When wet season comes it may eventually washout if not culverted. This would cause some localized turbidity of a short-term. Suggest that this be done in an area and monitored to see how effective this expensive idea is is. Do not want to create a situation where street legals would be able to move into more remote areas of the preserve where they do not presently go.

P. 106- Tactic 8.2 "Restore Vegetation."

Comment: Let natural re-vegetation process occur. Continue to monitor and remove exotics, schinus and melaleucca.

P. 107- Tactic 9.1 "Specify orv weights, psi/displacement, clearance, engine size or tires."

comments: This obviously is a difficult issue to gain agreement on. I do not have a recommendation on psi. Weight and tires are more important issues than clearance and engine size,

Tactic 9.3 "Reduce orv noise."

Comment: All wheeled vehicles are presently required to have a functional muffler. All mufflers should have baffles. No straight through pipes. Suggest active enforcement of this requirement.

On airboats those with automobile engines can be muffled down to be very quite. The prop noise is presently not able to be satisfactorily

E6 (cont.)

Page 9. ORV COMMENTS Franklin Adams

P. 108- Tactic 10.1 "Discourage use of particularly damaging types of orv's."

Comment: There are a few orv's that due to their extreme size and weight are in facr particularly damaging is some areas. The primary reason for their causing deep rutting in marl areas is the way they are often operated. Some of these heavy buggies are used by bush-wackers to bust palmetto thicke on pine islands in order to jump deer off their beds. It is an unethical, illegal way to "hunt". These individuals need to be caught in the act and busted. They make it difficult for the ethical hunter.

P. 109- Tactic 10.3 " Restrict use of particular orv types in sensitive or problem areas."

Comment: This will requife a great deal of time and research to develop sound criteria in order to decide what is acceptable and what is not.

P. 109- Tactic 11.1 "Discourage use during times of resource susceptibility."

Comment: Shifting the timing of hunting season is not practical. Hunting season begins near the end of the peak wet season and continues into the beginning of the winter dry season. This is an issue that must be discussed with the Florida Fish & Wildlife Conservation Commission. There are biological reasons for setting hunting season dates.

P. 110- Tactic 11.3 "Regulate timing of use to reduce crowding and conflict."

Comments: In my over 50 years of coming to the Big Cypress I have never experienced "crowding and conflict", it doesnt exist now. The vast majority of orv users and non-orv users time their visits to coincide with the opening of the fall hunting season. Many plan their annual vacation at this time of year. The present hunting season schedule is probably the proper time to have this more intensive use. The weather is cooling off, the rains are diminishing and the Thanksgiving and Christmas holidays are coming. Its the best of times to bring the family and friends to the woods.

P. 110- Tactic 12.1 "Increase orv use fees."

Comment: This would be discriminatory and obviously a blatant attempt to discourage orv users in BICY. Many cannot afford high fees in order to enjoy the Big Cypress. This is not the way to improve or regulated orv use. The present $35.00 is sufficient.

P. 111- Tactic 12.2 "Establish quotas."

Comment: This idea seems to be a difficult one in which to develop a realistic and fair selection or numerical basis. Orv use in BICY varies from month to month and year to year. Weather and water levels dictate to some ectent the amount of orv use. As mentioned previously, hunting season is the period of greatest use.

Page 10. ORV COMMENTS: Franklin Adams

P. 111- Tactic 12.3 "Make access more difficult."

Comment: Access sites have already been greatly reduced in the last 25 years. Many former access sites have been closed off by guard rails and deterioration of former rough bridges that crossed the US-41 ca... Many former buggy trails have grown over due to not being used by former camp owners.

If you want to reduce visual aesthetic impacts at the road (US-41) in certain areas it may be possible to funnel orv's off the road then allowing them to disperse to other trails once they are away from the general public's view. My experience has been though that the great majority of visitors are very curious about orv and actually enjoy seeing them up close.

Tactic 12.4 " Limit length of stay."

Comment: This would not be effective. It could cause more damage due to people coming and going more frequently. Once we reach camp where we may stay 4-5 days, The buggy usually sets in camp. We walk out from camp on a daily basis. The buggy is normally used once we are in camp to bring game back to camp or to reach areas that we may wish to hunt if they are not within walking distance. Our primary use of the buggy is to get to and from camp and when it is not hunting season to visit favorite areas of the preserve.

Tactic 12.6 "Regulate area of use to reduce conflicts."

Comment: I am not aware of any "social conflict problems" with other user groups that has occurred. If the problem does not exist-lets not make it one.

Conclusion: If you wish to discuss any of these issues, please do not hesitate to contact me. My telephone number is (941) 455-1567. I know that this is a difficult and time consuming effort and I am willing to assist if I can.

Franklin B. Adams

E6 (cont.)

BLUE RIBBON COALITION INC.
"Preserving our natural resources FOR the public instead of FROM the public"
P.O. BOX 1427 • IDAHO FALLS, IDAHO 83403-1427

December 13, 1999

RECEIVED
DEC 20 1999

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 110, Box 11
Ochopee, FL 34141

Dear Mr. Hibbard:

The BlueRibbon Coalition is a nationwide organization representing 500,000 motorized recreationists, equestrians, and resource users. We work with land managers to provide recreation opportunities, preserve resources, and promote cooperation with other public land users. Following are our comments on the Big Cypress National Preserve's Draft Off-Road Vehicle Management Plan (Draft ORV Plan) and Supplemental Environmental Impact Statement (SEIS).

The Big Cypress National Preserve, created in 1974, is a fairly recent addition to the nation's roster of public properties. As you know, prior to that time, the land was in private hands and used intensively. In 1947, 60M board feet of cypress was harvested. It was farmed by winter vegetable growers. There were cow-calf operations and oil explorations.

The enabling legislation, while reflecting the direction under National Park Service (NPS) management to return the area to a more natural state, also acknowledged the importance of maintaining pr-existing uses. OHV use is one of those, as are other traditional activities like hunting and fishing.

While the Draft ORV Plan's preferred option continues to allow OHV use in the Preserve, it imposes constraints on this use that will effectively reduce or eliminate this use.

* It raises the $35 annual ORV permit cost to $200. This exorbitant price increase will eliminate ORV recreationists, hunters, and fishermen of modest and average means. As such, it likely does not conform to NPS policy that opposes discrimination against low income people. The SEIS needs to evaluate the demographics of these users; if this were adequately done, it is likely that this proposal would be found racist as well.

* Non-motorized users pay no fees. Yet national statistics profiling Wilderness users (non-motorized) show them to be predominantly white, college-educated, and male. The Draft ORV Plan clearly favors this elite group. The SEIS must investigate and demonstrate how the Draft ORV Plan conforms to civil rights statutes and NPS policies that encourage diversity.

* Limits the pounds per square inch (psi) for tire pressure to 2 pounds. This non-standard requirement will render most equipment inoperable. A more standard 4 psi should be adopted. The average adult while walking applies 5 psi.

327

* Eliminates stump knockers. This vital piece of equipment is necessary for the safe operation of ORVs in the Preserve.

We urge that NPS adopt a policy of adaptive planning that uses new information as it emerges to responsibly manage ORV recreation and uses in the preserve. This would encourage:

* Incorporation of new technology to reduce airboat prop sound.

* Rules applied to new equipment; older equipment should be grandfathered in.

* Monitor trail system for impacts on the Florida Panther.

* Trail improvement to keep users on the trails.

* Re-route the National Scenic Hiking Trail to avoid conflicts with ORV use.

* Maintain eastern access in Corn Dance unit to disperse use.

Thank you for your serious consideration of our comments. Please keep us informed.

Sincerely,

Adena Cook, Public Lands Director
Phone: 208-524-3062; Fax: 208-524-2836
e-mail: bradena@sharetrails.org

E7

328

DEC 10 1999

EVERGLADES CONSERVATION AND SPORTSMAN CLUB, INC.

"HOME OF THE WILD HOG BARBECUE"
ESTABLISHED 1950
A NON-PROFIT ORGANIZATION

Post Office Box 524005, Miami, Florida 33152

December 8, 1999

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

Dear Mr. Hibbard:

The Everglades Conservation and Sportsman Club, Inc. (ECSC) appreciates the opportunity to review and comment on the Draft Recreational Off-Road Vehicle Management Plan/Supplemental Environmental Impact Statement (which we shall hereafter refer to, for the sake of brevity, as the Draft Plan). Many of our members attended the November 1 and 2, 1999, public meetings on the Draft Plan. Some spoke, and some have submitted their comments in writing. We enjoin you to carefully review all comments from ORV users, as we have the biggest stake in the final plan. Comments are keyed to the twelve strategies enumerated in the Draft Plan:

Strategy 1: Educate Visitor to Adopt Low-Impact Practices

The ECSC has a concern about the cost of educational programs. We urge the Park Service to contain the cost by using volunteers to help develop and present portions of such programs, and to not allow the cost to escalate to a point where any charges to attendees would tend to restrict attendance or make it cost-prohibitive. Please consider this in the context of our comments on Tactic 12.1, below.

The ECSC strongly recommends a concurrent program to educate the non-ORV visitor about the history and tradition of the ORV in the Big Cypress. We believe that the majority of visitors would be interested in ORVs (as any ORV user can testify when approached by the roadside and asked about the vehicle), their use, and origin. The ECSC would assist in the development of such a program.

- Tactic 1.1 Promote Selection and Use of Resistant Trails: The ECSC supports this tactic, and will assist in its implementation where possible.
- Tactic 1.2 Promote Adoption of Low Impact ORV Use Practices: The ECSC supports this tactic as indicated here and elsewhere in this letter, and will assist in the implementation of related educational programs where possible.
- Tactic 1.3 Promote Actions that Reduce Visitor Conflict. The ECSC supports this tactic and will assist in the implementation of related educational programs where possible. This tactic is applicable primarily within ¼ mile of improved roads and hiking trails in areas authorized for ORV operation.
- Tactic 1.4 Require Attendance at an ORV Low Impact Workshop: The ECSC supports this tactic, and will assist in its implementation where possible.

Strategy 2: Regulate ORV Use Practices

- Tactic 2.1 Prohibit Particularly Damaging Practices: While the ECSC would be amenable to discussion of the concept, damaging practices would have to be specifically defined. This is a highly subjective tactic. For example, the ECSC would support a prohibition on driving through a palmetto head with no pre-existing trail merely to cause game to run; however, we would not necessarily support a prohibition on driving through such vegetation on an existing trail.
- Tactic 2.2 Increase Enforcement Efforts: As most of its members abide by Preserve rules, the ECSC has no objection to increased enforcement as long as it does not entail harassment of the Preserve visitor (instances of this were brought to your attention at the public meetings, and anecdotal examples are plentiful under current levels of enforcement). This would be a very expensive undertaking and would, in itself, increase ORV use in the Preserve.
- Tactic 2.3 Prohibit Practices that Cause Visitor Conflict: This tactic is somewhat puzzling to most of the ORV users. Once the ORV is more than ½ mile or so (if that far) from an improved road, other visitors are seldom seen. Another consideration is, who gets to define the conflict? What constitutes a conflict? Someone driving on Tamiami Trail might pronounce the existence of a conflict merely because they don't want to see an ORV, which has come into view (much as the ORV user isn't thrilled by the sight of a tour bus on the road). There are huge areas of the Preserve which are designated for foot traffic only, and provisions exist in the draft plan for conflict reduction along the Florida Trail. Other than that, where do people walk to enter the Preserve? Usually on an ORV trail. Having stated that, however, the ECSC generally supports reduction of conflict, real or imagined, because it is in our best interest, and will participate when possible in further discussion about the tactic. This tactic would be best addressed in educational programs developed under Strategy 1.

Strategy 3: Encourage Dispersal of Traffic in Remote Areas

- Tactic 3.1 Encourage Visitors to Avoid Existing Trails in Remote Areas: The existing trail network has developed over many years because it allows access to desired destinations, and, generally, provides the most reliable routes to these destinations. Although the ECSC is in favor of dispersal and access to all parts of the Preserve, adoption of a tactic which encourages new trails would probably cause more problems than would be solved - for many of the reasons stated in the discussion of this tactic.

Strategy 4: Encourage Concentration of Traffic in Popular Areas

- Tactic 4.1 Encourage Visitors to Use Existing Trails: Observation of the Preserve reveals that, to a large degree, this tactic is in place by "natural selection." The narrative discussion of the tactic, however, indicates some degree of a mandate to use existing trails. As long as the operative word is "encourage," the ECSC is supportive of the tactic. The tactic should be addressed in training programs. Some damage may be prevented by maintenance of particularly bad spots on a trail, but this would be expensive and is not required for operation of most ORVs. One downside of trail maintenance is that it may encourage greater use by vehicles only marginally fit for off-road operation in the Preserve.
- Tactic 4.2 Require Visitors to Use Existing Trails: The ECSC is opposed to this tactic. It is predicated on the highly subjective term "resource damage". The term "damage" is a construct of anti-ORV sentiment, which is based on that group's aesthetic viewpoint. There is no evidence to show that an ORV trail poses any major threat to the existence of the Big Cypress. The notion of conflict with the non-ORV visitor crops up here again. This suggests that non-ORV visitors are somehow drawn to ORV trails for some reason (could this be accessibility?).
- Tactic 4.3 Concentrate Use by Designating Access Points: As presented in the Draft Plan, the ECSC is opposed to this tactic. We would, however, be willing to participate in a process to designate access points that would be acceptable to ORV users and non-ORV users alike. Existing access points have been established over the years and are readily identifiable. Also, access is highly restricted from most

roads by canals and areas closed to ORV use. The "rogue" trails, which are seldom used, could be closed. Reducing the number of access points, as is indicated in the Draft Plan, will increase east-west traffic, and would encourage development of trails through cypress strands; both undesirable side-effects. The Draft Plan indicates that there will be parking lots built at some access points. For years, ORVs have been driven on the Loop Road and on the side of Tamiami Trail to an access point. Similarly, trailers and trucks have been parked alongside of these roads. These practices must be allowed to continue whether or not parking lots are built. The ECSC believes that by landscaping and design of the first several hundred yards of an access route (for instance, a zigzag, or series of right angle turns or shallow hairpin turns, in the trail to eliminate a lengthwise view from the road), most aesthetic demands could be met. Unless there are aesthetic benefits for some user groups, improvement of trailheads is not necessary for the ORV user. If an ORV cannot make it off the side of the road, it has no business further in.

- Tactic 4.4 Select and Mark Resistant Trails: The ECSC supports this tactic as presented in the Draft Plan. The characteristics of a resistant trail will be difficult to define. We suspect that resistant trails would be preferred by the experienced ORV user, and the new ORV user would probably be spared some grief by having a marked trail. Here, again, the subject of conflict between ORV users and non-ORV users is brought up. The ECSC is concerned about the creation of a non-existent (or, at most, insignificant) conflict. This compels us to again mention the dearth of non-ORV visitors more than several hundred yards from an improved road or ORV trail.
- Tactic 4.5 Require Use of Designated Trails in Selected Areas: The ECSC is opposed to expansion of the designated trail system beyond those currently included, except as discussed above under Tactic 4.3 in the immediate vicinity (several hundred yards or so) of improved roads. We maintain that the "disturbance" caused by ORVs is aesthetic in nature as perceived by relatively few (but influential) non-ORV visitors, and then only in areas adjacent to improved roads. Designation of trails would deny access of many areas of the Preserve to all but a very few visitors, and would be manifestly unfair.
- Tactic 4.6 Require Use of Designated Trails in Selected Management Units: This has been done. Is the Bear Island Unit any better off for having designated trails? Construction of at- or above-grade trails will encourage increased use by vehicles marginally suited for off-road use. There will be increased enforcement problems and other problems relative to increased use. The ECSC is opposed to proliferating designated trails. The non-ORV user conflict issue is raised again. We believe that several hundred yards off the improved roads, conflict, if any, would be amongst ORV users because of increased density.

Strategy 5: Reduce Use in Problem Areas

- Tactic 5.1 Discourage Use in Problem Areas: What is a "problem area?" This appears to be the "conflict" issue again. If problem areas are satisfactorily defined and identified, the ECSC would support instructional programs to address usage patterns. The mention of "social issues" is raised in this tactic. We construe this to mean, for the most part, the perception of a non-ORV visitor who is within several hundred yards of an improved road, and who takes exception for aesthetic reasons to seeing a buggy or airboat trail. Perhaps there is also an exhaust or transmission noise factor. This tactic raises the issue of "crowding." We believe this to be a manufactured problem to make some point in the Draft Plan. Crowds are not an apparent problem in the Big Cypress – especially once you leave an improved road. The ECSC takes exception to such loosely defined terms as "problem area", "crowding", "conflicts" and "tolerable levels", as they can be manipulated to serve almost any purpose – legitimate or otherwise.
- Tactic 5.2 Make Access to Problem Areas More Difficult: The ECSC is opposed to this tactic primarily because it is based on the same ill-defined terms as Tactic 5.1. Although we have no objection to stating the nature of a problem in a given area, the rationale for so designating it, and possible alternatives, the idea of not maintaining access and thereby reducing ORV traffic is not well thought out. This tends to give the lie to the entire tactic. The ECSC would assist the Park Service in advertising sensitive, or problem, areas.
- Tactic 5.3 Establish Quotas for Use in Problem Areas: There are quotas established for ORV use in all areas of the BCNP. Currently established quotas are sufficient.

- Tactic 5.4 Prohibit Traffic in Problem Areas: This hits at the heart of the problem – who defines crowding? Are all visitors excluded from a "problem" area? Significant areas of the BCNP are already closed to ORV traffic. This raises the question as to whether non-ORV visitors are visiting areas of the Preserve open to ORVs just to cause a "conflict". The ECSC recommends that rather than expanding prohibition of ORV traffic, the Park Service do more to encourage use of already designated non-ORV areas through advertising and increasing accessibility.

Strategy 6: Reduce or Prohibit Traffic in Sensitive Areas

- Tactic 6.1 Discourage Traffic in Sensitive Areas: The ECSC is guardedly supportive of this tactic. We believe the educational effort would have some effect on use patterns; however, we are concerned that designation of an area as sensitive would soon cause escalation of restrictions to total prohibition of ORV traffic as in Tactic 6.3. Based on experience, this concern is not unfounded, as collaboration with some non-ORV groups in a seemingly worthwhile effort soon turns against the ORV user once that support has achieved initial goals.
- Tactic 6.2 Establish Quotas for Traffic in Sensitive Areas: The ECSC is opposed to this tactic.
- Tactic 6.3 Prohibit Traffic in Sensitive Areas: The ECSC is opposed to this tactic. In one sentence in the discussion of this tactic (Comments), the definition of a sensitive area ranges from "significant cultural historical value" to "areas with vegetation or soils that are particularly susceptible to impact from ORV use." Without any shadow of a doubt, this would be seized upon by certain non-ORV groups to demand a total ban of ORVs from the Preserve.

Strategy 7: Maintain Marked Trails

- Tactic 7.1 Add Fill Material in Problem Areas: The ECSC has no objection to this tactic as long as it does not lead to expansion of the number of designated trails.
- Tactic 7.2 Use geosynthetics in Problem areas: The ECSC has no objection to this tactic as long as it does not lead to expansion or the number of designated trails.
- Tactic 7.3 Construct At-Grade Trails: The ECSC is opposed to this tactic. Such a trail is not necessary for a bona fide ORV, will increase the opportunity for conflict, will tempt unsuitable vehicles to be used as an ORV. It is not clear if at-grade trails are intended for ORVs and other vehicles or just ORVs. Adoption of this tactic in areas open to ORV use will invite problems. This tactic should be considered in light of our comment regarding Tactic 5.4, and be implemented in an area already designated as a non-ORV area; e.g., Loop Road Unit.
- Tactic 7.4 Designate or Maintain Above-Grade Roads: The ECSC is opposed to this tactic. See comments concerning Tactic 7.3, above.

Strategy 8: Rehabilitate Closed ORV Trails

The ECSC opposed to this strategy because it will mandate the closing of trails. This is another strategy that can, and probably would be used to unfairly, arbitrarily, and without due process eliminate or severely restrict ORV traffic in the Preserve. The only legitimate use of this strategy would be to camouflage access points as indicated in our discussion of Tactic 4.3.

Strategy 9: Modify ORVs to Reduce Impacts

Because of the cost involved in retrofitting ORVs, those that comply with existing specifications for use in the Preserve should be allowed to continue operation as currently configured.

- Tactic 9.1 Specify ORV Weights, PSI/Displacement, Clearance, Engine Size, or Tires:
  - The ECSC maintains that adequate restrictions exist on ORVs at the present time.
  - Two pounds per square inch ground pressure, as calculated in the Draft Plan, is too restrictive, and imposes a nearly impossible criterion for many ORV users to comply with. This ground pressure is 50 – 60 percent less than that of an average walking adult. The ECSC supports the current minimum tire width.

E8 (cont.)

- Maximum ORV widths are self-limiting, in that wider vehicles are more restricted as to where they can go. It is not necessary to specify maximum widths.
- Braking systems must not be mandated on ORVs. For the occasional user of a street-legal vehicle, there may not be a serious problem. The true swamp buggy, because of its operating speed, needs no such system. There are also practical enforcement considerations such as, what is effective? Perhaps to be able to stop from a 5 mile-per-hour speed within 15 feet? What is the rationale behind such a mandate? How many problems have been caused by lack of brakes on a swamp buggy? The whole concept of "good operating condition" for mechanical systems brings to mind an inspection system that was eliminated from Florida vehicle licensing procedures many years ago.
- No one seems to know what a "stumpknocker" is. If this would outlaw protection of running gear, the ECSC is opposed to such a rule.
- The ECSC is opposed to the restrictions on tire chains. They are seldom used except on the very few two-wheeled buggys still in operation, and then only on those without tractor tread tires.
- The meaning of "bar grips" must be clarified. If this refers to V-treads and other agricultural type tires, the ECSC is opposed to such a restriction.
- The ECSC supports the requirement for mufflers on wheeled ORVs, however such equipment on airboats would probably be harmful to the engine and cannot be supported unless it can be proven otherwise.
- The ECSC is opposed to the use of tire size and type charts solely to determine conformance with established ground pressure or other such requirements. Some tires that accomplish the intent of the proposed rules are not listed in the tire size charts; e.g., 17.00 – 16 aircraft tires. Also, evidence exists that some tires have been in use so long that the identifying data on the sidewalls has been worn off. Regardless of tire criteria adopted, there must be a <u>provision for measurement of the tires at the time of vehicle registration</u> to determine compliance with existing rules. Publication of approved tire specifications will provide excellent guidance to the ORV user and Preserve personnel; however, a tire that is not "pre-approved" should have its acceptance determined by actual measurement when the ORV is registered.

- Tactic 9.2 Relate ORV Access to ORV Specifications: This is already being done. The ECSC is opposed to further restrictions. Much of the access is determined by the capabilities of individual ORVs.
- Tactic 9.3 Reduce ORV Noise: The ECSC believes that further muffler restrictions on wheeled vehicles are not necessary, as compliance is voluntary. Further, it is not in the best interest of the wheeled ORV user to operate a noisy vehicle, whether due to hunting concerns, sightseeing concerns, or simply aesthetic concerns. Airboat operators must be consulted for technical ramifications of operation of an aircraft engine with a muffler system. Again, this drifts into regulatory considerations more stringent than current street-legal laws.

<u>Strategy 10: Restrict Particularly Damaging Types of ORVs</u>

Generally, this tactic uses the undefined terms discussed in several preceding tactics. Such terms; e.g., sensitive areas, problem areas, and particularly damaging types of ORVs can be manipulated to almost any meaning. The ECSC is opposed to this strategy in general.

- Tactic 10.1 Discourage Use of Particularly Damaging Types of ORVs: Existing regulations satisfactorily address objectives of this tactic. There are only two basic types of ORVs used in the Preserve – wheeled vehicles and airboats. Beyond previously discussed vehicle specifications, there is little else to change.
- Tactic 10.2 Prohibit Use of Particularly Damaging Types of ORVs: Comments are the same as for Tactic 10.1.
- Tactic 10.3 Restrict Use of Particular ORV Types in Sensitive or Problem Areas: Particular ORV types are already restricted in some areas. The ECSC objects to proliferation of restricted areas.

<u>Strategy 11: Modify Timing of ORV Use</u>

- Tactic 11.1 Discourage Use During times of Resource Susceptibility and Tactic 11.2 Prohibit Use During Times of Resource Susceptibility: Currently, Tactic 11.2 is implemented as necessary; e.g., following high water caused by Hurricane Irene. There is not an obvious discretionary alternative provided for under Preserve operating procedures. The ECSC is cautiously supportive of some limitations, as long as they are for the stated purpose, and not just to eliminate ORV use in deference to anti-ORV pressure.
- Tactic 11.3 Regulate Timing of Use to Reduce Crowding and Conflict: This is the largely imaginary conflict issue discussed above. As to crowding, just go down a buggy trail for a quarter of a mile and look around. No crowd will be seen. This is a non-issue, and the ECSC objects to this tactic.

<u>Strategy 12: Reduce ORV Use in General</u>

- Tactic 12.1 Increase ORV User Fees: This is the most blatantly irresponsible and poorly thought-out tactic of all. What this does is to attempt to reduce use through a user fee. It is the understanding of the ECSC that a user fee is imposed to cover the cost of use of a facility. Restricting use is an entirely different issue. Such an increase hits at the very person who can least afford it. Is the Preserve to be the domain of the wealthy? The ECSC hopes that this is not the intent of the Park Service, but this tactic reveals that the increased user fee is not based on user costs, but rather is a construct, or subterfuge, to eliminate certain persons from access to the Preserve.
- Tactic 12.2 Establish Quotas: Quotas exist already. The ECSC is against further quotas.
- Tactic 12.3 Make Access More Difficult: The ECSC supports not maintaining initial segments of ORV trails. Please refer to our discussion under Strategy 4. Fewer access points will lead to more transverse trails, and is not recommended. It is not clear how restricting parking lot sizes will have an impact unless there is an unstated plan to eliminate traffic on the shoulder of Tamiami Trail or on semi-improved roads such as Loop Road. As discussed under Tactic 4, the ECSC is against restrictions on such travel.
- Tactic 12.4 Limit Length of Stay: The imagined crowding and conflicts issue is raised again. This is bogus. As recognized in the Draft Plan, a side effect of this would probably more trips, and therefore more traffic.
- Tactic 12.5 Require Certain Skills: Although the ECSC objects to the repeated allegations of crowding and conflict, we support this tactic. We do not see this as a particularly expensive tactic, and would assist in its implementation. It is noted, however, that the ORV user will be expected to demonstrate low-impact camping practices, and wonder if other campers will have the same requirement. A negative answer here would indicate that there is not enough camping outside of existing campgrounds to be of concern. If this is in fact the case, what does that tell you about the ubiquitous crowding and conflict issue?
- Tactic 12.6 Regulate Area of Use to Reduce Conflicts: There are thousands of acres set aside as non-ORV areas. See numerous comments above regarding this non-issue. The ECSC is opposed to designation of additional non-ORV areas.

In summary, we would like to leave you with the thought that that water management practices are the real villain in the Big Cypress. Unfortunately, water management practices leave no trail, therefore, ORVs are being singled out as the source of problems, real or imagined, in the Preserve. ORVs have been used for over 70 years in the Big Cypress, and the damage is transitory and miniscule compared to that caused by poor water management practices. Want to know who the "bad guy" is? We all just have to look in the mirror – every one of us living in South Florida who demand flood control and drinking water at the same time.

Enclosed are several letters which members and other concerned citizens have requested that we send to you. Other members have responded directly to you. It is our hope that you will understand the deep concern we have for the final decisions made, and for the profound impact those decisions will have on the

E8 (cont.)

many members of the Everglades Conservation and Sportsman Club. We supported creation of the Preserve and entrusted our recreational lifestyle to the Park Service. It is also our hope that that trust will not be broken.

Again, the ECSC appreciates being included in the process of reviewing the Draft Plan, and will abide by the finalized plan.

Sincerely,

Paul Moshanko
President

E8 (cont.)

Date: 9/20/99 11:06 AM
Sender: Wally Hibbard
To: Susan Kaynor
Priority: Normal
Receipt requested
Subject: Fwd:Off Road Vehicle (ORV) management plan for the Big Cypre
Author: Wally Hibbard at NP-BICY
Date: 9/20/99 11:06:07 AM
Priority: Normal
Receipt Requested
To: Susan Kaynor
Subject: Fwd:Off Road Vehicle (ORV) management plan for the Big Cypre
---------- Forwarded w/Changes ----------
Author: "Uys; Jack" <Jack.Uys@delta-air.com> at NP-INTERNET
9/20/99 8:20:12 AM
To: Wally Hibbard at NP-BICY
To: BICY Superintendent at NP-BICY
cc: "Carl Crowley (E-mail)" <cacrowley@mindspring.com> at NP-INTERNET
Subject: Off Road Vehicle (ORV) management plan for the Big Cypress

I may have already sent this to you. W

---------- Forward Header ----------
Subject: Off Road Vehicle (ORV) management plan for the Big Cypress
Author: "Uys; Jack" <Jack.Uys@delta-air.com>
Date: 9/20/99 8:20 AM

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 110, Box 11
Ochopee, Florida

Dear Sir,

On behalf of the Georgia Cruisers 4WD Club in Atlanta, GA, I would like to
extend our deepest opposition to the closing of the Big Cypress ORV areas.
Not only do we as a club use the ORV areas in the Southeast, we also
maintain and clean up these areas to protect the future of the National
Parks. We feel that the closing of our National Parks and Forests would be
a grave mistake for the Government to do to the ORV population in general.
We would be highly insulted by the closing of any of our preserves due to
our countless contributions of time and effort to keep them clean and
enjoyable for all. Yes, we agree that there are a selected few that do not
respect the land for it's beauty, but to punish us all for their
irresponsible acts would be a very sad thing. One suggestion we have to
control the land use, is that special permits be issued to

E9

local clubs etc.
that have a reputation for good respectable treatment of the land. Maybe a
mandate would be to have each club scheduled for a once a year trail
maintenance plan, and we could go on and on with ideas.

I hope our concerns can be a positive influence on the keeping our ORV areas
open.

Thank You,

Yours Sincerely
Jack Uys (Ace)
Vice President - Georgia Cruisers 4WD Club
Atlanta GA, USA
cruisers@mail.newnanutilities.org

Received: from satlmsghub03.delta-air.com (216.79.105.25) by ccmail.itd.nps.gov
with SMTP
(IMA Internet Exchange 2.12 Enterprise) id 00041E36; Mon, 20 Sep 99 10:46:50
-0400
Received: by satlmsghub03.delta-air.com with Internet Mail Service (5.5.2448.0)
id <TJFXYM2T>; Mon, 20 Sep 1999 10:40:37 -0400
Message-ID:
<113A3B5D7B46D211922C0020484016BC02DB7BCA@satlmsgusr10.delta-air.com>
From: "Uys, Jack" <Jack.Uys@delta-air.com>
To: "'Wally_Hibbard@nps.gov'" <Wally_Hibbard@nps.gov>,
"'BICY_Superintendent@NPS.GOV'"
<BICY_Superintendent@NPS.GOV>
Cc: "Carl Crowley (E-mail)" <cacrowley@mindspring.com>
Subject: Off Road Vehicle (ORV) management plan for the Big Cypress
Date: Mon, 20 Sep 1999 08:20:12 -0400
MIME-Version: 1.0
X-Mailer: Internet Mail Service (5.5.2448.0)
Content-Type: text/plain;
charset="ISO-8859-1"

E9 (cont.)

Specialty Vehicle Institute of America

Rec'd 11/15/99
Corr

November 9, 1999

Mr. Wally Hibbard
Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Mr. Hibbard:

The Specialty Vehicle Institute of America (SVIA) is the national nonprofit trade association representing manufacturers and distributors of all-terrain vehicles (ATVs) in the United States. SVIA's purpose is to foster and promote the safe and responsible use of ATVs.

We would like to offer the following comments regarding the Draft Recreational Off-Road Management Plan for the Big Cypress National Preserve.

There is no question that the responsible use of all-terrain vehicles is a legitimate use of public lands. Florida ranks in the top fifteen states in ATV population in the nation, yet opportunities for off-road riding are limited. Providing trails and riding areas where these products may be used should be a priority and serves to benefit not only the off-highway vehicle community but the broader population as well. Providing opportunities for appropriate use of OHVs on properly designated trails and riding areas helps keep OHVs out of unmanaged areas that may be susceptible to environmental damage. A properly managed riding environment also contributes to a safer recreational experience.

Your draft ORV Management Plan addresses these issues, attempting to balance environmental concerns with the need to provide access to our public lands for the many thousands of off-road vehicle owners and users in the state.

Improper operator behavior is the primary cause of detrimental effects on the environment and we agree that promoting responsible ORV use through education and communication is vital to preserving our public lands for everyone, including the vast majority of users who operate with careful regard to preserving the environment.

There are two particular provisions proposed in the draft with which we have serious objections. The proposed maximum ground pressure of 2 pounds per square inch for ATVs is arbitrary and serves to prohibit the use of certain ATVs which have no more adverse impact than other ATVs which would be permitted. We do not believe there is any scientific basis for this arbitrary criteria and are unaware of any definitive studies which have determined that ATVs exceeding these limits have a negative environmental impact. We agree that mitigation of soil compaction and rutting is a desired goal. However, the 2 psi ground pressure limit does not serve to achieve this objective. New ATVs on the market today, as originally equipped, do not cause damage when operated as intended, yet some of these ATVs would exceed the maximum allowable ground pressure, as computed in Appendix C of the Draft, and their use would be prohibited. If a definition of "all-terrain vehicle" were provided, it would serve to preclude those ATVs which may have unusual characteristics that would make them unsuitable for use in the Big Cypress,

1235 Jefferson Davis Highway • Suite 600 • Arlington, VA 22202 • (703) 416-0444 • FAX (703) 416-2269

E10

yet it would treat similar ATVs in a consistent and fair manner. We recommend the following definition be incorporated:

> "All-terrain vehicle (ATV) means any motorized off-highway vehicle designed to travel on three or four low pressure tires, having a seat designed to be straddled by the operator and handlebars for steering control, and intended for use by a single operator and no passenger. Low pressure tire means a tire designed for off-road use on all-terrain vehicles, and having a recommended tire pressure of no more than 0.7 kg/cm^2 (10 psi)."

This definition would serve to make a distinction between what has become nationally recognized as an "all-terrain vehicle" and the myriad other products, frequently highly modified highway vehicles, tractors or home-built vehicles. Low pressure tires are by definition low-impact tires. They are designed to mitigate any possible effect on the terrain by displacing pressure over a wider area. In surveying ATV manufacturers and distributors, there are several models of ATVs currently on the market that would exceed the maximum allowable ground pressure by virtue of the weight/tire size configuration. Although these ATVs are basically interchangeable with those ATVs that would not exceed the limit, they would be precluded from use. If, after considering these comments, you wish to retain a maximum ground pressure requirement, we strongly recommend that this limit be raised to 2.75 to allow for the use of originally-equipped, traditional ATVs offered in today's marketplace. We do not believe that the minimal difference between your proposal and a 2.75 psi maximum ground pressure will produce a measurable change in trail impact nor do we believe that any low pressure tires, which are standard equipment on ATVs, contribute to trail damage. It is important to keep in mind when making subjective determinations such as that proposed, that the foot print pressure of a person, horse, or cow will far exceed 2.75 psi.

A regulation that imposes restrictions on ATV use should be aimed at ensuring the mitigation of damage to soil or vegetation, by prohibiting certain careless operator behavior and modification. It should not discriminate among ATVs and exclude like vehicles from the Preserve. ATV buyers would not be able to discern the difference between allowable and prohibited vehicles and enforcement would be onerous if not impossible. Since the ground pressure table in Appendix C adds 200 pounds to the manufacture weight, an ATV that exceeds the 2.0 limit may be within the permitted limit with a smaller rider. Problems related to enforcement such as maintenance of ATV model lists with weight specifications, tire size determination, rider weight considerations, etc. would be such that the public would be confused at best and subject to harrassment at worst, with the result being a generally untenable situation.

Our second concern centers on the proposed permit fee increase from $35 to $125-$200. This proposal serves to reserve the use of public lands for that portion of the public with the money to pay for the privilege. In fact, tactics identified in Appendix B of the Draft blatantly confirm this intent by identifying an increase in ORV use fees as a tactic in eliminating ORV use: "Visitor access is retained, though at a greater cost. Visitors with less commitment to ORV riding *or with less wealth* [emphasis added] will reduce or discontinue their use." This is an appalling commentary on a management approach to America's public lands. The highest management priority should firstly consider that the public lands in fact belong to "the public." This permit fee increase is unreasonable and will make recreating in the Preserve a privilege for the wealthy only. We urge that an equitable fee structure be developed that will not make federal lands an elite reserve for the rich.

We strongly support proposed prohibitions on operation in a manner causing destruction of plants and under the influence of alcohol or other drugs. We further support the use of helmets and eye protection.

However, wording of the helmet and eye protection requirement implies that this pertains to ATV passengers as well as operators ["Anyone under the age of 16 must wear a helmet and eye protection while operating or riding on an ATV."]. SVIA strongly opposes the carrying of passengers on ATVs. ATVs are rider-active. The long seat is to allow the operator to shift body position as needed when riding an ATV. There are no hand holds or footrests for a passenger, and a passenger on an ATV can also interfere with the operator's control over the ATV. ATVs are not designed for carrying passengers and warning labels on the vehicle and in the owners' manuals clearly warn against this practice. A 1997 Consumer Product Safety Commission study found that 38% of the ATV drivers involved in accidents were carrying passengers. We wish to stress that ATV operators should never carry passengers.

Adequate trails and off-highway vehicle riding areas are vital to the nation's health and economy. They're important for healthy, family-oriented recreation. They encourage fitness. They give city residents a chance to experience the country and all of us a reason to get out or our cars and get a little closer to nature. We urge you to remove from the proposed plan the unnecessary impediments discussed above.

Thank you very much for your consideration of these comments on this vital issue.

Sincerely,

Kathy R. Van Kleeck

Kathy R. Van Kleeck
Vice President
Government Relations

E10 (cont.)

334

P.O. 990474
NAPLES, FL. 34116
Phone (941) 455-8109
Fax/Phone (941) 348-3218

COLLIER SPORTSMEN & CONSERVATION CLUB

Protecting
The Everglades, now
and Forever...

RECEIVED
SEP 08 1999
BIG CYPRESS NATIONAL PRESERVE

September, 1999

Dear Member,

The hunting seasons are fast approaching and hopefully a little cooler weather. You should have received your quota permits by now. If you have not applied, you still have until Oct. 1, 1999 to apply for a first quota. After Oct. 2, you may apply for any remaining permits available with no limit. If you are looking for a certain quota you did not get, come to our meeting and see if you can make a trade.

We are now into the comment period about the ORV management plan. There are some portions of this plan we must work to change if we want to continue to use the Big Cypress Nat'l. Preserve for recreation. The big anti groups are lined up to attempt to squeeze us out so we must make a good showing with numbers and presentations.

I have included a good summary by Jack Moller of the proposed new rules in this issue. John DiNunzio has written a good article and given you dates for public comments. We need you to be at this month's meeting to plan our strategies and give you ideas for input on these issues. It would be a good idea to bring a pen and paper to jot down some points to make. Now is the time to be a promoter of ideas, not a complainer after it's all over. We have enough uninformed people that have never set foot in the preserve that will be commenting. We need to counter this movement with informed knowledge as to why this preserve was established and how ORV's have been used in traditional uses over many years and that it is not destroyed as many will portray it. It is not a pristine area but it is surviving well and allowing recreation. There needs to be some areas set aside for public uses other than tree hugging. After all, what the educated environmental nuts want to overlook is the fact that we are part of the public also. We don't have to agree with their ideas, and we don't have to allow them to impose all the rules.

My article is short this month. I am trying to get it in the mail in time to notify you of this coming Thursday night's meeting. Hope you all have a safe and enjoyable hunting season.

See you at the meeting,
Wayne

Wayne Jenkins, Pres.

MEMBER:

Everglades CO-Ordinating Council
Wildlife Legislative Fund of America

The Back Page, by John Di Nunzio

Hello all! Well judging by the turn out for the last meeting, almost everyone in Collier must already have a lease in Alabama or Georgia! I'm giving a lot of you the benefit of the doubt about last month, we didn't have a copy of the Plan, as it didn't come out on the internet until the next day. So I really couldn't tell you much about it, other than what Wally had told us at the meeting with him on August 8th.

That's all changed.

We now have a complete copy of the Plan. At this meeting I will present the individual response recommended by the Everglades Coordinating Council, and we will talk about out clubs response. I need to see as many of you there as can make it. It is vitally important for you to show up and be counted. You need to know what is in this Plan and what it will do to our Traditional rights in the BCNP.

There is going to be some differences in the way we respond to this Plan, it's not going to be like the General Management Plan was done. Then we had the NPS as an opponent, this time it's the Florida Biodiversity Project, and the National Parks and Conservation Association. Both of them are well financed, cunning and absolutely without any **morals.** This will be a fight we cannot lose, and at the same time, we are in bad shape going in, if the attendance at the last meeting is an indication.

We need the presence of people who are concerned and willing to fight for the right to use the Big Cypress. If that isn't you, please stay home and let someone who cares have your seat! This could be our last hunting season in the BCNP, and that's **not** a scare tactic, that's not a **lie,** that's the **TRUTH.** We need to get our act together and prepare for a blitz on the NPS. I will not divulge any of our strategy in this newsletter, nor is any other club in the ECC.
To hear the word, you have to show up.

There is a reason for this and we will tell you about it at the meeting. In fact, ALL information about the Plan will be given only by word of mouth, at a meeting. There will be no written statements until the meeting just before the Plan is due.

So what I would tell you is be ready to show up! The time to stand and be counted is now, and we will need everybody pulling together to get the work done.

Another thing you need to know Department:

There is going to be a **PUBLIC MEETING** held on **SEPTEMBER 14, AT EDISON COMMUNITY COLLEGE AUDITORIUM AT 7:30 PM, TO DISCUSS THE ORV PLAN.** This is the only forum for public input to the Plan, and we need a good turn out. Our East Coast Members can go to a meeting at: FIU Campus, Graham Ballroom, on Wednesday, 13 September, at 7:30 PM.

HOWEVER, IF YOUR GOING TO SHOW UP DRINKING, LOUD, OBNOXIOUS, OR PROFANE PLEASE STAY HOME!

WE DO NOT NEED THAT KIND OF IMAGE!

IT IS VITAL THAT WE PRESENT A BUSINESS LIKE MANER TO THE PUBLIC!

THERE WILL BE REPORTERS THERE !

If we show up rowdy and loud, we will be playing right into the hands of our detractors.

If you see someone you know there who is in a state of altered conscience, get them out of there! Please!

I know that all of you know this, but sometimes it bears repeating, as at times we are our own worst enemies.

I cannot tell you how important our presents and behavior mean to the public. We are portrayed as drunken rednecks and idiots all the time. Watch how Leno or Letterman treat hunters. Look at shows like "Politically Incorrect" and see how hunters and gun owners are thought of as fools and dupes. In the world we live in, Image is EVERYTHING is not just a line, it's the way people will judge all of us to be.

This newsletter is a short one I know, but for right now this is the very most important thing we will do, as it we don't get our point across to the NPS, and the Plan goes down as they (Florida Biodiversity Project & NPCA) want, we will be out of the Preserve.

The last thing I want to leave you with is our meeting notice, so here it is!

SEE YOU AT THE MONTHLY CLUB MEETING, **9 SEPTEMBER, 7:30 PM, 3RD FLOOR COURTHOUSE, BUILDING "F"** (THE TALL ONE) COUNTY COMMISSIONERS MEETING ROOM.

BE THERE, WE NEED ALL OF US PULLING TOGETHER!

Seeya in the Woods,

John

(DUES AREN'T DUE FOR MEMBERS FOR SIGNING PUT A NEW MEMBER. HUNTING SEASONS ARE NEAR, SHARE YOUR NEWSLETTER WITH SOMEONE YOU MEET IN THE WOODS!

1999-2000

COLLIER SPORTSMEN & CONSERVATION CLUB

MEMBERSHIP APPLICATION

Name *(Print)* _____
FIRST MIDDLE LAST

Address _____
STREET CITY ZIP CODE

Phone Number (_____) _____

Outdoor Activity:

_____Hunting _____Fishing _____Camping _____Other _____

Membership: ___ Regular $20 ___ Executive Club $50

Make Checks Payable to: Collier Sportsmen & Conservation Club

P.O. Box 990474, Naples, FL 34116

335

Jacks Corner:

The following is an overview of the Big Cypress National Preserve ORV management plan. If you don't like these ideas then we have to get plenty of people to write. The anti-use people do not want buggies in the woods at all so they will be writing to make the rules tougher and/or get them out.

ORV design Criteria:

1. NO stump knockers
2. Pounds per square inches on the ground, flat plate measurement of 2 pounds per square inch. To figure ground psi take the height of the tire divide it by 2, multiply by the width of the tire, then number of tires and finally divide the weight of the vehicle by the total number of square inches of all tires as figured above.

   H/2 X width X T = Sq. inches(s); weight of machine/s = psi on the ground
3. NO bar tractor tires, R1 or R2—this has been changed. These tires will be allowed.
4. NO chains, NO bolt on cleats or steel. This does not pertain to track vehicles.
5. Airboats can have existing horse power
6. Airboat prop noise will be continually evaluated for ways to reduce the noise
7. Airboat mufflers will be continually evaluated for ways to reduce the noise
8. Owners will have 5 years to get their equipment in order
9. ATVs are to have 1.5 pounds per square inch on the ground with a 200 pound load used to compute the psi
10. To figure the tire psi you take the height of the tire divide it by 2; multiply that times the width; then multiply that by the number of tires of that size (if the front and back are different you have to do this twice and add them together); then divide the total number of sq. inches into the weight of the ORV. Remember if you have an ATV or ATC you have to add 200 pounds to the weight of the vehicle before you divide by the total square inches on the ground.

Loop Road, Deep Lake will see no change.

Bear Island will maintain the current trail system but be continually evaluated for potential impacts on the Florida Panther. The trail system will be improved so as to help keep ORV operators on the trails.

Turner River Unit:

1. The National Scenic Hiking Trail will be rerouted to avoid conflicts with ORV use.
2. There will be no ORV use zone of ¼ mile on each side of this trail, read the Hiking trail plan from many years ago, with ORV crossing locations.
3. The ORV entrance locations will be reevaluated

E11 (cont.)

4. No ORV operation within a certain distance of any highway. One cannot enter the swamps at one location, run along the highway, and come out at another entrance location.
5. Trailheads will have stabilizing material placed on the ground for a distance: ¼ ½, to a mile from the highway and al ORV use must use these Trails.

336

Corn Dance Unit:

1. No eastern access; this means the "jump-over" will be closed. This is not new –they wanted to do this in the GMP because the Rangers cannot control the access like they can at other access places on the roadways.
2. Designated entry points into Corn Dance from the JetPort Unit.

Stair Step Unit:

1. Hydro based criteria for opening and closing. The criteria will be based on steady water, connectivity of ponds and
2. No mashing of the grass while frogging.
3. Continual monitoring for possible impacts on Cape Sable Seaside Sparrow habitat.

ORV permits will cost between $125 and $200 per ORV. This is because of the concept of 'user pays', which is favored by congress and established in NPS executive order #53. This is open to debate and we have to make sure the NPS prorates the cost of the work over the life of the work.

We need to prepare a position paper for this plan. We must remember that if the NPS does not show they are managing ORVs to Florida Biodiversity and the judge that they are establishing limits, controls and not allowing ORVs to do significant damage, and minimizing soil impacts, water impacts, user conflitts and wildlife harassment then the plaintiff will ask the judge to stop ORV uses. This is not right but then since when has the world been right. Of course the judge may not agree with the plaintiff, but then do we want to spend the money on a lawyer to work for us and do we want to take that chance?

There will be no discussion about the Addition lands in this ORV management plan. The GMP for the addition lands will come in September, 1999. The anti-hunting and anti-use groups do not want hunting in this 175,000 acres and certainly do not want ORVs.

Send me your ideas, if you want, to help create a good response. We will have 90 days from August 13, 1999 when the plan is to be released on the Internet. If you want a copy ($10) you have to call 1-941-695-2000.

Happy Hunting and get ready for another season.

Jack Moller

E11 (cont.)

National Audubon Society

Everglades Ecosystem
Restoration Campaign
444 Brickell Avenue,
Suite 850
Miami, FL 33131-2405
(305)371-6399
(305)371-6398 *fax*

NOV 15 1999

12 November 1999

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Mr. Hibbard:

Audubon has reviewed the document entitled "*Draft Recreational Off-Road Vehicle Management Plan Supplemental Environmental Impact Statement.*" We recognize the historic recreational uses of the lands that now in part comprise the Big Cypress National Preserve (BCNP), and believe that it is imperative to maintain diverse recreational uses in the preserve. Although Audubon's mission statement includes protecting birds, other wildlife and their habitats, we firmly believe that providing access to a wide variety of user groups is crucial for developing a culture of conservation. We offer the following comments to the document:

1) We are in favor of providing controlled access for Off Road Vehicles (ORV). If this controlled access is provided, access points must be clearly marked, named, mapped, and maintained.

2) Although Audubon is not opposed to charging reasonable user fees for activities within the preserve, increasing fees for ORV use from $35 to somewhere between $120 and $200 dollars is a significant increase. If this fee increase is warranted, there must be absolute guarantees that all revenues generated from ORV use in the preserve are specifically earmarked for ORV management.

3) The justification for requiring all ORVs to not exceed a ground pressure of 2 pounds per square inch (psi) is not clear in the document. It is our understanding that an average human being exerts approximately 5 psi per footstep. Audubon is concerned that 2 psi may force some users to begin to use larger vehicles and/or wider tires to meet the criteria. The impacts of these potential modifications were not discussed in the document.

4) The overall tone of the document appears to reflect a bias against ORV use, which may not be justified by objective scientific information. This bias includes discussions on the impacts of ORVs to Florida Panthers and their prey base. However, there are no data to substantiate this as a conclusion. Although this hypothesis warrants more investigation, the basis to make decisions to establish additional regulations based on this hypothesis at this time seems lacking. Unless data are available that suggest controlled, legal hunting is impacting the panther, these biases should be removed from the document.

EVERGLADES RESTORATION CAMPAIGN

Printed on recycled Paper

E12

5) The earlier regulations established by BCNP appear, at least from a visual perspective, to have substantially reduced damages from ORV uses. The regulatory preclusion of tracked vehicles appears to have been particularly effective in reducing this visibly apparent damage.

Audubon thanks you for providing us with the opportunity to comment on this important issue. If you have any further questions regarding our comments, please do not hesitate to contact Dr. Mark Kraus of my staff.

Sincerely,

Stuart D. Strahl, Ph.D.
President, Florida Audubon Society
Vice President, National Audubon Society

337

E12 (cont.)

Rec'd: 11/15/99
Cok

RIDBERG, PRESS & SHERBILL, LLP

SUITE 650
THREE BETHESDA METRO CENTER
BETHESDA, MARYLAND 20814-5329

MICHAEL D. RIDBERG
FREDRIC A. PRESS
RAYMOND J. SHERBILL
NORMAN L. EULE
STUART A. SCHWAGER
PAUL D. SMOLINSKY
MATTHEW J. KREUTZER

TELEPHONE
(301) 913-5770
FACSIMILE
(301) 913-5769

November 11, 1999

Copy via E-Mail to Susan_Kaynor@NPS.gov

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

Re: Draft Recreational Off-Road Vehicle Management Plan and Supplemental Environmental Impact Statement, Big Cypress National Preserve

Dear Mr. Hibbard:

We are writing to provide comments on the above-referenced draft Recreational ORV Management Plan and Supplemental EIS on behalf of National Park Trust.

National Park Trust is a non-profit tax-exempt organization dedicated to the protection of lands (and resources within them) within and adjacent to units of the National Park System. Its principal activity has been to buy in-holdings and lands located in expansion areas and to hold them for ultimate sale or donation to the National Park Service. Among other properties it has acquired, National Park Trust is the owner of the lands comprising the Tallgrass Prairie National Preserve (TPNP), a newer unit of the National Park System, and in this capacity has worked closely with the National Park Service regarding the management of this Preserve and in the process of developing the General Management Plan for TPNP.

National Park Trust also has a special relationship with and interest in Big Cypress National Preserve. In 1985, National Park Trust (then a part of National Parks and Conservation Association) helped to preserve the lodge that now serves as the Preserve's headquarters. In 1990 and 1991, National Park Trust funded the acquisition of 100 acres of land (part of a 700 acre Addition project) for ultimate transfer to the Preserve as part of the Big Cypress National Preserve Addition. Due to National Park Trust's particular involvement with Big Cypress National Preserve, especially its contribution to the Addition, National Park Trust is taking the unusual step, for this organization, of participating in providing comments and objections to your draft proposal.

In general, National Park Trust concurs and joins in concerns about the draft previously circulated by the Florida Diversity Project. Among the concerns raised by the Florida Diversity Project, National Park Trust believes that, as a prerequisite to the development of this Plan, there must be a comprehensive analysis of the

E13

impacts of past and present ORV use, and that the Plan must prohibit ORV use in the Addition lands.

Our more specific objections to the Plan relate to these concerns and to the Trust's particular interest in the Preserve.

A special area of interest for National Park Trust and its contributors on the Big Cypress project was the protection of the Florida panther. The Trust's basis for involvement was specifically to protect Florida panther habitat.

The draft indicates that there has been no study of the impact of ORV use on panther habitat. Instead, the "Environmental Consequences" portion of the Plan relies solely on a study of Clark and Janis (1999) of human activity associated with hunting and its effects on the panther within the Preserve. While the draft uses the study to draw a conclusion that there exists a "correlation between panther movement and home range shifts and higher levels of human activity associated with hunting," it appears that the study failed to concern or address the larger impacts associated with the full range of recreational ORV use that is now to be permitted under the Plan.

This is not a shortfall of Clark and Janis, in our view, but rather a shortcoming in the Plan itself: *the impact of ORV use, past and proposed, on panther habitat, should have been comprehensively and extensively studied prior to the adoption of a plan to manage ORV use within the Preserve.* Yet, the draft plan states that "Under the proposed action, ORV activities within the preserve would occur in areas occupied by panthers including their preferred habitat of hardwood forests." Absent a study clearly demonstrating that such ORV use will not impair the panther habitat, the plan should not permit such ORV activities.

We recognize that ORV use in the Preserve (except for addition lands) is currently permitted and unregulated, due to the fact that such uses pre-dated NPS involvement. With the draft Plan, however, ORV use, although regulated, will be affirmatively allowed by the NPS. The NPS has a special role and legislative mandate to protect the panther habitat and other endangered species. The NPS should not act affirmatively to allow activities which are detrimental to endangered species without prior full study of nature and degree of the adverse impacts.

Finally, National Park Trust strongly objects to the implicit commitment contained in the draft that the NPS will open Addition lands to ORV use in the near future. Specifically, page 1 of the draft states:

> This plan does not address ORV use in the addition lands (see South Florida region map). The management of the addition lands will be addressed in a future addendum to the General Management Plan/Final Environmental Impact Statement, scheduled to begin in the fall of 1999. Addition lands will remain closed to public use of ORVs until after the GMP addendum, a wilderness suitability study, and a comprehensive recreational vehicle trail plan are approved for the addition lands and access sites are constructed.

As noted, ORV use clearly appears to be detrimental to panther habitat. It appears that in the case of Addition lands, because ORV use is now prohibited in these lands, there can be no justification for the NPS to affirmatively allow ORV use on the basis of pre-existing ORV use. Only if a comprehensive and impartial

study is first conducted, and such a study concludes that opening the Addition lands to ORV use will not adversely affect panther habitat (which hardly seems likely, in view of Clark and Janis), could ORV use and construction of ORV access sites properly be allowed.

In the meantime, National Park Trust objects to the opening of Addition lands to ORV use, including some lands transferred to NPS with the Trust's support, since the very purpose of the Trust's involvement was to preserve panther habitat. Statements implying or committing to the opening of Addition lands to ORV use should be deleted, and the NPS should instead continue to prohibit such uses on Addition lands.

Sincerely,

Raymond J. Sherbill

Counsel for National Park Trust, Inc.

cc: Paul C. Pritchard
Florida Diversity Project

E13 (cont.)

SIERRA CLUB The Florida Chapter

2101 NE 55 CT
Fort Lauderdale, FL 33308-3111
Date: November 28, 1999
email: forglades@aol.com

Superintendent Wallace Hibbard
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Re: BCNP ORV Management Plan

Dear Superintendent Hibbard,

The Florida Chapter of Sierra Club appreciates the opportunity to provide comments on the Big Cypress National Preserve (BCNP) "Draft Recreational Off-Road Vehicle Management Plan Supplemental Environmental Impact Statement (DSEIS)."

General Comments:
The BCNP ORV Management Plan does not encompass basic scientific research, data and analysis or a developmental matrix to comply with and satisfy the scope of the settlement agreement with Florida Biodiversity Project (FBP) et al vs. Roger Kennedy (herein FBP vs. Kennedy). The document does not include adequate research data or scientific peer review to support selection of any, let alone either of the two proposed alternatives. The two alternatives proposed and presented for public and agency review in the SEIS (proposed and no action) are insufficient to comply with the National Environmental Policy Act (NEPA) a true range of alternatives for an ORV management plan. The proposed action and no action alternatives preclude consideration and review of any/all other possible alternatives. Actions to implement the components of the proposed alternative are not adequately identified. What they consist of and how they would be implemented is integral to the efficacy of a ORV management plan. They should have been drafted in the SEIS and must be included in final EIS for public comment. Please number all document maps to facilitate review process.

The purpose of an Environmental Impact Statement is to provide a declaratory statement for public and appropriate agency review. The public has a right to review potential effects and NPS is required to provide all relevant information. This document does not provide competent relevent information. This document is not an ORV management plan. This document presents for consideration only two scenarios, one proposed action or none, in response to a demand, rather than reviewing possible, cumulative resource impacts. It presents a framework or skeleton

recycled paper

on which some later constructed management plan might be based. But there is no ORV management plan for BCNP.

Sierra Club should be reviewing an actual ORV management plan with specific sections addressing strategies by which BCNP will manage ORV's. The public should know how much of BCNP's staff and budget will go to "manage in the field." Estimates of capital expenditures should be provided (i.e. how many vehicles: buggies, helicopters, planes, etc., BCNP will need to procure to manage and enforce regulations and how many of those will be active and during what hours, days, seasons, etc). We request information regarding how BCNP will manage problem corridors (i.e. where commercial airboats strip mangroves of leaves). Please state what parameters and/or matrix NPS will use for assessing direct, secondary, and cumulative effects of ORV use has in BCNP when making a decision on closure or opening of an area or unit.

Compliance and oversight are major components of any management plan. NPS has provided no insight into potential agency actions to gauge, measure or enforce compliance. To manage you must have a means of enforcing. The public is not provided the means by which BCNP will manage under either alternative.

Sierra Club has reviewed several BCNP scientific documents outside of the formal SEIS and "ORV Management Plan" and suggest the following list of review criteria which in totality sum up what is lacking from the SEIS:

- Precautionary principle
- Trend Analysis (past, present and predicted/forecasted)
- Standard of care
- Adaptive Management
- Data and Analysis
- Specific, quantifiable, triggers (thresholds), criteria upon which to make management decisions, e.g. operational status of ORV trails, new, old, (close or reopen)
- Irresponsible motorized vehicular use
- Sustainable, viable, vibrant (values and functions) natural forest preserves
- Resource based management decisions
- Linkage of water and land use decisions
- Interim measures, criteria, conditions, until adequate "science" is available

IMPACTS:
The SEIS does not provide the method by which BCNP will analyze the proposed action's or no action's effects. Sierra Club would like to know how resource impacts will be measured. A matrix cross-referencing soil disturbance, drainage, pollution, water channelization, berm creation, and alterations of natural aesthetics should be researched and designed as a "scientific" management tool and included for review. Please provide a detailed means and by what measures oversight will occur in the ORV management plan. For example, please share with us the selection process

E14

BCNP will use to provide an appropriate number of rangers for regulatory enforcement needs and how these rangers will provide that function (i.e. whether on foot, using buggies, stationed in the field daily, at specific access points, number of acres per ranger, etc. Please provide detail as to how checkpoints and all access points will be monitored daily, seasonally (hunting). Additionally, please share with Sierra how BCNP will manage a potential of 2500 ORV users and concurrently minimize ORV impacts.

Sierra Club realizes the unique scope, depth, and detail required to manage the complex matrix of ecotones within BCNP. Sierra Club requests BCNP set measurable goals, time certain, and provide Sierra Club access to the Preserves' efforts to move the process forward:

A. Sierra Club (SC) does not accept the draft document in its present form.
B. SC requests BCNP to delay the FEIS and obtain the necessary, and required by "Standards of Care" supporting data and analysis, then revisit the range of alternatives and issue a revised SEIS.
C. SC seeks interim conditions, protocols to protect the resource until the Record of Decision (ROD) is released.

1. Deference of any/all new ORV permits
2. Cancellation of design, permit, and construction of any new trail heads and trail systems
3. Secure adequate funds to gather appropriate scientific information (data), analyze it, and then determine a Declaratory Statement, via a "if-then" process, the effects of implementation of each alternative. Note, by law....
4. Require, as one interim condition, that BMP's be actively imparted to current ORV permit holders (and interested citizens, including hikers, bicyclers, etc.). This would include a mandatory orientation/edcucation session with issuance of a certificate of appreciation to participants.
5. Require an ORV permit discount for installation of a GPS tracking device for currently permitted ORV's. This information would be used in monitoring, research, surveillance, and compliance.

Recommendation:
***Outreach program with colleges and universities should be sought, set up interaction groups; seek University of Miami, FAU, FIU, Florida Gulf Coast University, Broward Community College, Barry University, etc., aid in writing and seeking grants and grant funding. There is available free labor in universities which may aid NPS in their of scope of work that relates to research necessary for compilation to devise adequate management for BCNP ORV Management Plan.

ADAPTIVE MANAGEMENT:
BCNP policy and/or the means by which to manage must also provide "Adaptive Management" actions and/or how BCNP management will react to unfavorable results from its "ORV Management Plan."

1. Please clarify how BCNP will analyze any/all effects and what processes will be used to consider adaptations.
2. Please explain in detail how, and in what time frame BCNP will take action and adjust management protocol to deal with a crisis prior to collapse of a unit necessitating closure.
3. Please relate how adaptations will be considered and decided upon without a peer reviewed matrix by which to alter actions and reduce impacts.
4. Please divulge how BCNP will adapt to failures to protect the resource, beyond unit closure.

The October 25, 1995 "Settlement Agreement", FBP vs. Kennedy, calls for BCNP to prepare an ORV management plan and to include techniques and/or strategies to reduce ORV impacts. FBP vs. Kennedy settlement agreement did not provide for a deference, exclusion or delay to address possible damage to resources by commercial vehicles. "Commercial" classification should have been included for review in this SEIS as well as any steps to minimize any and all impacts. Sierra Club requests that commercial impacts be analyzed, evaluated, and included without exception in the Final EIS. Techniques and strategies to reduce ORV impacts, beyond closing impacted areas, need be drafted for review for all classes of ORV's and included in the Final EIS.

BCNP BUDGET AND PERMIT INCREASES:
Sierra has concerns about the proposed process to increase sale of ORV permits to a total of twenty-five hundred within BCNP. Scientific data to support such an increase in the number of permits while minimizing impacts must be included for resource users and others in the public sector to review. A baseline model or means to assess and measure ORV impacts including "cumulative effects" is lacking in the SEIS. A proposed increased sale of permits from two thousand to twenty-five hundred may increase current ORV use and possible ORV impacts. Increased numbers of permits sold will provide additional funds for BCNP management options. Sale of twenty-five hundred ORV permits at $200 per vehicle will raise $500,000 annually. Under new NPS policy, eighty percent or $400,000 from an increase in permit sales could remain on site for BCNP management activities. Sierra Club suggests you share with all ORV plan reviewers how funds from a single user group will be applied fairly in management decisions. BCNP should develop an "outlay" graph to affect management decisions based solely on those funds. An increased dependency upon one sector of resource users for BCNP funding and management could affect management decisions or how expenditures are used. An increased dependency for

E14 (cont.)

management funds on a single user group could ultimately affect congressional appropriation levels and funding to manage public lands. Sierra Club believes that a high percentage of BCNP management funds should *not* come exclusively from one user group. Sierra intends to pursue further a source of dedicated funding for REFINING an on-going ORV management program. We will lobby congress to help request additional funds from Congress. Florida Gulf Coast University has
Within BCNP watershed
SFWMD
Private-public partnerships
Hunters and NWF & FWF private-public

DSEIS Appendix B contains 12 general strategies and 42 specific strategies for managing ORV's. Please relate how BCNP's specific steps and strategies will affect ORV impacts. Time tables for reclamation for all damaged areas should be included in final EIS. Please explain how the DEIS, minus scientific criteria, meets the requirements of the FBP vs. Kennedy) settlement agreement. Please include timetables for reclamation of units and BCNP methodology _will choose_ to ensure compliance. And please include BCNP's specific implementation strategies chosen for use in the ORV management plan.

RECREATIONAL CONFLICTS:
The SEIS does little to address possible recreational conflicts between user groups (bicycles, horses, hikers, hunters, ORV's etc.). Some type of process (baseline matrix or model) must be designed, tested, and modified to ensure all user groups receive fair consideration in the outcome ORV Management Plan. Specific trail segments may and should be considered.

CUMULATIVE EFFECTS: The SEIS does not adequately consider the cumulative effects of ORV impacts. A "trend analysis" including past, present, and forecast (circa 2020) need be developed by BCNP to provide NPS the capacity to assess new information, alterations, and GDM miscalculations within BCNP for inclusion into the FEIS. BCNP should consider current and on-going research in management decisions and develop a feedback element to deal with such changes.

SPECIFIC COMMENTS:

Purpose of and Need for the Plan 1:

Page iv. 3rd paragraph states: "Under the proposed action alternative, the National Park Service would adopt a process for ORV management and would be guided by specific ORV management procedures and criteria...developed for determining when a unit should be closed." The BCNP ORV management plan should provide those

"criteria." Please share with the reader when, how, and on what basis those "criteria" will be established and enforced.

Page 5 2nd paragraph: "The 1997-2002 Strategic Plan for Big Cypress NP provides long term goals...Some of the long-term (5 years) goals relative to ORV management in the preserve include: restoring or reclaiming 5% of the disturbed lands impacted by various uses including ORV trails; increasing by 20% the amount of receipts from use, recreation, and other fees; and ensuring 80% of the visitors are satisfied with preserve facilities, services and recreational opportunities." This suggests a 20% increase in receipts yet reclamation of only 5% of disturbed lands. NPS should consider a more ambitious and broader range increasing the aerial extension and setting "time certain" target dates.

Page 6, 2nd paragraph states: "Closed areas and trails would be reopened after such adverse effects have been eliminated and future recurrence prevented with mitigation. Please elaborate on how new impacts in restored areas will be evaluated and off-set through compensatory mitigation. We recommend BCNP provide a matrix for how impacts will be measured and evaluated.

Page 11, final paragraph: Under the proposed alternative up to twenty-five-hundred permits may be issued by BCNP and/or vehicular use may increase. Twenty-five hundred permits have never been sought or issued. Prior to an appropriate scientific damage assessment BCNP proposes to increase the number of total permits allowed. Please relate what ecological and scientific and functional assessment data was used to select a cap of 2500 vehicles.

ALTERNATIVES, INCLUDING PROPOSED ACTION page 13
Stated in the first paragraph is, "The General Management Plan/Final Environmental Impact Statement (FEIS) evaluated four alternatives for managing ORV use in the preserve. Only the chosen proposed action from the GMP Final EIS was developed and analyzed further in this SEIS." Please explain the process used to select the "proposed alternative" and what scientific basis and/or matrix was used to deem it the most appropriate action.

Vehicle Specifications Page 18:: Stated are new restrictions for swamp buggies and ATV's. Specifications for street legal 4X4's should be included if such vehicles will be permitted for ORV use in final proposed action. Ground pressures of 2.0 psi and required modifications to swamp buggies should be substantiated through BCNP soil compaction and rutting research before any/all measures are standardized.

Access Points, Page 20: The "proposed action" does not indicate location of new access points or the process for proposal and/or selection. The SEIS does not relate where or how "sited" access point will provide for users to park. The SEIS does not

E14 (cont.)

342

address how and if access be monitored and controlled. Please provide this information for review in the FEIS.

Criteria for Closure, Page 23: Criteria should be inclusive in SEIS. Such criteria are crucial to evaluate the effects of the GMP and ORV plan. Any proposed actions should include "threshold criteria" (e.g. water levels in Stair Steps) for soils, vegetation, wildlife, etc., to determine the "biological threshold" (point of collapse) and process, which when detected would "trigger" closure.

Communication and Education, Page 23: To prevent damage in sensitive areas, BCNP should draft communication and educational materials. Informing the ORV user as to proper trail use and least damaging procedures and areas may help affect damaged areas.

Regulation and Enforcement Page 24: Plan would benefit from enforcement criteria and proposed number of rangers per unit.

Wildlife Monitoring, Page 25: Models should be developed for endangered and threatened species. HEP, designed to evaluate habitat of select species, should not be used to monitor wildlife.

Vegetation, Page 25: SEIS should have baseline data included currently. Photos should aid vegetation monitoring.

Bear Island Page 27: Proposed action should be modified to minimize effects upon the Florida panther. BCNP should consult with U.S. Fish and Wildlife Service on best management practices to avoid effects as required by NEPA. Clark and Janis (May,1999) conclude a correlation between Florida panther and hunting activities Please relate how and on the basis of what criteria and analysis proposed trail systems will be maintained..

Turner River, Page 28: Please provide information as to how no drive areas will be maintained and regulated.

Stairsteps Unit, Page 28: Hydrologic criteria is a crucial management component and should be included in this SEIS.

NO ACTION ALTERNATIVE:

Vehicle Permit System, Page 29: and Operating Standards: Regarding "reduction of impacts," the No Action Alternative mentions no method to control or prevent increase in number of current permits.

Mitigation, Page 30: Cite on-going or previously successful mitigation areas that offset ORV impacts in SEIS and prior to issuance of FEIS

VISITOR USE ISSUES: 41

ORV Users, page 41:
Sierra Club supports the rights of current "traditional" use, "inholder" use of recreational use of ORV's in accordance with the Enabling Legislation without new an increase in permits until comprehensive science review is completed.

ORV Trail Mapping: page 42
**Funding for "groundthruthing" to confirm or deny U. of Georgia (Welsh & Madden) GIS Study findings should immediately be appropriated. Groundthruthing must be completed before any FEIS goes forward.

ORV Trail Mapping, Page 49: Groundtruthing of U of Georgia trail study must be included in the final EIS. The 1984 study indicated a total of 1240 miles of trails. Either use has increased dramatically or study is flawed.

ENVIRONMENTAL CONSEQUENCES:

IMPACTS ON WATER RESOURCES: PG. 55

Surface Water Flows: page 56
Page 56: Conclusion: BCNP need provide detail to support the assumption that the proposed action have beneficial effect on water flows? BCNP need provide the matrix or means used to reach such a conclusion.

Cumulative Impacts, Page 57: "Both surface water and groundwater in South Florida are unusually susceptible to contamination because the region's high water table, shallow aquifers, and low filtering capacity of highly porous substrates. BCNP need provide what data, methods and/or techniques will be used to prevent agricultural impacts in conversion of pastures in Immokalee area to citrus groves.

Page 57 Analysis of Proposed Action Impacts: does not analyze effects of ORV impacts on water quality. BCNP need reveal what scientific basis will be used to prove the proposed action will improve water quality.

IMPACTS ON SOILS: PG 58
Soil compaction, aeration and disturbance studies should be completed prior to issuance or completion of FEIS

IMPACTS ON VEGETATION: 60

E14 (cont.)

Cypress Strands and domes, Mixed Hardwood Swamps, Page 60. Conclusion for Cypress Strands and Domes, and Mixed Hardwood Swamps: The proposed action has no scientific basis and/or components to substantiate the claim it would provide additional protection to cypress strands, domes, and mixed hardwood swamps. Please provide comment to substantiate these claims prior to issuance of FEIS.

Page 61, Marshes: The proposed action includes no additional data for openings or closures. Reduced impacts are based solely upon changes in ORV specifications. BCNP need provide criteria and analysis to substantiate such improved claims based on ORV specifications.

Old Growth Pinelands 62: A reduction of greater than five miles might be considered for an area of 54 acres with thirty miles of trails.

Hardwood Hammocks 63: (Deuver Study 1986 is now fourteen years old) Area should be re-surveyed to identify recovery over previous decade. Data and analysis will aid conclusions.

Prairies, page 64: Prairies *may* have Cape Sable Seaside Sparrows present and consultation with USFWS must be completed.

IMPACTS ON PROTECTED SPECIES: 65
Sierra Club requests BCNP explain the selection and siting process for access points and how impacts on endangered or threatened species shall be minimized. Data and analysis for avoidance and minimization of impacts to wetlands for access point construction need be demonstrated before permits can be issued for construction. Lack of siting methodology and procedures may preclude optimum alternative location options and recommendations.

Florida Panther, 66: Altered panther movement or shifts in home range may be affected. BCNP should have consulted with U.S. Fish and Wildlife Service. The proposed action cannot minimize effects on panthers. No elements to accomplish such are included in the proposed action or "proposed reclamation program." In light of the Florida panther's dependence and historical requirements on the "Addition Lands", Sierra Club recommends that area not be opened to hunting and ORV use until adequate data to ensure their survival is secured.

CSSS: 67: Analysis of Proposed Action Impacts:
"Under the proposed action, ORV activities could/would occur in areas possibly used by seaside sparrow..." SEIS needs more specific information on airboat restrictions, mashing of muhly grasses and area closure criteria to support conclusions.
Cumulative Impacts: The decline in the species is blamed on water level fluctuations and altered fire regime. BCNP need analyze additional impacts regarding areas of use, closure and opening, reclamation effects, and develop monitoring procedures

The following species longevity and survival *may* be affected by any proposed action: Red-Cockaded Woodpecker, page 68; Bald Eagle, page 69; Snail Kite, page 70; Wood Stork, page 71; West Indian Manatee, page 72
Consultation with USFWS is required to comply with basic tenets of the ESA and should be completed prior to issuance of FEIS

SUSTAINABILITY AND LONG-TERM MANAGEMENT, page 76:
The SEIS claims the proposed action would not result in unavoidable adverse impacts. The proposed action does not define NPS measures for avoidance and the conclusion is not backed by information in SEIS. The proposed action calls for identification of criteria for unit and trail closures and openings. What data is such a claim based on and what essential components will be included?

CONSULTATION AND COORDINATION: page 78
Required under NEPA for regulatory EIS. Consultation on panther and other highly threatened species must occur before any conclusions in FEIS.

APPENDIX D: USE OF HYDROLOGIC CRITERIA TO PREVENT DAMAGE OF NATUARAL RESOURCES, page 145: Hydrologic criteria should be developed to determine level and type of use in Stairsteps Unit.

SEIS should be altered to include mechanisms and criteria to help determine appropriate level of use, basis for closure and opening of damaged units, enforcement and trail use. NPS should consult U.S. FWS for modifications to lessen ORV impacts upon endangered and exclusive species.

USER FEES:
The DSEIS does not substantiate user fee increases. A fee analysis study is needed for BCNP and the DSEIS. A fair and possibly balanced (e.g. 50/50 Management Policy) fee split between resource users and normal congressional appropriations for management funding should be studied. Increased dependence upon "special interest" user fees could have a long-term negative/positive effect upon the BCNP resource. The suggested heavy dependence upon increased user fees for BCNP management may produce an effect of the tail wagging the dog. If staff becomes relegated to serving mainly or mostly those who provide management funds other important resource sectors might be neglected.

LEGAL ISSUES:

ESA: BCNP did not re-consult with FWS on panther as required under the Endangered Species Act (ESA). NPS is required to comply under Section 7 (a-1) of the ESA to develop programs for the conservation of each listed and threatened

E14 (cont.)

species. Executive Order(s) 11989 and 11644 require NPS to manage ORV use in a manner to minimize ORV impacts as well as damage to the environment. The orders provides that ORV use on public lands must be controlled and directed so as to protect the resources of those lands and that areas and trails shall be located to minimize damage to soil, watershed, vegetation or other resources as well as to establish and provide for procedures that will ensure that the use of ORV's on public land will be controlled and directed to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among various users of those lands.

NATIONAL PARK SERVICE ORGANIC ACT:
The Organic Act directed NPS to "promote and regulate the use of Federal areas known as national parks by means and measures as to conform to the fundamental purpose of said parks. The Organic Act's goals are affirmed in the Redwood Act of 1978 which provides for, "the authorization of activities shall be construed and the protection and management of administration of these areas shall be conducted in light of the high public value and integrity of the National Park system and shall not be exercised in derogation of the values and purposes for which their various areas have been established."

BCNP ENABLING LEGISLATION:
ORV use is not mandated but permitted. Section 4, B1: "Limit and control use with respect to 1 motorized vehicles; 2 oil & gas; 3 grazing; 4 drainage; 5 agriculture; 6 hunting, fishing, trapping, 7 new construction, 8 other

Section 5: "shall permit hunting, fishing, trapping, etc:, but doesn't mention motorized vehicles; applicable laws...

National Environmental Policy Act (NEPA):
Range of alternatives is required for regulatory EIS under the Endangered Species Act (ESA). SEIS should be reconfigured to comply.

Supt. Hibbard:
**Please advise Sierra Club so we may be included for comments on the "Addition Lands" addendum to the GMP and U.S. 41 Scenic Highway proposal. Thank you.

Sincerely,

Roderick Tirrell
Florida Sierra Club

E14 (cont.)

99/12/09

Superintendent Wally Hibbard
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Re: Comments on the Draft Recreational ORV Management Plan and Supplemental Environmental Impact Statement

Superintendent Hibbard:

The Panther Action Coalition and Friends of Whales (PAC) submit the following comments on the Draft Recreational ORV Management Plan and Supplemental Environmental Impact Statement (DSEIS). After 25 years of inadequate off-road vehicle (ORV) management and over 16 months late in complying with the 1995 settlement agreement with the Florida Biodiversity Project (FBP), the National Park Service (NPS) released the DSEIS. Tragically, despite the need for an effective, science-based, comprehensive, action-oriented plan, NPS has published a conceptual, ambiguous document that lacks substance and basically fails to identify the actions it plans to take to stop or reduce the ongoing destruction of the Preserve' s natural resources. This failure to produce a workable ORV management plan that would dramatically reduce the present, extensive, ongoing damage to the biological resources of the Preserve constitutes a violation of major statutes, regulations and the settlement agreement between the FBP and NPS.

The enabling legislation for Big Cypress National Preserve (BICY / Preserve) requires the Secretary to administer the park *in a manner which will assure the natural and ecological integrity in perpetuity.* Big Cypress Enabling Act 16. USC § 698i (a). The primary objective of the DSEIS is to establish a comprehensive, science-based system for management of recreational ORV use, which protects the natural wildlife and wilderness values of the preserve.

The PAC concludes that there is overwhelming substantial and credible evidence that the proposed DSEIS fails completely in reducing harmful ORV impacts on the Preserve's biological communities and hydrological systems and must be completely rewritten in order to comply with relevant statutes, regulations and the settlement agreement.

BICY is one of the most sensitive and biologically rich areas in the United States with over 1600 plant species, an exceptional concentration of animal species and more than 100 endangered, threatened or listed species, including the highly endangered Florida panther, West Indian manatee, Everglades Snail Kite and Cape Sable seaside sparrow. Ninety percent of the Preserve is wetlands that contain a diverse mosaic of cypress and mangrove forests, freshwater marshes and wet prairies, hardwood hammocks and pinelands.

E15

A recent NPS-funded study by the University of Georgia's (UGA) Center for Remote Sensing and Mapping Science found resource damage to be significantly higher than previously recognized. Rather than the 1240 miles of ORV trails identified by the NPS in the 1991 BICY General Management Plan and Final Environmental Impact Statement (GMP), the UGA study identified 29,799 miles. While the NPS previously estimated the impacted acreage at 2,230 based on the 1985 aerial photography interpretations, the UGA study estimated that an alarming 148,141 acres or 20% of the Preserve's acreage are adversely impacted by this recreational use. This represents a 66-fold increase in acreage adversely impacted by human play activities. Consequently, we strongly urge that ORV use by immediately minimized to the greatest extent possible until comprehensive, science-based research can establish the longterm ecological impacts of ORV activities.

If this resource of global significance is to be protected from the impacts of consumptive recreational use as required under the law, the DSEIS:

*must contain a biological inventory and analysis or plant and animal species, biological communities and ecological processes and assess impacts on all of these, including nonlisted species

*must state specific threshold criteria for unacceptable impacts to soil, hydrology, vegetation, wildlife and recreational conflicts,

*must utilize the best information available in developing a comprehensive, action-oriented plan, including the data and analysis upon which management conclusions were based,

*must include specific and comprehensive threshold criteria for closing and reopening ORV trails,

*must restrict ORVs to a significantly reduced, designated trail system and implement the best management practices (BMP) to minimize impacts until research demonstrates the longterm ecological effects of ORV use,

*must prohibit ORV use in the Addition Lands that are vital to the survival of the endangered Florida panther, on all lands identified as potential nesting sites for the critically endangered Cape Sable seaside sparrow, and in all water that are critical to the endangered West Indian manatee,

*must contain specific and comprehensive criteria for implementing and funding research and ORV monitoring and management, as well as establishing a dedicated, non-discretionary funding source to assure that appropriate actions are implemented in a timely manner.

345

Background information regarding the 1995 Settlement Agreement between NPS & FBP:

The BICY was established in 1974 by Public Law (PL) 93-440 in order to protect a wide variety of biological communities, the important wetland function provided by the Preserve, and the scenic and recreational values of the area. While humanplay activities may be permitted under the enabling legislation, they are to be regulated in a manner, which will protect the hydrology, water quality, wildlife and wilderness values of BICY. When the 1991 GMP was published, the NPS recognized that the GMP was not sufficient to address the ORV issues and that a supplemental ORV management plan would have to be developed.

The number of ORV users in the Preserve was steadily increasing and in 1993, the NPS issues approximately 2200 permits for ORVs, including swamp buggies and airboats. Not only was recreational use increasing, but the short and longterm impacts of these activities were becoming better understood.

ORV use causes rutting, churning and displacement of soils with serious adverse direct, indirect, and cumulative impacts upon plant and animal species, water flow, water quality and topography. Clearly this *discharge of dredged materials* falls under the regulations of the U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency (EPA) and requires a permit under § 404 of the Clean Water Act (CWA). In 1994, the FBP petitioned the Corps and the EPA to enforce the CWA with respect to ORV use in the Preserve. In August of the same year a 60-day notice of intent letter was sent by the FBP. In 1995, when the federal agencies failed to respond to this important issue, the FBP filed suit and filed a motion for partial summary judgement. A settlement was reached in October of 1995 between the NPS and the FBP which required the NPS to produce a science-based, comprehensive ORV management plan that fully analyzes the direct, indirect and cumulative impacts of ORV use in and identifies appropriate management actions to ensure that the biological and hydrological resources of the Preserve are protected. Throughout this process, extensive data and analysis documenting the adverse impacts of ORVs have been provided to the NPS.

Failure to develop a plan with clear conservation goals and objectives:

In order to comply with major statutes, regulations and the settlement agreement, the NPS must develop a science-based plan that identifies clear conservation goals and objectives, along with specific steps and strategies to meet those goals and objectives, and a timetable for this process. The present DSEIS appears to be a plan to develop a plan. The DSEIS discusses some problems and possible approaches to addressing these problems, but fails to provide goals, objectives, definitions, a timetable or the specifics for implementing any of the actions or strategies identified. As such, it allows the agency maximum flexibility in interpreting possible threats or implementing actions to conserve biological resources. After decades of inadequate regulation of BICY by the NPS, clearly continuation of the current management principles is not going to protect the Preserve.

E15 (cont.)

The GIS Suitability Analysis is a comprehensive, flexible, science-based system that provides a rational framework for evaluating complex questions regarding conflicts between the needs of natural systems and human activities and making appropriate management decisions. The essential components of the GIS Suitability Analysis are:

*define goals, objectives and constraints,

*provide for scientific review,

*develop a spatially referenced natural resource database,

*define natural resource and other categories to be included,

*define sensitivity criteria for each natural resource category (i.e. tolerance to ORV use),

*develop composite analysis of management areas

*design trail system that is consistent with composite results,

*integrate suitability analysis with management plan or EIS,

*develop comprehensive monitoring and research programs linked to adaptive management.

We strongly recommend utilization of these principles in rewriting the current DSEIS.

Failure to incorporate science-based management:

In order to comply with major statutes, regulations and the settlement, the DSEIS must contain the essential elements to ensure *the natural and ecological integrity of ORV use in BCNP*. This process is more likely to succeed if there are clearly defined goals and objectives, a series of strategies and action plans, and regular review to ensure that compliance with the goals and objectives is being achieved. The DSEIS must define what is meant by ecological integrity of the Preserve. Without agreement on the substance of this goal, it is simply not possible to determine if conservation is being achieved or threatened.

The PAC strongly supports recreation, but it must be clear that recreation can only be allowed to the extent that is does not harm or degrade the wildlife and wilderness values of the Preserve. As natural areas continue to diminish in the face of an ever-increasing human population expansion and the few remaining wild areas come under greater and greater demand from people seeking solace in nature, regulation may play an even more important role in protecting ecological systems. For those listed species, it is their very survival that is in question. For the Preserve visitors, fulfilling their recreational desires is important, but certainly not essential. The DSEIS should fundamentally be a comprehensive, science-based conservation plan, not a recreational document.

The National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), and National Parks Omnibus Management Act, and the settlement agreement all require that the DSEIS utilize the best scientific information available and demonstrate that the agency performed the proper environmental analysis.

Agencies shall also insure the professional integrity, including scientific integrity, of the discussions and analysis. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other methodologies used and shall make specific reference by footnote to the scientific and other sources relied upon for conclusions in the statements. 40 CFR § 1502.24.

The ESA requires the action agency to provide the U.S. Fish and Wildlife Service (FWS) with *the best scientific and commercial data available...for an adequate review of the effects* the planned action may have on a listed species. 50 CFR § 402.14 (d).

The National Parks Omnibus Management Act of 1998 states: *The Secretary (of the Interior) is authorized and directed to assure that the management of units of the National Park System is enhanced by the availability and utilization of a broad program of the highest quality science and information.* Sec. 202.

The 1995 settlement agreement with the FBP states: *Supplemental analysis of issues and impacts previously considered in the FEIS will be conducted to the extent required by NEPA or other federal laws, in light of newly available data, information submitted by members of the public through the SEIS process, and all other information available to the NPS.* Settlement Agreement at 3.

The DSEIS either ignores important scientific information, fails to include it or fails to analyze it. Additionally, *in-house* studies, reports and comments; the UGA ORV trail database (Welch and Madden. 1998); the Clark panther study (Clark and Janis. 1999); comments and analysis by important scientists such as Dr. Stuart Pimm, Dr. Aust, Dr. Smith, Dr. Snedeker, and Dr. Jones; and improvements in GIS technology such as the Airborne Laser Terrain Mapper (ALTM) (*EOM.* March 1998).

In addition to failing to include and analyze relevant scientific information, NPS administrative staff has illegally attempted to impede the planning effort by deliberately attempting to keep such information out of the public record. Dr. Mike Aust of Virginia Tech wrote a letter after a visit to the Preserve in which he commented on the extensive and longterm damage caused by ORVs, including decreased plant productivity, destruction of algal mat, lack of access for pedestrians, and death of trees around the hammocks.

Rather than demonstrating appreciation for this nonsolicited resource evaluation and utilizing the information to improve the situation, Superintendent Hibbard stated:

E15 (cont.)

This has no business being included as part of the public record in any of the planning effort. As I stated earlier, the impacts of ORV use has been documented in the GMP/EIS. The task at hand is to develop a plan to manage the use of ORV's. No matter how credible Dr. Aust may be, it is not appropriate to seek an impact analysis from him, nor, even if unsolicited, to use it as a matter of record. Superintendent Wally Hibbard 1997.

There have been some recent dramatic improvements in high-resolution mapping and GIS applications.

The Optech ALTM 1020 system draws on several recent technological advances to create a compact, light-weight, low-power, and highly automated laser mapping system that can be operated from a light dual or single engine aircraft. A high repetition rate (typically 5,000 pulses per second, but 25,000 pulses per second is already feasible) laser ranging system is reflected from a precisely controlled scanning mirror and directed toward the ground in a saw tooth pattern that covers the ground at spacings of every few meters. An inertial navigation unit in the system and phase differenced kinematic Global Positioning System (GPS) provide the orientation and position, respectively, of the aircraft at the exact instant of each range measurement...After some post-flight processing, which can be completed within hours of the flight, a high resolution digital Terrain Model (DTM) can be created. Comparisons between the ALTM and traditional surveying methods, necessarily confined to limited areas because of the time and cost to do the traditional mapping, show sub-decimeter agreement...

Once the DTM is made, the data can be displayed in many forms, such as shaded relief and false color maps, traditional contour maps, and three-dimensional perspective views that can help both engineers and less technically qualified managers to comprehend the extent and degree of the damage...

For the first time ALTM makes it possible, indeed relatively easy to map all one thousand kilometers of Florida beaches yearly, or even seasonally. EOM. March 1998.

The research team at the University of Florida (UF) utilizes a digital camera along with the ALTM system. We recommend that this new technology be evaluated as a means of determining impacts to and restoration of the Preserve, as well as hydrological function of this complex wetlands system.

Failure to adhere to the precautionary principle:

An important principle of conservation biology is the precautionary principle. It is a principle that attempts to keep us from causing unnecessary harm and producing irreversible changes. *Homo sapiens* inhabit an incredibly complex, interconnected natural world. Our myopic, homocentric, linear thinking makes it difficult for us to see ourselves as part of a living world whose future and welfare are forever linked to our own. Because of our worldview, our species has, for the most part, viewed biological communities and natural processes as things to be changed into economic commodities with little if any thought about the ecological consequences of such actions. Consequently human society has brought us to the point where the continuation of life and evolution into the next millenium is now an open question. Indigenous people, citizens with an earth-centered consciousness, scientists (Meffe and Carroll 1997), and others are advancing the precautionary principle as a thought process to engage in when making decisions on natural resource management.

We must recognize the limitations of the human capacity to understand or manage natural systems. These complex communities and processes evolved through millions of years of interaction. The present diversity and stability of natural ecological systems are a result of all those years of trial and error. The one irreversible act we can take is to cause extinction. For any species at suboptimal levels or facing significant threat, and particularly for those listed due to their decreased numbers, every reasonable action should be taken to ensure their recovery. When uncertainty prevails, be cautious. Understand the short and long-term consequences of various management actions before allowing their use.

ORVs may produce ruts as deep as 2 feet; can alter natural ground water flow; can affect egg-laying, nesting, web building and other activities; can cause long-lasting effects on fish and wildlife populations; erosions of river banks; and defoliation of mangroves; and introduce and spread exotics.

An audit conducted by the Department of Interior found that the NPS fails to adequately employ the precautionary principle. Thus, natural resource degradation is occurring throughout the system primarily because of an emphasis on visitor and recreational promotion and satisfaction rather than an emphasis on natural resource protection. A common finding was the lack of adequate inventory, analysis and monitoring programs, as well as the failure to implement timely responses to threats to natural resources.

Failure to include the Addition Lands and commercial vehicular use:

The Addition Lands must be included in the DSEIS, and ORV use should not be allowed.

The DSEIS should also include commercial use, such as that from airboats. Despite the widespread and extensive damage from airboats, during the last year assessed from November 1998 to October 1999, there were 22,364 commercial airboat trips. To make this number more comprehensible, if we consider an average workday to be 9 hours, this amounts to one trip every ten minutes every day, 365 days per year. Certainly this level of use cannot be consistent with the preservation of natural resources.

Failure to analyze the direct, indirect and cumulative impacts on listed and nonlisted species:

E15 (cont.)

Additionally, BICY management staff determined that airboats were significantly affecting seven listed species, eventually resulting in the closing of ORV use in Ochopee Prairie.

The DSEIS should ensure the greatest protection for listed and nonlisted species.

Summary:

We find it very distressing to realize that after 3 ¼ years and $400,000 tax dollars, NPS has failed to produce a comprehensive, science-based plan for management of ORV use in BICY. We are in full agreement with the FBP who have commented extensively on this and with the terms of the settlement and their commitment to having the terms of the settlement met. We strongly urge you to develop a comprehensive plan with goals, actions, an implementation schedule, monitoring and a dedicated source of funding that allows some benign human use while protecting the wildlife and wilderness value of the Preserve. Additionally, we urge you to analyze the no ORV alternative and an alternative which would avoid and decrease ORV impacts.

Sincerely,

Holly Jensen
Panther Action Coalition
Friends of Whales
11714 SW 89 Street
Gainesville, FL 32608-6289
352.495.9171
flpanther@earthlink.net

E15 (cont.)

SOUTHERN APPALACHIAN BIODIVERSITY PROJECT
PO Box 3141 Asheville NC, 28802
Phone (828) 258-2667 email info@sabp.net Fax (828) 258-0758

12/13/99

Wally Hibbard
Big Cypress National Preserve
HCR 61 Box 110
Ochopee, FL 34141
FAXED to 941 695 3007

Greetings,

SABP offers the following comments on the Draft EIS for ORV operations in the Big Cypress National Preserve.

1. The operation of ORV's in the reserve harms several species listed as threatened or endangered under the Endangered Species Act. Therefore, Section 7 consultation is required on this EIS. The EIS mentions consultation on page 65, but never actually states whether consultation is occurring or will occur. Without consultation, implementation of the EIS will violate the ESA. This letter therefore also serves as 60 day notice, as required by the ESA. 16 USC 1540(g), that SABP will sue NPS to force consultation on this EIS.

The fact that the EIS suggests (without any support) that the proposed action will decrease the likelihood of adverse affects to the panther is immaterial. Decisions affecting endangered and threatened species must be made on the basis of the best scientific information available. The fact is, ORVs will harm panthers and their habitat *no matter what mitigation is provided.* It is indisputable that ORV operations scare away panthers and change their behaviour, which is harassment. It is also beyond doubt that ORV's increase habitat destruction impacting panther feeding, breeding and other behaviours, resulting in harm to the species. Therefore, the NPS must undertake formal consultation on the EIS, and present the results to the public before issuing a final EIS. NEPA requires that federal agencies disclose environmental impacts and allow public comment. Completing consultation after a decision is made sidesteps the NEPA process, and will result in public distrust and probable legal action.

The EIS also makes unsupported assertions about adverse affects to other threatened and endangered species. For example, how can there be any doubt that ORV's impact water quality? Decreased water quality will absolutely harm aquatic-dependent species such as the Bald eagle, snail kite, wood stork and manatee. The NPS is being duplicitous in equating reduction of harm by decreasing ORV use to no harm, which can only occur with no ORV use.

Unless the NPS undertakes full, formal consultation on this EIS, SABP and other groups will take all available legal action to protect endangered species and their habitat by preventing ORV use in the preserve.

2. The EIS only has one action alternative, in violation of 42 USC 4332(2)(E).

a. The lack of action alternatives violates the National Environmental Policy Act (NEPA). At least one alternative must consider complete elimination of ORV's from the Preserve, as that is the only alternative which will eliminate impacts to endangered species and their habitats.

> 42 U.S.C. 4332(2) states that: all agencies of the Federal Government shall-- (E) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which

E16

involves unresolved conflicts concerning alternative uses of available resources. . .

Federal courts have consistently held that a detailed discussion of several alternatives is required under NEPA.

Requirement for a thorough study and a detailed description of alternatives is the linch-pin of environmental impact statement required under this section. I-291 Why? Ass'n v. Burns, D.C.Conn.1974, 372 F.Supp. 225, affirmed 517 F.2d 1077.

This section requires an environmental impact statement to do more than merely list alternative courses of action to the one recommended by the agency; alternative courses of action must be affirmatively studied and the study of alternatives must be exhibited in the statement. Rankin v. Coleman, E.D.N.C.1975, 394 F.Supp. 647, modified on other grounds 401 F.Supp. 664.

While federal agency need not consider all possible alternatives for given action in preparing environmental assessment, NEPA requires agency to consider range of alternatives that covers full spectrum of the possibilities; Ayers v. Espy, D.Colo.1994, 873 F.Supp. 455, reconsideration denied.

This section does not require that an environmental impact statement evaluate any particular alternative to a proposed action; however, it does not permit the agency to eliminate from discussion or consideration a whole range of alternatives, merely because they would achieve only some of the purposes of a multipurpose project. Town of Matthews v. U. S. Dept. of Transp., W.D.N.C.1981, 527 F.Supp. 1055.

By having only one "action" alternative, the NPS is merely justifying a pre-determined outcome, rather than making a reasoned choice among alternatives. This violates NEPA requirements as well.

Purpose of requirement of this section for discussion of alternatives to proposed federal action is to assure that alternatives are explored in the initial decision-making process and to provide an opportunity to those removed from that process also to evaluate the alternatives, and to accomplish these objectives, discussion of alternatives must go beyond mere assertions and provide sufficient data and reasoning to enable a reader to evaluate the analysis and conclusions and to comment on the environmental impact statement; discussion of alternatives must be undertaken in good faith and it is not to be employed to justify a decision already reached. Citizens Against Toxic Sprays, Inc. v. Bergland, D.C.Or.1977, 428 F.Supp. 908, supplemented.

The consideration and unsupported rejection of alternatives from a previous EIS is not sufficient. If other laws, such as the ESA, may require the complete halt of ORV use in the Preserve, then NPS must consider such an alternative in the EIS.

Agency consideration of alternatives in administrative record cannot replace the discussion mandated by this section of alternatives in environmental impact statement itself. Com. of Ky. ex rel. Beshear v. Alexander, C.A.6 (Ky.) 1981, 655 F.2d 714.

Requirement of this section that a federal agency prepare a detailed statement discussing alternatives to proposed agency action is not satisfied in whole or in part when pertinent information is found in the administrative record, but is not incorporated in an environmental impact statement. Grazing Fields Farm v. Goldschmidt, C.A.1 (Mass.) 1980, 626 F.2d 1068, on remand.

By only analyzing one alternative, the NPS has made conclusory remarks about that alternative's impacts, without any reasoned discussion. This violates NEPA as well.

It is not enough to consider alternatives in conclusory fashion in environmental impact statement; not only must drafter have basis for his assertions, but he must present enough data that those who must comment on statement are able to evaluate his recommended choice. Natural Resources Defense Council, Inc. v. Callaway, D.C.Conn.1974, 389 F.Supp. 1263, reversed in part on other grounds 524 F.2d 79.

Conclusion

Until these deficiencies are cured, SABP will do everything legally possible to prevent the implementation of this EIS. Please contact us if we may provide additional information.

Sincerely

Marty Bergoffen
Staff Attorney

E16 (cont.)

350

NATIONAL PARKS AND CONSERVATION ASSOCIATION
SOUTH FLORIDA FIELD OFFICE

1546 Polk St.
Hollywood, FL 33020
(954) 922-4962
FAX (954) 922-4960
e-mail [illegible]@npca.org

To: Superintendent Wallace Hibbard / Geologist Eric

FAX # 941-695-3007

Pages (incl. This one): 8

Comments:

6/3/99

December 10, 1999

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Superintendent Hibbard:

National Parks and Conservation Association (NPCA) appreciates the opportunity to comment upon the Draft Recreational Off-Road Vehicle Management Plan. This plan has been long forthcoming and anxiously awaited to promulgate protective measures to appropriately manage Off Road Recreational Vehicle (ORV) use in the Big Cypress Preserve. However, many more questions are posed by this plan than answered.

In brief, this draft is a "plan to write a plan". The plan is lacking in overarching scientific criteria in which to base decisions, education and enforcement strategies, implementation processes, time schedules and proposed funding monitoring, and sufficient protection of the threatened endangered species.

NPCA believes in controlled access, appropriate ORV use in appropriate areas and will support a plan that adequately manages vehicle usage in accordance to the mandates of the law.

In the effort to avoid redundancy of submitted comments, our comments will be concise, and we would like to refer to and in agreement with, the comments submitted by the Fish and Wildlife Service and Environmental Protection Agency.

Purpose of the Management Plan

In the first reading, one is left with the impression that ORV use is *mandated* under congressional law. This is misleading, as the mandated purpose is first and foremost the protection and preservation of the resources.

The 1916 Organic Act directs the Service to:

"promote and regulate the use of the [parks] by such means and measures as to conform to the fundamental purpose of the said parks, monuments, and reservations, *which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.*" (Emphasis added)

The Enabling Legislation Public Law 93-440 to establish the Big Cypress Preserve. That (a) in order to assure the preservation, conservation, and protection of the natural, scenic, hydrologic, floral and faunal, and recreational values of the Big Cypress Watershed in the State of Florida and to provide for the enhancement and public enjoyment thereof, the Big Cypress National Preserve is hereby established."

Under Section 4(a) Such lands shall be administered by the Secretary as a unit of the National Park System in a manner which assure their natural and ecological integrity in perpetuity in accordance with the Provisions of this Act.

While the enabling legislation does recognize the recreational values, recreation is not defined as ORV use exclusively. Therefore, ORV use may be an acceptable mode of transportation and even for recreation, but not to the detriment of the resources. When setting the objectives of use, what determinations are assigned? What types of motorized vehicles are under the umbrella of "motorized vehicles"? The private property owners have the right to access their property, but does this mean staying on the designated roads or trails to access camps or creating short cuts for convenience?

Management of Resources

E17

Big Cypress often has been referred to as having to answer to a different set of standards because it is a preserve versus a national park. Clearly this is not the intent of congress to allow for recreation to supercede preservation.

From the NPS Management Policies, 1988:
Significant growth in the number and diversity of parks occurred as a result of the 1933 Government reorganization, again following World War II, and during the 1960s. By 1970 the national park system had grown to encompass a diverse collection of "superlative natural, historic, and recreation areas in every major region of the United States, its territories and island possessions." That year Congress formally recognized the existence of this system of areas managed by the National Park Service, and went on to declare

> that these areas, though distinct in character, are united through their interrelated purposes and resources into one national park system as cumulative expressions of a single national heritage; that individually and collectively, these areas derive increased national dignity and recognition of their superb environmental quality through their inclusion jointly with each other in one national park system preserved and managed for the benefit and inspiration of all the people...; and that it is the purpose of this Act to include all such areas in the System and to clarify the authorities applicable to the system. (16 USC 1a-1)

Congress amended this statement in the act of March 27, 1978 (the act expanding Redwood National Park), to add:

> The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress. (16 USC 1a-1)

The General Authorities Act of 1970 defines the national park system as including "any areas of land and water now or hereafter administered by the Secretary of the Interior through the National Park Service for park, monument, historic, parkway, recreational, or other purposes" (16 USC 1c(a)). It states that "each area within the national park system shall be administered in accordance with the provisions of any statute made specifically applicable to that area" (16 USC 1c(b)) and in addition with the various authorities relating generally to NPS areas, as long as the general legislation does not conflict with the specific provisions.

From the BICY – General Management Plan

In administering the Preserve, the Secretary shall develop and publish such rules and regulations as *he deems necessary and appropriate* to limit or control the use of Federal lands and waters in respect to:
1) Motorized vehicles 6) Hunting fishing and trapping

These excerpts recognize both the responsibility and ability to promulgate management stratagems for the best interest of the park resource protection. Hunting and ORV use are subject to necessary controls from the NPS to ensure compatibility with the mandates. It is not a right, but a mandate. Missing from the ORV plan is the adequate information to base management decisions in the best interest of the wildlife and other natural resources.

Concept: Balancing park (unit) protection and preservation to that of sustainable recreational activities.

Decisions can be attributed to the incorrect but persistent belief that NPS operates under a dual mandate and must balance the competing interests of resource protection and providing visitor enjoyment. The Park Service has but one mandate: to conserve park resources unimpaired for the enjoyment of future generations. The Service's own Natural Resources Challenge reinforces this interpretation. Only after

assuring the protection of the resources is the Service to provide appropriate and meaningful public access and use.

Big Cypress is a "Preserve" which means that it has a qualified mandate of protection, as directed in the legislation about "Preserves". The "mandate" to include recreation and other "uses" must be to the degree degree *compatible with the primary goal of preserving the natural resource*. BICY legislation was very specific- the management was to err on the side of preservation - making activities compatible.

The principal thrust of these areas should be the preservation of the natural values that they contain. They might differ, in some respects, from national parks and monuments insofar as administrative policies are concerned. Hunting, for example, subject to reasonable regulations by the Secretary, could be permitted to the extent compatible with the purposes for which the area is established.

This language and other portions of the legislative history make it clear that off-road vehicle use, hunting, fishing, and grazing are to be allowed to the extent these activities are shown to be compatible with protection of the preserve's resources

This plan needs to utilize this stronger standard as the basis for ORV management, not the lesser and more difficult test of proving detriment or derogation before action is taken to halt detrimental uses.

Arguments regarding derogation and compatibility are applied Service-wide via the Redwoods Act. In order to assure there is no derogation, the NPS should adopt the test of compatibility; i.e., allow human activities to the extent we can prove they are compatible with preservation of the resources or other purposes for which the park was created. There is no other way in which the Service can assure derogation does not occur.

Clearly this states that recreation is permitted- but not to the detriment of the resources. In further reading of the law, Sec 5, 'the Secretary shall permit hunting, fishing and trapping , or entry may be permitted for reasons of public safety, administration, floral and faunal protection and management, or public use or enjoyment'.
Several court cases have responded to these mandates by taking such measures as to remove 'trespass camps' in BICY because of the multiple impacts and problems associated with their occupancy in the preserve.

Impairment: The question is whether or not those activities will cause impacts to the resources

Interpretation of impairment clause seems to indicate that onus of responsibility is on the conservation community to provide proof that there *is* permanent impairment to the resources, versus the responsibility to prove ORV usage is *not* detrimental to the resources.

The interpretation of the University of Georgia Remote Sensing Lab analysis (the combination of remote sensing and geographic information system (GIS) techniques) needs to be furthered to help understand the extent of alterations to the resources. While the data still needs "ground truthed" to interpret the ORV trails from other types vegetation and soil damage, what does remain is the evidence of remnants of various types of trails. There are ORV tracks today in areas of the park, such as Loop Road that have been closed for over 20 years.

The closure of areas that are severely degraded is a tool for management, however- on what criteria is this based? What mitigation practices will be utilized to attempt to repair these areas? Monitoring of the results? This set of procedures is vague as to the success of the closures or repairs, especially in light of the Univ. GA study that indicates "scars" remaining after many years of closure.

The question remains and is not indicated by the proposed alternative- how are we going to manage these uses so as not to allow continued resource degradation?

E17 (cont.)

ORV Permitting

ORV use has incrementally increased, and despite the cap of 2500 issued permits, this has failed produce or to limit indications of severe impacts to the resources (Airboat, and ATC (approx. 1971) numbers and permits have increased significantly). Upon what basis were these permit caps set?

The ORV use has increased because of gradual extended hunting seasons. Prior to the institution of the Preserve the hunting season closed in February. The season has lengthened (added hunting seasons for spring gobbler season, archery, etc.) from ending in January to the current practice of ending May (September to May). ORV use therefore has increased over the years as more time is spent accessing the remote areas and hunt camps

The proposed alternative does not adequately account for the *past* negative impacts when deciding how to manage the resource in the future. What will be the determination of future ORV permitting? The permit process should only allow for those activities that are compatible with the mission of the preserve. The proposed PSI criteria is a move in a positive direction, but it needs additional analysis and other protective measures. These would include such measures as setting criteria for the vehicle weight, width, tire type, and engine horsepower.

Have permits in Bear Island actually improved the resources ? If not, what alternative ways can managers utilize to improve the resources short of closure? a) More enforcement? b) Greater restrictions? c) Better education? All options are not adequately determined. There is a lack of information to determine if the current permit process will adequately protect the resources.

The proposed regulations also would raise annual ORV permit fees from $35 to $120– $200 please explain what the figures were based upon?

Environmental Consequences

Wildlife:

The proposed alternative has little information as to the impacts upon the wildlife. Missing in detail is the assessment and impacts upon the threatened and endangered species such as Cape Sable Seaside Sparrow and manatee from the usage of airboats, or upon the Florida Panther from ORVs during. Hunting season. We agree with the Fish and Wildlife Service comments.

Vegetative:

There may be impetus to keeping ORVs out particularly rare plant habitats, but with little knowledge of the existing resources (where and what species are present) how can these areas be adequately protected when there is a disconnect between what is known and unknown? Again, this is a critical call for a thorough inventory and monitoring of the resources to base such decisions.

Water and Soil Impacts

We support the Environmental Protection Agency comments.

Commercial Use

There is no commercial use plan included in the draft. This is a critical area of need in BICY, especially in light of the current litigation and impacts form the airboat concessionaires from Everglades City into the Preserve.

Visitor Experience

The plan fails to recognize the impacts of the ORV use on the non-recreational vehicle visitors. The percentage of land that is available to the ORV user, and the time of the year that is most conducive for non-vehicular travel (the dry season) coincides with the hunting season. Given the area dedicated to ORV and hunting use, one concludes that there is an unequal sharing of the resources. Quite simply, ORV use

and hunting are not complimentary to safe pedestrian access. Given the mandate to provide for the visitor experience and the limited number of ORV permits operators, versus American citizens as the trustees of the national park units; the ratio is skewed.

Land Statistics:

Open to ORV use (Swamp buggies and airboats)

493,899.93 acres

Areas closed to OR V use

87,812.89 acres

Percentage of BICY

Open to ORV use	67.76%
Closed to use	12.05%

Note: The Addition Lands comprise 147,153.01 acres, or 20.19% of BICY - currently closed to ORV & hunting- but as the Superintendent has openly expressed- "we intend on opening the Addition Lands to ORV use and hunting. Quite simply- that is twice as much land for special uses for a limited number of citizens.

Other points to address:

- The visual and physical impacts (sharing trails that are deeply rutted making it difficult for walking) of ORV trails upon the pedestrian visitor.
- The survey of visitors included no African Americans.
- Educational information to be provided is not clear in concept or latent, curriculum developed? Time requirements for participants? Part of the permitting process?
- Are there designated bike only trails? How many miles of trails? Will there be hunting allowed in these areas? Integration of the Florida Trails guidelines into the park plans?
- NPS has to provide access to the private property, but not to provide convenient access, especially for ORV use in environmentally sensitive areas.

Implementation

The ORV Plan refers to implementation policies, yet there are no demonstrable measures for implementation or enforcement of protective measures. Also missing are a time schedule and a proposed budget for implementation.

National Precedence

There is a need for a national oversight on the motorized use in parks. Big Cypress could serve to be the park unit that could set a precedent for all motorized use in park units, rather than the example of shortcomings in the NPS resource preservation policies.

Summary:

The proposed action plan does not assure that ORV usage will not supercede the preserve's mission of resource protection

The plan unfortunately falls short of the necessary goal to set appropriate management policies to ensure the preservation and protection of the resources, and to ensure compatible uses consistent to the mission of NPS and BICY.

E17 (cont.)

Specifically, the Plan:

- Is ambiguous and speculative and does not present supporting data and analysis to support conclusions.
- Fails to identify specific management actions to avoid and minimize ORV impacts.
- Violates relevant environmental statutes and regulations.
- Does not analyze a reasonable range of alternatives as required by NEPA.
- Is not science based and does not have comprehensive and scientifically justifiable goals and objectives.
- Does not present a comprehensive program for ORV management.
- Fails to analyze specific criteria for the development of a designated trail system.
- Does not contain specific threshold criteria for unacceptable ORV impacts.
- Fails to present supporting data and analysis for the 2 PSI ground pressure standard.
- Fails to incorporate the best available information.
- Fails to incorporate best management practices (BMP's) designed to avoid and/or minimize impacts from ORV use.
- Fails to analyze management practices for particular vehicle types.
- Does not contain a detailed and comprehensive implementation schedule including a dedicated non-discretionary funding plan to assure that all management actions including monitoring, research, and adaptive management are enacted in a timely manner.
- Fails to adequately analyze methods of monitoring impacts of ORV use and mechanisms for taking remedial action.
- Fails to analyze procedures and considerations for closing, opening, or reopening ORV trails.
- Fails to adequately analyze the direct, indirect, and cumulative impacts of ORV impacts.
- Ignores the analysis of ORV impacts on non-listed and listed species.

Does not contain a comprehensive program for research to identify the long-range ecological effects of ORV use.

Recommendations

- Develop specific goals and objectives specifically for the Plan to avoid and minimize impacts of ORV use provide opportunities for peer review.
- Connect these goals and objectives to specific indicators, threshold levels, and performance measures.
- Ground truth the Univ. of GA study to serve as an evaluative tool.
- Develop a spatially referenced natural resource database.
- Develop comprehensive monitoring and research programs linked to adaptive management.
- Set policies on the vehicle specifications, along with a timeline to modify the different types of buggies and airboats to meet the new standards (weight maximums, tire type, width and tread specifications, etc.)
- Define and designate trails consistent to the mandated mission of preserve. To include the most appropriate areas of ORV usage, select additional areas that are zoned to allow for safe alternative user groups (cyclist, hikers, canoeist, etc.) during the optimal travel times that are free from ORV and hunter use.

- Develop an operational definition of ecological integrity.
- Develop specific procedures and measures for evaluating ecological integrity. These would include landscape, ecological, hydrological and biochemical measures.
- Incorporate the above into a comprehensive monitoring program.
- Development of an educational component to the permitting process.

References:

Florida Biodiversity Project 1999, Review and Comments on Draft Off-Road Vehicle (ORV) Management Plan Supplemental Environmental Statement Big Cypress National Preserve, Florida

Duever, M.J., J.E. Carlson, J.F.Meeder, L.C. Duever, L.H. Gunderson, L.A. Riopelle, T.R. Alexander, R.L. Myers, and D.P.Spangler. 1986a. The Big Cypress National Preserve. National Audubon Society Research Report No. 8.

National Park Service 1999. Draft Environmental Assessment: Operation of Airboat Tours from Everglades City, Florida Within the Southwest Addition Area of Big Cypress National Preserve. U.S. Department of Interior, National Park Service. March 1999.

NPS internal memos, documents and interviews with BICY park staff (1998 –1999)

U.S. Fish and Wildlife Service (USFWS) 1999a. Comment letter on the Big Cypress Off-Road Vehicle Management Plan, Supplemental Environmental Impact Statement (SEIS). November 12, 1999.

U.S. Environmental Protection Agency (EPA) 1999. EPA Review and Comments on Draft Off-Road Vehicle (ORV) Management Plan Supplemental Environmental Statement Big Cypress National Preserve, Florida CEQ No. 990285. November 12, 1999.

Welch, R. and M. Madden. 1998. Off Road Vehicle trail Database for Big Cypress National Preserve. Final Research Report. University of Georgia Center for remote Sensing and Mapping Science, Athens, GA, 30pp.

E17 (cont.)

354

DEC 20 1999

December 13, 1999

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

Re: Big Cypress Draft Recreational Off-Road Vehicle Management Plan Supplemental Environmental Impact Statement

Dear Mr. Hibbard:

I am writing on behalf of myself as an interested member of the public and on behalf of Wildlands Center for Preventing Roads (Wildlands CPR) and its members and supporters. Wildlands CPR, a national non-profit conservation organization, seeks to restore and protect wild places by promoting road removal and revegetation, preventing road construction, and limiting motorized recreation. Please accept and fully consider these comments on the Draft Off-Road Vehicle Management Plan and Supplemental Environmental Impact Statement (Plan) for Big Cypress National Preserve (BCNP).

The BCNP is of particular interest to us because of its enormous biological and ecological value and the severity of the degradation it has experienced in recent decades through agency mismanagement and BCNP visitor abuse. The importance of protecting the Preserve from the continued ORV assault cannot be overstated.

We sincerely appreciate the efforts of those NPS staff who are committed to protecting the Preserve's natural resources, and appreciate that this Plan is at least a move (however minimal) in the right direction. However, given the devastating impacts of ORVs in BCNP, and given the NPS' legal and ethical duty to prevent such impacts, the Plan is, simply, grossly inadequate (both legally and ethically) to meet the agency's management duties.

The Environmental Impacts of ORV Use in Big Cypress National Preserve

There is an abundance of evidence that off-road vehicle (ORV) use, especially at high use levels or in sensitive ecosystems, consistently causes severe adverse environmental impacts. Unfortunately, BCNP is comprised of an ecosystem highly susceptible to ORV impacts and is subject to high levels of ORV use. Although the NPS should be well aware of the voluminous scientific research documenting how ORVs cause such impacts, in general as well as in the BCNP specifically, this proposed management plan shows little evidence that this scientific research was more than marginally considered. We ask that you fully and carefully consider the following documents discussing, summarizing, analyzing, and synthesizing the numerous ways in ORVs frequently and readily cause severe environmental impacts:

- Comments on this draft Plan and EIS submitted by the Florida Biodiversity Project and Biodiversity Legal Foundation
- The rulemaking petition submitted to the National Park Service on December 7, 1999 by Bluewater Network et al. requesting an ORV ban in National Park Service management units.
- The rulemaking petition submitted to the U.S. Forest Service on December 9, 1999 by Wildlands Center for Preventing Roads et al., entitled "Petition to enhance and expand regulations governing the administration of recreational off-road vehicle use on National Forests."

Although some of these documents include information or focus on ecosystem types other than those found in BCNP, most contain some information specific to BCNP-ecosystems, and much of the remaining literature is highly relevant even if not site-specific. For instance, ORVs cause often severe disturbance and harassment effects to wildlife, whether the use is occurring in arid desert ecosystems, high alpine meadows, montane forests, or swamps.

Unless you indicate otherwise, we will assume you have copies of all of these documents, and expect that the Record of Decision and final Plan will appropriately reflect the information they contain. In the event that you have not acquired any of these documents, and have difficulty doing so, we are happy to provide copies of any of them documents upon request.

The environmental impacts of ORV use in BCNP, as discussed in the documents noted above, include considerable adverse effects to soils, hydrology, air and water quality, vegetation, and wildlife. Many of these impacts in BCNP will probably take years or decades to recover if they are reversible at all.

We draw your attention to a recent study conducted by the University of Georgia Center for Remote Sensing and Mapping Science as an example of these impacts. Although there are only 60 miles of official NPS-designated ORV trails in Big Cypress, this study identified an estimated 29,799 miles of ORV routes and 148,000 of ORV-impacted acres within the Preserve.

As the best available scientific information overwhelmingly demonstrates, including research conducted by the NPS itself, ORV use in BCNP is resulting in outrageous environmental impacts.

Critical Failings of the DEIS and Plan

1. The Plan fails to incorporate substantive, enforceable standards.

The Plan fails to identify and incorporate specific management actions to ensure that ORV use does not result in adverse impacts. The Plan is vague and ambiguous and fails to require the management approach and actions necessary to meet NPS obligations to protect natural resources.

2. The Plan is not based on sound science.

As noted above, the Plan appears to have ignored the majority of the best available and relevant scientific information. In fact, the NPS appears to have highly germane research conducted both by outside scientists as well as its own agency personnel.

3. The DEIS fails to adequately evaluate the effects of the proposed Plan on vulnerable species, including Florida panther and Cape Sable seaside sparrow.

The potential impacts of ORV use on these highly imperiled species, and other species which might be adversely affected by ORV use, were largely ignored.

4. The Plan improperly segments commercial airboat travel from the analysis.

The EIS and Plan must fully evaluate and consider the potential impacts of commercial airboat travel in BCNP.

Recommendations

We urge the NPS, in its management plan for BCNP, to adopt the following provisions:

- ORV use shall be allowed only on system roads and trails designated and posted as open for ORVs. Cross-country ORV travel shall be prohibited.
- Designation of ORV routes shall only occur on Big Cypress National Preserve system roads and trails where the NPS demonstrates in a public process that use of the route by ORVs will not cause adverse environmental impacts.
- Designation of ORV routes, construction of new ORV routes, upgrading of existing routes to accommodate new or additional ORV use, and the construction or upgrading of facilities for ORV use must be fully analyzed under the National Environmental Policy Act.
- ORV use shall be prohibited unless adequate monitoring and enforcement of the use and impacts are fully funded and implemented.
- ORV use shall be prohibited in areas where such use might adversely affect species listed under the Endangered Species Act (or species designated as candidates for such listing), on Bear Island and in the Preserve Addition Area (Florida panther), within the historic range of the Cape Sable seaside sparrow, and any other part of the BCNP where such use might result in adverse impacts to native species or other natural resources.
- The process by which ORV routes are designated must include the above-mentioned prohibitions. It must also specify temporal conditions on the appropriate use in specific locations, maximum ORV weight limits, strict guidelines for the type of tires used on permissible ORVs, and any other criteria necessary to ensure that BCNP's natural resources are fully protected.
- All of the above provisions must be incorporated into the final Plan as nondiscretionary and enforceable management standards.

Moreover, the NPS must ensure that the new EIS and final Plan include a comprehensive analysis of all the potential adverse impacts of ORV use, including all commercial activities and other activities which may produce cumulative or connected impacts.

Ultimately, the final Plan must be based on science, it must be conservative in character, and it must ensure that the BCNP's natural resources are fully protected.

Conclusion

The NPS is required, under its own Organic Act, BCNP enabling legislation, Executive Orders 11644 and 11989, and other pertinent legal guidance, to allow the use of ORVs in the Preserve only to the extent that the Preserve's natural resources are fully protected. Given these legal mandates and the extent of the adverse impacts caused by ORV use in BCNP, it is clear that the NPS cannot permit ORV use except in those situations where it can determine, prior to permitting the use, that the use will not result in adverse environmental impacts. Please refer to the legal analyses in the documents cited above (comment letter submitted by Florida Biodiversity Project et al., rulemaking petition submitted by Bluewater Network et al., and rulemaking petition submitted by Wildlands CPR et al.). Although the Wildlands CPR rulemaking petition addresses ORV management by the Forest Service and not the NPS, the interpretation of the Executive Orders is applicable. Although in some cases the details of the interpretations of these organization varies, the basic interpretation is identical – natural resource protection must be the primary management objective, and any ORV use that occurs must not impinge upon this primary directive. The Plan's insistence that the Preferred Alternative will result in "reduced" impacts is woefully insufficient – that it will reduce impacts is legally-inadequate. The adopted management plan must fully protect BCNP's natural resources, not merely "reduce" ORV impacts to them.

It is clear from the level of ORV use in BCNP and the astonishing level of consequent environmental impacts that ORV use has been grossly mismanaged by the NPS (despite the efforts of those NPS staff committed to protecting BCNP). The NPS' defense for this egregious mismanagement, in the DEIS and Plan and elsewhere, has been its claim that it is charged with both protecting natural resources and providing for the recreational enjoyment of these resources. However, the NPS has frequently misinterpreted this mandate to mean that environmental protection and recreational access are to be equal goals of its land management efforts. While the NPS is charged with providing for the recreational use and enjoyment of NPS-managed lands, this is only permitted to the extent that natural resources are fully protected. We fully support the management of BCNP for recreational use and enjoyment, but the Preserve's natural values cannot be compromised in the process.

In fact, even the BCNP's enabling legislation, much heralded by those who feel there should be no restrictions on their use of public lands regardless of the consequences as protecting access rights, makes this hierarchy of management mandates clear. While the NPS is required to provide for specific types of uses of the Preserve, these uses must be subject to reasonable regulation, and the Preserve must be managed to ensure its "natural and ecological integrity in perpetuity." As even the DEIS acknowledges, "the natural and ecological integrity of the preserve is the fundamental natural value that Congress directed the National Park Service to protect" (Plan at 2).

For the NPS to point to its recreational mission as the basis for allowing the continued devastation of this ecologically exceptional area is inexcusable. It has all the appearances of shallow pandering to the vocal minority which either refutes the overwhelming evidence that ORV use in Big Cypress causes severe environmental impacts, or which argues that their

We urge the NPS, in the strongest possible terms, to end the destructive reign of the ORV in Big Cypress National Preserve. It has both the legal authority and the legal obligation to do so.

Thank you for carefully considering our comments. We look forward to considerable improvements when the Record of Decision and final Plan are released.

Sincerely,

Jacob Smith, Policy Director
Wildlands Center for Preventing Roads
P.O. Box 2353
Boulder, Colorado 80306-2353
(303) 247-0998

Wildlands CPR comment letter on Big Cypress ORV Plan

E18 (cont.)

RECEIVED
NOV 08 1999
BIG CYPRESS

COMMENTS BY KEN CARPENTER, FLORIDA TRAIL ASSOCIATION, FOR THE BIG CYPRESS NATIONAL PRESERVE DRAFT OFF-ROAD VEHICLE MANAGEMENT PLAN MEETING

November 1, 1999
Florida International University

Ken Carpenter

K. E. Carpenter
801 NW 54th St.
Ft. Lauderdale, FL 33309-6047

DCR #4 FT LAUDERDALE FL PM 08 NOV 1999

Mr.Wallace Hibbard
Superintendent, Big Cypress NationalPreserve
HCR 61, Box 110
Ochopee, FL 34141-9710

34141X9710

I have canoed in Everglades National Park and hiked in Big Cypress National Preserve since 1961. I love the Everglades.

At present I am the Trail Coordinator (or Section Leader) of Section II of the Florida Trail through Big Cypress National Preserve in the Addition Lands north of Alligator Alley and on up to Lake Okeechobee. This section of about 65 miles is to be maintained by the Broward County Chapter of Florida Trail Association. There are 270 members in Broward County and over 5000 members in Florida Trail Association state and nation wide. The main purpose of FTA is to establish a National Scenic Trail from the southern end of Big Cypress National Preserve on Tamiami Trail to the Alabama border beyond Alabama. Over 1000 miles of Florida Trail and Florida National Scenic Trail have already been built.

Last week two persons (one from New York State, one from Virginia) contacted me about hiking the Florida Trail through Big Cypress National Cypress Preserve since they are planning to hike the whole trail this coming winter season. I have many calls every year about this as there is national, state, and local interest in our Florida Trail system.

The best hiking weather is in December, January, February, and March, which also coincides with hunting dates. Therefore it is proposed that a safe corridor on both sides of the Florida Trail be defined in order to provide safe protection from hunting routes.

Florida Trail members will build and maintain both the Florida Trail and the Florida National Scenic Trail through Big Cypress National Preserve and cooperate with them in carrying out the proposals and principles of their General Management Plan.

Everglades Coordinating Council

Coordinating the Conservation Efforts of South Florida Sportsmen's Associations

Barbara Jean Powell
Wildlife and Resource Management Liaison
22951 S.W. 190 Avenue
Miami, Florida 33170

Telephone: (305) 248-9924
Fax: (305) 248-9924
E-mail: barjnpwll@aol.com

RECEIVED
DEC 13 1999

December 12, 1999

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

Dear Mr. Hibbard:

Regarding: Draft Off-Road Vehicle Management Plan

Attached is the Everglades Coordinating Council's response to the Draft Off-Road Vehicle Management Plan. We thank you for the opportunity to submit these comments.

Sincerely,

Barbara Jean Powell
Wildlife and Resource Management Liaison

Attachment

E20

Everglades Coordinating Council

Coordinating the Conservation Efforts of South Florida Sportsmen's Associations

22951 S.W. 190 Avenue
Miami, Florida 33170

Phone/Fax: (305) 248-9924
Email: evcoord@aol.com

DRAFT RESPONSE TO BCNP DRAFT RECREATIONAL ORV MANAGEMENT PLAN AND SEIS

Compiled by Barbara Jean Powell, Wildlife and Resource Management Liaison

Presented by Wayne Jenkins, President

The Everglades Coordinating Council is an umbrella organization of South Florida conservation associations. Our affiliates include regional chapters of national and international sportsmen's organizations, as well as state and grassroots sportsmen's groups. We are dedicated to assuring wise management and ethical enjoyment of our state's wildlife and wildlife habitat.

The following comments are a compilation of remarks and observations offered by our delegates as well as individual members of our affiliate organizations. Collectively they represent hundreds of years of intimate, firsthand experience in the Big Cypress Swamp. We ask that this input be entered into the public record.

EXECUTIVE SUMMARY

In it's opening remarks, the NPS indicates the plan will address best management practices; a comprehensive designated trail/designated use system for ORVs; vehicle types; methods of monitoring and enforcing plan requirements; and a procedure for opening, closing, and realigning designated trails and use areas. The Everglades Coordinating Council agrees these are important components for an ORV management plan, however, the plan falls far short of accomplishing the intended purpose in many of these areas. We want to work with the NPS to develop a good management plan, but judging from this version we have a long way to go before that can be accomplished.

Regrettably, the plan appears to be oriented toward placating the settlement agreement of an anti-ORV lawsuit filed by a plaintiff closely tied to a radical extremist group, rather than a genuine attempt to properly manage a traditional recreational use. It contains shocking institutional bias against the ORV community, and is rationally and

Jan- 9-00 MON 4:27 PM BIG CYPRESS NAT FAX NO. 1 941 695 6921 P. 4

and deliberately misleading. Unfortunately, it exploits all of these flaws to follow a standard formula for justifying a proposed action.

Purpose of the plan: The draft ORV Management Plan states that the purpose of the Supplemental Environmental Impact Statement includes the need to incorporate information that has become available since the General Management Plan was released, and to address new issues raised by the public. The new information and issues must be evaluated with extreme caution to assure they are substantive and not simply the reflection of management philosophies that are contrary to the enabling legislation which provides for the enhancement and public enjoyment of traditional recreational activities in cooperation with the State of Florida.

Throughout the document reference is made for the need to eliminate non-specific and undocumented conflicts between user groups. It also places extraordinary weight upon telemetry maps that were released to the public and incorporated into the plan before having been ground truthed. Big Cypress National Preserve's ORV community has suffered undeserved and irreversible negative publicity nationwide because of these baseless claims, and this has generated negative public input by persons unfamiliar with the facts.

Scope of plan: The draft plan stipulates the scope of the plan is limited to recreational ORV use only. There is no basis in the preserve's enabling legislation, the General Management Plan, the Cooperative Agreement with Virginia Tech, prior drafts of the ORV Management Plan, nor the 1995 settlement agreement, to place the entire burden of reducing and mitigating ORV impacts solely upon recreational ORV use.

Incredulously, the plan also proposes to severely restrict ORV use as a means of mitigating effects of development and agricultural activities occurring outside the preserve boundaries. This, despite the fact that millions of acres contiguous to the preserve is either already in public or Tribal ownership, or is slated for purchase under Florida's land acquisition program, one of the most aggressive in the nation.

The scope of the plan must include all vehicles operated within the preserve for recreational, commercial, resource management, or law enforcement purposes. It should focus solely upon quantifiable adverse impacts that ORV activities have on the integrity of the preserve's overall natural values.

The General Management Plan directed that an ORV Management Plan be developed to reduce the level of impacts that were occurring in 1991, therefore, the preserve superintendent's subsequent success in reducing

E20 (cont.)

impacts through discretionary management actions prior to obtaining funding for an "official" plan should be factored into the equation.

Natural Resource Issues: The Draft Plan wrongly attributes to prior ORV use the lingering evidence of myriad historical land uses, including logging, commercial and real estate enterprises, cattle grazing and farming. By placing the blame solely upon ORVs, planners contrive justification for imposing excessive restrictions in the name of mitigation.

In presenting alternatives as "No Action" and "Proposed Action", the plan wrongly implies ORV activities are totally unregulated at this time. For clarification, we urge that the No Action alternative be renamed "Current Action". It must accurately reflect the extensive ORV management program in place now, which consists of designated trails and areas that are opened or closed to various levels of ORV activities, as well as a system for addressing resource protection issues. It is this alternative that we feel needs to be documented and fine-tuned in order to fulfill the dual mandate of providing the appropriate level of resource protection and traditional recreational opportunities.

The plan references the need to minimize and mitigate impacts of ORV use, however, it fails to identify quantifiable *adverse* impacts of existing levels of ORV use on the preserve's overall natural resources, endangered species, or other wildlife. It admits the no-action alternative will cause no harm to protected species, yet, nonetheless fabricates justification for imposing excessive restrictions on preserve visitors by claiming the proposed action will provide a greater level of unspecified or unneeded benefits.

Visitor Use Issues: The plan is unabashed in admitting the proposed action will diminish traditional recreational use and enjoyment of the preserve, and that it will impose inconveniences and financial hardships to ORV users and backcountry property owners. This tactic is a clear violation of the congressional mandate as stipulated in the original enabling legislation and clarified and strengthened in the Addition legislation.

It is also a breach of the long-term goals set forth in the 1997-2002 Strategic Plan for Big Cypress National Preserve which include assuring 80% of the preserve visitors are satisfied with preserve facilities, services, and recreational opportunities. As written, the plan guarantees the ORV-oriented visitors will be among the dissatisfied 20%.

The Redwood Act stipulates that the NPS shall not be exercised in derogation of the values and purposes for which the various areas have

been established. Again, traditional recreational opportunities were a specific value protected by the enabling legislation.

Big Cypress legislative background and the purpose of the preserve: Hunting, fishing, and frogging in the Big Cypress, and the manner in which people have historically accessed the area, is deeply ingrained in the culture of many South Floridians. It is their extraordinary passion for the region and its customs that generated public support for National Park Service acquisition.

But, the sportsmen, Florida's governor, Congress, and the President of the United States wisely recognized that in order for the public to be able to continue to enjoy their traditional pursuits it had to be established under a new management designation. In his testimony before Congress, Assistant Secretary for Fish, Wildlife and Parks Nathanial Reed aptly dubbed the national preserve concept a "new breed of cat" that would accommodate a high level of uses the park service was unaccustomed to managing.

The efforts of the sportsmen affiliated with the Everglades Coordinating Council were essential to the establishment of the preserve. We transported key public officials via swampbuggy to a hunting camp deep in the Big Cypress Swamp where logistics of the agreement were worked out. We helped write the enabling legislation that gave equal emphasis to preserving, conserving, and protecting the recreational values of the Big Cypress National Preserve as it did the natural, scenic, hydrologic, floral and faunal values. And, by networking with fellow sportsmen throughout the nation, we were instrumental in gaining congressional approval for the acquisition.

Over time it became evident that managing activities that were prohibited in other units of the national park system was a difficult transition for some within the federal agency to make. With the creation of the Addition, we authored the language with which Congress clarified and emphasized that one of the purposes for which the preserve and its Addition was created was the enhancement and public enjoyment of its *traditional* recreational values.

The Addition's enabling legislation defines these values as "*hunting, fishing, frogging, and other traditional recreational opportunities*", and it directs the federal agencies to cooperate with the State of Florida in providing them. Unquestionably, off-road vehicle use is a necessary and integral component of enjoying traditional recreation in Big Cypress National Preserve, both before and after the preserve's creation.

E20 (cont.)

360

We strongly support reasonable and prudent regulation of ORV use, however, we vehemently object to numerous components of the Draft Plan that would diminish this traditional activity in order to establish new recreational uses customarily and generically associated with other units of the national park system. In diminishing a traditional use for this purpose, the Draft Plan violates a mandate of the Organic Act, as amended in the 1970s, which provides that activities "*shall not be exercised in derogation of the values and purposes for which these areas have been established.*"

Federal Regulations and NPS Policies Related to ORV Use: The Organic Act stipulate it is the *integrity* of the system that must be protected, and it dictates that management shall not compromise a unit's resource values except as specifically provided by Congress. As ORV use is an activity specifically provided for in the enabling legislation, subject to *reasonable* regulation, it is evident that Congress acknowledged some level of ORV impacts to the natural resources was both inevitable and expected.

Federal Regulations and Policies Related to Biological Resources: The NPS Management Policies and the Endangered Species Act require the examination of impacts during planning in order to protect biological diversity on a management unit. To reduce adverse impacts, the US Fish and Wildlife Service recommended that the NPS consult with the USFWS and the Florida Fish and Wildlife Conservation Commission (FWC) in developing an ORV Management Pan.

The Draft Plan, especially the SEIS, is terribly flawed in that it repeatedly exaggerates inconsequential affects of ORV activities on the flora, fauna, and hydrology. Most disturbing, it uses verbal slight of hand to transform conjecture into fact to justify the proposed action. The bias and inaccuracies contained in the document suggest planners disregarded the recommendation that they consult with agencies knowledgeable about the region's wildlife and it's habitat.

1995 Settlement Agreement: Although we feel the litigation that resulted in the settlement agreement was without merit, the lawsuit was beneficial in that it prompted the Department of Interior to finally provide funding for an official ORV Management Plan. Apparently this funding had previously been a low priority due the preserve superintendent having already achieved many of the goals for a plan through his discretionary management actions.

It is important, however, to note that the settlement agreement stipulated that the plan was to assure natural and ecological integrity of the preserves resources in accordance with the establishing legislation. The

Draft Plan exceeds this requirement by attempting to eliminate localized impacts wherever they occur rather than protecting the overall integrity of the ecosystem as a whole.

Planning Opportunities and Issues: Institutional bias and discrimination against the ORV use was evident even during the planning process. ORV owners and their spokespersons were segregated from other members of the environmental/conservation arena during public scoping meetings held at Oasis Visitor Center.

Segregating "Preservationists" and "ORV users" in this manner reflected a good-guys/bad-guys image that was humiliating for the ORV community and prevented them from dispelling misconceptions about their activity. This was especially damaging because it gave the anti-ORV litigant a sanctioned forum to share his opinions with the environmental community, something that was denied the Court-approved defendant intervenors who were segregated with other "ORV users".

VISITOR USE ISSUES

ORV Users/Hunting and Hunters: It is totally inappropriate for proposed management actions to be considered acceptable if they reduce current levels of lawful traditional recreation.

"Noise and visual intrusion" is open for interpretation according to a visitor's perspective. The sounds airboats and swampbuggies make actually enhances the backcountry experience for hunters and ORV users. The subtitles of sound can tell an experienced outdoorsman where an unseen ORV is coming from, where it is going, who the driver is, and what he's up to. It is difficult to explain, but by sitting in camp, or in a tree stand across a swamp, one can share the enjoyment of a fellow outdoorsman just by listening.

Buggy trails offer the same type of enjoyment. One speaker at the ORV public hearing in Miami summed this up by saying, "We love our buggy roads!"

Driving or walking along, observing the animal tracks or tire tracks in a buggy road, one can replay in his mind's eye what went on before he arrived or since he had been there last. A raccoon pouncing at a leaping frog; a bobcat looking for groceries; a slithering snake; a buck that slipped by camp while you were sleeping; a crafty alligator laying in wait for supper; this and so much more entertainment the buggy roads provide.

E20 (cont.)

Other Visitors: The Draft Plan states that noise and visual intrusions resulting from ORV use may adversely affect non-ORV users. We strongly oppose the trend toward reducing traditional uses in order to accommodate sensitivities of individuals who are visiting the wrong unit of the park system. If they are expecting to find a wilderness experience free of evidence of human use and enjoyment there are other units of the preserve dedicated for that purpose.

We were astounded to read claims in the Draft Plan that the presence of ORVs can affect natural scenery, and wildlife and habitat viewing opportunities, as the use of ORVs *enhance* these qualities.

Environmental Justice: We feel strongly that the plan must include an Environmental Justice component because the proposed fee increase and ORV specifications (discussed at length elsewhere in this document) will deliberately reduce visitation by low income individuals.

Vehicle Permit System and Operating Standards

ORV permit fees: According to preliminary estimates, the proposed action would increase annual ORV permit fees from $35 to as much as $200 per vehicle to cover the total direct costs to monitor, maintain, enforce, and restore ORV effects. It bases justification for this action *on Directors Orders #53 (DO-53) for Special Park Use Guidelines*, however, the full explanation for the enormous fee increase is shockingly evident in Tactic 12.1 of the Strategy and Tactics for Reducing Managing ORV Use.

This tactic states its purpose is to reduce resource damage, crowding and conflicts with a fee structure designed to eliminate visitors "with less commitment to ORV riding or less wealth". The Draft Plan describes this incredibly discriminatory action as having "moderate" impact on the preserve visitor.

Our research into DO-53 indicates it is still in draft form. It's purpose will be to recover the direct costs of managing a short-term special use which provides a benefit to an individual, group, or organization rather than the public at large, and which is neither initiated, sponsored, nor conducted by the National Park Service. An example of a special use covered by DO-53 would be the filming of a movie that would require an area to be temporarily closed to the public and divert NPS staff from their customary duties in order to monitor the activity.

ORV use in the preserve is exempt from DO-53 because it is an historical use that is specifically provided for in the original enabling legislation,

and reaffirmed in the Addition enabling legislation under the umbrella of "traditional recreation".

As DO-53 is not applicable and Tactic 12.1 is abhorrent and, if not illegal, certainly should be, the cost of ORV permits must be structured to cover administrative costs only, such as inspecting vehicles and maintaining a permit database. Other costs associated with managing the activity should be derived from the same general operating fund that covers other types of visitor use in the preserve.

In light of the Draft Plan's intent to require ORV-users to bear the cost of constructing ORV access sites, we find it especially disturbing that the NPS has recently procured a creative funding source from tax revenue for safety and access for other preserve visitors. Our review of site plans for the project revealed absolutely no safety enhancements for ORV access, not so much as an "ORV Crossing" sign at existing trailheads on Tamiami Trail.

Vehicle Specifications

The proposed action reflects a startling lack of knowledge of the evolution and complexities of ORV design and construction. In many cases the proposed restrictions will not only fail to achieve the desired objectives, but will also *increase* impacts to the resource, as well as increase risk to operator and equipment.

Airboats: Airboat designs vary according to the area and conditions under which they are intended to run. Ever since airboats were invented --starting with crude plywood hulls with surplus engines built by veterans recently returned from WWII--sportsmen have constantly evaluated their equipment, forever striving to improve performance, safety, fuel efficiency and sound aesthetics. Length, width, engine size, and other considerations are all factored into a complicated design equation.

The formulas for these designs are developed, revised, and recorded largely in a builder's mind alone, tested and perfected through trial and error, and passed verbally from one generation to the next. This backyard technology, developed by South Florida sportsmen who had a burning desire to enjoy remote areas of the Everglades, is now used by industry and recreational enthusiasts throughout the world for low impact access to wetland habitats.

We adamantly oppose the simplistic and shortsighted proposal to restrict airboat width to 6.5 feet. Under certain applications, wider boats are more stable and handle more efficiently in turns, eliminating the risk of

E20 (cont.)

362

flipping the boat and injuring the operator and passengers. Width proportional to length properly distributes the weight of the vessel, reducing impacts to the resource by creating less ground pressure.

Similarly counterproductive is the proposal to limit airboat engine horsepower, reportedly for noise reduction. The sound an airboat makes is not determined solely by engine size. Higher horsepower engines have a smoother, quieter sound and under certain conditions can reduce the need for greater acceleration, thus further reducing sound. Higher horsepower engines can also reduce damage to vessels as they have the power to allow the operator to "crawl" over rocks, whereas a smaller engine on the same vessel may require heavy acceleration that could cause rocks to pierce or otherwise damage the hull. Under certain applications high horsepower engines are more fuel-efficient as well. Lastly, enforcement of this restriction would be difficult, as it is not always possible to determine horsepower by exterior examination only.

Modern airboats are the result of decades of engineering advancements and cost an average of $25,000. The proposal to arbitrarily restrict width and engine size will result in a giant and costly step backward in safety, fuel efficiency, performance, sound, and technological advancements.

- Airboat width should be limited to the maximum allowable for street transport, which is 8.5 feet.
- Mufflers should not be required for airboats as they dramatically affect performance and efficiency without achieving the desired results.
- The plan's objective to reduce sound can be achieved at very low cost and inconvenience to the owners by simply requiring engines to be retrofitted with flex-pipe exhaust extensions.

Swampbuggies: Swampbuggy use in the Big Cypress Swamp dates back to the 1920s. The same backyard technological genius evident in airboat design and construction applies to the evolution of swampbuggy engineering, as well.

Maximum Ground Pressure: The Draft Plan fails to explain how the NPS determined that 2 psi maximum ground pressure or lower is needed for ORVs to operate without difficulty in wet areas and to reduce soil compaction and rutting.

In preparing for this response, the Everglades Coordinating Council consulted extensively with experts in field of building and operating

JAN- 3-00 MON 4:33 PM BIG CYPRESS NAT FAX NO. 1 941 695 3921 P. 11

ORVs, tire manufactures, heavy equipment dealers, and engineers. Based upon their feedback, we must conclude 2 psi is extremely unrealistic and was most likely a figure arbitrarily selected for the purpose of addressing the lawsuit settlement agreement.

A survey of ORVs currently permitted for use in the preserve would probably yield an average of between 4 and 5 psi. If this figure were analyzed with a goal of attaining something reasonably achievable--perhaps 4 psi—it could be used in conjunction with commonsense best management practices to reduce impacts in a manner that should satisfy the Court.

Two-wheel drive and four-wheel drive: In addressing maximum allowable psi, the Draft Plan does not differentiate between four-wheel drive vehicles (four driving wheels) and two-wheel drive vehicles (two idler wheels and two driving wheels). The idler wheels on a two-wheel buggy, usually on the front, disrupt soil far less than driving wheels. (There is a complex explanation for this phenomenon that our engineer can provide upon request.) It is imperative for the Draft Plan to make this distinction because considerably higher psi can be allowed on idler wheels that merely roll across the landscape with negligible impact.

Bigger tires: The Draft Plan is extremely wrong in assuming one need only to convert to larger tires to achieve the magical 2 psi. Claims of this nature, found throughout the document, make it abundantly clear the authors of the Draft Plan have no practical knowledge of building and operating swampbuggies and airboats.

It is impossible to fully educate the reader about the technology involved in building a swampbuggy, but we can state unequivocally that swampbuggies are built around the tires. Drive trains are custom designed to operate with a given set of tires, and turning clearance between front tires and the frame must be factored into the design, as well vertical and horizontal clearance between all four tires and the body.

Converting to larger tires is more than theoretical calculations of weight and tire size. It would require reconfiguring the entire drive train, frame and body to accommodate them, at enormous cost of labor and cash. Furthermore, 100% of the anticipated reduction of psi would not be achieved because larger tires are also heavier; heavier tires require a heavier drive train, and often larger, heavier wheels. This creates a Catch-22 situation in which one would then have to go to still larger tires to accommodate the added weight, and so on.

Tire charts: All the above having been said about psi, we feel a strong need to caution the NPS that it is about to get in over its head with tire

E20 (cont.)

charts and mysterious calculations of the illusive optimal psi. As listed, the tire charts do not include all of the tire options currently on the market, and it will be a constant challenge for staff to keep it up-to-date with new products as well as obsolete tires still in use. Staff training will be a particularly difficult due to the complexities of the subject and high turnover of seasonal staff. There are far less complicated methods of reducing ORV impacts and we strongly advise the NPS to give them a try before considering this convoluted psi plan.

Vehicle Width: We agree that wheeled vehicle width should not exceed 8.5 feet. As with airboats, this is the maximum allowable for street transport.

Noise Control: We agree that all wheeled ORVs should have a muffler in good working condition, which would make the proposal to measure decibels unnecessary. Airboats should be exempt from this requirement for reasons stated previously.

Safety equipment: We agree that mechanical systems *necessary* for safe operation should be in good operating condition.

Brakes: We adamantly assert that brakes are not necessary for safe operation of swampbuggies. The challenge with swampbuggies is making them go, not making them stop. Due to their large tires, low gear ratio, and slow traveling speed, one need only lift one's foot off the accelerator (or press the clutch on one equipped with manual transmission) to make the vehicle stop immediately. Brakes were tried years ago, but phased out when it became evident that the wet, muddy conditions quickly ruin them, causing them to seize up and cause expensive damage to the running gear. Brakes also add unnecessary weight to the vehicle and they make field repairs of equipment more difficult.

Stumpknockers: This is an unfamiliar term in the region, but it implies the Draft Plan is proposing to prohibit the sturdy bumpers of swampbuggies that are vital for protecting the running gear, radiator, and frame of the vehicles during accidental impact. We adamantly oppose a proposal this hazardous.

Swampbuggies transport passengers miles into the backcountry over very challenging terrain. Fallen logs, stumps, pinnacle rock, or cypress knees obscured by tall grass, and even trees that establish themselves between the tire lanes in long-established buggy roads, all pose a threat to important components of the vehicle. The last thing one wants is to be placed in the position of having to make field repairs—or worse yet, having to hike out and start the difficult process of locating expensive replacement parts.

Tire chains: The proposed action would prohibit tire chains and "bar grips", another unfamiliar term. "Bar grips" must not be interpreted as the molded tread designs of rubber tires. Tire chains are rarely used these days, however, those having a cross-section diameter of link material not exceeding one-half inch have very low impact and should be permitted.

Access Points: The proposed action stipulates it will designate access points to help reduce impacts caused by informal parking along the roadways. While we support and anticipate the convenience of parking facilities at access points, we must question the Draft Plan's statement that the informal roadside parking currently in practice creates "impacts". Recreational visitors must continue to be able to enjoy the option of using informal roadside parking.

The designated ORV access points outlined in Table 1 do not contain enough parking spaces for 2,500 vehicles, which is the maximum allowable number of ORV permits. It is especially imperative that access points equal at least the number and locations stipulated in the General Management Plan.

The ORV plan should take into consideration cause and effect of management actions. For instance, the development of improved camping spaces at Monument Lake Camp Ground has displaced ORV parking space. Improved trailheads will encourage use of vehicles not adequately designed for the rigors of backcountry conditions, which will create additional impacts. Concentration of access and use will increase impacts, as well as diminish enjoyment of the preserve.

Corn Dance Unit access: We strongly oppose the shortsighted proposal to prohibit access into the Corn Dance Unit from contiguous state lands to the east. This proposal would result in *increased* impacts to soil and vegetation by requiring preserve visitors to travel several hours overland to reach this destination instead of making a quick trip via airboat through the adjacent Everglades Wildlife Management Area.

Designated entry points into the Corn Dance Unit from the Jetport property are unwarranted, as there are only a couple practical routes anyway. If they are established, however, they should be sufficient in number and appropriately located so as to avoid increased impacts caused by unnecessary detours.

Florida National Scenic Trail: The proposed one-quarter mile buffer on either side of the trail must be established in consultation with the Florida Fish and Wildlife Conservation Commission, and representatives

E20 (cont.)

of the ORV and hiking community in order to select the optimal route and ORV-crossing sites. The width of the buffer must be flexible so as to avoid ORVs or hikers from having to make extraordinarily long detours.

Criteria for Closure: The Draft Plan states that criteria will be developed for determining if and when a unit should be closed or use of a unit should be restricted due to temporary conditions. Any closures or restrictions to hunting, fishing, frogging, or other traditional uses, such as off-road vehicles, must be developed consistent with the legislative mandate that the NPS *fully consult and cooperate* with Florida Fish and Wildlife Conservation Commission.

During the 1999-2000 hunting season, ongoing as of this writing, a major controversy has occurred regarding unnecessarily long closures of these activities following temporarily elevated water levels caused by Hurricane Irene. Despite repeated assertions by the FWC that conditions had improved to the point that they were within normal ranges compatible with recreational uses, the NPS continued to keep many of the closures in effect.

This resulted in portions of the Stairsteps and Turner River Units being reopened to airboat use only *after* water levels had dropped too low for them to be operated. Consequently, sportsmen who had purchased hunting licenses, obtained quota permits, and scheduled their vacations around the hunting season were arbitrarily denied enjoyment and use of public lands.

Documented discussions between sportsmen and NPS staff indicate the institutional bias is directed not only at Florida's hunting and ORV community, but at our state's wildlife agency as well. This problem must be resolved so that decisions related to closures will address genuine resource protection issues.

Education and Communication: We strongly support an ORV user manual that would communicate regulations governing ORV use, techniques of low impact operation, ethics, sensitive resources and known adverse impacts. An informative video could be developed for viewing by first-time ORV registrants, and/or educational workshops could be scheduled for times and locations convenient to the intended target.

But ORV users aren't the only people that need to receive education about their use. Tourists and preserve staff must receive extensive orientation about their history, legislative protection, and benefits. This message should not be conveyed as "the law says we've got to allow it", rather it should celebrate the uniqueness of the experience, the

resourcefulness and inventive genius that goes into their construction, and the strong cultural tie the ORV community has with the preserve. The foundation for this education can be found in "BICY Off-Road Vehicle Recreation and Its Benefits"

ORV Trail Mapping: As previously stated in this response, the Draft Plan relies heavily upon the University of Georgia ORV Maps despite disclaimers by the map's producer that the map's findings must be confirmed by field inspection.

Our Council arranged for the maps to be reviewed by sportsmen and women who have intimate, first-hand knowledge various units of the preserve. We provided them with orthoquad maps for comparison to help get their bearings among the tangle of lines the ORV maps attributed to swampbuggy and airboat use. Without exception, within a few minutes each of these individuals "broke the code" and found glaring errors in the map's representations:

- What the maps attribute to being 65 km of primary ORV trails, our sources identified as being roads left behind by a string of developers, farmers, loggers, cattlemen, oil crews, and numerous other commercial activities. Also included in this mix is the restored Pace's Dike, bulldozer cuts, and landing strips.

- Much of the 367 km of purported to be secondary ORV trails, appear to be primary and secondary ORV trails in locations and patterns similar to ORV maps developed for the General Management Plan.

It was the tertiary maps, reportedly depicting 32,626 km of ORV impacts, that was the most difficult to interpret because of the sheer *impossibility* of what it was representing. It showed trails penetrating heads, hammocks and sloughs where no vehicle or boat could go. It showed circular trails with no access trails leading up to them. It showed vehicles crossing every natural feature in the preserve, thousands of miles of impossible trails. Only by comparing the "tertiary trails" with natural features on the orthoquad maps was the mystery solved.

The technology is apparently so sensitive that it picked up linear qualities in every natural feature in the preserve. Circular "trails" are actually ponds and lakes; other geometric shapes depict hammocks, sloughs, transitional zones between habitats, and so forth. Mixed in with tens of thousands of "miles" of natural features, game trails, and gator slides, it is logical to conclude there are some ORV trails, virtually indistinguishable from all the rest.

E20 (cont.)

The trail maps also showed 14,899 km of "high impact" trails reportedly so dense as to be indistinguishable from one another. These were shown as solid orange sections on the map. Our map reviewers quickly recognized these to be areas having water or vegetation so dense that the technology couldn't penetrate them.

Why, if our people were able to see the faults in the maps, was the NPS staff that helped develop the maps unable to see the flaws, as well? Why didn't they question the Loop Unit still having a high level of "trails" more than two decades after the last buggy entered the unit? Or question why the Deep Lake Unit showed impacts a decade after vehicles were banned?

This example is perhaps the most dramatic demonstration of the Draft Plan's reliance upon unproven worst case scenarios to guide selection of every management option.

ENVIRONMENTAL CONSEQUENCES

It is appropriate for the Draft Plan to describe the anticipated impacts of the proposed action and no-action (current action) alternative on the preserve's natural resources. It is totally inappropriate, however, for traditional recreational opportunities, assured in the enabling legislation, to be diminished as mitigation for the cumulative affects of off-site activities on the ecological communities of the entire South Florida ecosystem.

The Draft Plan contains so many contradictions and confusing double-talk related to the anticipated consequences of the proposed and current action, that it is difficult to formulate a response. It's interesting to note that impacts of ORVs on wildlife, soils, and hydrology were described in inconclusive terms such as "may", "could", "can". In absolutely no case was the current action considered adequate to address any of these remote possibilities, but in every situation the proposed action conclusively "will".

Of special concern to our members are allegations that current levels of ORV use adversely affect the game populations, a situation the proposed action reportedly will reverse. A glaring omission in the document is mention of the comparison study on the health white-tailed deer populations in Everglades National Park, which is managed as a no-use wilderness area, and the deer populations in the preserve, where hunting and ORV-use takes place.

Numerous other documents supportive of the current action have apparently been suppressed as well, in order to facilitate implementation of the proposed action, including books by Dave Maher, one of the few panther experts in the country.

We strongly urge that a new Draft Plan be developed in which environmental consequences will be addressed in a fair, factual, and forthright manner.

Regulations and Policies: A portion of this section contains an odd reference to non-federal private property rights and uses. Any such rights and uses not directly related to ORV management should be stricken from the document.

Impacts on ORV users: The proposed action will inflict an unfair financial and emotional burden on the people who love the preserve the most. It will affect their way of life and their very culture. It will diminish the relative freedom and the sense of self-reliance that the backcountry experience provides. It will affect the public's ability to explore and experience many areas of the preserve and it will have the greatest impact on the ability of low income, elderly, and disabled citizens to enjoy public lands to their full potential.

The NPS will be entering into this management action with full knowledge of the adverse impact it will have on the traditional recreational opportunities of the preserve.

Hunting, and Hunters: As the primary advocate for South Florida's hunting community, the Everglades Coordinating Council objects to the preposterous assertion that traditional hunting activities in the preserve will not be significantly impacted by the proposed action. Sportsmen made this abundantly clear at two standing room only public hearings.

The proposed action will limit access to traditional hunting areas and significantly diminish hunter success. Due to the challenging terrain of the preserve, these restrictions will limit the ability of elderly and youth hunters to participate in the sport. The proposed action will have a negative affect on those who enjoy the walk-hunt experience by concentrating use.

The NPS will be entering into this management action with full knowledge of the adverse impact it will have on a traditional recreational use specifically protected under the preserve's enabling legislation.

E20 (cont.)

Other Visitors: The Draft Plan asserts that the proposed action will improve the recreational experience for the non-motorized visitor by improving the visual experience and enhancing wildlife viewing opportunities.

We must first clarify that that ORVs actually enhance wildlife viewing opportunities. An airboater observes more snail kites in an outing than "non-motorized visitors" will probably see in a lifetime. But more important, we question the objective of arbitrarily reducing ORV-oriented recreation in areas designated for their use in order to accommodate visitors who prefer an experience free of motorized influence. These individuals have not only two units of the preserve that are closed to vehicles, but also thousands of acres of nearby public lands where vehicles are also prohibited.

We take strong objection to the claim that the no-action (current action) alternative would result in "continued conflicts" between ORV users and other preserve visitors. This constant slander of the ORV community is without basis. For the past five years or more, our Council has made annual requests for documentation of user conflicts within the preserve, specifically letters of complaint and/or ranger incident reports. On each occasion the preserve superintendent has informed us there was no documented conflicts.

SUSTAINABILITY AND LONG-TERM MANAGEMENT

Unavoidable Adverse Impacts: We regretfully agree with the Draft Plan's conclusion that the ORV users' outrage and resentment toward the NPS will be unavoidable if ORV management guidelines are based upon the current version of this draft.

This bitterness can easily be avoided, however, by purging the document of bias, contradictory and unsubstantiated statements which cast ORVs in the worst possible light, and baseless predictions of impacts and conflicts that haven't become evident in more than 70 years of continual ORV use in the region. In short, give the public an ORV Management Plan that is fair and factual and free of unnecessary burdens and the NPS will have the public's respect and cooperation.

STRATEGIES AND TACTICS FOR MANAGING ORV USE

The Everglades Coordinating Council supports the establishment of strategies and tactics to guide the superintendent in addressing resource protection and social problems that might arise over the course of time. We are dedicated to assisting the NPS in selecting and implementing effective guidelines that create the least adverse impact on visitors.

It is important to note that there is a cause and effect associated with any new management action. Most of the resource problems associated with ORVs today are the direct result of well-intended management actions. For instance:

- The reduction of access sites concentrated uses, which created increased impacts in many locations. Our Council had forewarned preserve management this would occur and were assured it was an acceptable consequence of establishing controlled access. As we expected, our user group is once again having further restrictions inflicted upon us to address damage caused by concentrated use.

- When squatter camps were still in use, swampbuggies were generally smaller because it was not necessary to carry so much gear on a typical visit. The preserved removed the camps and this created a need for larger, heavier equipment to transport passengers and the increased amount of camping gear needed for a typical visit. Now we are being faced with restrictions designed to reduce the impacts caused by the larger vehicles.

- Hunting with dogs was once a popular activity in the preserve, but management actions curtailed their use. This necessitated a change in hunting methodology that involved increased use of vehicles. Now we are being faced with restrictions designed to reduce the visual impacts of the new methodology.

We point these examples out to bring attention to the fact that these Catch-22 situations will eventually "manage" the enjoyment of our activity. Words are inadequate to express the emotional stress that the sportsmen and their families endure because of this.

The most effective tool in the entire plan is the strategy to educate visitors to adopt low-impact practices. Workshops can be set up, an educational film can be developed and shown at time of vehicle registration, literature can be published, and sportsmen's organizations can assist by reinforcing the message.

The term "damaging" is subjective and open to various interpretations. We support prohibition of practices that are damaging to the function and sustainability of the overall resource, but caution should be used to prevent this strategy from being broadly applied to general impacts of ORV use.

E20 (cont.)

We support and encourage the presence of enforcement. NPS personnel, especially seasonal personnel, must receive training to help them overcome the difficulty in adjusting to managing without prejudice an activity that is not typical in other units of the national park system.

Throughout the Draft Plan reference has been made for the need to reduce visitor conflicts. In actuality, visitor conflicts are very rare in the preserve, but individuals who philosophically oppose ORV use have fueled the misconception about their existence.

A through evaluation of documented conflicts should be made before implementing additional restrictions on visitor use. ORV use and enjoyment is a traditional activity and should not automatically be abrogated to accommodate new uses. The superintendent should fairly evaluate both the ORV and non-ORV activities to determine the best course of action.

As conflicts are rare in the preserve, extreme caution should be used in implementing management actions that will inadvertently create conflicts where none currently exist.

As noted above, guidelines designed to encourage dispersal or concentration in various areas must be weighed heavily before implementing. ORV use and practices in the Big Cypress Swamp have evolved over eight decades. There are many practical and social issues associated with a specific ORV or hunting practice in this unique habitat that our people literally started learning as children accompanying their parents.

It would be impossible for NPS personnel, no matter how conscientious, to know these things after being assigned to an area for only a brief period. This is one of the reasons the Addition enabling legislation gave the Florida Fish and Wildlife Conservation Commission added responsibility in this area. We strongly urge the NPS to work with the state agency and the conservation community to determine the best course of action to address site specific problems.

CONCLUSIONS

The Draft Plan must undergo *major* revisions. The next draft should include a wider range of alternatives and each should be compatible with the intent of the enabling legislation. Special efforts should be made to preserve the benefits of ORV use as outlined in "BICY Off-Road Vehicle Recreation and Its Benefits"

A through investigation should be made into the origin and cause of the institutional bias and misrepresentations that are reflected throughout the current version and corrective measures should be assure that future versions of the Draft Plan are not similarly tainted.

Management decisions should be made based upon the best information available and commonsense, and not of fear of litigation from environmental zealots. The NPS must assertively defend the spirit and mandates of it's enabling legislation.

The University of Georgia ORV Trail Maps must not be used for plan development until and unless they receive extensive ground-truthing to prove their accuracy. If they are found to be unreliable or inaccurate, it should be widely publicized to help dispel damage their premature release inflicted upon the ORV community.

The new draft should include a component for the NPS to work with ORV users and sportsmen's conservation organizations to address site specific, identifiable adverse impacts and conflicts. Workshops, brainstorming sessions, and an honest and respectful partnership between the public and the agency that manages its land will resolve most of the problems associated with ORV use in Big Cypress National Preserve.

We sincerely thank the National Park Service for the opportunity to submit comments for the development of an off-road vehicle management plan. The primary purpose of the Everglades Coordinating Council's existence is to promote and defend ethical use and wise management of our public lands. Our families have a strong cultural connection to the Everglades and Big Cypress Swamp and we are dedicated to preserving it in perpetuity.

In other words, we're here for the long haul.

E20 (cont.)

368

FLORIDA WILDLIFE FEDERATION

Affiliated With National Wildlife Federation

Manley K. Fuller, III, President
2545 Blairstone Pines Drive, Tallahassee, FL 32301
Post Office Box 6870, Tallahassee, FL 32314-6870

Phone: (850) 656-7113
Fax: (850) 942-4431
e-mail: wildfed@aol.com

December 7, 1999

DEC 13 1999

Mr. Wally Hibbard
Big Cypress National Preserve
HCK 61, Box 110
Ochopee, FL 34141

Dear Mr. ~~Hibbard~~ WALLY

The Florida Wildlife Federation appreciates this opportunity to provide comments on the draft Off Road Vehicle (ORV) Management Plan/Supplemental EIS for Big Cypress National Preserve. As you know, the Florida Wildlife Federation has a long history of conservation action in and around Big Cypress National Preserve. The Federation was actively involved and lobbied for the National Preserve's establishment and expansion. Individual members of the organization worked very hard to see that the Preserve was created. We worked closely with then Senator Lawton Chiles in the Preserve's establishment. The late Calvin Stone, Past President of the Florida Wildlife Federation and author of "Forty Years in the Everglades," was an active sportsman leader on behalf of the Big Cypress. He and his wife, Mary, maintained a hunting camp, "Calusa," in the middle of what is now the Preserve for many years. This camp, now in a state of disrepair, should be maintained for its historical significance. It was at Calusa where Stone and Audubon leader Joe Browder and many sportsmen met with Julie Nixon, the President's daughter, in the early 1970's and spearheaded the effort that led to the creation of the Preserve. Calusa was also the site of a significant meeting in the late 1980's between then Senator Chiles, his staff including the current EPA administrator Carol Browner, Park Service Regional Director Bob Baker, Preserve Superintendent Fred Fargeren, Executive Director of the Florida Game and Fresh Water Fish Commission Colonel Robert Brantly, Calvin Stone, Franklin Adams, Jack Moller, myself and approximately 150 other outdoor enthusiasts and camp owners. The purpose of the meeting was to resolve concerns about Preserve management issues and to develop strategies to work cooperatively to solve problems.

The point of discussing the area's history is to show how important the Big Cypress Preserve concept is to us. Our organization has been there since the Preserve concept was conceived and we are still there. Some of our members are intimately familiar with the Preserve, its history and its problems, and the Preserve is an extremely important part of their lives and their culture.

The sound management of off road vehicles is very important to public access to the Preserve, also as a means of access to individually owned Preserve back country camps. The Federation suppors innovative means of regulating ORV's within the Preserve. However, we are concerned that there has been misinformation regarding off road vehicles distributed to the media and over the Internet by organizations who have little on-site familiarity with the Preserve or its history. There is an ongoing campaign which exaggerates the impacts of use of off road vehicles to the environment and to wildlife. Essentially, the opponents have alleged the following:

1. Off road vehicle operation results in permanent destruction of the Big Cypress. This contention consistently fails to note that much of "permanent destruction" cited actually is what remains of historic modifications as part of former logging roads, historic use of heavy equipment to clear other roads, oil and gas exploration, cattle operations, etc. Scientific research primarily conducted by ecologist Michael Dueuer for the National Audubon Society and documented through his publications and affidavit (attachment 1) clearly state that the majority of ORV impacts are temporary.

2. Contentions by ORV opponents also exaggerate impacts of ORV operation upon wildlife. Panther researcher Dr. David Maehr provided the affidavit (attachment 2) regarding wildlife effects and ORV's and hunting. The Florida Fish and Wildlife Conservation Commission comments on the attached management plan also clearly support the concept that off road vehicle use and hunting as currently regulated within the Preserve have no known significant impacts to the area's wildlife. Allegations by opponents of recreational ORV's have been made that manatees are adversely impacted by ORV operations within the Preserve. Where is the data to document this problem? The vast majority of the Preserve's waters are too shallow for manatees to utilize. Any regulation relating to manatees should be based on an actual, not an imagined, problem.

Another issue of concern is that opponents of ORV use have exaggerated user conflicts totally out of proportion to their actual significance. For example, claims have been made that hiking trails and hunting are incompatible. We recently posed the following question to the national organization, Rails to Trails Conservancy: Aren't there numerous examples in the United States where hiking and biking trails cross or are adjacent to areas where legal hunting occurs? Their response: They were able to document, after a brief review, over 170 such areas where recreational trails go through areas which are hunted.

Our point is not that there are no problems, but that intelligent management of these activities will eliminate or greatly reduce problems, real or perceived. We believe that through the ORV management planning process, the Park Service in conjunction with the ORV users can enhance current management practices to better manage the activity.

Recent research has documented that a significant portion of the soil disturbance within the Preserve occurs near the entrance points. We believe that these disturbances can be reduced by restricting off road vehicles to a designated route which is stabilized for an appropriate distance from the entrance points. The stabilization should be approximately at natural grade, and should not allow street legal vehicles, but be restricted to permitted ORV's. These stabilized portions of the trail should be designed to minimize hydrological disruption. We believe that

initial trail stabilization will reduce aesthetic impacts of ORV use. We believe that most of the concern of ORV impacts actually is based on aesthetic, rather than ecologically significant concerns. To fund this activity, we believe that there are federal transportation funding sources which can be utilized for this purpose. We do not believe that the cost of trail stabilization should be borne exclusively by the ORV operator. We do support the concept of user fees, but believe that the current proposal to raise the fee structure from $35 to $120 - $200 is excessive. Other trail users, hikers and bikers benefit from federal transportation dollars being allocated for trail improvements and management from various federal and federal/state transportation grants across the country. Why not seek and apply those funds within the Preserve?

We believe it critical to maintain diverse recreational activities within the Preserve. We also believe that with certain improvements the current management practices will continue to protect the Preserve's natural resources and its wildlife. To maintain a "culture of conservation", it is very important for people to have intimate contacts with the natural environment and the Big Cypress is a perfect place for such an experience. Access points should be clearly marked and maintained. We believe ORV user fees should be specifically earmarked for ORV management. We do not understand how the requirement that vehicles not exceed 2 pounds per square inch of ground pressure was selected or what the specific justification for this figure was.

We are also concerned that there appears to be a bias within the draft plan against ORV use which does not appear justified by objective scientific information. For example, impacts to panthers and their prey base are discussed, however the existing scientific data do not show statistically significant relationships. Analysis of these relationships is thoroughly discussed in letters from the Florida Fish and Wildlife Conservation Commission's review of the recently completed University of Tennessee studies (by Janis and Clark, 1999) of panthers and hunting and ORV use.

We believe that the draft plan should clarify that the "no action" alternative may be misinterpreted by the reader unfamiliar with the Preserve to mean that nothing is being done to regulate the activity. This clearly is not the case as the Preserve has developed many regulations designed to allow congressionally authorized ORV use while maintaining the environmental integrity of the area. The use of the term "current action" would clarify what the "no action" alternative actually means.

We believe that under the proposed action alternatives it is necessary to explain the criteria that would be used to determine whether or not a trail or an area should be closed for resource or visitor protection. This information is critical to properly evaluate the draft plan. We look forward to evaluating a revised draft of the Off Road Vehicle plan. We believe that it is possible to balance a variety of public recreational activities, including traditional ones, with resource conservation and protection.

In the draft plan, there is a proposal to establish a cooperative educational effort between ORV operators and Big Cypress management staff. We support this idea and several of our members have indicated their desire to assist in establishing an educational program.

The Florida Wildlife Federation concurs with the specific comments of the Florida Fish and Wildlife Conservation Commission dated October 13, 1999, (attachment 3), specifically those noted regarding page 55 relating to hydrological effects and pages 56 and 57 relating to comments concerning water quality. These and other portions of the Commissions' analysis point out several inconsistencies which should be clarified in the final plan. The Florida Wildlife Federation also is in agreement with the page specific recommendations made by Federation Vice-chair Franklin Adams, (attachment 4).

We have attached additional page-specific comments on the draft plan for your consideration.

Yours truly,

Manley Fuller

Manley Fuller
Florida Wildlife Federation

Attachments

E21 (cont.)

FLORIDA WILDLIFE FEDERATION
Affiliated with National Wildlife Federation

2545 Blairstone Pines Drive
Tallahassee, FL 32301

Post Office Box 6870
Tallahassee, FL 32314

Telephone: (850) 656-7113
Facsimile: (850) 942-4431
e-mail: wildfed@aol.com

FACSIMILE TRANSMITTAL COVER SHEET

DATE: 12/13/99 Number of Pages, Including Cover Sheet: 5

TO: WALLY HIBBARD

FAX NUMBER: 941-695-0416

FROM: MANLEY FULLER (BY PAT PEARSON)

MESSAGE: —PLEASE REPLACE PREVIOUS COMMENTS WITH THESE COMMENTS. ATTACHMENTS (4) ARE THE SAME. HARD COPY WILL FOLLOW.

FLORIDA WILDLIFE FEDERATION
Affiliated With National Wildlife Federation

Manley K. Fuller, III, President
2545 Blairstone Pines Drive, Tallahassee, FL 32301
Post Office Box 6870, Tallahassee, FL 32314-6870

Phone: (850) 656-7113
Fax: (850) 942-4431
e-mail: wildfed@aol.com

December 7, 1999

Mr. Wally Hibbard
Big Cypress National Preserve
HCK 61, Box 110
Ochopee, FL 34141

Dear Mr. Hibbard:

The Florida and National Wildlife Federations (Federations) appreciate this opportunity to provide comments on the draft Off Road Vehicle (ORV) Management Plan/Supplemental EIS for Big Cypress National Preserve. As you know, the Florida Wildlife Federation (FWF) and the National Wildlife Federation (NWF) have a long history of conservation action in and around Big Cypress National Preserve. The Federations worked closely with then Senator Lawton Chiles and actively lobbied for the Preserve's establishment and expansion. Also, several individual members of both organizations worked very hard to help create the Preserve.

One such FWF member was the late Calvin Stone, Past President of the Florida Wildlife Federation and author of "Forty Years in the Everglades." He was an active sportsman leader on behalf of the Big Cypress. For many years, he and his wife, Mary, maintained the hunting camp, "Calusa," in the middle of what is now the Preserve. This camp, now in a state of disrepair, should be maintained for its historical significance. It was at Calusa where Stone, Audubon leader Joe Browder, and many sportsmen met with Julie Nixon, the President's daughter, in the early 1970's and spearheaded the effort that led to the creation of the Preserve.

Calusa was also the site of a significant meeting in the late 1980's between then Senator Chiles, his staff including the current EPA administrator Carol Browner, Park Service Regional Director Bob Baker, Preserve Superintendent Fred Fargeren, Executive Director of the Florida Game and Fresh Water Fish Commission Colonel Robert Brantly, Calvin Stone, Franklin Adams, Jack Moller, Manley Fuller, and approximately 150 other outdoor enthusiasts and camp owners. The purpose of the meeting was to resolve concerns about Preserve management issues and to develop strategies to work cooperatively to solve problems.

The point of discussing the area's history is to show how important the Big Cypress Preserve concept is to us. FWF and NWF have been there since the Preserve concept was conceived and we are still there. Some of the Federations members are intimately familiar with the Preserve, its history and its problems. The Preserve is an extremely important part of their lives and their culture.

E21 (cont.)

The Federations support innovative means of regulating ORV's within the Preserve. Ongoing, appropriate management of off road vehicles in BCNP is important to continued legally-authorized public access of the Preserve and to insure access for landowners to their privately-owned back country camps.

We are concerned about misinformation regarding off-road vehicles being distributed to the media and over the Internet by organizations who have little on-site familiarity with the Preserve or its history. This on-going campaign exaggerates the impacts of off-road vehicles (and hunting which is inseparable related to ORV use in BCNP) to the environment and wildlife. Opponents to ORV use allege the following:

1. *Off road vehicle operation results in permanent destruction of Big Cypress habitat.* This statement consistently fails to note that much of the "permanent destruction" is not related to ORVs but is historic in origin - the result of construction of logging roads, use of heavy equipment to clear other roads, oil and gas exploration operations, and impacts associated with cattle operations. Scientific research primarily conducted by ecologist Michael Duever for the National Audubon Society and documented through his publications and affidavit (Attachment 1) clearly state that the majority of ORV impacts are temporary.

2. *ORV use has extreme adverse impacts on wildlife.* Panther researcher Dr. David Maehr provided the affidavit (Attachment 2) regarding ORVs and hunting on wildlife. Maehr stated in his September 26, 1995 affidavit that "There is absolutely no published evidence that off-road vehicles (ORV's) disturb Florida Panthers in the Big Cypress National Preserve or elsewhere. To target panthers as a natural resource that has suffered from the use of this equipment contradicts available information." The Florida Fish and Wildlife Conservation Commission comments on the ORV management plan also clearly support the concept that off road vehicle use and hunting as currently regulated within the Preserve have no known significant impacts to the area's wildlife. Some opponents of recreational ORV's allege that manatees are adversely impacted by ORV operations within BCNP. Because they have not produced any data to back up this claim, it is nothing more than an unsubstantiated claim. In fact, the vast majority of the Preserve's waters are too shallow for manatees to utilize. Any ORV regulation relating to manatees should be based on actual, not imagined, management problems.

3. *Hiking trails and hunting associated with ORV use are incompatible.* We recently posed the following question to the national organization, Rails to Trails Conservancy: "Aren't there numerous examples in the United States where hiking and biking trails cross or are adjacent to areas where legal hunting occurs?" After a brief review of the literature, Rails to Trail documented over 170 areas where recreational trails go through areas which are hunted with little if any user conflict.

The Federations recognize the need for intelligent management of ORV use and believe that by doing so we can eliminate or greatly reduce ORV problems, real or perceived. Through the ORV management planning process the Park Service, in conjunction with ORV users, can enhance current management practices to better manage the activity.

An often cited example of the adverse impacts of ORVs and one for which an acceptable management solution exits, is the visible soil disturbance seen near designated ORV entrance points to the Preserve. This "impact," more of an aesthetic rather than an ecological issue, can be significantly reduced by restricting off road vehicles to designated entrance roads that are stabilized for an appropriate distance from the entrance points. Built at or close to natural grade, these "ORV-only entrance ramps" can be designed to minimize hydrological disruption and significantly reduce the visible impacts of ORV use. Funding for these improvements can come from existing federal transportation funding sources. In other parts of the country, trail users, hikers and bikers benefit from federal transportation dollars allocated for trail improvements and management from various federal and federal/state transportation grants. Why not seek and apply those funds within the Preserve? Applications should be made seeking enhancement funding for entrance points from the Federal Highway Aid Program - National Scenic Byway Program or from the State Surface Transportation Program, transportation enhancements for landscaping or environmental mitigation for trails construction and maintainence. FWF and NWF support the concept of user fees, but believe that the current proposal to raise the fee structure from $35 to $120 - $200 is excessive. The full cost of trail stabilization need not be borne solely by ORV users in the Preserve.

In addition to the "big picture" issues mentioned above, FWF and NWF have the following specific comments:

1. Access points, ORV and foot-only, should be clearly marked and maintained.
2. ORV user fees should be specifically earmarked for ORV management.
3. We do not understand the rationale and the justification supporting the decision that requires ORVs not to exceed 2 pounds per square inch of ground pressure.
4. The draft plan should clarify that the "no action" alternative may be misinterpreted to mean that nothing is being done to regulate ORV use. This clearly is not the case as the Preserve has developed many regulations designed to allow congressionally authorized ORV use while maintaining the environmental integrity of the area. The use of the term "current action" would clarify what the "no action" alternative actually means.
5. Under the proposed action alternatives it is necessary to explain the criteria used to determine whether or not a trail or an area should be closed for resource or visitor protection. This information is critical to properly evaluate the draft plan.
6. In the draft plan, there is a proposal to establish a cooperative educational effort between ORV operators and Big Cypress management staff. We support this idea and several of our members have indicated their desire to assist in establishing an educational program.
7. FWF and NWF concur with the specific comments of the Florida Fish and Wildlife Conservation Commission letter of October 13, 1999, (Attachment 3), specifically those noted regarding page 55 relating to hydrological effects and pages 56 and 57 relating to comments concerning water quality. These and other portions of the Commissions' analysis point out several inconsistencies which should be clarified in the final plan.
8. FWF and NWF also agree with the page specific recommendations made by Federation Vice-chair Franklin Adams, (Attachment 4)
9. Attached are page-specific comments on the draft plan for your consideration.

E21 (cont.)

372

Maintaining a "culture of conservation" in which persons can have intimate contact with the resource is very important to members of the Federations. The Big Cypress is a perfect place for such an experience. With revisions to the draft management plan the Dept. Of Interior can balance a variety of public recreational activities, including ORV and other traditional uses, with resource conservation and protection. The Federations look forward to evaluating a revised draft of the Off Road Vehicle plan.

Yours truly,

Manley Fuller
President
Florida Wildlife Federation

Kris Thoemke, Ph.D.
Everglades Project Manager
National Wildlife Federation

Attachments (4)

Florida Fish and Wildlife Conservation Commission

James L. "Jamie" Adams, Jr. Bushnell; Barbara C. Barsh Jacksonville; Quinton L. Hedgepeth, DDS Miami; H.A. "Herky" Huffman Deltona; Thomas B. Kibler Lakeland
David K. Meehan St. Petersburg; Julie K. Morris Sarasota; Tony Moss Miami; Edwin P. Roberts, DC Pensacola; John D. Rood Jacksonville

ALLAN L. EGBERT, Ph.D., Executive Director
VICTOR J. HELLER, Assistant Executive Director

OFFICE OF THE EXECUTIVE DIRECTOR
620 South Meridian Street
Tallahassee, FL 32399-1600
www.state.fl.us/fw
(850) 487-3796
TDD (850) 488-9542

October 26, 1999

Mr. Wallace A. Hibbard
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141-9710

Dear Mr. Hibbard:

Thank you for the opportunity to comment on the Draft Off-Road Vehicle (ORV) Management Plan / Supplemental Environmental Impact Statement (draft plan) for the Big Cypress National Preserve (Preserve). General comments based on the review of the draft plan are provided in this letter. More specific comments are provided in Attachment 1. All publications cited in these comments were originally referenced in the draft plan. We appreciate the opportunity to work with the Preserve to develop an ORV plan that protects the resources of the Preserve while providing public recreational opportunities in accordance with the enacting legislation for the area.

The draft plan evaluates two ORV management alternatives, the "proposed action" and "no-action" alternatives. Though NEPA regulations require a "no-action" alternative, this term suggests that no action is currently being undertaken to regulate ORV use on the Preserve which is clearly not the case. The Preserve has developed a complex set of area regulations designed to allow ORV use while still maintaining the environmental integrity of the area. A more appropriate and descriptive term for the second alternative would be "current action."

A critical component of the proposed action alternative is the criteria that would be used to determine when or if a trail or particular unit of the area should be closed for resource or visitor protection. This information was noticeably absent from the draft plan except for an example in the appendix which was included to demonstrate how criteria would be developed Preserve-wide. Without the actual criteria, a comprehensive and informed review of the draft plan is not feasible.

E21 (cont.)

A second critical component of the proposed action alternative is the new vehicle specification that would limit the ground pressure of ORV's to a maximum of two pounds per square inch (psi). Within the draft plan, there was no information or data to explain how the maximum ground pressure of two psi was derived, how it would be measured in the field, how this figure compares to the average ground pressure for current ORV's, and there was no analysis on how the proposed maximum ground pressure would reduce ORV impacts to soils and/or vegetation in comparison to existing ground pressures. Considering the financial cost this change could impose on ORV owners, the justification for proposing a maximum two psi ground pressure should be included in the draft plan to support the new vehicle specifications described in the proposed action alternative.

We recognize that implementation of an ORV plan could have significant impacts on public recreation on the Preserve. We believe that it is possible to balance traditional uses with natural resource protection, and in many ways the Preserve has already demonstrated this. We believe the comments provided in this letter will contribute to the development of a final comprehensive ORV plan that will maintain this balance between resource protection and traditional recreational use. We look forward to the opportunity to review a revised draft of the ORV plan, and thank you for the opportunity to review and comment on this version. Please contact me if you have questions or require additional information.

Sincerely,

Allan L. Egbert, Ph.D.
Executive Director

ALE/W201/nw
WLD 8-5-1
bwm/nick/hibbar05.let

Attachments

cc: Mr. Frank Montalbano
Mr. Mark Robson

ATTACHMENT ■

Specific Comments
October 13, 1999

The major topics discussed in the draft plan included the comparison of proposed action and no action impacts on natural resource issues including water resources, soils, vegetation, protected species, and white-tailed deer and feral hog populations. Visitor use issues included ORV operators, hunting and hunters, other visitors, and non-federal property owners. These specific comments are provided in the order the issues appeared in the draft plan.

Water resource issues discussed in the draft plan included factors that affected water flow and water quality. With respect to water flows, the draft plan states on page 55 that the extent, severity, and occurrence of ORV trails altering water flows in the Preserve is largely unknown. Additionally, the study conducted by Deuver et al. (1986) and referenced on page 56 indicated that although under certain circumstances ORV trails could act as drainage channels and potentially alter natural hydrologic patterns, in most parts of the Preserve the ground is sufficiently irregular to interrupt any channelizing effects and any potential hydroperiod impacts would be localized. The conclusionary statement for this section of the draft plan states "The no-action alternative would result in continued localized impacts to surface water flow." This statement confuses the issue of localized impacts on hydroperiod with the broader issue of surface water flow in the Preserve. It has not been substantiated that ORV trails alter surface water flow in the Preserve. The conclusion should be clarified to make the distinction between localized impacts and surface flow impacts and to more accurately reflect the actual information on ORV trails and surface flows. In addition, infrastructure such as U.S. 41, 11 Mile Road, Jetport, Loop Road, Turner River Road, oil pads and pipelines, water control structures, etc. which serve as impediments to natural water flow should be discussed in this section to place the potential impacts of ORV trails in proper perspective.

Sections of the draft plan related to water quality appear to contain contradictory information. On page 56, water quality in the Preserve is described as good although temporary water quality problems have occurred due to petroleum related spills (from oil exploration?) and illegal discharge of raw sewage from recreational vehicles such as camper trailers. On page 56, Duever et al (1986b) determined that the effects of ORV use on water quality were negligible and localized. In the discussion of the proposed action on page 57, however, these facts are ignored, and the draft plan includes statements such as "... impacts of ORV use to water quality, however localized, may be substantial" and "The implementation of the proposed action would improve water quality in certain marshes...". These statements differ considerably from the studies that were cited in the draft plan and should be revised to more accurately reflect the negligible impacts of ORV use on water quality and the current status of water quality within the Preserve. Similarly, the section on cumulative impacts goes into great detail on water quality issues on properties surrounding Big Cypress, even though these issues have no relevance to ORV use. This section should be revised and focused more closely on ORV use in the Preserve. If concerns exist over water quality issues outside the Preserve, monitoring activities should be conducted as recommended in the Water Resources

E21 (cont.)

Management Plan (NPS 1996) referenced on page 24, but should not be included or funded as part of the proposed action under the draft plan. The cumulative impacts section should be amended to state neither the proposed or no-action alternative would have cumulative effects.

The discussion on impacts to soil beginning on page 58 states the NPS is responsible for managing ORV's and prohibiting vehicle operation that could adversely affect the Preserve's resources. The pertinent question that needs to be addressed in this section is whether this type of use constitutes an adverse affect on the Preserve's resources or merely creates a temporary visual impact. In commercial operations, other soil impacts have been considered acceptable by NPS as demonstrated in the cumulative impact section: "Oil and gas exploration and operations, and grazing in the Preserve have and will continue to impact soils in the Preserve, but are limited in area...". The relative impacts of ORV use compared to other on-going activities should be discussed in this section.

In the studies conducted on Big Cypress and cited in this section, rutting was the most severe impact identified with respect to ORV use. The referenced studies demonstrated that in all study environments some recovery in rut depths occurred within months after impacts and in all but one habitat type "medium impact" ORV trails were completely filled in and no longer visible in ≤ 5 years. This information suggests the least amount of impact occurs under a scenario where ORV users are not restricted to designated trails. The conclusion statement for this section should also be revised to state under the no-action alternative some areas would be reclaimed to more natural conditions over time through the current use of temporary trail closures.

Impacts to vegetation collectively discusses ORV impacts in a variety of plant communities. While operating ORV's ultimately impacts vegetation to some degree, it is important to evaluate these vegetative impacts with respect to ecological function. For example, on old-growth pinelands (reported as 54 acres in size on page 62 and 23,500 acres on page 38) the reported 30 miles of existing trails encompasses approximately 1/10 of one percent of the total landscape for this plant community (assuming the correct acreage figure is 23,500 and the average trail width is 8 feet). The impact this has on the ecological function of the area and the ability of the area to support wildlife is negligible. This type of information is missing for all
plant communities in the draft plan and would be useful to better assess the possible impacts ORV use may have on ecological function.

The cumulative impacts section for most plant communities references the loss of habitat in south Florida due to development and agriculture and a resulting increase in the importance of protecting plant communities within the boundaries of Big Cypress Preserve.

While the loss of natural areas is concerning to all resource agencies, it should be recognized that more than 2.3 million acres of land surrounding the Preserve have been purchased by state and federal agencies to protect these types of plant communities in south Florida. The cumulative impacts sections seem to suggest that these plant communities are unique to Big Cypress which is misleading. In addition, the analysis of no-action impacts for all plant communities should include "severely impacted areas would be closed and reclaimed to more natural conditions over time." This statement is included for some plant communities but missing in others.

It was also noticed that for some plant communities the conclusion section references restricting ORV numbers as part of the proposed action alternative. The explanation of the proposed action alternative in the beginning of the draft plan does not include any restrictions on the number of ORV's allowed to operate on the area other than the current cap of 2500 permits which is already in place and described under the no-action alternative. The statement regarding restricting ORV numbers needs clarification.

The sections describing wildlife impacts (both protected species and white-tailed deer and feral hogs) contains a number of contradictions and needs careful review. For example, on page 66 in reference to Florida panthers it is stated as part of the proposed action impacts "The proposed reclamation program would likely increase diversity and abundance of prey in some areas " but under the white-tailed deer and feral hog section, which are important prey species for panther, it is stated "It is unlikely that the impacts on the deer and feral hog population would be significant under the proposed action." A second example exists under the discussion of red-cockaded woodpeckers . On page 66, it is stated that no studies or reports exist that demonstrate red-cockaded woodpeckers are sensitive or threatened by ORV use or similar activities. The following sentence, however, states that red-cockaded woodpeckers may benefit by the proposed action due to a reduction in disturbance. These types of contradictions and unsupported conclusions are found throughout the sections dealing with wildlife and necessitate revisions based on an objective overview of the best available scientific information.

A central theme that runs through the protected species section is that neither the proposed or no-action alternative would adversely affect listed wildlife species, but the no-action alternative is less desirable because "there would be fewer ORV restrictions and less effort to improve habitat." This statement needs to be explained in more detail. As previously discussed, there is no information in the draft plan that explains what, if any, relationship exists between ORV use, ecological function, and the ability of an area to support wildlife. The only place this topic is discussed is on page 73 where a lack of any measurable relationship is described for white-tailed deer and feral hogs. For the majority of these species, the most significant impacts on population and habitat have been altered hydrology as a result of

E21 (cont.)

development and the operation of water control structures. To suggest that adopting additional ORV rules would improve habitat and result in healthier wildlife populations is unrealistic in light of much larger impacts such as altered hydrology. A second suggested benefit of the proposed alternative mentioned in relation to several wildlife species is that the proposed alternative would improve water quality and flows. As discussed earlier, it is doubtful the proposed alternative would have a significant effect on water quality or flows throughout the Preserve. A more objective view is that if significant hydrological problems exist, they are related to regional water flows and existing infrastructure and not ORV use.

The University of Georgia ORV Map included in this draft plan and described in the affected environment section is referenced several times with respect to ORV impacts on vegetation without the authors qualifying statement that the map needs to be ground-truthed as linear features other than ORV trails may be included in the map. The accuracy concerns expressed by the map's authors appear valid as the Loop unit has been closed to ORV use for 21 years and yet the map shows a maze of "ORV trails" throughout this area. Studies conducted on Big Cypress and cited in the draft plan state that most moderate impact trails become indistinguishable in less than five years. Therefore, given that the Loop unit has been closed to ORV use for 21 years it appears many of the linear features represented on the map must be something other than ORV trails. A similar situation exists in Deep Lake unit which has been closed to ORV use for ten years. References made to this map in the vegetation section should include this type of information as well as the authors' cautionary note on interpretation. Preferably, the map should be ground truthed for accuracy before it is included in the draft plan.

The section on Florida panthers warrants special consideration due to the limited range of this endangered species in Florida. The discussion on panthers states the Janis and Clark study (1999) demonstrated a correlation between panther movement and home range shifts and higher levels of human activity associated with hunting. This is incorrect. The study demonstrated current levels of public use on Bear Island *did not* affect movement rates and home range shifts. The two variables that tested significant were distance to trails, which was considered biologically insignificant by the authors, and use of Bear island during fall and early winter. The overall results of the study indicated human activity during the hunting season did not produce negative energetic responses which were considered the most direct indicators of the well-being of the Florida panther. In fact, mean values for panther predation success were higher on hunted areas than on non-hunted areas.

White-tailed deer and feral hogs are important prey species for panthers as well as game species for recreational hunting. In the discussion of these species on page 73, it is stated "... the reduction in noise and other disturbances associated with ORV use would likely result in an

increase in the populations of the white-tailed deer and feral hogs." This statement is in need of further explanation and supporting documentation. The analysis of the proposed action also discussed deer movement in response to hunting and cited a dated study conducted by Downing et al. (1969) that suggested it is not uncommon for deer to temporarily abandon their home ranges to avoid hunters. More recent studies utilizing advanced telemetry equipment have been conducted by Sargent (1992) and Land (1991) on deer behavior relative to hunting in the Big Cypress Preserve. These studies indicated deer did not leave the Bear Island unit or the southern portion of Big Cypress in response to hunting or ORV use during the hunting season. These more current and site-specific studies should be cited and elaborated on in the discussion of deer movements in response to hunting, especially as they relate to the availability of panther prey. Both studies are referenced in the Janis and Clark panther report.

Visitor use issues discussed in the draft plan included impacts on ORV users, hunting and hunters, other visitors, and non-federal property owners. As with natural resource issues, impacts were analyzed for both the proposed and no-action alternatives.

The discussion on the impacts of the proposed action alternative fails to recognize social issues or issues related to the enjoyment of the area by ORV operators. Page 31 of the draft plan identifies approximately 70 undesignated access points currently used by the public to access the Preserve. The proposed action alternative would reduce the total number of access points to 15. This will undoubtedly cause at least localized crowding problems which should be identified as an impact to ORV users under the proposed action alternative. Another impact that should be included in the proposed alternative is that adopting the new ORV rules would reduce an individual's ability to explore new places and possibly reach favorite destinations. These factors were considered important components relative to the enjoyment of the Preserve by ORV owners according to the survey conducted by Farrel et al. (1998) and should also be listed as impacts under the proposed alternative. In the discussion of permit fees, the permit fee increase from $100 to $200 per year listed on page 74 does not correspond to the expected permit fee listed on page 16 in the beginning of the draft plan.

In reviewing the Off Road Vehicle Management Practices in Appendix B as it relates to ORV operators, it was disturbing to read that strategies being considered to reduce ORV use in general (Strategy 12, beginning on page 110) included "increasing ORV use fees to reduce visitation" and "increasing the difficulty of access, either by reducing the number of accesses or restricting parking lot sizes." Neither one of these appear to be appropriate management strategies for an area purchased and funded by public tax dollars. Both strategies would certainly cause difficulties in the future as they give an unfair advantage to individuals with a higher economic status and would promote confrontational situations at designated access points.

E21 (cont.)

Specific Comments
Page Seven

The discussion on hunting and hunters suggests the proposed action would likely result in a reduction in harvest for hunters utilizing ORV equipment and an increase in harvest for walk-hunters. While this suggestion seems logical for motorized hunters as they would no longer be able to access all portions of the Preserve, it is unlikely walk hunters would realize an increase in harvest "due to the reduction in disturbance from the ORV's and the reduced startle effect on the wildlife." The panther report produced by Janis and Clark indicates these types of reactions to vehicles are minimal and provides a measurement of 50 meters as the distance deer in northern Florida moved away from roads during the hunting season. The cumulative impact statement for this section which references future loss of habitat should be changed to "no cumulative impact" as the Preserve is surrounded almost entirely by state and federally owned property where the loss of habitat through development is not a threat.

The impact of ORV use on non-ORV users was one of the visitor use issues identified in the draft plan. The draft plan states that "noise and visual intrusions resulting from ORV use may adversely affect other Preserve visitors (non-ORV users)" but does not provide quantitative data to support this statement. Conversely, page 54 of the draft plan states "Many pass-through visitors do not see and are likely not affected by the Preserve's ORV use" and "...few non-motorized visitors venture off roads or other prepared surfaces or engage in back country recreation." Based on this information, it appears user groups already segregate themselves and the potential for conflict between user groups may be more of a perceived problem than an actual problem. This issue should be revisited and quantified as the supposition of user conflicts exists throughout major sections of the draft plan and forms one of the foundations for needing to place further restrictions on ORV use within the Preserve. In addition, when discussing visitor use issues, the draft plan should emphasize that Loop Unit and Deep Lake Unit have already been designated as non-motorized zones currently available for visitors who wish to utilize the area without encountering ORV use. This geographic separation of user groups has been implemented successfully on other wildlife management areas to address the same concerns.

Comments related to impacts to non-federal property owners are the same as the comments prepared for impacts to ORV operators.

n:\bwm\nick\orvplan.ltr

page 2. ORV COMMENTS: Franklin Adams

Summary- P.111. 4th paragraph, change "park" to preserve.

P. 1V- I fully support and volunteer to sssist in education and development of an ORV manual.

P. V- Increased enforcement administered with common-sense and fairness would not inconvience responsible ORV users. In fact it would be welcomed.

P. 10- Question that West Indian Manatee would be adversely affect by ORV use in anyway. Documentation?

P. 10- "Other visitors." I agree that noise and visual intrusion resulting from ORV use may? adversely affect other preserve visitors in a campground, or near Tamiami Trail, but I do not think this is a significant problem, especially, in the back country.

P. 16- Proposed action: "The proposed action would reduce impacts on the preserve by: protecting specific sensitive areas by establishing areas where ORV use would not be allowed."

Comment: Request examples of such known areas. What criter would N.P.S. use ?

P. 16- " Vehicle Permit System and Operating Standards."

Comment: I feel that the present fee structure is adequate. ORV use in the preserve is a congressionally authorized use As such it is my opinion that "Special Park Use Guidelines, NPS-53" do not apply to orv permits. Orv owners did not request that their activities become subject to further regulation or additional expenditures of N.P.S. funds. (Also we are talking abount a preserve-not a park.) The Bic diversity lawsuit "settlement" has resulted in the N.P.S. making a sincere effort to develop new ways of dealing wit orv use and impacts. If orv users had requested trail improvements, camp grounds, or staging areas to be construc then NPS-53 might have validity and higher permit fees mi be justified. Raising the permit fee to 120.00 to 200.00 i excessive and would be a hardship on those on a low or fixe income. Suggest that other sources of funding be explored. Hunters and orv users have always paid their way but in thi case raising the permit fee is unjustified.

P.19- "Other orv equipment."
Comment: Very few buggies have a braking system. Its just not necessary as low geared as they are. In addition brake increase the weight of the buggy and cannot be maintained in the environment in which they are used.

E21 (cont.)

P. 20- "Access Points." Strongly support identification of ORV crossings on US 41 for safety reasons. Reduce speed, signage and road striping. A very positive recommendation.

P. 55-56- "Impacts on water resources, surface water flows." Quote, " although impacts to surface water flows are localized (Duever et al. 1986) the cumulative impacts may have permanent, long-term effects on fish and wildlife populations in the Preserve."

Comment: While there "may" be localized negative impacts from orv trails, ruts or airboat trails, one must look at certain positive benefits created by trails and ruts.

While not naturally occurring features these areas none the less do provide some benefits to certain species of fish a and wildlife. Ruts in buggy trails since they are of lowe elevation than the surrounding areas serve as concentratio points for many aquatic organisms when water levels recede in the winter or spring dry seasons. Fish , crayfish, fro and snakes prey on those food species that are concentrate in the buggy trails deeper ruts. This is in a way analago to the concentrations that seasonally occur in the centers cypress heads(domes) and shallow ephemeral ponds. These concentrations serve as a biological "soup" for wading bir small mammals and reptiles. The same concentrations can be observed in the airboat trails in the Stairstep area of th Preserv south of US-41.

Orv trails, particularly on pine islands are habitually us as travel corridors by the Florida Panther and its primary prey species, white-tailed deer and hogs. The openess of the trail allows them to travel with less expenditure of energy and to most likely detect predators and prey more easily. Certain panthers regularly use buggy trails as evidenced by their tracks on a regular basis. Deer can oft be approached very closely on a quiet swamp buggy, whereas a person on foot would be more likely to spook them at a greater distance. Preserve mammals are use to vehicular motorized sounds and normally do not seem to associate the with danger. Based on my personal experience,orv trails d provide some positive benefits not only to people but also the critters.

P. 57- "Cumulative impacts, water quality."

Comments: There are several external threats to the water quality of the Preserve. Pesticides, herbicides and fert-ilizers to name the most obvious ones. We strongly suppor a preserve wide network of water quality monitoring statio A full-time hydrologist position must continue to be a pre serve priority.

377

P. 62-63- "Old growth pinelands etc."

Comment: N.P.S. needs to refine their "prescribed fire methods. Prescribed burns needs to be done when ground moisture levels and winds are conducive to "controlled burning." There are pine islands north of the Trail where so-called controlled burns have actually killed fairly mature pine stands. Also I have witnessed in the past couple of years, willow heads that have been in place for a long-time that were literally burnt out of the ground. Burning needs to be done more frequently and more acreage needs to be burned. Otherwise fuel loads are excessive and hot crown fires can occur. Burning of course whe properly done is of great benefit to both flora and fauna.

P.66-67- "Florida Panther, Impacts on Protected Species."

Comments: Regarding panthers and prey. & ORV'S.

I have attached a copy of personal correspondence that I received from David Maehr in August 1995 regarding the Florida Panther. Mr. Maehr was the principal panther researcher for the Florida Game & Freshwater Fish Commission for over 8 years. I had requested that Mr. Maehr write down his thoughts on any possible adverse impacts that orv's or hunters might have on the panther. This later was used as a basis for his affadavit **in the Biodiversity lawsuit**, Mr. Maehr's opinion was orv's and hunters were not a significant concern in preserving the Florid Panther.

P. 72- "West Indian Manatee" "Analysis of proposed action impacts."
"In the preserve, manatees only occur in the estuarine porti of Zone 1 of the Stairstepw unit; which is designated as critical habitat. Under the proposed action Zone 1 would remain closed to recreational airboating.

Comments: Recreational airboating poses no threat to the manatee. In fact I have never seen a manatee on the Stairst airboat trail. It is to shallow for a manatee to move about For a number of years I reported manatee sightings to the Florida Department of Natural Resourses (now DEP.) in the Turner River area. I have never seen a manatee above McKinne Mound on the Turner River. Also no sightings in the New Rive Where specifically is there a problem with airboats and mana

The manatee should not be used as a reason to keep the Ochop Prairie or the Stairstep Airboat Trail closed to recreationa airboats. This area is essentially the only area available t those living on the western side of the Preserve for airboat access. Commercial airboats should no be permitted. Recreati airboating during periods of adequate water levels should be permitted. What justification is there for this continued closure?

E21 (cont.)

Page 5. ORV COMMENTS; Franklin Adams

P. 73- "Impacts on white-Tailed deer & hogs."

"Analysis of No-Action Impacts."
"Preserve staff are of the opinion that increased prescribed burns would improve the habitat for the feral hog and deer populations far more than restricting orv use to designated trails."

Comment: I fully support an increase in burning throughout the Preserve as originally outlined in the "fire management plan". Regular burning will not only benefit deer, hogs and panthers it will also serve to maintain native vegetative communities that are fire dependent. It would also help to increase the population of the Osceola wild turkey and the Bob-White Quail which were once abundant in the Turner River unit of Big Cypress.

P. 81- "Organizations."

Comment: #14 on list should read Florida Wildlife Federation. #22 should read National Wildlife Federation.

P. 92-#6. "Reduce or prohibit traffic in sensitive areas."

Comment: Have these sensitive areas been identified and mappe Has a preserve wide effort been completed to determine which areas are considered sensitive and which areas are not? What criteria will be used to determine degree of sensitivity

P. 93- "Reduce orv use in general."

12.2- "establish Quotas."

Comments: Quotas already exist for the number of orv's allow and numbers of hunters permitted in the Preserve during hunting season. It is important to remember that the permitt number of orv's are never in use in the Preserve at any one time. Opening (quota) of general gun season is the time of heaviest use and even then many orv's are not used in the Preserve for various reasons. Had to work, illness, major repairs required, family emergencies etc. I mention this because uninformed people comment that since there are over 2,000 orv's permitted it must be incredibly damaging with all of these vehicles running around at one time.

12.3- "MAKE ACCESS MORE DIFFICULT."

Comment: Its already difficult enough. Access points are already greatly reduced when compared to the many access points that existed when the Preserve was established 25 years ago.

Page 6. ORV COMMENTS: Franklin Adams

12.4- "Limit length of stay."

Comment: Why? This is not a problem. Very few people stay for any extended length of time, even in the exempt camps. For many hunting season is their once a year vacation. They plan their vacation to coincide with the opening of hunting season. Obviously, not every one that goes to the woods is a hunter. I personally know several individuals who rarely hunt. They just enjoy being in the woods.

12.5- "Require certain skills."

Comment: If you mean mandatory attendance at a class on responsible ORV operation and ethical outdoor behavior then I fully support this. Classes would have to be scheduled on Saturdays most likely.

12.6- "Regulate area of use to reduce conflicts."

Comment: What are the conflicts and where do they occur? I have never had any conflict with any other responsible user of the Preserve.

P. 94- Tactic 1.2-"Promote adoption of low impact orv use practices.

Comment: Fully support.

P.95- Tactic 1.4- "Require attendance at an orv low impact workshop

Comment: Strongly support.

P.96- Tactic 2.1"Prohibitparticularly damaging practices."

Comment: Support-but "high costs" need to be defined. Are we talking specifically monetary costs?

P. 96- Tactic 2.2. "Increase enforcement efforts."

Comment: Support. If N.P S. does not have the enforcement personnel to actively patrol the backcountry on a regular basis then at least be prepared to respond to notification that someone is breaking the law. Poaching, operating an orv ina purposely damaging manner etc. Flying over in a helicopter has its limitations.

P. 96- Tactic 2.3 "Prohibit practices that cause visitor conflict."

Comment: Again, is there a present problem with visitor confli I am not aware of any. Certainly we want to avoid creating a conflicts in the future.

E21 (cont.)

P.97- Tactic 3.1 "Encourage visitors to avoid existing trails in remote areas."

Comment: Sounds good in theory but may not be practical. In remote areas that receive light use there are frequently fewer available to travel. Many orv trail locations were established due to physical limitations to travel. Examples are trails crossing through cypress strands, Trails around deep low wetland areas. Trails on higher elevations due to not being able to traverse prairies during the wet season.

P. 98- Tactic 4.2. "Prevent or reduce resource damage by encouraging the repeated use of a common but limited set of orv trails."

Comment: If orv traffic is required to use a limited set of trails there will be heavier increased impact on these trails. Again, there may be areas where this is frasible. A common-sense approach recognizing that attempts to maintain these trails would not only be expensive it could actually cause new or increased impacts from the types of equipment that would be required to do the maintaince work.

P. 98- Tactic 4.3 "Concentrate use by designation access points."

Comment: If you provide us with a specific proposal as to location then we could respond as to whether or not this would permit access to exempt properties and camps. Seems dificult to manage and enforce.

P. 99- Tactic 4.4 "Select and mark resistant trails."

Comment: Willing to give it a try. Important to remember that these efforts are going to be much more restrictive than previous requiements. Implementation will require that NPS. personnel also be educated as to how requirements will be enforced. This process if implemented will need to phased in gradually with common sense enforcement efforts.

P. 99- Tactic 4.5." Require use of designated trails in selected areas."

Comment: Would be willing to to explore this idea. The problem is that most trails of any length contain various degrees of resistant areas i.e. pine islands, cap rock areas, and non-resistent areas such as short stretches of marl prairie, muck substrate etc. May not be practical due to size of preserve and magnitude of maintaince.

P. 101-Tactic 5.2 " Make access to problem areas more difficult."

Comment: To quote the draft, if this policy is considered, then, "the policy must be communicated with supporting documentation of its rationale."

P. 101- Tactic 5.3. "Establish quotas for use in problem areas."

Comment: Inholder-exempt property owners should not be considered to fall under the quotas of discouragement. Its going to be a real challenge to figure this one out. Documentation and data probably dont exist. Probably not a viable idea.

P. 102- Tactic 5.4 "Prohibit traffic in problem areas."

Comment: Permanent prohibitions should only be considered in extremely rare instances. This would be to protect some endangered flora for example. Supporting documentation would be required. There already exists an example. The closure of the Ochopee Praire/Stairstep Airboat Trail access. The area was justifibly closed to airboat use as a result of overuse by commercial airboats. The resource impacts were not a result of recreational airboaters. However, the area remains closed to recreational airboaters even though the area has recovered its resource values. The feeling seems to be that if an area is temporairly closed for study or restoration that in effect it becomes a defacto permanent closure.

P. 104- Tactic 7.1 "Add fill material in problem areas."

Comment: Questionable. If native limerock material is used it must be placed and compacted during the dry season. When wet season comes it may eventually washout if not culverted. This would cause some localized turbidity of a short-term. Suggest that this be done in an area and monitored to see how effective this expensive idea is is. Do not want to create a situation where street legals would be able to move into more remote areas of the preserve where they do not presently go.

P. 106- Tactic 8.2 "Restore Vegetation."

Comment: Let natural re-vegetation process occur. Continue to monitor and remove exotics, schinus and melaleucca.

P. 107- Tactic 9.1 "Specify orv weights, psi/displacement, clearance, engine size or tires."

comments: This obviously is a difficult issue to gain agreement on. I do not have a recommendation on psi. Weight and tires are more important issues than clearance and engine size,

Tactic 9.3 "Reduce orv noise."

Comment: All wheeled vehicles are presently required to have a functional muffler. All mufflers should have baffles. No straight through pipes. Suggest active enforcement of this requirement. On airboats those with automobile engines can be muffled down to be very quite. The prop noise is presently not able to be satisfactorily

E21 (cont.)

P. 108- Tactic 10.1 "Discourage use of particularly damaging types of orv's."

Comment: There are a few orv's that due to their extreme size and weight are in facr particularly damaging is some areas. The primary reason for their causing deep rutting in marl areas is the way they are often operated. Some of these heavy buggies are used by bush-wackers to bust palmetto thicke on pine islands in order to jump deer off their beds. It is an unethical, illegal way to "hunt". These individuals need to be caught in the act and busted. They make it difficult for the ethical hunter.

P. 109- Tactic 10.3 " Restrict use of particular orv types in sensitive or problem areas."

Comment: This will require a great deal of time and research to develop sound criteria in order to decide what is acceptable and what is not.

P. 109- Tactic 11.1 "Discourage use during times of resource susceptibility."

Comment: Shifting the timing of hunting season is not practical. Hunting season begins near the end of the peak wet season and continues into the beginning of the winter dry season. This is an issue that must be discussed with the Florida Fish & Wildlife Conservation Commission. There are biological reasons for setting hunting season dates.

P. 110- Tactic 11.3 "Regulate timing of use to reduce crowding and conflict."

Comments: In my over 50 years of coming to the Big Cypress I have never experienced "crowding and conflict", it doesnt exist now. The vast majority of orv users and non-orv users time their visits to coincide with the opening of the fall hunting season. Many plan their annual vacation at this time of year. The present hunting season schedule is probably the proper time to have this more intensive use. The weather is cooling off, the rains are diminishing and the Thanksgiving and Christmas holidays are coming. Its the best of times to bring the family and friends to the woods.

P. 110- Tactic 12.1 "Increase orv use fees."

Comment: This would be discriminatory and obviously a blatant attempt to discourage orv users in BICY. Many cannot afford high fees in order to enjoy the Big Cypress. This is not the way to improve or regulated orv use. The present $35.00 is sufficient.

P. 111- Tactic 12.2 "Establish quotas."

Comment: This idea seems to be a difficult one in which to develop a realistic and fair selection or numerical basis. Orv use in BICY varies from month to month and year to year. Weather and water levels dictate to some ectent the amount of orv use. As mentioned previously, hunting season is the period of greatest use.

P. 111- Tactic 12.3 "Make access more difficult."

Comment: Access sites have already been greatly reduced in the last 25 years. Many former access sites have been closed off by guard rails and deterioration of former rough bridges that crossed the US-41 canal. Many former buggy trails have grown over due to not being used by former camp owners.

If you want to reduce visual aesthetic impacts at the road (US-41) in certain areas it may be possible to funnel orv's off the road then allowing them to disperse to other trails once they are away from the general public's view. My experience has been though that the great majority of visitors are very curious about orv and actually enjoy seeing them up close.

Tactic 12.4 " Limit length of stay."

Comment: This would not be effective. It could cause more damage due to people coming and going more frequently. Once we reach camp where we may stay 4-5 days, The buggy usually sets in camp. We walk out from camp on a daily basis. The buggy is normally used once we are in camp to bring game back to camp or to reach areas that we may wish to hunt if they are not within walking distance. Our primary use of the buggy is to get to and from camp and when it is not hunting season to visit favorite areas of the preserve.

Tactic 12.6 "Regulate area of use to reduce conflicts."

Comment: I am not aware of any "social conflict problems" with other user groups that has occurred. If the problem does not exist-lets not make it one.

Conclusion: If you wish to discuss any of these issues, please do not hesitate to contact me. My telephone number is (941) 455-1567. I know that this is a difficult and time consuming effort and I am willing to assist if I can.

Franklin B. Adams

E21 (cont.)

UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF FLORIDA
FORT MYERS DIVISION

THE FLORIDA BIODIVERSITY PROJECT; BRIAN HUNT; BRIAN SCHERF; LAUREL ANN SHIVER; BOB BROUNLEY; and CATHERINE S. DEES,

Plaintiffs,

vs.

ROGER KENNEDY, Director National Park Service; BRUCE BABBITT, Secretary, Department of the Interior; MOLLIE BEATTIE, Director, U.S. Fish and Wildlife Service; CAROL BROWNER, Administrator, Environmental Protection Agency; TOGO D. WEST, JR., Secretary, U.S. Department of the Army; and LT. GEN. ARTHUR E. WILLIAMS, Chief of Engineers, U.S. Army Corps of Engineers,

Defendants.
_____/

Civ. No. 95-50-CIV-FTM-24D

Affidavit of Michael Duever

381

AFFIDAVIT OF MICHAEL DUEVER

1. I am submitting this affidavit in support of intervenor-defendants' position that the National Park Service's ("NPS") Off-Road Vehicle ("ORV") permitting program in the Big Cypress National Preserve ("BCNP") is not subject to dredge and fill permitting requirements under section 404 of the Clean Water Act ("CWA"). I have worked for over 20 years in the field of wetland ecology, with much of this time focused on the Big Cypress Swamp of southwest Florida. I have conducted extensive research on the relationships between hydrology, vegetation and soils, and worked with land managers to implement this information. I was responsible for the "Resource inventory and analysis of the BCNP" and several studies of ORV impacts on the BCNP. I have attached and incorporate my curriculum vita.

2. Based on my observations and studies of ORV activity in BCNP, it is my expert opinion that operation of ORVs in BCNP, while creating discernable effects on the Preserve, are not creating biologically or ecologically significant impacts on the overall BCNP ecosystem.

3. I base my opinion on personal observation and extensive studies that I have conducted on ORV impacts in BCNP. My study methods and conclusions regarding ORV impacts in BCNP culminated in three published reports: "ORVs and Impacts in BICY" (1981 Duever study); "Resource Inventory and Analysis of BICY"; and "Long Term Recovery of ORV Trails" (1986 Duever study).

4. My first study of ORV impacts on BCNP began in 1977, three years after the establishment of BCNP. At the completion of my last study in 1986, the NPS had been managing ORV activity for approximately twelve years. It is my observation that the creation of the Preserve and the institution of ORV management practices by the NPS have significantly mitigated the potential for degradation due to unregulated and unchecked ORV use. The NPS's

E21 (cont.)

management practices are designed to strike a balance between conservation and recreation. For example, in heavy use areas such as the Bear Island Unit, ORVs are limited to designated routes which are maintained and improved by the NPS. If an area is too sensitive to ORV activity, the NPS will close the area to ORV use. As a result, only a small area (the trail route) should be affected by the ORV activity; the surrounding habitat should remain undisturbed. These and other NPS ORV management practices are designed to ensure that a proper balance is achieved between recreation and conservation.

5. All human activity can be considered to impact BCNP; even walking through marshes and prairies impinges on vegetation or substrates. ORV activities also impinge on vegetation and substrates. While human activities such as hiking and ORV use cause localized impacts within the confines of the hiking or ORV trail corridor, the significance of any impact depends on how the activity affects the function of the ecosystem as a whole. When assessing the health of an entire wetland or ecosystem, the localized impacts created by ORV activity cannot be said to have a significant impact on the BCNP ecosystem.

6. My 1981 study tested the impacts of four types of ORVs, swamp buggies, all terrain cycles (ATCs), airboats, and track vehicles, on various habitats found in BCNP. Experimental lanes were created in various habitats in which vehicles attempted to generate three levels of impact: light, medium or heavy. Light impacts were impacts generated by one vehicle pass through the habitat. Medium impacts were characterized as activity which caused significant impacts to vegetation, and heavy impacts were considered as those impacts which generated a significant soil impact. At the time the experimental impacts were made, we recorded the number of passes required to make each level of impact, and measured noise levels during each treatment. The experimental lanes were then examined over a one year period for resulting impacts using four parameters: (1) visual impacts; (2) soil impacts, including rut depth, adjacent ridge height, and soil compaction; (3) understory vegetation impacts, including biomass, percent cover, height, standing litter, and taxonomic composition; and (4) shrub and tree impacts. The study also examined the recovery of old ORV trails within BCNP, using essentially the same parameters as used for the experimental lanes. Seven years later, the 1986 ORV study examined the recovery of the experimental lanes and old trails using the same parameters as in the 1981 study.

7. BCNP encompasses 570,000 acres. It has been estimated that ORV routes affect at some level 1800 of those acres. The degree of impact observed in our studies ranged from light to heavy, depending on the type of ORV, the frequency of ORV passes through the area, the type of habitat, and the degree of wetness of the soil. Most ORV activity results in light to medium impacts in the BCNP, and these trails can be expected to exhibit no significant impacts within a year. Heavily impacted areas where the soil is displaced are not as common, and occur mainly around heavily used access points, where trails cross heavily forested areas, and along regularly used major trails crossing the Preserve. Typically the impact is limited to the confines of the corridor. With the exception of some marshes close to major access points, only a small localized area is disturbed; the surrounding habitat remains undisturbed.

8. To assess the degree of recovery of an ORV trail, impacts were also identified as non-cumulative or cumulative. Impacts were considered cumulative for a particular parameter if the area did not recover from the impact within a year's time. Not all impacts from ORVs are cumulative. Cumulative impacts occurred consistently when the activity caused soil disturbance, but incidences of cumulative impacts are infrequent and small in scale compared to the large scale of BCNP.

E21 (cont.)

9. The extent of ORV impact and trail recovery depends on the criteria selected for recovery. If a person examines ORV impacts using only a visual parameter, then ORV impacts could be considered severe. Visual impacts from ORV activity show the least recovery of all parameters studied within a year's time. Even if an ORV route is aesthetically unpleasing, an examination of other parameters such as various vegetative and soil characteristics often showed that the ORV activity had not caused a significant adverse impact to the habitat.

10. An examination of the experimental lanes created in the 1981 ORV study seven years later showed that virtually all of the light and medium impact lanes had completely disappeared. However, heavily impacted trails -- where the soil had been severely disturbed -- had not recovered to the same extent. This does not mean that heavy impact trails will never recover, but once the soil is severely disturbed, recovery may take a long time. Thus, the recovery of ORV trails over the seven year period could be described as good for low-to-medium impact levels, but poor for heavily impacted trails.

11. Different ORV types also affect the degree of impact on an area. Airboats cause the least impact of all ORV types, and areas experimentally impacted by airboats typically completely recovered within a year. This is because an airboat's impact on the ground surface is minimal, and therefore rutting did not occur. The most severe impact caused by ORVs is soil disturbance. Swamp buggies and ATC's, but mostly swamp buggies, can potentially disturb the soil. However, soil disturbance does not occur every time these types of ORV are used, as this type of impact depends on the weight of the vehicle, the type of tires on the vehicle, the degree of wetness of the soil, and the number of vehicle passes over the area. It should be noted that, depending on habitat type and the type of ORV, it may be difficult to create the level of disturbance which would result in a heavy impact (e.g., soil displacement, rutting). With some track vehicles[1], in the experimental lanes it took only one pass to create a heavy impact. However, for some ATCs, it was impossible to create a heavy impact, even after as many as sixty passes through an area. Thus, heavy impacts that produce soil disturbance are not "typical" ORV impacts.

12. Whether an ORV impact should be considered as "significant" or as having an "adverse effect" on BCNP depends on what levels of impact are considered acceptable. If it is determined that any visual impact is unacceptable, then ORVs could not operate in the preserve at all. If an acceptable impact level is defined as the disappearance within one year of any track produced by a single pass in any habitat type, then only certain types of ATCs and airboats would be permitted to operate within BCNP. If the criterion were changed so that an acceptable impact meant that vegetation could be severely damaged but the trail disappeared within one year, then airboats and ATCs would be limited to use in certain habitats. If an acceptable level of impact would allow trails to remain visible for more than one year, as long as any remaining impacts were not statistically significant, then more ORVs could be used in more habitat types in BCNP.

13. Most ORVs tend to follow established trails when they depart from a Preserve access point. Where permitted, some eventually leave this trail and travel cross-country. Since they tend to either stay on an existing trail or travel singly cross-country, in most circumstances they do not cause destruction and ruts in pristine areas.

14. The 1981 and 1986 studies yielded several conclusions regarding ORV impacts on the Preserve's natural functions, including hydrology, soil, vegetation, wildlife, and wetland productivity. Based on these findings it is my opinion that ORVs do not cause significant

[1] Track vehicles are now prohibited within BCNP.

E21 (cont.)

adverse impacts on the natural characteristics and processes of the overall BCNP ecosystem.

15. Hydrology. Water flows in ORV trails have a higher mean velocity flow than in undisturbed areas. Despite this, ORV trails have relatively insignificant effects on surface water flows within the preserve. Because ORV trails are localized and confined to a small area in relation to the undisturbed area, the influence of ORV trails on regional water flows is essentially negligible in terms of overall hydrology. The most significant impacts might be associated with a shortened hydroperiod in the localized area of the trail itself, but ORVs do not affect the overall hydrology of the preserve. Furthermore, there is no evidence that non-commercial ORVs caused anything but localized and temporarily increased turbidity or soil erosion.

16. Vegetation. Except within and immediately adjacent to trails where soils were disturbed, our ORV studies uncovered no evidence that ORVs alter the natural succession of plants, or permanently alter the vegetative composition of particular habitats. Also except in instances when the soil is severely disturbed, ORV activities do not cause long term damage to vegetative communities.

17. Soil. ORVs cause the most significant impacts when their tires disturb the soil. Under certain conditions and in certain habitats, certain ORVs cause soil displacement and rutting. Soil displacement and extensive rutting tends to destroy vegetative root systems, and such damage to vegetation within the trail corridor does not recover within a year. Thus, when ORVs cause soil displacement, the impacts are typically cumulative. However, it cannot be said that deep rutting and ridges are "typical" ORV impacts, because most ORV activity involves existing trails or scattered cross-country travel which causes little, if any soil displacement. The potential and degree of soil disturbance is greatest when water levels are at or near the ground surface. In drier areas, or when bedrock is exposed, the ground cover often recovers quickly because no rutting occurs. Finally, one of the specific parameters studied with regard to soil impacts was the degree of soil compaction caused by ORVs. The studies found no evidence that ORVs tended to compact the soil, if anything, ORVs tended to loosen the soil.

18. Wetland Productivity. Given the large scale of the preserve's ecosystem and that any ORV impacts on wetland function are quite localized, and it cannot be said that ORVs significantly decrease the productivity of the BCNP ecosystem.

19. Wildlife. Little is known about the effect of ORV activity on the preserve's wildlife. Ruts and other depressions created along some ORV trails have served as feeding areas for wildlife during the dry season, and there is evidence that wildlife trails often follow ORV corridors.

Michael J. Dwyer

STATE OF FLORIDA

COUNTY OF Osceola

Sworn to (or affirmed) and subscribed before me this 5th day of October 1995 by Michael James Dwyer.

KIM SIEBELINK
MY COMMISSION # CC 345246
EXPIRES: January 31, 1998
Bonded Thru Notary Public Underwriters

Kim Siebelink
NOTARY

Personally known _____

or Produced Identification FL DL

Type of Identification Produced FL DL D160 550-41-291-0

E21 (cont.)

CURRICULUM VITAE

MICHAEL JAMES DUEVER

Project Ecologist
Disney Wilderness Preserve

The Nature Conservancy
Disney Wilderness Preserve
6075 Scrub Jay Trail
Kissimmee, Florida 34759
407/935-0002
FAX: 407/935-0005

3151 Ham Brown Rd.
Kissimmee, Florida 34746
407/870-8972

Social Security Number: 329-34-8275

EDUCATION:

B.S., Zoology, University of Illinois, 1964

M.S., Zoology, University of Georgia, 1968
Thesis - Distributions in space and time of reptiles on the Savannah River Plant in South Carolina.

Ph.D., Forest Resources, University of Georgia, 1972
Dissertation - The distribution of trace elements in a small reservoir as influenced by two types of discharge.

POSITIONS:

1993-Present Project Ecologist, Disney Wilderness Preserve, The Nature Conservancy.
Responsible for development and implementation of ecological monitoring and research program on the Disney Wilderness Preserve.

1977-1993 Director, Ecosystem Studies Program, National Audubon Society.
For the last 15 years, I have directed the National Audubon Society's Ecosystem Studies Program in its efforts to supply information needed by legislators, regulators, and land managers to make appropriate decisions in the restoration and protection of natural ecosystems. We conduct comprehensive studies of whole ecosystems as well as research on specific subjects necessary for understanding and managing essential processes within these systems. Specific activities in which we have been involved during this period include the following.

* Established research and monitoring program (surveying, installing wells, setting up transects, soil surveys, etc.) on Francis Biedler Sanctuary in South Carolina and Ordway-Whittell Kissimmee Prairie Sanctuary in south Florida.

* Co-organized effort to develop monitoring programs for all National Audubon Society sanctuaries.

* Supervised a comprehensive ecosystem management study of Audubon's Rainey Wildlife Sanctuary in coastal Louisiana.

* Conducting a study of hydrology-plant community relationships in wet meadows in the Big Bend reach of the Platte River in south-central Nebraska.

* Participated in Platte River Management Joint Study Hydrology Work Group, where my efforts focused on: 1) ecological relationships between changes in the occurrence of woody riparian vegetation and changes in river channel morphology, and 2) long term climatic patterns and how these are related to long term Platte River flows.

* Directed overall project and was responsible for portions of the Resource Inventory and Analysis of the Big Cypress National Preserve for the National Park Service. Edited the final report, which analyzed all existing information on climate, geology, hydrology, vegetation, animals, fire, and land use in the area.

* Conducted an experimental study of off-road vehicle impacts on Big Cypress National Preserve plant communities for the National Park Service.

* Directed study to classify peninsular Florida habitats and identify the best remaining examples for the National Park Service Natural Landmarks Program.

* Organized and supervised a study of the effects of excavations on water tables in Collier County, Florida.

* Conducted a study of water quality in western Collier County canals for the Big Cypress Basin of the South Florida Water Management District.

* In collaboration with Audubon's Ornithological Research Unit, defined environmental characteristics of Florida wading bird colony sites.

E21 (cont.)

* Worked for Florida Department of Natural Resources to determine the Ordinary High Water Line around Lake Hatchineha, based on hydrology-plant community relationships and community ages as determined by tree ring analyses.

* Conducted study of Myakka River State Park watershed hydrology for Florida Department of Natural Resources.

* Conducted studies on the Okefenokee National Wildlife Refuge, which included 1) the hydrologic regimes of major plant community types, 2) impoundment affects of the Suwannee River Sill, 3) plant community successional patterns and rates on tree islands, and 4) a cypress tree ring chronology for reconstructing long term hydrologic records for the swamp.

* Developed techniques for working with cypress tree rings, and conducted tree ring studies which provided information on successional patterns, growth rates, and age structure of the Corkscrew Swamp cypress forest, as well as information on the response of cypress to changes in hydrology.

* Conducted several other Florida studies of tree-ring patterns using cypress, as well as other southeastern U.S. woody species; these studies included determination of 1) impacts on Barley Barber Swamp of development on adjacent uplands, 2) the timing and probable cause of the destruction of the lower Loxahatchee River floodplain forest, 3) predisturbance hydrologic regime of Lake Hatchineha using ages and distribution of trees bordering the lake, and 4) successional patterns on abandoned agricultural lands in central Florida.

* Supervised an ecosystem analysis of terrestrial and wetland communities in the Florida Keys.

* Participated in deliberations on a number of South Florida conservation issues including development of land management strategies to benefit the endangered Florida panther, land acquisition plans for the Florida Save Our Rivers Program, and regulations for protecting "small isolated wetlands".

* Assisted Mexican ecologists with their studies on the Usumacinta Delta, a major wetland ecosystem in southern Mexico, and organized a preliminary ecosystem analysis of the area.

* Involved in an assessment of salinity and hydrologic characteristics in relation to changing vegetation patterns in the interior wetlands on the Bahamas National Trust flamingo sanctuary on Great Inagua.

* Participated in the United Nations Scientific Committee on Problems of the Environment's program on "Dynamics of Freshwater Wetlands and Shallow Bodies of Water", where I was responsible for the hydrology portion of the program.

* Was a member of a panel that reviewed the wetlands research program of the Environmental Protection Agency.

* In addition to conducting ecological research, advised staff of public and private land management agencies and research institutions, participated in Audubon task force projects, cooperated with universities in training graduate students, lectured, organized symposia, lead professional field trips, produced reports, papers, articles, etc., and generated research funds for our program and others as appropriate.

1973-1977 Research Biologist, National Audubon Society.
Conducted an ecosystem analysis of Corkscrew Swamp Sanctuary.

1972-1973 Research Scientist, Ecosystems Department, Battelle-Northwest.
Reviewed nuclear power plant environmental impact statements and conducted land use planning studies.

1968-1972 Research Assistant, Cooperative Fisheries Unit, School of Forest Resources, University of Georgia.
Conducted a study comparing the effects of bottom vs. surface discharge on the biology and nutrient cycling processes of a small reservoir.

1966-1968 Research Assistant, Institute of Ecology, University of Georgia.
Studied structural characteristics and nutrient cycling processes in terrestrial ecosystems of eastern Panama.

1965-1966 Research Assistant, Savannah River Ecology Laboratory.
Studied reptile habitat distribution, activity patterns, and food requirements.

1964-1965 Research Assistant, School of Forest Resources, University of Georgia.
Conducted pesticide bioassays with mosquitofish.

1961-1964 Research Assistant, Illinois Natural History Survey.
Involved in a wide variety of river ecology studies throughout Illinois.

1960 Assistant summer animal keeper, Lincoln Park Zoo, Chicago.

1956-1959 Technician, Field Museum of Natural History.
Assisted in maintenance of reptile and amphibian preserved collection.

E21 (cont.)

CURRENT PROFESSIONAL MEMBERSHIPS:

American Institute of Biological Sciences
American Society of Limnology and Oceanography
Association of State Wetland Managers
British Ecological Society
Ecological Society of America
George Wright Society
International Association of Ecology (INTECOL)
International Society for Tropical Ecology
International Society of Vegetation Science
Natural Areas Association
Society for Ecological Restoration
Society of Wetland Scientists
Tree Ring Society

CURRENT CONSERVATION MEMBERSHIPS:

Environmental Defense Fund
Florida Audubon Society
Florida Conservation Foundation
Florida Native Plant Society
Gopher Tortoise Council
Home Habitat Society
Mono Lake Committee
National Audubon Society
National Parks and Conservation Association
Natural Resources Defence Council
Save the Redwoods League
The Nature Conservancy
Wild Earth
Wilderness Society
1000 Friends of Florida

MISCELLANEOUS ACTIVITIES:

Vice-Chair, Paleoecological Section, Ecological Society of America
Chair, Paleoecological Section, Ecological Society of America
Member, Council, Ecological Society of America
Member, Editorial Board, Natural Areas Journal
Member, Board of Directors, Natural Areas Association.
Visiting Scholar, Laboratory of Tree-Ring Research, University of Arizona

CURRENT RESEARCH INTERESTS:

Ecosystem analysis techniques for natural area management planning
Factors controlling plant community distribution and productivity
Hydrology - substrate - vegetation relationships
Tree-ring analysis as a tool for assessing:
    successional patterns and rates
    natural and anthropogenic effects on vegetation
Evapotranspiration-habitat relationships

PUBLICATIONS:

Larimore, R.W. and M.J. Duever. 1968. Effects of temperature acclimation on the swimming ability of smallmouth bass fry. Trans. American Fisheries Society 97:175-184.

Duever, M.J.* and J.R. Fatora. 1969. Daily and seasonal activity patterns of mourning doves on the AEC Savannah River Plant. Proceedings of the Annual Conference Southeastern Association of Game and Fish Commissioners 22:189-198.

Fatora, J.R. and M.J. Duever. 1969. Daily and seasonal activity patterns of bobwhite quail on the AEC Savannah River Plant. Proceedings of the Annual Conference Southeastern Association of Game and Fish Commissioners 22:189-198.

Golley, F.B., J.T. McGinnis, R.G. Clements, G.I. Child, and M.J. Duever. 1969. The structure of tropical forests in Panama and Columbia. Bioscience 19:693-696.

McGinnis, J.T., F.B. Golley, R.G. Clements, G.I. Child, and M.J. Duever. 1969. Elemental and hydrologic budgets of the Panamanian tropical moist forest. Bioscience 19:697-700.

Duever, M.J. 1972. The striped mud turtle, (Kinosternon bauri Garman) in South Carolina. Herpetological Review 4:131.

Golley, F.B., J.T. McGinnis, R.G. Clements, G.I. Child, and M.J. Duever. 1975. Mineral cycling in a tropical moist forest ecosystem. Athens: University of Georgia Press. 248 pp.

Duever, M.J., J.E. Carlson, and L.A. Riopelle. 1974. Water budgets and comparative study of virgin Corkscrew Swamp. In H.T. Odum, K.C. Ewel, J.W. Ordway, M.K. Johnston, and W.J. Mitsch, eds. Cypress wetlands for water management, recycling and conservation. 1st Annual Report to National Science Foundation and Rockefeller Foundation. Gainesville: Center for Wetlands, University of Florida. p. 595-634.

E21 (cont.)

Duever, M.J., J.E. Carlson, and L.A. Riopelle. 1975. Ecosystem analyses at Corkscrew Swamp. In H.T. Odum, K.C. Ewel, J.W. Ordway, and M.K. Johnston, eds. Cypress wetlands for water management, recycling and conservation. 2nd Annual Report to National Science Foundation and Rockefeller Foundation. Gainesville: Center for Wetlands, University of Florida. p. 627-725.

Duever, M.J.* 1976. Formation and maintenance of cypress strand systems. Bulletin of the Ecological Society of America 57:53.

Duever, M.J., J.E. Carlson, L.A. Riopelle, L.H. Gunderson, and L.C. Duever. 1976. Ecosystem analyses at Corkscrew Swamp. In H.T. Odum, K.C. Ewel, J.W. Ordway, and M.K. Johnston, eds. Cypress wetlands for water management, recycling and conservation. 3rd Annual Report to National Science Foundation and Rockefeller Foundation. Gainesville: Center for Wetlands, University of Florida. p. 707-737.

Duever, M.J.* 1977. Factors controlling structure and productivity of a South Florida cypress swamp. Bulletin of the Ecological Society of America 58:35.

Duever, M.J.* 1977. Seasonal snake activity patterns on the Savannah River Plant. 57th Annual Meeting American Society of Ichthyologists and Herpetologists. Gainesville, Florida.

Duever, M.J., L.A. Riopelle, and L.C. Duever. 1977. Ecosystem analysis of the Okefenokee Swamp: tree-ring and hydroperiod studies. Annual Report to the University of Georgia and the National Science Foundation. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 14 pp.

Wharton, C.H., H.T. Odum, K. Ewel, M. Duever, A. Lugo, R. Boyt, J. Bartholomew, E. Debellevue, S. Brown, M. Brown, and L. Duever. 1977. Forested wetlands of Florida - their management and use. Gainesville: Center for Wetlands, University of Florida. 348 pp.

Coultas, C.L. and M.J. Duever. 1978. Soils of cypress swamps. Florida Scientist 41 (supplement):2.

Duever, M.J.* 1978. Implications of grazing to management of natural South Florida grasslands. Presentation to Thirty-first Annual Meeting Society of Range Management, San Antonio, Texas. 12 pp.

Duever, M.J.* and J.E. Carlson. 1978. Implications of grazing to management of natural South Florida grasslands. Thirty-first Annual Meeting Society Range Management. San Antonio, Texas.

Duever, M.J., J.E. Carlson, L.A. Riopelle, and L.C. Duever. 1978. Corkscrew Swamps. In H.T. Odum and K.C. Ewel, eds. Cypress wetlands for water management, recycling and conservation. 4th Annual Report to National Science Foundation and Rockefeller Foundation. Gainesville: Center for Wetlands University of Florida. p. 534-565.

Duever, M.J., J.E. Carlson, L.A. Riopelle, and L.C. Duever. 1978. Ecological systems analysis. In National Audubon Society Research Department 1977 Annual Report. Tavernier, Florida: National Audubon Society. p. 118-179.

Duever, M.J.* and L.A. Riopelle. 1978. Tree-ring analysis and successional rates in the Okefenokee Swamp. Bulletin of the Ecological Society of America 59:111.

Duever, M.J., L.A. Riopelle, and L.C. Duever. 1978. Ecosystem analysis of Okefenokee Swamp: tree-ring and hydroperiod studies. Annual report to the University of Georgia and National Science Foundation. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 84 pp.

Duever, M.J. and A. Sprunt, IV. 1978. Ecosystem analysis of the Usumacinta Delta, Tabasco and Campeche, Mexico. Proposal to the International Union for the Conservation of Nature and Natural Resources. Tavernier, Florida: Research Department, National Audubon Society. 123 pp.

Knoble, D., M.J. Duever, J.E. Carlson. 1978. Cypress Leaf-Out sequences. In H.T. Odum and E.C. Ewel, eds. Cypress wetlands for water management, recycling and conservation. 4th Annual Report to National Science Foundation and Rockefeller Foundation. Gainesville: Center for Wetlands, University of Florida. p. 566-570.

Carlson, J.E. and M.J. Duever. 1979. Seasonal fish population fluctuations in a South Florida swamp. Proceedings of the Annual Conference Southeastern Association of Game and Fish Commissioners 31:603-611.

Duever, M.J. 1979. Ecosystem analysis of Okefenokee Swamp: tree-ring and hydroperiod studies. Athens: University of Georgia. Okefenokee Ecosystem Investigations, Technical Report No. 5. 72 pp.

Duever, M.J., J.E. Carlson, J.F. Meeder, L.C. Duever, L.H. Gunderson, L.A. Riopelle, T.R. Alexander, R.F. Myers, and D.P. Spangler. 1979. Resource inventory and analysis of the Big Cypress National Preserve. Final report to the National Park Service. Gainesville: Ecosystem Research Unit, National Audubon Society and Center for Wetlands, University of Florida. 1225 pp.

Duever, M.J., J.E. Carlson, L.A. Riopelle, L.C. Duever, and J.F. Meeder. 1979. Ecosystem Research Unit. In National Audubon Society Research Department 1978 Annual Report. Tavernier, Florida: National Audubon Society. p. 66-106.

E21 (cont.)

Carlson, J.E., M.J. Duever, and L.A. Riopelle. 1980. Off-road vehicle impacts in the Big Cypress National Preserve. Volume 9. Human impact on natural resources/ORVs. In Proceedings of Second Conference on Scientific Research in the National Parks; 1979 November 23-30; San Francisco. National Park Service. p. 347-386.

Duever, M.J.* 1980. A comparison of surface and bottom discharge effects on a small reservoir. In Proceedings of the Symposium on Surface Water Impoundments; June 2-5; Minneapolis. p. 865-874.

Duever, M.J.* 1980. Surface water hydrology of an important cypress strand, Corkscrew Swamp Sanctuary. In P.J. Gleason, ed. Water, oil, and the geology of Collier, Lee, and Hendry counties. Miami, Florida: Miami Geological Society. p. 74-78.

Duever, M.J. 1980. Tree-ring analysis studies, Barley Barber Swamp. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 12 pp.

Duever, M.J., J.E. Carlson, L.A. Riopelle, L.C. Duever, and J.F. Meeder. 1980. Ecosystem Research Unit. In National Audubon Society Research Department 1979 Annual Report. Tavernier, Florida: National Audubon Society. p. 59-95.

Duever, M.J. and L.C. Duever. 1980. Preliminary reconnaissance of Ordway-Whittell Prairie Preserve. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 9 pp.

Duever, L.C., G.B. Iverson, P.F. Lund, M.J. Duever, F.P. Porzel, J.N. Burch, and J.F. Meeder. 1981. Resource inventory and analysis of the John D. MacArthur Beach State Recreation Area. Report to the John D. and Catherine T. MacArthur Foundation. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 203 pp.

Duever, M.J. 1981. An approach to dealing with ring quality problems in cypress. Cambial Activities 4:6-7.

Duever, M.J.* 1981. Research on National Audubon Society sanctuaries. In C.E Bock and J.H. Bock, eds. Proceedings of Symposium on Southwestern Grasslands: past, present and future. U.S. Bureau of Land Management and National Audubon Society. p. 97-98.

Duever, M.J., J.E. Carlson, and L.A. Riopelle. 1981. Off-road vehicles and their impacts in the Big Cypress National Preserve. South Florida Research Center Report SFRC T-614. Homestead, Florida: National Park Service. 214 pp.

Duever, L.C., J.F. Meeder, and M.J. Duever. 1982. Ecological portion Florida peninsula natural region theme study. Final report to the National Park Service. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 397 pp.

Duever, M.J. 1982. Hydrology-plant community relationships in the Okefenokee Swamp. Florida Scientist 45:171-176.

Duever, M.J.* 1982. Status of peatlands in the Tabasco lowlands of southern Mexico. Presented at the TIE Tropical Peatlands Workshop. Indianapolis; June 1-2. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 3 pp.

Duever, M.J.* 1982. Tropical peatland hydrology. Presentation at Tropical Peatlands Workshop. Indianapolis: June 1-2. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 4 pp.

Armentano, T.V., A. de la Cruz, M. Duever, O.L. Loucks, W. Meijer, P.J. Mulholland, R.L. Tate, III, and D. Whigham. 1983. Recent changes in the global carbon balance of tropical organic soils. Report to U.S. Department of Energy. Indianapolis, Indiana: Holcomb Research Institute Butler University. 57 pp.

Carlson, J.E. and M.J. Duever. 1983. The Big Cypress Basin water quality monitoring network annual report for 1982. Report to Big Cypress Basin, South Florida Water Management District. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 79 pp.

Duever, M.J. and L.A. Riopelle. 1983. Successional sequences and rates on tree islands in the Okefenokee Swamp. American Midland Naturalist 110:186-193.

Coultas, C.L. and M.J. Duever. 1984. Soils of cypress swamps. In K.C. Ewel and H.T. Odum, eds. Cypress swamps. Gainesville: University of Florida Press. p. 51-59.

Duever, M.J. 1984. Environmental factors controlling plant communities of the Big Cypress Swamp. In P.J. Gleason, ed. Environments of South Florida present and past. Coral Gables, Florida: Miami Geological Society. p. 127-137.

Duever, M.J., J.E. Carlson, and L.A. Riopelle. 1984. Corkscrew Swamp: a virgin cypress strand. In K.C. Ewel and H.T. Odum, eds. Cypress swamps. Gainesville: University of Florida Press. p. 334-348.

Duever, M.J.* and J.M. McCollom. 1984. Application of tree-ring techniques to studies of woody plant growth, successional patterns, and long-term site history. Unpublished report distributed at the National Science Foundation/Long Term Ecological Research Meeting, Lake Itasca, Minn., May 1984. 6 pp.

Duever, M.J., J.F. Meeder, and L.C. Duever. 1984. Ecosystems of the Big Cypress Swamp. In K.C. Ewel and H.T. Odum, eds. Cypress swamps. Gainesville: University of Florida Press. p. 294-303.

Duever, M.J. and L.A. Riopelle. 1984. Successional patterns and rates on Okefenokee Swamp tree islands. In A.D. Cohen, D.J. Casagrande, M.J. Andrejko, and G.R. Best, eds. The Okefenokee Swamp. Los Alamos, New Mexico: Wetlands Surveys. p. 112-131.

E21 (cont.)

Duever, M.J. and L.A. Riopelle. 1984. Tree-ring analysis in the Okefenokee Swamp. In A.D. Cohen, D.J. Casagrande, M.J. Andrejko, and G.R. Best, eds. The Okefenokee Swamp. Los Alamos, New Mexico: Wetlands Surveys. p. 180-188.

Duever, M.J., J. McCollom, and L. Neuman. 1985. Plant Community boundaries and water levels, Lake Hatchineha, Florida. Report to the Department of Natural Resources, State of Florida, August 1985. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 32 pp.

McCollom, J., L. Neuman, and M. J. Duever. 1985. Tree ring analysis at Lake Hatchineha, Florida. Report to the Department of Natural Resources, State of Florida, August 1985. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 38 pp.

Duever, M.J., J.E. Carlson, J.F. Meeder, L.C. Duever, L.H. Gunderson, L.A. Riopelle, T.R. Alexander, R.L. Myers, and D.P. Spangler. 1986. The Big Cypress National Preserve. New York: National Audubon Society. 455 pp.

Duever, M.J., L.A. Riopelle, and J.M. McCollom. 1986. Long Term Recovery of Experimental Off-Road Vehicle Impacts and abandoned Old Trails in the Big Cypress National Preserve. South Florida Research Center Report SFRC-86/09. Homestead, Florida: National Park Service. 47 pp.

Stone, P.A., P.J. Gleason, M.J. Duever, D.J. Colquhoun, and M.J. Brooks. 1986. Age, origin, and landscape evolution of south-eastern U. S. wetlands. International Symposium on Ecology and Management of Wetlands, College of Charleston, Charleston, South Carolina, June 16-29, 1986.

Duever, M.J. 1987. Environmental considerations relevant to the design of a hydrologic monitoring program for the evaluation of impacts of wellfield withdrawals on wetlands in the vicinity of the North Martin County Wellfield. Report to James M. Montgomery, Consulting Engineers, Inc. Lake Worth, Florida. Not yet available for distribution. 8 pp.

Duever, M.J.* and J.M. McCollom. 1987. Cypress tree-ring analysis in relation to wetlands and hydrology. In G.C. Jacoby Jr. and J.W. Horbeck, compilers. International Symposium on Ecological Aspects of Tree-Ring Analysis. Washington, D.C.: U.S. Department of Energy. p. 611-621.

Duever, M.J.* and J.M. McCollom. 1987. Trade-offs between the use of tree-ring counting and dendrochronology in ecological studies. In G.C. Jacoby, Jr. and J.W. Horbeck, compilers. International Symposium on Ecological Aspects of Tree-Ring Analysis. Washington, D.C.: U.S. Department of Energy. p. 249-260.

Duever, M.J. 1988. Hydrologic Processes for Models of Freshwater Wetlands. In W.J. Mitsch, M. Straskraba, and S. E. Jorgensen, eds. Wetland Modelling. Amsterdam: Elsevier. p. 9-39.

Duever, M.J.* 1988. Surface hydrology and plant communities of Corkscrew Swamp. In D. A. Wilcox, ed. Interdisciplinary approaches to freshwater wetland research. East Lansing: Michigan State University Press. p. 97-118.

Duever, M.J.*, J.M. McCollom, and L. Neuman. 1988. Plant Community Boundaries and Water Levels at Lake Hatchineha, Florida. In J.A. Kusler and G. Brooks, eds. Proceedings of the National Wetland Symposium: Wetland Hydrology, September 16-18, 1987. Berne, NY: Association of State Wetland Managers. p. 67-72.

Duever, M.J.*, L.B. Meeder, and J.F. Meeder. 1988. Vegetative structure and productivity of semi-impounded and free-flowing brackish marshes in coastal Louisiana. Supplement to Bulletin of the Ecological Society of America 69(2):123-124.

Meeder, J.F. and M.J. Duever. 1988. Hydrology and salinity characteristics of semi-impounded and free-flowing brackish marshes in coastal Louisiana. Supplement to Bulletin of the Ecological Society of America 69(2):230.

Newman, J.R., R. Hart, L.C. Duever, S. Doherty, M.J. Duever, and J.M. McCollom. 1988. A study of succession on agriculturally - altered lands. Final Report to Southwest Florida Water Management District. Gainesville, Florida: KBN Engineering and Applied Sciences, Inc. 110 pp.

Duever, M.J. 1989. Ecosystem Analysis of the Ordway - Whittell Kissimmee Prairie Sanctuary. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 32 pp.

Duever, M.J. and J.M. McCollom. 1989. Restoration in the Florida Everglades. In Everglades Symposium Abstracts, Key Largo, Florida, October 22-27, 1989. 3 pp.

Duever, M.J.* and J.M. McCollom. 1989. Restoration in the Florida Everglades. Paper presented at the Everglades Symposium, Spatial and Temporal Patterns as Guidelines for Ecosystem Restoration, Key Largo, Florida, October 22-27, 1989. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 16 pp.

Duever, M.J.*, J.F. Meeder, and L.B. Meeder. 1989. The climate of South Florida and its role in shaping the Everglades ecosystem. In Everglades Symposium Abstracts, Key Largo, Florida, October 22-27, 1989. 3 pp.

Duever, M.J.* 1990. Encroachment of woody riparian vegetation onto the Platte River Channel in Nebraska. Natural Areas and Yosemite: Prospects for the Future, 17th Annual Natural Areas Conference with the Yosemite Celebration, October 14-19, 1990. Concord, California.

Duever, M.J.* 1990. Hydrology. In B.C. Patten, ed. Wetlands and shallow continental water bodies, Volume 1. The Hague, Netherlands: SPB Academic Publishing. p. 61-89.

E21 (cont.)

Duever, M.J.* 1990. The Long Term Viability of Restored Wetlands. In M.K. Loftin, L.A. Toth, and J.T.B. Obeysekera, eds. Kissimmee River Restoration Symposium Proceedings. October, 1988. West Palm Beach, Florida: South Florida Water Management District. pp. 279-289.

Duever, M.J.* 1990. Survival and growth of 12 year old experimental plantings of "pond" and "bald" cypress, Taxodium distichum, in South Florida cypress and marsh habitats. Supplement to Bulletin of the Ecological Society of America 71(2):142.

Duever, M.J. and J.M. McCollom. 1990. Hydrological Study within Myakka River State Park. Final report to the Florida Department of Natural Resources, Florida DNR Contract No. C-6415. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 150 pp.

Duever, M.J. and J.M. McCollom. 1990. Quarterly Report for June 23 - September 15, 1990 on the Hydrological Study within Myakka River State Park. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 6 pp.

Duever, M.J.* and J.M. McCollom. 1991. Hurricane Hugo effects on major floodplain forest communities at Four Holes Swamp, South Carolina. Supplement to Bulletin of the Ecological Society of America 72(2):104.

Duever, M.J.* and J.M. McCollom. 1992. Hurricane Hugo effects on old-growth floodplain forest communities at Four Holes Swamp, South Carolina. In Seventh Biennial Southern Silviculture Research Conference, November 17-19, 1992. Mobile, Alabama. p. 29.

Duever, M.J.* and J.M. McCollom. 1992. Hurricane Hugo in a South Carolina Old Growth Floodplain Forest: Environmental Effects. In 19th Annual Natural Areas Conference Abstracts. Bloomington, Indiana: Indiana Department of Natural Resources Division of Nature Preserves and the Natural Areas Association. p. 14.

Duever, M.J. and J.M. McCollom. 1992. Initial and delayed mortality of canopy trees in an old-growth forested wetland following Hurricane Hugo. Final Report for USDA-Forest Service Southeastern Forest Experiment Station Cooperative Research Agreement No. 29-738. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 91 pp.

Duever, M.J.* and J.M. McCollom. 1992. Major structural damage present prior to Hurricane Hugo in old-growth forest trees at Four Holes Swamp, South Carolina. Supplement to Bulletin of the Ecological Society of America. 73(2):161.

Duever, M.J. and J.M. McCollom. 1992. Semi-Annual report to USDA-Forest Service Southeastern Forest Experiment Station, Cooperative Research Agreement No. 29-738: Initial and delayed mortality of canopy trees in an old-growth forested wetland following Hurricane Hugo. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 20 pp.

Duever, M.J.* and J.F. Meeder. 1992. A successful resolution to the conflict between oil and gas development and environmental concerns in the Big Cypress Swamp. American Association of Petroleum Geologists 1992 Annual Convention Official Program. p. 33.

McCollom, J.M. and M.J. Duever. 1992. Patterns of initial and delayed mortality caused by Hurricane Hugo in Four Holes Swamp, South Carolina. Supplement to Bulletin of the Ecological Society of America. 73(2):266.

Duever, M.J. and J.M. McCollom. 1993. Long-term study of recovery and delayed mortality patterns in canopy trees following Hurricane Hugo in an old-growth forested wetland. Semi-annual report to the USDA-Forest Service Southeastern Forest Experiment Station, Cooperative Research Agreement No. 29-879. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 14 pp.

Duever, M.J. and J.M. McCollom. 1993. Establishing Transects and Well Sites to Monitor Recovery of Four Wetlands at the Disney Wilderness Preserve. Report to The Nature Conservancy. Naples, Florida: Ecosystem Research Unit, National Audubon Society. 39 pp.

Park, R.A., J.K. Lee, D.W. Crumpacker, and M.J. Duever. 1993. Potential impacts of sea level rise on South Florida natural areas. In Eighth Annual United States Landscape Ecology Symposium, March 24-27, 1993. Oak Ridge, Tennessee.

Stone, P.A., and M.J. Duever. 1993. Holocene sedimentation at Corkscrew Swamp (Collier Co.): A model for the origin and evolution of the present wetland-dominated regime of South Florida. Geological Society of America, Southeastern Section Annual Meeting, April 1-2, 1993. Tallahassee, Florida.

Duever, M.J.* 1993. Environmental control of wetland plant communities. In H. W. Shen, S. T. Su, and F. Wen, eds. Hydraulic Engineering '93, Proceedings of the American Society of Civil Engineers Meeting, San Francisco, California, July 25-30, 1993. pp. 293-298.

Duever, M.J.* and J.M. McCollom. 1993. Hurricane Hugo effects on old-growth floodplain forest communities at Four Holes Swamp, South Carolina. In J. C. Brissette, ed. Proceedings of Seventh Biennial Southern Silvicultural Research Conference, Mobile, Alabama, November 17-18, 1992. pp. 197-202.

Duever, M.J.*, J.F. Meeder, L.C. Meeder, and J.M. McCollom. 1994. The climate of South Florida and its role in shaping the Everglades ecosystem. In S. M. Davis and J. F. Ogden, eds. Proceedings of the Everglades Symposium, Spatial and Temporal Patterns as Guidelines for Ecosystem Restoration, Key Largo, Florida, October 22-27, 1989. pp. 225-248.

* Indicates was associated with a presentation I gave.

Publications Updated 5/93 (Partial 9/94)

E21 (cont.)

UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF FLORIDA
FORT MYERS DIVISION

THE FLORIDA BIODIVERSITY PROJECT; BRIAN HUNT; BRIAN SCHERF; LAUREL ANN SHIVER; BOB BROUNLEY; and CATHERINE S. DEES,

Plaintiffs,

vs.

Civ. No. 95-50-CIV-FTM-24D

ROGER KENNEDY, Director National Park Service; BRUCE BABBITT, Secretary, Department of the Interior; MOLLIE BEATTIE, Director, U.S. Fish and Wildlife Service; CAROL BROWNER, Administrator, Environmental Protection Agency; TOGO D. WEST, JR., Secretary, U.S. Department of the Army; and LT. GEN. ARTHUR E. WILLIAMS, Chief of Engineers, U.S. Army Corps of Engineers,

Defendants.

_____/

Affidavit of David S. Maehr

AFFIDAVIT OF DAVID S. MAEHR

26 September 1995

There is absolutely no published evidence that off-road vehicles (ORVs) disturb Florida panthers in the Big Cypress National Preserve (BCNP) or elsewhere that I am aware of. To target the panther as a natural resource that has suffered from the use of this equipment contradicts available information.

First, Florida panthers exhibit an abundance gradient from northwest to southeast in south Florida. Higher reproduction, better physical condition, and stable demographics are characteristics of panthers using private ranchlands in Collier and Hendry counties, the Florida Panther National Wildlife Refuge, the BCNP addition lands, and the Bear Island Unit of the BCNP. While these areas exhibit a variety of land uses, they are all similar in supporting abundant, productive upland forest, healthy prey populations (white-tailed deer and wild hogs), and ORV use. The landscapes of eastern BCNP and Everglades National Park (ENP), while presumed by many to be important panther habitat, are likely unimportant to the future of this endangered subspecies. As the Plaintiff's Motion for Partial Summary Judgment observed, virtually all of BCNP is covered by wetlands. Panthers prefer uplands where their food, cover, and reproductive requirements can be consistently met. That ENP and BCNP have not been more important to panthers is primarily the result of a predominance of low productivity soils, sparse forested cover, inundated landscapes, and low prey densities. Even a complete moratorium on ORV use in BCNP would not change this pattern.

It is instructive that the only local panther population in Florida to have experienced extinction during the last decade was in ENP where hunting and ORV use have been banned for a half century. Eastern BCNP has supported a very sparse panther population in the face of moderate to light hunting and ORV use. In contrast, Bear Island annually sustains the highest ORV and hunter density in BCNP and yet has exhibited more panther use and reproduction than any other unit of the preserve. This is not to say that there is a cause and effect relationship between high ORV use and panther abundance, but merely points out that the reasons for panther population distribution and performance are more likely the result of other factors unrelated to ORVs or hunting.

For several years, the NPS has enforced a system of designated trails in Bear Island that appear compatible with wildlife. An example of this was exhibited by an adult female panther during 1993. Number 48 denned in late October and gave birth to her first litter (2 females, 1 male) in a saw palmetto thicket near a heavily used ORV trail in north central Bear Island. After her one-week-old kittens were handled by researchers, #48 moved her litter across the designated trail to another palmetto thicket equidistant from the same trail but on its north side. For the next two months, during the peak of the general gun season, #48 maintained a normal pattern of movements and den attendance despite heavy ORV traffic within 50 yards of her den, the discharge of firearms, and the presence of hunters on foot throughout the area surrounding her den and within her hunting grounds. In addition, toward the end of the denning period in December, a prescribed fire was inexplicably set by the National Park Service (NPS) that burned to the edge of the palmetto thicket

E21 (cont.)

containing #48's den. With the exception of entering her original den and handling her kittens, none of these activities appeared to alter #48's behavior (it is my understanding that the NPS monitored vehicle traffic on the designated trail, so it is possible that these data may still exist, and may be a useful yardstick for documenting quantitatively the level of ORV use that this panther tolerated). The key to this apparent compatibility seems to be the fact that hunters are active primarily during the day, while panthers are primarily active between sunset and sunrise. Further, the designated trail system limited ORV traffic to predictable pathways and prevented random, unpredictable movements of swamp buggies and other ORVs. Thus, just as wading birds, waterfowl, and other wildlife that use roadside waterways (canals, drainage ditches, etc.) become accustomed to heavy automobile traffic such as is found along US 41, CR 951, and SR 29, panthers appear to adjust to human activities when a repeating pattern exists.

The future of the panther in Florida depends on the management of large, contiguous forests, not on elevating perceived symptoms of problems that are no more than distractions to panther recovery. Unfortunately, due to the natural patterns of soils, primary productivity, and hydrology of all NPS lands south of I-75, it is unlikely that the value of this predominantly wetland landscape can be improved for panthers. At best, this vast area can remain connected to a larger system of public and private lands that supports the bulk of the panther population and produces most of its reproduction. Only drastic drainage, fertilizing, and revegetation campaigns could convert the eastern BCNP and ENP to better panther habitat. But in these more enlightened times of 'ecosystem management', such actions would be contrary to more important issues related to hydrological restoration, pollution control, exotic plant control, esthetics, and the management of many plant and animal species dependent upon wetlands. Further, the continual targeting of sportspersons as a measurable negative influence on panthers serves only to alienate a segment of the public that is an important ally in panther recovery.

My opinions on the relationships between ORVs and panthers stem from over 8 years of experience studying the Florida panther and supervising field research for the State of Florida (1985-1994). During this time I authored or co-authored many refereed journal papers that provide the bulk of the written, empirically-based information on this subspecies. I have appended my curriculum vita which contains a list of publications that detail panther data and their interpretation relative to habitat use, activity patterns, reproduction, mortality, distribution, food habits, and management issues.

Prepared by David S. Maehr

State of Florida

County of Collier

The foregoing instrument was acknowledged before me this 29th day of September 1995, by DAVID S. MAEHR who is personally known to me.

Notary Public Ronnie Dichio

RONNIE DICHIO
MY COMMISSION # CC205727 EXPIRES
May 11, 1997
BONDED THRU TROY FAIN INSURANCE INC.

CURRICULUM VITA
David S. Maehr

Office Address: Wilkison & Assoc., Inc.
3506 Exchange Ave.
Naples, FL 33942
(813) 643-2404

Home Address: 331 27th St. NW
Naples, FL 33964
(813) 455-8122

Personal History: Born - Fairbanks, Alaska, 9/18/55
Married - 11/5/77
Wife - Diane
Son - Clif (15)
Daughter - Erin (13)
Interests - Swimming, Birdwatching, Photography, Drawing, Backpacking
Height: 5' 10", Weight: 170 lbs.

Education: University of Florida, Gainesville 5/94-
Dissertation Subject: Carnivore community ecology in southwest Florida (PhD candidate 7/1995)
Committee Chairperson: Dr. L.D. Harris

University of Florida, Gainesville 1/79 - 12/80
Degree: M.S. Wildlife Ecology
Thesis Title: Avian abundance and habitat preferences on new habitats created by phosphate mining
Major Professor: Dr. Wayne R. Marion

The Ohio State University, Columbus 9/73 - 6/77
Degree: B.S. Wildlife Management
Advisor: Dr. Thomas W. Townsend

Belmont Technical College, St. Clairesville,OH 9/78-12/78
Course: Explosives and blasting
Purpose: State Certification (No. 10258)

University of Cincinnati, College of Design Art and Architecture, 6/75 - 8/75
Course: Drawing and Perspective

Certified Wildlife Biologist: 2/27/83

E21 (cont.)

EMPLOYMENT & EXPERIENCE:

Senior Biologist
Wilkison & Associates 2/94 -

I provide technical services such as designing and conducting bird and mammal surveys, and vegetation and wetlands analyses for clients ranging from local and state agencies to private corporations involved in natural resources issues. A significant portion of my time is spent trouble-shooting conflicts between private property owners and natural resources agencies. These interactions allow the application of creative solutions to traditional problems inherent to permitting and development.

Biological Administrator I
Florida Game & Fresh Water Fish Commission
11/85 - 2/94

My duties as the south Florida Research Supervisor were to conduct field research on endangered Florida panthers and threatened black bears to provide information needed for their management and recovery. Projects included home range and movement patterns, predator/prey interactions, social interactions, reproductive and recruitment potential, food habits, and impacts of management and disturbance on bears and panthers and their prey. This work resulted in many refereed publications and presentations at local, state, regional, and national conferences.

Biological Scientist II
Florida Game & Fresh Water Fish Commission
9/80 -11/85

In this position I primarily was responsible for designing and conducting research on black bears. Some of these projects included a radio-telemetry study, food habits descriptions, and a beekeeper-bear conflict survey. In addition I also was involved in population and food habits studies of otters and bobcats.

Environmental Affairs Supervisor
Merco Mining, Inc., Moxahala, OH
2/78 - 12/78

In this position I set up and maintained water quality, soil sampling, and reporting programs; advised on state and federal strip-mining rules and regulations; supervised reclamation, prospecting, and explosives operations.

Strip Mine Inspector
Ohio Environmental Protection Agency, Columbus, OH
7/77 - 12/77

Through the National Pollutant and Discharge Elimination System (NPDES) I conducted inspections of strip mines in 26 counties. These activities resulted in enforcement of and assistance complying with Ohio strip mine laws.

Naturalist
4-H Camp Whitewood, Windsor, OH 6/77 - 7/77

I conducted an outdoor education program for 8-15 year-old children, utilizing 200

Natural Resources Assoc. Editor, Artist, Photographer
The Ohio State University, Buckeye Triune Magazine
2/76 - 5/77

I wrote and edited articles pertaining to current natural resources issues, designed layout, and provided illustrations and photographs for covers and articles.

Bird Treatment Center Intern
Huntington Audubon Society, Huntington, NY
6/76 - 9/76

I assisted in surgical operations on injured birds (mainly amputations), prepared bird study skins (mainly from lost patients), and participated in a long-term banding study of least terns.

Artist and Layout Designer
Cooperative Extension Service, Ohio State University
6/76 - 9/76

I created numerous original illustrations for an 8-volume overhead brochure series.

Instructor of Spelunking
Creative Arts Program, Ohio State University 9/75 - 3/76

I instructed students, staff, and faculty on cave biology, history, geology, and caving techniques. This was followed by field trips to caves in Kentucky and Indiana.

Resident Artist
Cincinnati Zoo 1974 - 1977

As a zoo artist I created hand drawn animal illustrations for use on signs, and covers of publications such as Your ZooNews, and Volunteer Voice.

Other Activities:

Member - Florida Panther Technical Advisory Council (appointed by the Governor of the State of Florida) 1995 -

Board of Directors - Florida Ornithological Society 1995 -

Member - Endangered Cats Of Texas and Arizona Recovery Team (USFWS) 1993 -

Vice Chairman - Environmental Policy Technical Advisory Board, Collier Co., Florida 1991- 92

Chairman - Environmental Policy Technical Advisory Board, Collier Co., Florida 1992-93

Vice President - Golden Gate Little League, Golden Gate, Florida 1991- 93

Tour Leader- Florida Audubon Society, Birding in the Dry Tortugas 1986-1991

Member - Florida Committee on Rare and Endangered Plants and Animals (mammals) 1986 -

Editor - Seventh Eastern Workshop on Black Bear Management and Research 1984

E21 (cont.)

Assistant Editor - Colonial Waterbirds 1983-1988

Florida Representative - Southeastern Section of the Wildlife Society/Florida Chapter 1985-1987

Compiler - National Audubon Christmas Bird Count, Hamilton, Co., FL 1979-1984

Co-chairman - Wildlife Graduate Student Council, University of Florida 1980

Vice President - School of Forest Resources and Conservation Graduate Student Council, University of Florida 1980

Student Representative - University of Florida, School of Forest Resources and Conservation Faculty Search and Screen Committee 1979-1980

Referee - J. Wildl. Manage., Proc. Annu. Conf. Southeast. Assoc. Fish Wildl. Agencies., Internat. Bear Conf. Proc., J. Mammal., Fla. Field Nat., Florida Nongame Program, Man and the Biosphere, National Science Foundation, National Geographic Society, Am. Midl. Nat., National Geographic Research and Exploration

Memberships:

The Wildlife Society
Florida Chapter of The Wildlife Society
Southeastern Section of The Wildlife Society
Bear Biology Association
Florida Ornithological Society
U.S. Handball Association
U.S. Masters Swimming Association
National Audubon Society

Awards:

Merit Award for Artwork, National Speleological Society 1974

1st Place, Cincinnati Nature Center Annual Photography Contest 1975, 1978

Agricultural Communications Award, The Ohio Farmer 1976

The Aaron M. Bagg Memorial Award, Wilson Ornithological Society, 1979

Nominated: Best paper, Southeastern Section of The Wildlife Society, 1990.

Wildlife Conservationist of the Year, Florida Wildlife Federation, 1992

Guy Bradley Award, Collier County Audubon Society, 1994

Grants and Contracts

Primary researcher in association with Dr. Wayne Marion. 1979-1980. Impacts of phosphate mining on north Florida bird communities. For Occidental Chemical Company.

Principal investigator in conjunction with the Florida Cooperative Wildlife Unit. 1994. Landscape features and Florida panthers in the southwest Florida agricultural region. For Immokalee Research and Education Center.

Principal investigator with Wilkison and Associates, Inc. 1994- present. An investigation on wildlife community changes on The Habitat, a proposed residential development in Lee County, Florida. For Corkscrew Development Corporation.

Principal field researcher with Wilkison and Associates, Inc. 1994-1995. Conduct wildlife and wetland surveys, and act as wildlife agency contact on issues related to development of the Ford Vehicle Evaluation Center. For Ford Motor Company.

Principal environmental advisor with Wilkison and Associates, Inc. 1994- present. Assist Lee County DOT with wildlife issues related to the proposed 10th state university.

Principal investigator. 1994-1995. Coyote distribution in southwest Florida. For the Immokalee Research and Education Center, University of Florida, Institute of Food and Agricultural Sciences.

Primary researcher in association with Dr. Larry Harris. 1995. Recommendations for reclamation of the DuPont Tract at the Camp Blanding Training Site. For the Florida Museum of Natural History, University of Florida.

Publications

Maehr, D.S., and G.B. Caddick. 1995. Demographics and genetic introgression in the Florida panther. Conserv. Biol. 9: in press.

Maehr, D.S., and J. Cox. 1995. Landscape features and Florida panthers. Conserv. Biol. 9:in press.

Maehr, D.S., E.C. Greiner, J. Lanier, and D. Murphy. 1995. Notoedric mange in the Florida panther. J. Wildl. Diseases 31:251-254.

Maehr, D.S. 1995. Natural resource record custodians need more access education. The Brechner Report 19(8):4.

Maehr, D.S. 1994. The Florida panther: all present and accounted for? In J. Tischendorf, ed. The Eastern Cougar Conference. In press.

Maehr, D.S. 1994. Twilight of the panther- a review. Fla. Field Nat. 17: 86

E21 (cont.)

Glass, C.M., R.G. McLean, J.B. Katz, D.S. Maehr, C.B. Cropp, L.J. Kirk, A.J. McKeirnan, and J.F. Evermann. 1994. Isolation of pseudorabies (Aujeszky's Disease) virus from a Florida panther. J. Wildl. Diseases 30:180-184.

Maehr, D.S. 1993. Activity and diet of an urban population of Big Cypress fox squirrels: a comment. J. Wildl. Manage. 57:929-930.

McBride, R.T., R.M. McBride, J.L. Cashman, and D.S. Maehr. 1993. Do mountain lions exist in Arkansas? Proc. Annu. Conf. Southeast. Fish and Wildl. Agencies 47.in press.

Maehr, D.S., and C. T. Moore. 1992. Models of mass growth in 3 cougar populations. J. Wildl. Manage. 56:700-707.

Maehr, D.S., J. C. Roof, E. D. Land, J. W. McCown, and R. T. McBride. 1992. Home range characteristics of a panther in south central Florida. Fla. Field Nat. 20:97-103.

Hellgren, E., and D.S. Maehr. 1992. Habitat fragmentation and black bears in the eastern United States. East. Workshop Black Bear Manage. and Research. 11:154-166.

Maehr, D.S., E. D. Land, and M. E. Roelke. 1991. Mortality patterns in Florida panthers. Proc. Annu. Conf. Southeast. Fish and Wildl. Agencies 45:201-207.

Maehr, D.S., J. C. Roof, and E. D. Land. 1991. Social ecology of Florida panthers. Nat. Geogr. Research and Exploration 7: 414-431.

Bass, O.L., and D.S. Maehr. 1991. Do recent panther deaths in Everglades National Park suggest an ephemeral population? National Geographic Research and Exploration 7:427

Schortemeyer, J.L., D. S. Maehr, J.W. McCown, E.D. Land, and P. Manor. 1991. Prey management for the Florida panther: a unique role for managers. North Amer. Wildl. Conf. 56:512-526.

Maehr, D.S. 1990. The Florida panther and private lands. Conserv. Biol. 4:167-170.

Maehr, D.S., E.D. Land, J.C. Roof, and J.W. McCown. 1990. Early maternal behavior in the Florida panther. Am. Midl. Nat. 122:34-43.

Maehr, D.S., R. C. Belden, E. D. Land, and L. Wilkins. 1990. Food habits of panthers in southwest Florida. J. Wildl. Manage. 54:420-423.

Maehr, D.S., E. D. Land, J. C. Roof, and J. W. McCown. 1990. Day beds, natal dens, and activity of Florida panthers. Proc. Annu. Conf. Southeast. Fish and Wildl. Agencies 44:310-318.

McCown, J. W., D. S. Maehr, and J. Roboski. 1990. A portable cushion as a wildlife capture aid. Wildl. Soc. Bull. 18:34-36.

Regan, T. W., and D. S. Maehr. 1990. Melanistic bobcats in Florida. Fla. Field Nat. 18:84-87.

Maehr, D.S., J.C. Roof, E.D. Land, J.W. McCown, R.C. Belden, and W.B. Frankenburger. 1989. Fates of wild hogs introduced into occupied panther home ranges. Fla. Field Nat.17: 42-43.

Maehr, D.S., J.C. Roof, E.D. Land, and J.W. McCown. 1989. First reproduction in a Florida panther (Felis concolor coryi) in southern Florida, U.S.A. Mammalia 53: 129-131.

Maehr, D.S., and J.Q. Smith. 1988. Bird casualties at a central Florida power plant: 1982-1986. Fla. Field Nat. 16:57-64.

Maehr, D.S., J.L. Schortemeyer, E.D. Land, and D.K. Jansen. 1988. An unusual nest site for purple martins. Fla. Field Nat. 16:35-37.

Maehr, D.S., J.N. Layne, E.D. Land, J.W. McCown, and J. Roof. 1988. Long distance movements of a Florida black bear. Fla. Field Nat. 16:1-6.

Roof, J.C., and D.S. Maehr. 1988. Sign surveys for Florida panthers on peripheral areas of their known range. Fla. Field Nat. 16: 81-85.

Maehr, D.S., and J.R. Brady. 1986. Food habits of bobcats in Florida. J. Mammal. 67:133-138.

Maehr, D.S., and J.T. DeFazio. 1985. Foods of black bears in Florida. Fla Field Nat. 13:8-12.

Maehr, D.S., and J.A. Rodgers, Jr. 1985. Colonial waterbirds: an elusive definition. Colonial Waterbirds 8:186-187.

Brady, J.R., and D.S. Maehr. 1985. Distribution of black bears in Florida. Fla. Field Nat. 13:1-7.

Maehr, D.S. 1985. The eighty-fifth Audubon Christmas bird count (Hamilton County). Am. Birds 39:576.

Maehr, D.S. and W.R. Marion. 1984. Bird abundance and distribution in a north Florida phosphate mine. Proc. Annu. Conf. Southeast. Assoc. Fish and Wildl. Agencies. 38:111-120.

Maehr, D.S., and J.R. Brady. 1984. Food habits of Florida black bears. J. Wildl. Manage. 48:230-235.

Maehr, D.S., and J.R. Brady. 1984. Comparison of food habits in two north Florida black bear populations. Fla. Scientist 47:171-175.

Maehr, D.S., R.W. Repenning, and H.D. Couch, Jr. 1984. Three unusual waterfowl in north Florida phosphate mines. Fla. Field Nat. 12:105-107.

Maehr, D.S. and J.R. Brady. 1984. Florida status report. Proc. East. Workshop Black bear Manage. Res. 7:2-3.

Maehr, D.S. 1984. Distribution of black bears in eastern North America. Proc. East. Workshop Black Bear Manage. Res. 7:74.

E21 (cont.)

Maehr, D.S. 1984. The black bear as a seed disperser in Florida. Fla. Field Nat. 12:40-42.

Maehr, D.S. 1984. The eighty-fourth Audubon Christmas bird count (Hamilton County). Am. Birds 38:582.

Maehr, D.S. 1984. Status of birds using phosphate-mined lands in Florida. Am. Birds 38:28-31.

Maehr, D.S. 1984. Two field guides (special review). Fla. Field Nat. 12:72-75.

Wenner, A.S., D.S. Maehr, and S.A. Nesbitt. 1984. A leucistic eastern phoebe in Alachua County, Florida. Fla. Field Nat. 12:97-98.

Maehr, D.S., A.G. Spratt, and D.K. Voigts. 1983. Bird casualties at a central Florida power plant. Fla. Field Nat. 11:45-49.

Maehr, D.S. 1983. The eighty-third Audubon Christmas bird count (Hamilton County). Am. Birds 37:552.

Maehr, D.S. 1983. Black bear depredations on bee yards in Florida. Pages 133-135 in D.J. Decker (ed.) Proc. First East. Wildl. Damage Contro Conf. Ithaca, NY.

Maehr, D.S.. 1982. The eighty-second Audubon Christmas bird count (Hamilton County). Am. Birds 36:543.

Maehr, D.S., and J.R. Brady. 1982. Florida black bear-beekeeper conflict: 1981 beekeeper survey. Am. Bee J. 122:372-375.

Maehr, D.S., and J. Hintermister. 1982. A possible white ibis-scarlet ibis hybrid in Alachua County, Florida. Fla. Field Nat. 10:78.

Maehr, D.S., and J.R. Brady. 1982. Fall food habits of black bears in Baker and Columbia counties, Florida. Proc. Annu. Conf. Southeast. Assoc. Fish and Wildl. Agencies. 36:565-570.

Maehr, D.S., M. Conner, and J. Stenberg. 1982. Bird diversity and abundance in three plant communities in Putnam County, Florida. Fla. Field Nat. 10:69-73.

Brady, J.R., and D.S. Maehr. 1982. Florida status report. Proc. East. Workshop Black Bear Manage. Res. 6:in press.

Brady, J.R. and D.S. Maehr. 1982. A new method for dealing with apiary-raiding black bears. Proc. Annu. Conf. Southeast. Assoc. Fish and Wildl. Agencies 36:571-577.

Marion, W.R., D.S. Maehr, and R.K. Frohlich. 1982. Phosphate mine reclamation and habitats for wildlife. Pages 501-506 in Nat. Symp. on Surface Mining Hydrology, Sedimentology, and Reclamation. Univ. of Kentucky, Lexington, KY.

Maehr, D.S. 1981. Bird use of a north-central Florida phosphate mine. Fla. Field Nat. 9:28-32.

Maehr, D.S. 1981. The eighty-first Audubon Christmas bird count (Hamilton County). Am. Birds 35:514-515.

Marion, W.R., T.E. O'Meara, and D.S. Maehr. 1981. Use of playback recordings in sampling elusive or secretive birds. Studies in Avian Biol. 6:81-85.

Maehr, D.S. 1980. The eightieth Audubon Christmas bird count (Hamilton County). Am. Birds 34:476.

Popular Literature

Maehr, D.S. 1982. Beekeeping enters the solar age. Am. Bee J. 122:280-281.

Maehr, D.S. 1982. The adaptable least tern. Fla. Nat. 55(3):7-10.

Maehr, D.S. 1985. The Dry Tortugas. Fla. Nat. 57(4):10.

Maehr, D.S. 1989. Radio telemetry: window on the wildlife world. Fla. Wildl. 43(2): 40-41.

Maehr, D.S. 1990. Tracking Florida's panthers. Defenders 65(5):10-15.

Maehr, D.S. 1993. South Florida black bear research. Fla. Wildl. 47(5):16-20.

Maehr, D.S., and J.N. Layne. 1995. Saw palmetto: Florida's all-purpose plant. Submitted to Natural History.

Maehr, D.S., S.K. Stafford, and H.D. Couch. 1984. Osceola bird colony. Fla. Wildl. 38(4):31-33.

Maehr, D.S., and D. Decker. 1989. What happened to cat #12. Telonics Quart. 2(3):2.

Frohlich, R.K., and D.S. Maehr. 1982. Wasteland wildlife. Fla. Wildl. 35(5):28-31.

Rodgers, J.A., Jr., and D.S. Maehr. 1982. Wading birds and wetlands. Fla. Wildl. 36(2):30-33.

BOOKS

Kale, H. W., II, and D. S. Maehr. 1990. Florida's birds. Pineapple Press. Sarasota, FL. 288 pp. (currently in 5th printing)

Illustrations for:
Harris, L.D. 1984. The fragmented forest. University of Chicago Press.

Forrester, D.J. 1992. Parasites and diseases of wild mammals in Florida.University Press of Florida. Gainesville.

E21 (cont.)

398

SIERRA CLUB The Florida Chapter

office: 954 772-3885
home: 954 202-9263
email: forglades@aol.com

Roderick Tirrell
2101 NE 55 CT
Fort Lauderdale, FL 33308-3111
Date: October 21, 1999

Superintendent Wallace Hibbard
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Superintendent Hibbard,

The Sierra Club appreciates the opportunity to provide written comment on the Big Cypress National Preserve (BCNP) ORV Management Plan. As a result of hurricane Floyd the scheduled public hearings had to be postponed to November 1, 1999. The current resulting schedule will allow little time to review, evaluate, and incorporate comments from the public hearings and meet the November 12th written comment deadline.

Therefore, we request a thirty day extension of the comment deadline. Would you please consider extending the deadline until December 12, 1999? This will allow Sierra Club, recreational users, and Florida residents adequate time to review and evaluate the depth and scope of comments raised at the public hearings. With an extra thirty days we can better contemplate and evaluate issues raised by speakers and incorporate important considerations into our written comments for the final ORV Management Plan. Thank you for consideration of this request.

Sincerely,

Roderick Tirrell
Everglades co-chair
Florida Sierra Club

recycled paper

"... when we try to pick out anything by itself, we find it hitched to everything else in the universe." *John Muir*

TOTAL P.01

E22

FLORIDA BIODIVERSITY PROJECT

1060 TYLER STREET HOLLYWOOD, FL 33019 (954) 922-5828

October 17, 1999

RECEIVED
OCT 21 1999
BIG CYPRESS NATIONAL PRESERVE

Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

RE: Extension of Comment Period

Dear Mr. Hibbard,

The Florida Biodiversity Project (FBP) requests a 30 day extension on written comments for the draft Off-road Vehicle Management Plan and Supplemental Environmental Impact Statement (DORVMP/SEIS). We request the extension for the following reasons:

1. The FBP has still not received a FOIA request dated July 31, 1999. We received a letter from your office dated September 2 stating you were ready to proceed. After two follow-up phone calls, we still have not received the responsive documents. This level of non-compliance is unacceptable. It will therefore take additional time to review these documents and incorporate information into our comments.

2. Due to Hurricane Floyd the public meetings on the DORVMP/SEIS were postponed. Unfortunately, they are now rescheduled for November 1 and November 3 which is very close to the November 12 comment deadline. This time frame would not allow FBP or other reviewers sufficient time to address issues brought up in the public meeting and incorporate them in the written comments.

3. The FBP has received numerous comments about delays in receiving paper copies of the DORVMP/SEIS that apparently were mailed from Denver or the Preserve.

4. The public has also had trouble downloading the DORVMP/SEIS from your website. The entire DORVMP/SEIS was initially put into one large file and was not segmented for easy downloading. Download times are quite long.

We request a response to this letter as soon as possible.

Sincerely,

Brian Scherff

E23

TOTAL P.02

EMMETT F. "FRAN" STALLINGS, PH. D.

Home Address:	Mailing Address:	Phone: 941 992-7832
9835 Delaware St.	Box 366457	Fax: 941 992-2165
Bonita Springs, Florida 34135	Bonita Springs, Florida 34136-6457	Mobile: 941 250-0634
	E'mail: Franstall@aol.com	

October 6, 1999

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

RECEIVED
OCT - 8 1999
BIG CYPRESS NATIONAL PRESERVE

Dear Wally:

I am writing in regards to the Draft ORV Management Plan in behalf of the Responsible Growth Management Coalition, The Environmental Confederation of Southwest Florida and Save The Manatee Club. As you know we have been very concerned about the extensive damage that has occurred on the Preserve as a result of ORV activities. On the basis of this experience we believe that it is incumbent upon the National Park Service to regulate these activities to a much higher level than has been the case in the past. Our basic concerns essentially mirror those of the Florida Biodiversity Project and are as follows:

1. The Draft ORV Management Plan must be all encompassing and include a comprehensive analysis of past and present commercial ORV use.

2. The proposed action must include specific management actions to avoid negative ORV impacts. If impacts cannot be avoided they must be minimized to the maximum extent practicable, not merely reduced.

3. Prohibit ORVs in sensitive wetlands and uplands, areas important to wildlife, or when conditions are such that their presence would cause undesirable impacts.

4. ORV activities must be restricted to a greatly reduced area that includes a designated trail system designed to avoid and minimize impacts. Monitoring and enforcement should be strong and high-density braided trail areas should be closed.

5. Fully analyze the negative direct, indirect and cumulative impacts of ORV use in the past and for all alternatives under consideration for the future. It is especially important to identify and document actual and potential fragmentation and edge effects of the estimated 29,800 miles of existing trails and any new ones that are under consideration.

6. The Management Plan must include specific threshold criteria for unacceptable impacts to soils, hydrology, vegetation, wildlife and recreational conflicts.

7. Any standard to be employed, for example, the 2 psi. ground pressure limit, must be documented as to how it will impact the resources listed under # 6 above and when those impacts will be deemed unacceptable.

8. Specific threshold criteria should be developed addressing the opening, closing and maintenance of ORV trails.

9. ORV use should be prohibited in the Northern Addition Lands because they are vital habitat for the Florida Panther.

10. The plan must meet the criteria of any good management plan in that it includes an ongoing inventory/feedback element, implementation strategies, funding mechanisms, and provisions for research and education.

In closing I think it is important for all concerned to realize that the inherent value of the Big Cypress Preserve goes far beyond that of serving as a playground for the unusually vociferous contingent of hunters and ORV enthusiasts who seem to think that this Preserve is their private playground where they can do as they wish and the rules and all other users be damned.

Thank you for your consideration of our input to the Management Plan.

Sincerely,

Fran Stallings

Fran Stallings, Ph. D.
President, Responsible Growth Management Coalition
Treasurer and Member, Board of Directors, Environmental Confederation of SW Fla.
Co'– Chair, Board of Directors, Save The Manatee Club

CC: Judith Vallee, Executive Director, Save The Manatee Club
Becky Ayesh, Presdient, Environmental Confederation of SW Fla.
Florida BiodiversityProject

400

November 10, 1999

Superintendent
Big Cypress National Preserve
HCR 61, Box 110Ochopee, FL 34141
RE: Big Cypress Wildlife Mgt. Area
Proposed Management Regulations

NOV 2 1999

Dear Superintendent:
Please consider and enter into the public record the following comments regarding the Big Cypress National Preserve ORV Management Plan.

Congress recognized the powerful cultural connection sportsmen have with the Big Cypress region and provided a clear mandate that traditional recreational use of the area was to be protected and enhanced. The proposed management actions are in violation of that mandate.
The Draft ORV Management fails to identify a scientific or biological need for the proposed actions and fabricates alleged adverse impacts to justify unnecessary restrictions designed to reduce traditional recreation.

I strongly oppose the proposed ORV Management Plan, it is prejudicial and unfair to the average working man and will only serve to drive families and their traditions out of the Big Cypress National Preserve. This proposal does nothing to address the real environmental concerns of this unique and beautiful land. ORV use is only a minute part of the entire environmental impact; South Florida Water Management, Department of Transportation, Developers, Farmers and other entities that adversely affect this fragile environment bear an even greater responsibility for impacting our Everglades .
Please keep the Big Cypress open and free for citizens of all socioeconomic backgrounds and stop the unjust regulation of this natural resource.

Thank you. print

Name Lorenzo TORRES
Address 14300 SW 176 TERR.
Miami FL 33177
Signature Lorenzo Torres

F1

RECEIVED
NOV 03 1999
BIG CYPRESS NATIONAL PRESERVE

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

Dear Mr. Hibbard:

Please consider and enter into the public record the following comments regarding the Big Cypress National Preserve ORV Management Plan.

Cultural and Legislative Issues

Congress recognized the powerful cultural connection sportsmen have with the Big Cypress region and provided a clear mandate that traditional recreational use of the area was to be protected and enhanced. The proposed management actions are in violation of that mandate.

The Draft ORV Management fails to identify a scientific or biological need for the proposed actions and fabricates alleged adverse impacts to justify unnecessary restrictions designed to reduce traditional recreation.

Vehicle Specifications

1. I strongly oppose the proposal to impose a maximum airboat width restriction of 6.5 feet. Airboats up to 8.5 feet should be permitted.

2. I strongly oppose the proposal to limit horsepower on airboat engines. Horsepower alone does not determine noise levels, furthermore it is impossible to determine engine horsepower by external inspection.

3. I support continued evaluation of airboat technology for the purpose of reducing sound levels without affecting performance.

4. Proposed maximum ORV sound level of 60 decibels must not be applied to airboats and should be measured with ORV engines at idle speed.

F2

5. "Stumpknocker" is an unfam. ar a : vague term. Regulations must not prohibit bumpers and guards designed to protect engines, running gear, and other equipment from dam- ge by accidental encounters with stumps, rocks and limbs.

6. I strongly oppose the prop to limit vehicles to the arbitrary and unattain able maximum ground pressure . 4 psi. Vehicles must be permitted to apply at least the same ground , ssure as a walking human, which is over 4 psi.

7. The proposed action would prohibit tire chains and undefined "bar grips". Tire chains with a cross-section diameter of link material not exceeding ¼ inch are low impact and should be permitted. The term "bar grips" must not apply to the molded tread designs of rubber tires. The NPS should continue to evaluate new advancements in low impact technology.

8. Owners of ORVs currently regist 1 sho ld be grandfathered exempt from the new specification requirements.

Stairsteps Unit

1. Planners must be made aware that primary airboat trails in this unit were made with bulldozers when the area was farm. i prior to establishment of the preserve.

2. Development of hydrological-based criteria for temporary closures should be based upon documented need for the action and in consultation with the Florida Fish and Wildlife Conservation Commission (FWC) and representatives of the airboating community.

Bear Island

I suppose the continued use of a designated trail system in this unit provided necessary trail improvements are made.

Corn Dance Unit

1. I oppose the NPS proposal to prohibit access into the Corn Dance Unit from state lands on its eastern border. This proposal would result in increased ORV impacts to soil and vegetation in the Corn Dance Unit by requiring preserve visitors to travel several hours overland by swamp buggy to reach this popular destination instead of a short airboat ride through adjacent state land.

2. Designated entry points into the Corn Dance Unit from the Jetport property should be selected in consultation with the FWC and knowledgeable ORV users. They should be sufficient in number and appropriately located so as to avoid increased ORV impacts caused by unnecessary detours.

401

Florida National Scenic Trail

The hiking trail should be rerouted to avoid possible conflicts with ORV use. As the trail will have a 1/4 mile ORV-free buffer, consultation with the FWC and representatives of the ORV and hiking community is necessary in order to select the optimal route and ORV-crossing sites.

Access and permitting

1. Access and parking facilities should be provided at the level identified in the General Management Plan.

2. Stabilized trail heads are unnecessary and expensive to maintain, however, if the NPS desires them for aesthetic purposes they should be short in length so as not to spoil the back country experience in designated use areas. Proposed trail heads up to a mile in length would be excessive and would result in vast area being closed to traditional access and enjoyment.

3. ORV users must not be required to enter and exit at the same access sites as to do so would eliminate the enjoyment of cross-county excursions.

4. The cost of ORV permits should be structured to cover administrative costs only, such as inspecting equipment, maintaining records, and issuing the permits. ORV use in the preserve is a traditional activity, not a "Special park Use" subject to direct cost guidelines which would increase permit fees to as high as $200 per vehicle. The proposed permit fee increase is discriminatory and is designed to reduce use by eliminating ORV access to low income families or multiple vehicle owners.

Very truly yours,

1705 N. Riverside Dr
Pompano Beach, FL 33062

11/1/99

p.s. Please add my name to your mailing list for future ORV Management proposals.

F2 (cont.)

402

August 16, 1999

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 11
Ochopee, Florida, 34141

RECEIVED
AUG 23 1999
BIG CYPRESS NATIONAL PRESERVE

Dear Superintendent Hibbard,

I would like to take a few minutes and comment on the proposed OHV Management Plan for the Big Cypress National Preserve (BCNP). Of the alternatives offered, the preferred alternative is generally acceptable with a few caveats:

General Comments:
OHV use is clearly being discriminated against throughout the document and, once again, is the target of inappropriate and unnecessary restriction and outright prohibition despite years of traditional use and with minimal legitimate reason. Your agency has again caved to the anti access lobby.

OHV permits will cost between $125 and $200 per ORV. This is being enacted under the concept of 'user pays', which is favored by Congress and established in NPS Director's Order #53. In the case of the Big Cypress National Preserve it is not acceptable for the following: The use of OHVs was initiated by the NPS during Congressional testimony thus the concept of DO #53 is not applicable. The use of OHVs was a preexisting activity before the NPS gained control of the land and has been in continual use since. The activity is a standard and traditional activity that is allowed by the enabling acts, thus this large fee is neither required nor legal. At this time no other user pays any use fee. It is grossly inappropriate to single out the traditional user groups for fee assessment, the OHV and other traditional visitors to BCNP should not be assessed a user fee that is out of line or inconsistent with the user fees of other groups of visitors. As it is, OHV users, hunters and fishermen are prohibited from several areas of the Preserve in spite of the current, disproportionate, use fee, to now propose to assess this one group of traditional users a prohibitively high use fee for only a portion of the available area while charging considerably less, or nothing, to groups able to utilize and enjoy the entire preserve is unreasonable and could be considered malicious or capricious in nature. Please eliminate the proposed, discriminatory, fee structure.

Traditional uses, specifically OHV use, hunting, and fishing are specifically authorized in both the original enabling legislation and were expanded and strengthened in the addition legislation. These activities should be cornerstones to the management plan and not something to be discriminated against to the degree that this plan does, in the hopes that these guaranteed traditional uses are driven from the preserve. This outrageous fee structure seems to be an obvious attempt to do just that, which, I believe, is an affront to the intent and the vision of those who set aside the BCNP for future generations.

Specific comments:

OHV design criteria:
NO stump knockers; I do not support the removal of this vital equipment from OHVs using the area.

Any style tire tread is to be allowed; I can support this design criterion.

NO chains, NO bolt on cleats or steel; This does not pertain to track vehicles and I can support this part of the plan.

Airboats can have existing hours power; this is a good idea.

Airboat prop noise will be continually evaluated for ways to reduce the noise and airboat mufflers will be continually evaluated for ways to reduce the noise; this is not a bad idea but must not be mandated in a manner that will cause financial hardship on these users.

Owners will have 5 years to get their equipment in order; This is should be dropped to allow all existing OHVs to operate as designed and grandfathered to the current owner. This equipment has been operating as built since the BCNP was created in 1974 and has done no harm to natural resources. Only the new equipment should have the new rules applied to them.

ATVs are to have 1.5 pounds per square inch on the ground with a 200-pound load used to compute the psi; ATVs should have the same 2-psi ground contact values to use as the other OHVs and the 200 pound (man load) should be dropped.

Specific areas:
Loop Road, Deep Lake will see no change; both of these units must have center OHV trails returned to them as they had before the NPS took control of the property. There are very few people who use these areas because OHVs have been banned.

Bear Island will maintain the current trail system but be continually evaluated for potential impacts on the Florida Panther. And, the trail system will be continually improved to help keep OHV operators on the trails. This is acceptable to me. The NPS must continue to work with users groups to locate proper trail placement.

Turner River Unit:
The National Scenic Hiking Trail will be re-routed to avoid conflicts with OHV use. This has long been a goal of the ORV folks as the hiking trail was built on a historic OHV trail.

The NPS must work with State of Florida's Fish and Wildlife Conservation Commission and knowledgeable local OHV users to not cause large areas of the Preserve to be closed to OHVs to reduce impact on hiking trails.

The OHV entrance locations will be reevaluated. I can support this, but as above, the NPS must work with these people to make sure the locations are properly located.

No OHV operation within a certain distance of any highway; There is no problem with this item as long as entry points are connected by backcountry trails.

Trailheads will have stabilizing material placed on the ground for a distance from the highway and all OHV use must use these Trails. There is no problem with this as long as the OHV users are not charged with the cost of developing and maintaining. These improvements are neither needed nor wanted by the OHV users but are a demand by the anti-OHV people. Thus the cost should be incurred by those same requesters, and is not to be sent to the OHV users under the concept of the 'user pays." These trailheads have been in continual use since the 1930s.

F3

Corn Dance Unit:
No eastern access; this means the "jump-over" will be closed. This is not acceptable, as OHV users will have to use a 28-mile cypress trail as opposed to an airboat trail. Thus greater pressure will be placed on the cypress trail.

Designated entry points into Corn Dance from the Jetport Unit. This is acceptable as long as the NPS again works with the Florida Fish & Wildlife Conservation Commission FFWCC and ORV users to site these designated access sites.

Stair Step Unit:
Hydro based criteria for opening and closing. In the real world this restriction is not needed, when the water is gone the airboats cannot work properly, thus the activity is self-regulating. The NPS must, again, work with the FFWCC and airboat users to make sure that this component is acceptably developed in a manner that does not prevent or unduly restrict airboat use. Additionally, property owners originally made the major airboat trails long before the NPS gained control of the land.

Thank you very much for your kind attention to my concerns and for the opportunity to help manage our public lands.

Sincerely,

Terry Rust
118 Beryl
Los Alamos, NM 87544

F3 (cont.)

Mr. Wally Hibbard, Superintendent
HCR 110, Box 11
Ochopee, Florida

RE: Big Cypress National Preserve

Dear Mr. Hibbard:

Subject: Off Road Vehicle (ORV) management for the Big Cypress National Preserve.

1. NO stump knockers; I do not support the removal of this vital equip. ent from ORVs using the area.

2. Pounds per square inches on the ground of 2 pounds per square inch. To figure ground psi take the height of the tire divide it by 2, multiply by the width of the tire, then number of tires and finally divide the weight of the vehicle by the total number of square inches of all tires as figured above. H/2 X idth x T = sq. inch s); weight of machine/s = psi on the ground. I cannot support t as a standard to be adopted by . NPS. The NPS must adopt a 4-psi standard as established by the formula above. The average adult applies 2.5-psi per foot thus while walking each foot applies 5-psi. The 4-psi ORV standard would apply fewer psi to the ground than a walking adult would. Current ORVs are to be grand fathered as they are to the owner.

3. Any style tire tread is to be allow d. I can support this design criterion.

4. NO chains, NO bolt on cleats or steel. This does not pertain to track vehicles and I can support this part of the plan.

5. Airboats can have existing horsepower. This is a good idea.

6. Airboat prop noise will be co ally evaluated for ways to reduce the noise and airboat mufflers will be continually evaluated fo to reduce the noise. This is not a bad idea but must not be mandated in a manner that will cause financial hard these users. Owners will have 5 years to get their equipment in order. Thi is should be dropped to allow all existing ORVs to operate designed and grandfathered to the owner. T s equipment has been operating as build since the BCN created in 1974 and has done no harm to natural resources. New equipment should have the new rules apply to them. Loop Road, Deep Lake will see no change. Both of these units must have center ORV trails returned to them as they had before the NPS took control of the property. There are very few people who use these areas because ORVs have been banned.

Stair Step Unit:

1. Hydro based criteria for opening and closing. The NPS must work with the FFWCC and airboat users to make sure that this component is acceptably developed in a manner that does not prevent airboat use. In the real world it is not needed as when the water is gone the airboat cannot work properly thus activity is self-regulatin. Additionally, property owners long made the major airboat trails before the NPS gained control of the land by the use of a bulldozer. Bear Island will maintain the current trail system but be continually evaluated for potential impacts on the Florida Panther. And, the trail system will be improved so has to help keep ORV operators on the trails. This is acceptable to me. The NPS must continue to work with users groups to locate proper trail placement.

Turner River Unit:

1. The National Scen tiking Trail will be re-routed to avoid conflicts with ORV use. This has long been a goal of the ORV folks as the hiking trail was built on an ORV trail.

2. There will be a no ORV use zone of ¼ mile on each side of this trail read the Hiking trail plan from many years ago, with ORV crossing locations. I have no problem with this measure but the NPS must work with State of Florida's Fish and Wildlife Conservation Commission and knowledgeable local ORV users so as not to cause large areas of the Preserve to be closed.

3. The ORV entrance locations will be re-evaluated. I can support this but as u em 2 the NPS must work with these people to make sure the locations are proper.

RECEIVED
SEP 28 '9
BIG CYPRESS NATIONAL PRESERVE

F4

404

4. No ORV operation within a certain distance of any highway. One cannot cross the swamps at one location, run along the highway, and come out at another entrance location. There is no problem with this item as long as entry points are connected by backcountry trails. 5. Trailheads will have stabilizing material placed on the ground for a distance, ¼, and ½ to a mile, from the highway and all ORV use must use these Trails. There is no problem with this as long as the ORV users are not charged with the cost of developing and maintaining. These improvements are neither needed nor wanted by the ORV users but are wanted by the anti-ORV people. Thus the cost is not to be sent to the ORV users under the concept of the 'user pays." These trailheads have been in continual use since the 1930s

Corn Dance Unit:

1. No eastern access; this means the "jump-over" will be closed. This is not new they wanted to do this in the GMP because the Rangers cannot control the access like they can at other access places on the road ways. This is not acceptable, as ORV users will have to use a 28-mile cypress trail as opposed to an airboat trail. Thus greater pressure will be placed on the cypress trail.

2. Designated entry points into Corn Dance from the JetPort Unit. This is acceptable as long as the NPS again works with the FFWCC and ORV users to site these designated access sights.

3. ATV's are to have 1.5 pounds per square inch on the ground with a 200-pound load used to compute the psi. ATV's should have the same 2-psi ground contact values to use as the ORV and the 200 pound (man load) should be dropped. ORV permits will cost between $125 and $200 per ORV. This is idea is promulgated because of the concept of 'user pays', which is favored by Congress and established in NPS Director's Order #53. The use of ORVs was initiated by the NPS during Congressional testimony thus the concept of D.O.#53 is not applicable. The use of ORVs was a preexisting activity before the NPS gained control of the land and has been in continual use since. The activity is a standard and traditional activity that is allowed by the enabling acts thus this large fee is neither required nor legal. NO other user of the Preserve, at this time, pays any use fee. We have reasonable fees today. Please enter my letter into the Federal Register for the Off Road Vehicle General Management Plan of the Big Cypress National Preserve

Sincerely,

Signature

MICHAEL BAXTER Name

19920 DAYTON AVE N Address

SEATTLE, WA. 98133 City, State, Zip

F4 (cont.)

above. The average adult applies 2.5-psi per foot thus while walking each foot applies 5-psi. The 4-psi ORV standard would apply fewer psi to the ground than a walking adult. Current ORVs are to be grand fathered as they are to the owner.

3. Any style tire tread is to be allowed. I can support this design criterion.

4. NO chains, NO bolt on cleats or steel. This does not pertain to track vehicles and I can support this part of the plan.

5. Airboats can have existing horsepower. This is a good idea.

6. Airboat prop noise will be continually evaluated for ways to reduce the noise and airboat mufflers will be continually evaluated for ways to reduce the noise. This is not a bad idea but must not be mandated in a manner that will cause financial hardship on these users.

7. I support Airboats having a maximum of 8.5 feet wide at the gunwale and should not be regulated to only 6.5 feet wide. The idea of an airboat is to build a hull that will slide across the grass, soil and water with as much floatation as possible. Thus it is better to not require boats to be narrower. Also the airboat trails do not allow excessively wide boat hulls.

8. The motor decibel value is not be applied to airboats and is to be measured only when the engine is at ideal speed.

9. I support the use of tire chains made with a chain of less than ½ inch diameter. Chain is to be allowed.

10. The term 'bar clear' does not apply to the modeled tread that is on rubber tires and if so is supportable. If it applies to the modeled tire tread design then the term and idea is not supported. Owners will have 5 years to get their equipment in order. This also should be dropped to allow all existing ORVs to operate as designed and grandfathered to the owner. This equipment has been operating as build since the BCNP was created in 1974 and has done no harm to natural resources. New equipment should have the new rules apply to them. Loop Road, Deep Lake will see no change. Both of these units must have center ORV trails returned to them as they had before the NPS took control of the property. There are very few people who use these areas because ORVs have been banned. I do not support the closing of the eastern side of the Preserve to access. This will cause additional pressures on more than 28 miles of buggy trails going north of Tamiami Trail. It will also stop entry to the Preserve by those with a canoe, kayak or motorboat to hunt, fish, camp and sight see by using L-28 canal.

ORV permits will cost between $125 and $200 per ORV. This idea is promulgated because of the concept of 'user pays', which is favored by Congress and established in NPS Director's Order #53. The use of ORVs was initiated by the NPS during Congressional testimony thus the concept of Do #53 is not applicable. The use of ORVs was a preexisting activity before the NPS gained control of the land and has been in continual use since. The activity is a standard and traditional activity, which is allowed by the enabling acts thus this large fee is illegal and initiated by the DOI/NPS in 1974 and 1988. NO other user of the Preserve, at this time, pays any user fee. We have reasonable fees today, which cover the cost of the ORV permitting process

Please enter my letter into the Federal Register for the Off Road Vehicle General Management Plan of the Big Cypress National Preserve.

Sincerely,

Name: William Patrick Mayer

Postal Address: 13320 S.W. 99 PL Miami, FL 33176

Email Address: N/A

Additional Comments:

1) Instead of increasing O.R.V permit fees, I suggest the N.P.S. begin charging campers using the monument lake site a nominal fee. Bear Island should remain free of charge since this site is less frequented and is classified as Primative camping.

(OVER PLEASE)

F5

2) The fees charged to campers at monument Lake shall be based on a per site/per night charge.

3) R.V. campers should be charged an increased fee, over the fee charged to campers using the (Traditional Ten method) which also has less enviromental impact on the area verses R.V.'s. This fee should not exceed $10.. per night/per site for R.V.s, and $2-5.00 for tent sites

4) Although, I'm not in favor of fees for use of bear Island camp ground. I do feel the fees at monum Lake should be applied to increase maintenance at this site as needed.-including better maintenance of Roads-entering and circling camp ground.

5) If item #5 is to be implemented the N.P.s should use the new proposed camping fee to baild/maintain these trail heads. I Donot support this item nor feel its necessary as it defeat the off Road experince and sport.

6) The current O.R.V. fee is reasonable; howeve I feel the permits should expire 1.YR from Dat or month of purchase, instead of the current Jun to June method. Thus, giving O.R.V users fuller use of their permits.

Please consider the above comments
Thank You. W. Patrick [illegible]

405

F5 (cont.)

Dagmar [redacted]: Nye
1200 W Dimond Blvd Lot 1478
Anchorage AK 99515-1562

11/6/99

Dear Sir,

Please protect the resources of Big Cypress National Preserve more effectively by establishing designated trails and controlled access for all motorized vehicles as soon as possible.

Nearly 29,000 miles of this park has user trails with displaced soil, altered vegetation and fragmented wildlife habitat. The draft ORV plan needs to be redone to balance resource protection with recreation. Thank you, Mrs. Nye

F14

406

Date: 8/27/99 8:59 AM
Sender: Wally Hibbard
To: Susan Kaynor
Priority: Normal
Receipt requested
Subject: Fwd:BCNP ORV GMP, Private property issues, hard copy in mail

Forward Header
Subject: BCNP ORV GMP, Private property issues, hard copy in mail
Author: LJMoller@aol.com
Date: 8/21/99 8:17 PM

August 21, 1999

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCT 61 BO 11
Ochopee, Fl 34141

Dear Mr. Hibbard:

SUBJECT: IMPACTS OF ORV PLAN ON AN INHOLDER, L. JACK MOLLER

Mr. Hibbard we had a brief conversation on the phone the other day about the impacts of the proposed ORV management plan on private property owners in the Big Cypress National Preserve. I think we ended the conversation with you having the wrong impression of the total expanse, which I will have to bare to bring my ORVs in to compliance with the arbitrary 2-psi ground pressure. I am going to illustrate to you the total expense for me and I am sure many other property owners will have to bare when this plan is implemented. Of course if this is the way the NPS wants to get rid of the backcountry property owners then I suppose you are on the proper track.

I have four ORVs and none of them comply.

A) This buggy is a home made buggy and I have $32,000 in this machine. It has 23.1 x 26 R2 tires on the back and 13.6 x 26 R1 tires on the front. The machine weighs 4,700 pounds. Rounded down as you stated we would do this 4,500 pounds. A review of your documents shows that the 23.1 tire has 673.8 sq inches per tire for a total of 1,347.6 sq inches. The 13.6 tire is NOT in your ORV plan charts thus by using your formula of (#tires = sq inches) and the Goodyear tire specification book I get 334.56 per tire for a total of 669.12 sq inches. Thus the total amount of sq inches on the ground that this machine has is 2,016.72 sq inches. Multiplying the total sq inches by 2 psi ground pressure I get a figure of 4033.44 pound machine. Thus 4,500 (rounded down weight) minus 4,033.44 tells me I am 466.56 pounds over the allowable weight. Or another way of stating the problem my ground psi is 2.2313459. Thus I am .23 psi over the allowable amount. This .2 psi overage will cost me the following; A) two new tires, 16.9 x 26 at 225 pounds each and $780.45. Then I have to purchase new rims and build new wheels, about $300. I then have to flip the front axle to keep the buggy level that will be another $400. The labor will run about $1,500 do accomplish these corrections. But the real kicker is the weight of the 13.6 tires I am replacing are 123 pounds each. Thus in tire along I am gaining 204 pounds. The tubes, rims and wheels of the new tire will also be additional weight. Thus my 4,700 pound machine, rounded down to 4,500 pounds, is now over 5,000 pounds. Therefore the entire $32,000 machine is no longer useable because I have to change the engine, rear end, and super structure to cut the additional 1,000 pounds in order get the machine to comply with this 2 psi and gain the .2 psi needed to make it comply. Thus if you decided that this machine can be used by me to access my property you have impacted me financially by $32,000 and taken my property because I no longer have reasonable access which I have had.

B) The next machine is the 1972 Jeep truck with four 12.5 x 24 R1 tires. It weights 4,070 pounds and rounded down is 4,000 pounds. Your charts show that these tires give me a 3.9-psi on the ground. There is NO way to modify this machine with bigger tires to make it comply. Taller tires will cause the axles to beak and wider tires will make it too wide to work in the cypress and upland trails. This machine cost me $6,000 to build. Thus you have now taken $38,000 from me with no compensation.

C) The next machine is a buggy built in 1952 and is a Model 'A' engine. It has 10.5 x 26 tires in the rear and 13.6 x 26 tires in the

F25

exploration Off Road Vehicles. As you know these machines exceed the 2-psi
by many pounds.

I would also like to know if the cattle lease holder in Bear Island has to
comply with the 2-psi requirement.

I would also like to know what the NPS is going to do with the majority of
their ORVs as these machines will not met the 2 psi criteria either.

Because we are in the public comment time of the ORV GMP I would appreciate
an answer to these questions soon as possible.

I read where the author, I suppose you, consider the issues raised in
EO12898, Environmental Justice, as not applying because minorities and
low-income people will not be effected. I may not be a minority in the USA
but certainly am in SE Florida. I may not be low-income but being retired on
a fixed income, losing of $46,000 is not a little bit of money. Considering
the amount of additional money being lost because the tires and material
coming off these machines has no market value the price is a great deal more
than $46,000.

I am sure the next step in the removal of the hunters, founders and people
who love the swamp is removal of the private landowners by one technique or
another.

Sincerely,

L. Jack Moller

Cc: Sec. Babbitt
Director Stanton
Joe Browder
Manley Fuller

Received: from imo18.mx.aol.com (198.81.17.8) by ccmail.itd.nps.gov with SMTP
(IMA Internet Exchange 2.12 Enterprise) id 0034AF91; Sat, 21 Aug 99 20:15:18
-0400
Received: from LJMoller@aol.com
by imo18.mx.aol.com (mail_out_v22.4.) id zZPBa02400 (2617);
Sat, 21 Aug 1999 20:17:40 -0400 (EDT)
From: LJMoller@aol.com

front. The
machine weighs 4,060 pounds rounded down it is 4,000 pounds. Your chart does
not have these back tires so gain using the Goodyear specifications and your
formula I compute that each tire has 476.2 sq inches for a total of 952.4 sq
inches. The font tires have a total of (49.2/2 x 13.6 x 2 tires = 669.12)
669.12 sq inches. The total machine sq inches is 1621.52. This would give
me an allowable vehicle weight of 3243.04 pounds. Other words this machine
has 2.46682212 psi on the ground. There is no way to get this machine to 2.0
psi on the ground. I have $8,000 in this machine. You have now taken $40,000
from me.
D) The last ORV I own is a 1947 CJ2-A Jeep this machine weighs 2,520 pounds
with four 12.5 x 15 tires. Since I do not understand your passenger tire
chart, these are tires on this ORV, I will use the 12.5 x 16 agriculture tire
and your chart shows a 2,500 pound machine has 3.02 psi on the ground. There
is no why to increase the tire size on this machine to make it comply without
completely rebuilding it and doing extensive improvement on the drive train.
I have about $6,000 tied up in this machine. You have now taken $46,000
from.

I have to say that the figures in your charts are always on the short side.
That is a tire is reported to have fewer square inches then when the formula
is used to compute the square inches from the Goodyear tire specification
book. Perhaps someone could explain this discovery.

Since I have no machine that complies and if you do not grant me an exemption
to travel to and from my camp via a designated trail/route you have
effectively taken my land.

Further, since you have taken my "private drive" which was so designated by
the previous Superintendent and the right of way was a part of the land
purchase agreement when I purchased land in this location you have laid claim
to my property rights illegally. You are effectively denying me use of my
land.

I would also like to know what you plan to do with the oil and mineral

F25 (cont.)

Date: 8/27/99 9:00 AM
Sender: Wally Hibbard
To: Susan Kaynor
Priority: Normal
Receipt requested
Subject: Fwd:Big Cypress National Preserve ORV management plan

Forward Header

Subject: Big Cypress National Preserve ORV management plan
Author: Mollerd@aol.com
Date: 8/20/99 9:42 PM

August 18, 1999

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 110, Box 11
Ochopee, Florida
Wally_Hibbard@nps.gov

Dear Mr. Hibbard:

Subject: Off Road Vehicle (ORV) management plan for the Big Cypress National Preserve.

The following ORV design criteria is being proposed by the National Park Service:
1. NO stump knockers; I do not support the removal of this vital equipment from ORVs using the area.
2. Pounds per square inches on the ground of 2 pounds per square inch. I cannot support this as a standard to be adopted by the NPS. The NPS must adopt a 4-psi standard as established by the formula above. The average adult applies 2.5-psi per foot thus while walking each foot applies 5-psi. The 4-psi ORV standard would apply fewer psi to the ground than a walking adult. Current ORVs are to be grand fathered as they are to the owner.
3. Any style tire tread is to be allowed. I can support this design criterion.
4. NO chains, NO bolt on cleats or steel. This does not pertain to track vehicles and I can support this part of the plan.
5. Airboats can have existing horsepower. This is a good idea.
6. Airboat prop noise will be continually evaluated for ways to reduce the noise and airboat mufflers will be continually evaluated for ways to reduce the noise. This is not a bad idea but must not be mandated in a manner that will cause financial hardship on these users.

Owners will have 5 years to get their equipment in order. This is should be dropped to allow all existing ORVs to operate as designed and grand-fathered to the owner. This equipment has been operating as build since the BCNP was created in 1974 and has done no harm to natural resources. New equipment should have the new rules apply to them. Loop Road, Deep Lake will see no change. Both of these units must have center ORV trails returned to them as they had before the NPS took control of the property. There are very few people who use these areas because ORVs have been banned.

Stair Step Unit:
1. Hydro based criteria for opening and closing. The NPS must work with the FFWCC and airboat users to make sure that this component is acceptably developed in a manner that does not prevent airboat use. In the real world it is not needed as when the water is gone the airboat cannot work properly thus activity is self-regulating. Additionally, the major airboat trails were made by property owners long before the NPS gained control of the land by the use of a bulldozer.

Bear Island will maintain the current trail system but be continually evaluated for potential impacts on the Florida Panther. And, the trail system will be improved so has to help keep ORV operators on the trails. This is acceptable to me. The NPS must continue to work with users groups to locate proper trail placement.

Turner River Unit:
1. The National Scenic Hiking Trail will re-routed to avoid conflicts with ORV use. This has long been a goal of the ORV folks as the hiking trail was built on an ORV trail.
2. There will be a no ORV use zone of ¼ mile on each side of this trail read the Hiking trail plan from many years ago, with ORV crossing locations. I have no problem with this measure but the NPS must work with State of Florida's Fish and Wildlife Conservation Commission and knowledgeable local ORV users so as not to cause large areas of the Preserve to be closed.

F28

3. The ORV entrance locations will be re-evaluated. I can support this but as
in item 2 the NPS must work with these people to make sure the locations are
proper.
4. No ORV operation within a certain distance of any highway. One cannot
entire the swamps at one location, run along the highway, and come out at
another entrance location. There is no problem with this item as long as
entry points are connected by backcountry trails.
5. Trailheads will have stabilizing material placed on the ground for a
distance, ¼, ½ to a mile, from the highway and all ORV use must use these
Trails. There is no problem with this as long as the ORV users are not
charged with the cost of developing and maintaining. These improvements are
neither needed nor wanted by the ORV users but are wanted by the anti-ORV
people. Thus the cost is not to be sent to the ORV users under the concept of
the 'user pays." These trailheads have been in continual use since the 1930s.

Corn Dance Unit:
1. No eastern access; this means the "jump-over" will be closed. This is not
new they wanted to do this in the GMP because the Rangers cannot control the
access like they can at other access places on the road ways. This is not
acceptable, as ORV users will have to use a 28-mile cypress trail as opposed
to an airboat trail. Thus greater pressure will be placed on the cypress
trail.
2. Designated entry points into Corn Dance from the Jet-Port Unit. This is
acceptable as long as the NPS again works with the FFWCC and ORV users to
site these designated access sights.
3. ATVs are to have 1.5 pounds per square inch on the ground with a 200-pound
load used to compute the psi. ATVs should have the same 2-psi ground contact
values to use as the ORV and the 200 pound (man load) should be dropped.

ORV permits will cost between $125 and $200 per ORV. This is idea is
promulgated because of the concept of 'user pays', which is favored by
Congress and established in NPS Director's Order #53. The use of ORVs was
initiated by the NPS during Congressional testimony thus the concept of Do
#53 is not applicable. The use of ORVs was a preexisting activity before the
NPS gained control of the land and has been in continual use since. The
activity is a standard and traditional activity that is allowed by the
enabling acts thus this large fee is neither required nor legal. NO other
user of the Preserve, at this time, pays any use fee. We have reasonable fees
today.

Please enter my letter into the Federal Register for the Off Road Vehicle
General Management Plan of the Big Cypress National Preserve.

Sincerely,

Name: Donna Moller

Postal Address: 610 NW 93 Ave
Pembroke Pines, FL 33024
Email Address: <A HREF="mailto:Mollerd">Mollerd</A>@aol.com

Additional Comments: I think the current situation surrounding management of
ORVs is not what South Florida sportsmen/conservationist have worked for
since 1969.

Em: Bruce Babbitt, Sec. Of Interior Bruce_Babbitt@doi.gov
Robert Stanton, Region Director NPS
Bob_Stanton@nps.gov

Received: from imo18.mx.aol.com (198.81.17.8) by
ccmail.itd.nps.gov with SMTP
(IMA Internet Exchange 2.12 Enterprise) id 00349771; Fri, 20 Aug 99 21:39:42
-0400
Received: from Mollerd@aol.com
by imo18.mx.aol.com (mail_out_v22.4.) id oJKRa02406 (2618);
Fri, 20 Aug 1999 21:42:38 -0400 (EDT)
From: Mollerd@aol.com
Message-ID: <bba38906.24ef5e0e@aol.com>
Date: Fri, 20 Aug 1999 21:42:38 EDT
Subject: Big Cypress National Preserve ORV management plan
To: Bruce_Babbitt@doi.gov, Bob_Stanton@nps.gov,
Wally_Hibbard@nps.gov
MIME-Version: 1.0
Content-Type: text/plain; charset="ISO-8859-1"
Content-Transfer-Encoding: quoted-printable
X-Mailer: AOL 4.0 for Windows 95 sub 214

F28 (cont.)

410

Date: 8/19/99 8:26 AM
Sender: Wally Hibbard
To: Susan Kaynor
Priority: Normal
Receipt requested
Subject: Fwd:BCNP ORV GMP vs ESA/panther

PLP

Forward Header

Subject: BCNP ORV GMP vs ESA/panther
Author: LJMoller@aol.com
Date: 8/19/99 7:22 AM

Mr. Hibbard, Superintendent
Big Cypress National Preserve

If you did not want 'opinions' in the Clark report and sincethe report is
not statistically valid nor scientificly valid because it is the author
lowered the P values to try and get a "correlation" why would you allow this
following to be placed in the ORV plan?

"A study by Clark and Janis (1999) found a correlation between panther
movement and home range shifts and higher levels of human activity associated
with hunting."

Jack Moller
610 NW 93 Ave
Pemrbroke Pines, Fl
33024
Received: from imo12.mx.aol.com (198.81.17.2) by ccmail.itd.nps.gov with SMTP
(IMA Internet Exchange 2.12 Enterprise) id 00343060; Thu, 19 Aug 99 07:19:47
-0400
Received: from LJMoller@aol.com
by imo12.mx.aol.com (mail_out_v22.4.) id zVVNa05141 (4555);
Thu, 19 Aug 1999 07:22:45 -0400 (EDT)
From: LJMoller@aol.com
Message-ID: <b6f12a6c.24ed4304@aol.com>
Date: Thu, 19 Aug 1999 07:22:44 EDT
Subject: BCNP ORV GMP vs ESA/panther
To: Wally_Hibbard@nps.gov, Carolyn_Kriz@nps.gov
CC: Wildfed@aol.com, floridahunter@worldnet.att.net, rcs@flinet.com,
autoexp@gate.net, ml281@juno.com, Swamp121@aol.com, corkyl@icanect.net,
gatordan@mailexcite.com, atejon@sprintmail.com, HHouse5700@aol.com,
DOC@jcstructural.com, BARJNPWLL@aol.com, LJMoller@aol.com,
RJ005@aol.com, qanodize@bellsouth.net,

Date: 10/8/99 10:31 AM
Sender: Wally Hibbard
To: BICY Assistant Superintendent; Ron Clark; Peg Kohl; Susan Kaynor
Priority: Normal
Receipt requested
Subject: Fwd:Money for ORV trails

Forward Header

Subject: Money for ORV trails
Author: LJMoller@aol.com
Date: 10/7/99 10:26 PM

Wally Hibbard, Superintendent
Big Cypress National Preserve

Funds for ORV trails.

You apparently have a lot of money in DC to do what you want me to pay for.
I suggest your staff look for ways to be creative in obtaining these funds.
The following was taken from the Christian Science Monitor:

"With 500,000 members and a handful of American and Japanese ORV manufacturers contributing to the cause, the coalition earlier this year was
instrumental in persuading Congress to fund the $270 million Recreation
Trails Program. Under the program, some hiking and horseback-riding trails
will be converted to accommodate wide-bodied ORVs."

Jack Moller
Received: from imo14.mx.aol.com (198.81.17.4) by ccmail.itd.nps.gov with SMTP
(IMA Internet Exchange 2.12 Enterprise) id 0005F455; Thu, 7 Oct 99 22:25:37
-0400
Received: from LJMoller@aol.com
by imo14.mx.aol.com (mail_out_v23.6.) id zUJZa02563 (3961);
Thu, 7 Oct 1999 22:26:08 -0400 (EDT)
From: LJMoller@aol.com
Message-ID: <0.e4b2bfb.252eb040@aol.com>
Date: Thu, 7 Oct 1999 22:26:08 EDT
Subject: Money for ORV trails
To: Wally_Hibbard@nps.gov
CC: Wildfed@aol.com
MIME-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Content-Transfer-Encoding: 7bit
X-Mailer: AOL 4.0 for Windows 95 sub 214

Lee Grayson
3411 Canal Street
Naples, FL 34112

DEC - 8 1999

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Mr. Hibbard or to whom to it may concern,

I wish to express my opinion on the new Big Cypress Draft plans. I find that we do not tear up the swampland as much as we are accused. The things that are killed grow back in time. It seems that we are doing the ground a service by aerating the soil for new growth to flourish. Perhaps the area needs a respite from off road vehicles, yet there is no alternative place to hunt, and ride for recreation. For instance the Fakahatchee Strand has been closed, when it could have been used as an alternate for a season. The Everglades National Park area, State Conservation Area and Big Cypress National Reserve could all be alternated yearly to give each area time to rejuvenate.

There are many people who turn to the woods to get away from the pressures of working life. If we reserve these places, yet no one gets to see or experience the wonders of the everglades, whom is this plan benefiting? Is it benefiting our children who do not know what it is like to camp outside and survive, without facilities and pools and stores nearby? Is it benefiting the working class who pays the taxes to maintain these beautiful parks but are not allowed to enjoy them? How am I expected to build a buggy that only applies 2 pounds per square inch, when a 6ft. man weighing 200 pounds applies 5.5 psi.? Furthermore, what happens when that lightweight buggy breaks down, supplies are exhausted and my 70-year-old grandfather does not survive?

Three generations of my family have been hunting and riding on buggies in the swampland for years. We are law-abiding citizens that work hard for a living. We deserve to have a place to call our own and carry on the family tradition to the generations to come. A compromise to suit all sides would be gladly accepted. But we can not accept such a biased proposal, cutting the people who use the swampland out of the picture.

Sincerely,

Lee Grayson
Concerned Citizen

411

F32

Jerron K. Hull
POB 694
LaBelle, FL 33975

DEC 10 1999

December 8, 1999

Mr. Wallace K. Hibbard
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Re: Off Road Vehicle (ORV) Management Plan SEIS public comment

Dear Mr. Hibbard,

After review of the proposed ORV Management Plan (ORVMP) I would like to submit the following comments for public record.

As a landowner in the Big Cypress National Preserve (BCNP) I support the preservation of the diverse flora and fauna found only in the BCNP. I recognize the appearance of a dichotomy the National Park Service (NPS) faces when it is socially charged to protect the ecosystem indefinitely and legislatively required to continue customary and traditional uses of the BCNP.

I support ORV management that would strike a median between these two responsibilities. While this is not an easy task, the future enjoyment and protection of the BCNP is at stake.

I cannot however, support the NPS recommendations as laid out in the ORVMP. I feel that the reduction to two pounds per inch squared of ground pressure is overly restrictive and arbitrarily derived with the intent of being restrictive. The examples sited to bring an ORV into compliance are over simplified and therefore inaccurate. Additionally restricting the overall width to eight feet flies in the face of reduced ground pressure due to the consequential election of wider tires.

I object to designated trails and access points which will lend itself isolated overuse and will ultimately be detrimental to the BCNP.

I feel that as the plan stands now, it is excessively restrictive and would be in violation of the legal duty to provide for customary and traditional uses.

I appreciate the opportunity to provide comments on this important issue.

Sincerely,

Jerron K. Hull

cc: Richard Pringle esq.
Guy Strayhorn esq.

F34

412

DEC - 9 1999

CYPRESS NATIONAL PRES

Neal F. Eichholz
P. O. Box 1153
Crawfordville, Florida 32326

December 6, 1999

Mr. Wally Hibbard
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

Dear Mr. Hibbard:

Re: Big Cypress ORV Management Plan, SEIS

I have reviewed the Draft Recreational ORV Management Plan Supplemental EIS and I have the following comments:

- Under the proposed action alternative, I favor ORV specifications that prevent or reduce resource damage and noise pollution (Strategy 9; Tactics 9.1 and 9.3).
- I do not support Tactic 9.2, which regulates access to the Preserve.

One of the primary purposes for the establishment of The Big Cypress National Preserve was to ensure the preservation, conservation, and protection of recreational values of the Big Cypress Watershed. As a current recreational user of the Big Cypress National Preserve, I am also committed to ensuring the area's protection and preservation. While I endorse ORV modifications that will protect the area's resources, I also want to ensure that ORV specifications are not unduly restrictive for the recreational user. Examples of modifications to vehicle weight and/or tire size in the SEIS document provide inadequate information for recreational users to determine how difficult or burdensome it would be to comply with the proposed maximum ground pressure standard of 2 psi.

I recommend further clarification regarding the impact of proposed ORV vehicle specifications. Such clarification should provide detailed information about the specific modifications that are necessary to make existing ORVs compliant. Only with this type of specific information can we ensure that ORV specifications are not unduly restrictive for the recreational user.

I appreciate the opportunity to provide comments on this important issue.

Sincerely,

Neal F. Eichholz

F35

Shane Snell
13410 Snell Lane
Bonita Springs, Fl 34135

Superintendant
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

12/13/1999

Dear Mr. Hibbard:

In response to the Draft ORV Plan prepared by the NPS, I would like to comment that while I agree with the need to address ORV use and develop a successful strategy, I totally disagree with almost every aspect of the proposed action. The proposed plan does not use rational and justifiable knowledge of the area, ORV's, and their owners to reach the unnecessary restrictions that it does. I would like to discuss the impact these proposals would have on my family and I, other problems I have with the plan, and some suggestions I have that would help facilitate the development of a successful management plan.

My father constructed his swamp buggy over 26 years ago, creating a buggy that was light weight, compact, and self sufficient. The whole concept was to create a buggy that would 'float' on top of the muck, rather than dig down and sink. Comprised of a small 4 cylinder motor, narrow light duty Jeep running gear, airplane tires with chains, and weighing 2,600 lbs., this combination has proved both environmentally friendly, and a successful way to travel, except when encountering the ruts of a larger, heavier buggy. With an overall width of 66 inches, a wheel-base length of 89 inches, it is also very easy to maneuver in tight trails, with minimal damage to vegetation. Even though this buggy does less damage than almost any other buggy that could possibly be built, it would become obsolete under the proposed plan. Even though the 17.00-16 airplane tires are perfect flotation tires, they do not meet the irrational 2 psi. ground pressure limit. Also, even though the chains we use on the tire do not protrude more than half an inch from the tire surface, they would be banned as well. It seems totally absurd that in order to comply with the provisions of the new plan, we would in effect be creating a buggy that would be more harmful to the environment. A larger tire with 4 inch deep V-shaped tractor tread, could be used as long as it met the 2 psi. requirement. In this case, we would have to upgrade the running gear to at least ¾ ton in order to handle the stress of turning a larger tire. A larger motor, V-6 at a minimum, and heavier transmissions would be needed to complement the upgrade. These upgrades would add at least 1,500 lbs. to the overall weight, and 20 inches to the width.

F36

After compliance, the resulting buggy would be more damaging to the soils due to its deep tractor tread, trees and vegetation because of its increased width, and both soils and vegetation because of an overall weight increase. Historically speaking, this buggy fits the profile of the first buggies ever used in the area, however there has been a trend in recent years of buggies being larger, utilizing bigger motors, heavier running gear, and deeper treaded tires. It is totally unacceptable that this buggy should be banned because of the exponential increase in size and weight of other buggies being used.

This plan not only unfairly punishes the ORV user economically, it also fails to comply with congressional mandate by denying access and damaging the cultural and recreational values that they enjoy. ORV use is a legal, traditional activity, not a 'special privilege', and therefore the direct costs of mis-management in the past and proper management in the future should not be unfairly placed on the permit holder. While Federal Law prohibits discrimination on the basis of income, tactic 12.1 states "Visitors with less commitment to ORV riding or with less wealth will reduce or discontinue their use". While Public Law 100-301 requires "...establishing access points and roads for traditional recreational opportunities, hunting, fishing, and other purposes" for the addition lands, eleven years later there is still no access to the addition lands, and tactic 12.3 states that "visitation reduction is achieved by increasing the difficulty of access...". It is difficult to comprehend that the NPS would allow 2,500 permit holders to pay up to $200 a year, but yet there only be parking available for 360 of these at any given time. What would happen if a permit holder and his family drove four hours to spend a holiday weekend in the Big Cypress, but arrived to find all the parking spaces filled? It is widely known that a number of wildlife groups take advantage of the flawed hunting quota system by applying for numerous quotas in order to keep them from the hunters, and this type of activity could easily occur if restrictions were placed on parking as well. The NPS does need to waste $2.7 million and destroy acres of wetlands on the access points as is currently planned. Where is the proof for the need of increased enforcement and monitoring? It states on page 31 that "Currently, enforcement is not a problem because most of the preserve visitors comply with the regulations." The NPS administers an ORV plan and monitors the preserve currently, so what need is there other than some adjustments? The 265 horsepower limit on airboat engines to reduce noise is an unjustified requirement, as a 500 horsepower motor when properly muffled can be made just as quiet.

The only way there will be a truly successful and fair ORV management plan, is for there to be more communication with the ORV users, more studies to reflect ORV use patterns, analysis of unbiased scientific studies, and a common sense approach to develop strategies and tactics. It is stated on page 42 that there is no accurate data on ORV-related visitation, however on page 17 a backcountry use permit system would be developed. It seems logical to me, that a backcountry permit system/survey could be implemented to analyze ORV use, including data such as number of riders, registration number, destination, length of time, and possession of hunting quotas. The points of entry, exit, and destination of ORV users is very critical data that should be obtained and evaluated before making any decisions on adding, deleting, or improving access points. An example of a common sense approach to access points is access to the Turner River Unit. Access from Turner River Rd east into the preserve could be limited to 15 to 30 ORV's if the plan is approved, which is incomprehensible considering the size of the Turner River Unit, and the beneficial recreation it provides. In fact, more access points across the Turner River Canal would reduce impacts to the environment. As noted on page 51 (ORV Plan), ORV users are very likely to reach a favorite destination, and if that favorite destination is in the Turner River Unit, then increasing access points on Turner River Rd would reduce the congestion of ORV use on these three access points. Another concern is that while it is known that hunting is highly associated with ORV use, the hunting factor should not be considered in the decision making process, as hunting is a separate, and independently controlled activity.

ORV users are dedicated to cooperating with the NPS and all of those concerned, but there needs to be more communication among all of those involved. ORV users are very concerned, and against any further restrictions and closures, as there has been enough taken away already. I point to the fact that two units have been wrongly and permanently removed from ORV use, and that use of Addition Lands from 1988 has still not been addressed. Maps detailing areas of disturbance, mailings to all ORV users of potential actions, would be just a few ideas that would help. ORV users want to help, we just want to be included in the decision making process, and not have unwarranted restrictions forced upon us. I thank you very much for giving me an opportunity to state my case, and voice my opinions.

Sincerely,

Shane Snell

F36 (cont.)

414

November 11, 1999

RECEIVED
NOV 15 1999
BIG CYPRESS NATIONAL PRESERVE

Big Cypress National Preserve

Recratoinal Off Road Vehicle Management Plan

Public Comment

By

L. Jack Moller
610 NW 93 Ave.
Pembroke Pines, FL
33024

Executive Summary

ORV PERMIT COST:
This section explains how Director's Order #53 is being wrongly applied and includes an email from Mr. Nat Woods to that effect. This is because the ORV activity is neither short term, was initiated by the Department of Interior/National Park Service, is traditional and a standard use of the Preserve, has been continuous since the creation of the Big Cypress National Preserve, the funds are not assured of returning to the Big Cypress National Preserve and are being applied in a discriminatory manner on one user group that is authorized by the enabling act and its amending act, and the cost factor for NPS desired improvements are neither wanted, needed or required by the ORV users but by Florida Biodiversity and NPCA. Thus these groups should fund the actions sought by the NPS in this plan.

TIRE SIZE/GROUND PSI & ORV CONSTRUSTION CRITERIA:
This proves how the desired ORV ground psi of 2 pounds is 60% less than that of a the average walking adult; creates a condition in which ORV owners will not be able to modify their existing equipment to meet the new criteria, and establishes a properly balanced criteria of 4-psi ground pressure as measured by the NPS formula, and establishes serious problems with the tire chart sheets to be used by NPS staff during ORV registration, establishes the fact that two Executive Order sited by the NPS cannot be fully applied to the Big Cypress National Preserve and allow the NPS to adhere to the intent of the enabling acts for the Preserve, establishes that if ORVs are removed from a trail/route until they have completely returned to nature that the ORVs will never use them again because of the rapid regrowth of trees, establishes that it is not possible to create a new trail/route without the cutting of trees which is unacceptable.

ACCESS INTO THE BCNP:
This section provides guidelines to the desires of the NPS to implement these objectives in a manner that will take advantage of the knowledge the ORV users have and the Florida Fish and Wildlife Conservation Commission. It also points out how closure of the eastern boundary will create additional pressure on 28 miles of ORV trails and stop non-ORV, canoeist, kayakers and outboard motor boaters, from accessing that portion of the Preserve.

NATIONAL SCENIC HIKING TRAIL:
This section provides guidance for the NPS to implement this desired objective and concurs with the need to realign the trail as long as it is done in a manner so as not to stop current ORV uses in other areas of the Preserve. It also points out that the National Scenic hiking trail, as admitted in the NPS plan, did not exist before the creation of the Preserve. There was a Florida Scenic hiking trail created about the time of passage of the enabling act and created on old established ORV trails/routes. It establishes the fact that there are millions of acres this user group can go that are currently off limits to the ORV community.

STAIRSTEP AIRBOAT USE:
This section establishes that there is no need for the NPS to implement these objectives and problems that will occur if they do. It restates the author's position to not allow commercial frogging in the Preserve and for the NPS to take effective actions to stop this while not impacting the recreational airboater and fogger.

ADDITIONAL RECOMMENDATIONS:
This section establishes the idea of an educational program for first time ORV permit holders.

ENDANGERED SPECIES ACT ISSUES:
This section establishes the NPS's continued use of "opinionated" research to try and remove hunters and ORV uses via the ESA and supposed panther conflicts. It establishes that the latest research is neither statistically or scientifically valid yet is being used as if it was. The section points out there are now 17 panthers in the Preserve, which is an increase of 11 panther in ten years.

F37

CULTURE:
This section uses the NPS documents to establish that the NPS has not followed their directions to protect the culture of the area. The ORV community and culture is being destroyed every so slowly by the NPS thus the Service is practicing cultural genocide on a targeted community of South Florida.

MORE LIES AND INCONSISTANCIES WITH THE ENABLING ACT: ORV GMP property owners:
This section continues to substantiate the culture genocide being practiced by the NPS through their constant presentation of half-truths and lies, which must be proven wrong by the community. This section also establishes the absence of sanitary standards on the 'Standard' NPS activity of hiking on the National Scenic Hiking Trail.

OTHER USER INTEREST:
This section establishes the fact there is not a need for certain areas of the Preserve to be set-aside for canoeist and kayakers. It establishes the fact that there are adequate areas within and without the Preserve for these user groups to in pursuit of their recreational activities.

LAND RECLAMATION:
This section establish the fact that the existing disturbed prairies do not need to be reclaimed and that the damage was done by other earlier uses. Thus the ORV users should not be charged with this cost.

EXOTC VEGITATION:
This section establishes the fact that ORVs are not the agent causing the spread of exotic plant seeds. This is a popular myth that the NPS has continually tried to perpetuate. The old saying is a lie told long enough and often enough will no longer be a lie.

ENVIRONMETAL JUSTICE:
This section points out that the NPS has not fully and completely applied this regulation to their findings. They have not recognized the proper demographics of the largest county in SE Florida or the financial hardships to be brought on the retired ORVs owners who are on fixed income. They have also not acknowledged the increase in building cost will prohibit many poor members of the over all South Florida community from every developing an interest in ORVs.

WILDLIFE MANAGEMENT:
This section establishes the fact that the preserve superintendent does not have 'discretion' to manage wildlife related activities as stated by the NPS.

CONCLUSION:
This section establishes the fact that the NPS and their supporters are moving with all speed and influence to change the intent of the enabling act and to cause the Big Cypress National Preserve, the first Preserve in the Nation, to become a Park.

INTRODUCTION:

This comment is made by L. Jack Moller, 610 NW 93 Ave, Pembroke Pines, Florida, 33024. I am requesting that it be entered in to the Federal Register as a comment on the Big Cypress National Preserve Off-Road Vehicle (ORV) management plan and Supplemental Environmental Impact Statement (SEIS). The Big Cypress National Preserve was created as the first Preserve in the Nation. It started in 1969 with Mr. Joe Browder, National Audubon Society, and Mr. Cal Stone, Florida Wildlife Federation, President. Mr. Browder had the wisdom to realize the impacts of the planed Dade-Collier Jet-Port located in the eastern portion of the Big Cypress Basin near 20-mile bend. Mr. Browder was not able to get the required momentum needed to move the issue of protecting the Big Cypress. The National Park Service was not interested in adding the land to their ownership. This is thought to mainly be because the land was already heavily used by timber, cattle, row crop, real estate ventures and oil exploration. In other words the land was used too heavily and intensely to meet NPS requirements of untouched property. Mr. Stone being a property owner who owned several sections of land and had a lease on 10 sections of land he, also owned a small cabin (Southern's call these camps), did not want to see the Big Cypress drained and developed thus joined forces with Mr. Browder to create the Big Cypress National Preserve.

Now more than 25 years later the world seems to have forgotten how hard the land was used before the NPS gained ownership. The NPS now considers these non-Federal property owners, camp owners, as undesirable. The NPS and its supports, who supported the creation of the Big Cypress National Preserve in 1974 along with the 175,000 acre Addition lands in 1988, have now decided the historical use of using swamp buggies, airboats and other ORVs as being undesirable. This is happening even though these uses are going on where they were 1928.

The story of the Big Cypress National Preserve is a prim example of why sportsmen working with non-sportsmen cannot happen. Today's desired actions to satisfy new laws and concepts after the land has been condemned and taken from private landowners is simply an excellent example of what sales people call "bait and switch". Sportsmen have worked with non-sportsmen to save 729,000 acres of land with an understanding of how it would be managed yet the Federal Government and new people to the area have developed a different direction they want Big Cypress National Preserve to head. This new direction is toward being a "Park" and not a "Preserve".

It is important to note the title of this document: "Recreational ORV Management Plan". As such it does not apply to private property owners within the boundary of the Big Cypress National Preserve unless these inholders use their ORVs in other ways than going to and from their property. Thus the regulations pertaining to the public's recreational uses of ORVs with the Big Cypress National Preserve do not apply to private property owners.

ORV PERMIT COST:

I have been told that the user must pay for activities, which are not considered as a traditional activity on NPS properties. The activity of using and ORV on the Big Cypress National Preserve is a traditional activity. The activity is allowed by the enabling act and further the Big Cypress National Preserve Amendment specifically states "traditional" activities:

> Public Law 100-301 was passed on April 29, 1988, and increased the size of the Big Cypress National Preserve by almost 175,000 acres of land. It not only increased the size but altered the management language to be applied to the entire Preserve. Section 10 states: " The Secretary and other involved Federal agencies shall cooperate with the State of Florida to establish recreational access points and roads, rest and recreation areas, wildlife protection, hunting, fishing and frogging, and **other traditional recreational opportunities** in conjunction with the creation of the Addition and in the construction of Interstate Highway 75. Three of such access points shall be located within the preserve (including the Addition)."

F37 (cont.)

The term "other traditional recreational opportunities" could include a number of different types of recreational activities. Some will undoubtedly say this means hiking only. However being one of the constructors of the enabling act, along with Mr. Manley Fuller, President of the Florida Wildlife Federation and the National Park Service I assure you that this was not the sole meaning of this phrase. This phrase as discussed at the creation of the bill was to mean the traditional uses at the time of the creation, which includes the use of ORVs. It does not preclude the other uses which the NPS is accustomed to being the only uses on their properties, like hiking and bird watching. Because the NPS and DOI participated with us in the development of this bill, which amended the original act, the activity of ORV use was once again initiated by the NPS.

In an email received from Mr. N. Woods, Special Assistant to the Director, he explains how the purpose of D.O.#53 is to charge for those activities, which are, considered Special Park uses. The use of an ORV in the Big Cypress National Preserve is not a special park use. As this use is prescribed by law and people used the ORV in the Cypress before the Preserve was created in 1974 and then again in 1988 for the amendment.

Subj: Re: Director's orders
Date: 7/29/99 3:33:38 PM Eastern Daylight Time
From: Nat_Wood@nps.gov (Nat Wood)
To: LJMoller@aol.com

Mr. Moller,

Apparently, DO-53: Special Park uses, is still being drafted and has not yet been circulated (even within NPS). We hope to have it issued for public review and comment within the next month.

You are correct that DO-53 does touch on the concept of "the user pays." But that is not really the primary focus of DO-53. The primary focus is on how park superintendents should evaluate requests from individuals, organizations, and agencies who want to use the parks for special purposes – many of which are unrelated to the purposes for which the parks were established. A side issue to that is what the superintendent needs to do to recover the costs associated with administering a special park use and, when authorized by law, impose a reasonable charge for the use granted to the permittee.

I hope this is helpful. -- Nat Wood

_____ Reply Separator _____

Subject: Director's orders
Author: LJMoller@aol.com at NP-INTERNET
Date: 7/28/99 9:38 AM

Mr. Wood
I have been searching the Internet for director's order #53. I cannot locate this item. Can you either tell me how to locate #53, I have found #53A, or send me a copy of #53. I understand this deals with the concept of the user pays.

Thanks
Jack Moller

Received: from imo16.mx.aol.com (198.81.17.6) by ccmail.itd.nps.gov with SMTP (IMA Internet Exchange 2.12 Enterprise) id 002FF619; Wed, 28 Jul 99 09:35:37 -0400
Received: from LJMoller@aol.com

by imo16.mx.aol.com (IMOv20.25) id zUTNa20336 (2615)
for <nat_wood@nps.gov>; Wed, 28 Jul 1999 09:38:17 -0400 (EDT)
From: LJMoller@aol.com
Message-ID: <bd3343af.24d061c8@aol.com>
Date: Wed, 28 Jul 1999 09:38:16 EDT
Subject: Director's orders
To: nat_wood@nps.gov
MIME-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Content-Transfer-Encoding: 7bit
X-Mailer: AOL 4.0 for Windows 95 sub 214
---------- Headers ----------
Return-Path: <Nat_Wood@nps.gov>
Received: from aol.com (rly-yc05.mail.aol.com [172.18.149.37]) by air-yc04.mail.aol.com (v60.18) with ESMTP; Thu, 29 Jul 1999 15:33:38 -0400
Received: from oriole (oriole.itc.nps.gov [165.83.216.27]) by rly-yc05.mx.aol.com (v60.18) with ESMTP; Thu, 29 Jul 1999 15:33:24 -0400
Received: from ccmail.itd.nps.gov (ccmail.itd.nps.gov [165.83.216.134])
by oriole (8.8.7/8.8.7) with SMTP id PAA24134
for <LJMoller@aol.com>; Thu, 29 Jul 1999 15:41:13 -0400
Received: from ccMail by ccmail.itd.nps.gov
(IMA Internet Exchange 2.12 Enterprise) id 003058D3; Thu, 29 Jul 1999 15:24:38 -0400
Mime-Version: 1.0
Date: Thu, 29 Jul 1999 15:20:23 -0400
Message-ID: <003058D3.1235@nps.gov>
From: Nat_Wood@nps.gov (Nat Wood)
To: LJMoller@aol.com
Subject: Re: Director's orders
Content-Type: multipart/mixed; boundary="IMA.Boundary.872672339"

It is not my idea to do away with the ORV permit cost but it should certainly not be raised to the level of $125 to $200, a 572% increase. The current price, for what was a "free, good for life, one time required permit" which was what the NPS had stated and issued when the Big Cypress National Preserve first opened, is sufficient. When one considers that no fee is charged for hikers, non-hunting users, canoeist, and campers then to charge more than the amount of money required to cover the permit cost and labor to issue these permits is certainly a discriminatory action on the part of the NPS. It has been explained by NPS staff that the current $87,500 (potential earnings at $35 x 2,500) is covering the production cost of the permit, labor to issue and two part-time seasonal rangers. Even the two part-time seasonal rangers are a questionable expense to contribute to the use of ORVs. This is because at the time ORV activity increases so does the number of 'snow-bird' winter tourist who camp in the Preserve and use the preserve in other manners, including hiking.

Reviewing DO#53, the document BCNP administration is using to charge the discriminatory and high ORV permits states:

A special park use is a short term activity that takes place in a park area and that:
-provides a benefit to an individual, group or organization rather than the public at large;
-requires written authorization and some degree of management control from the NPS in order to protect park recourses and the public interest;
-is not prohibited by law or regulation; and
-is neither initiated, sponsored nor conducted by the NPS.

Looking at these directions we can understand how an organization, such as the NPS, that does not want to allow the use of ORVs would consider using this language to price the general public using ORVs out of

F37 (cont.)

this unit of the NPS. But a closer evaluation of the issue shows that the administration has wrongly applied the directions and intent of this Director's Order.

The first line: *A special park use is a short-term activity that takes place in a park area and that:* clearly states the activity is to be short term. The use of ORVs is not short term. This activity has been a part of the history of the Big Cypress National Preserve even before the Preserve was created. The activity has been a part of the BCNP since 1974 when the enabling act was past. Those who enjoyed the activity were an important political ally to the concept of the Big Cypress National Preserve and the Addition (Joe Browder). It has been said by many if the hunters/ORV owners had not supported (Mr. Cal Stone, President of the Florida Wildlife Federation and Mr. John Jones, Executive Director of the Florida Wildlife Federation) both legislative items we would not have the Big Cypress National Preserve today. Thus this is not a short-term activity, as a movie production or company picnic would be.

The second line: *-provides a benefit to an individual, group or organization rather than the public at large;* While the use of ORVs requires the issuance of an ORV permit this is done in a manner to manage the numbers of ORVs in the Preserve. The first ORV permit issued by the NPS was a "GOOD FOR LIFE, ONE TIME ORV PERMIT." Of course this was changed to an annual permit that cost $25 and now $35 and a desired $200 under this discriminatory ORV general management plan. In truth there is no need for an ORV permit except that the NPS wants to issue one thus the permit has become the means by which to remove the use of the ORV and violate the enabling act's integrity.

The third line: *-is neither initiated, sponsored nor conducted by the NPS.* The activity was initiated by the NPS and is in the enabling act as supported by the NPS thus the activity is approved and initiated by the NPS. Because the NPS did not object to the use of the ORVs in the BCNP and they did encourage the continual use of the ORV they have initiated the activity of ORV use. Mr. N. Reed, Assistant Secretary to the DOI, testified before Congress that if the swamp buggy was removed then use of the area would be reduced to about 10% a year. This was a clear statement by the Assistant Secretary of DOI, speaking for the USFWS and NPS that the NPS was to initiate the continued use of the ORV in the Big Cypress National Preserve. They have actively encouraged the continued use of the ORV by the good for life permit and by the establishment of public ORV parking at various locations and the public storage areas of ORVs. I am not saying they have not wanted to manage the activity and they have been. The NPS did initiate the activity that is creating the need to raise money. The ORV users did not initiate the activity that is causing the need to raise money. The ORV trailheads to be improved were in existence before the creation of the unit and have remained in continually use since the BCNP was created. Thus the NPS has initiated and sponsored the activity, which is causing the need to raise the money. The improvements to the trailheads and trails is not needed nor required for the ORV users to continue using the Preserve. Nor has the use of ORVs negatively impacted the resources. This has been shown true by the increase in wildlife, panther and according to NPS documents the cleanest water in the region. The Plaintiff used a regulation designed by the Department of Justice from Clean Water Act called the "*Tulluck Rule*" to file their complaint. Since this litigation was filed the Federal appellate courts have declared the "Tulluck Rule" illegal. The court stated this regulation far exceeded what Congress intended when they passed the Clean Water Act. Those who do not like the use of ORVs have initiated the activity of trail stabilization thus they should be the user group, the five members who are the plaintiff in the current litigation against the NPS concerning ORV use, to fund this activity.

Director's Order #53 (D.O.#53) goes on to state that *"the NPS will charge for Special Park uses."* Directions are given to superintendents to recover costs pertaining to the management of a special park use. ("The NPS will recover and retain its costs incurred in managing a special park use." Again this is not a special park use. For one thing the Big Cypress is not a park but a preserve. There is a big difference in the concepts of the two types of NPS units of land. The use of ORV on a park would certainly be a "special use". However the use of the ORV on the Preserve are not special uses but authorized and "traditional" as required by the amending enabling act. There is a need to require a permit to manage the overall use of the BCNP by ORVs but to say the use of an ORV is a "special park" use in this unit of the NPS is not a proper position. It is not a proper position when one reviews the legislative history, the intent of Congress and the concept of a Preserve. Again the Assistant Secretary of Interior told Congress while talking about the "preserve" concept verses "park" concept that the "Preserve" would be a different breed

of cat and would be used hard. The BCNP is the first "preserve" to be created in the NPS land categories. Thus it is important for all today to understand what the NPS and Congress expected the unit to be managed like. The present charge of $35 for a permit is a proper charge. The Superintendent of the BCNP has explained that the monies raised by the sale of these permits cover the cost to manage the activity. Thus there is not a need to raise the current cost to cover improvements which are not required by the ORV user nor the natural resources. Additionally, there is no assurance that the increase in funds will go to the BCNP for these un-needed improvements. The order states that "charges received by the permittee arising from the use of the NPS lands and facilities must be deposited in the U.S. Treasury."

If the NPS was to determine the cost of these trail improvements were to be past on to the ORV users then the cost has to be pro-rated over the life of the material used to construct the improvements. If we use the current figure of 2,500 ORV permits (the maximum allowed in the BCNP) and the cost of $200 we find that $500,000 is generated each year. The proper way to establish an increase in the cost of the permit, a cost for something that is not needed, required nor wanted by the ORV user and is not needed to protect the natural resources, would be to establish the life expectancy of the improvements. This would allow for the cost to be recovered over a longer period of time and the discriminatory ORV permit would not cost as much. To not do this would be a violation of D.O.#53 because this order states that the NPS is not to make money from the sale of permits. Thus with the current $35 cost covers present cost to manage the ORV use then the $200 would make the NPS money. This is because the NPS does not have to continue ORV trail improvements. This idea has not been presented in the ORV management plan.

The NPS must provide an itemized expenditure plan to prove they will require the amount of money they think they will need to implement the desired improvements sought for in the ORV plan to satisfy the needs of the non-ORV individuals.

The NPS could accomplish the same aesthetic effects on the trail heads to be improved by establishing designated trails from the entry point to the point where the present planned ORV trail improvement would stop. This will be the most efficient and in the long run the best technique to use. By improving these trail heads and trails for a distance off the paved highway the NPS will encourage people to take equipment that is not suitable for the difficulties of the Big Cypress National Preserve. This will lead to additional demands for trails to be stabilized further and further into the backcountry. This will increase use deep into the backcountry and that has been frond on by the USFWS (eleven-mile road rules).

There is another example leading to the expressed attitude of the NPS favoring the non-ORV/hunting visitor. There is a private business within the Big Cypress National Preserve giving swamp walks. This year they have "joined with the Big Cypress National Preserve for a swamp walk in another section of the Preserve. The walks will take place all day, on all three days of the holiday. ... This year they are volunteering with the Park Rangers to help lead you into the swamp." (Taken from the company's advertisement "The Muck-About Journal", summer 1999) This again makes it clear that the NPS is favoring one user over another. They are not charging for their services to this private business operating within the BCNP. This business also was not there when the BCNP was created. Why is the BCNP not collecting a user fee for this activity and has decided to volunteer their services to a private organization? What happens if a ranger, volunteer, becomes injured while volunteering his/her time working with a private organization? Who pays the workman's compensation issues?

The NPS recently acquired a significant amount of money from a tax source to build hiking boardwalks, pull-offs and to improve old railroad beds for the hikers and non-hunters. This same safety money could have been applied to the desired trail stabilization project now being sought by the NPS. The trail stabilization project could have been done to improve safety of not only the automobile visitor traveling through the BCNP but to improve safety for the ORV users. Again the NPS has presented a for certain desire to remove the ORV users from this unit of the BCNP.

In recent days it has been brought out to the public that the NPS has continued to act in a manner that indicates their favoritism to the non-ORV community. They have allowed the building of 17 miles of the Florida National Scenic Hiking trail in the Addition lands north of I-75. This has been done over the last 12 years while the ORV community and hunting community have not been allowed to enter the area.

F37 (cont.)

Additionally it was brought on public television how the NPS has been providing, at no charge, helicopter transportation for the hikers to cut vegetation and build their hiking trail. All this was done without a General Management Plan of the area. This hiking trail was not in the Addition lands prior to the enabling act passing because the major private land owner did not grant trespass permission but this same land owner did allow hunting and the use of ORVs on this land before passage of the enabling. Additionally when the public learned of these illegal activities being done by the hikers the Superintendent Hibbard informed this author that he did not know they were doing this work and issued a stop work order. This author finds it amazing that the NPS could, for 12 years, allow 17 miles of hiking trails to be developed, their helicopter to fly private citizens into the back county and NOT know what these people were doing.

TIRE SIZE/GROUND PSI:

> "Off-Road Vehicles and Their Impacts In the Big Cypress National Preserve", Report T-614; Michael J. Duever, et al; March 1981:
> Page 53
> During the pre- growing season period, no ruts were visible in most one-pass and medium impact lanes, while ruts in most of the heavy impact lanes were still significantly different from controls. At this time ruts produced by the light buggy in the heavy impact lanes were consistently the most, or among the most, severe, while the ATC produced the least severe ruts. Except for slight decreases in depth, the ruts changed little during the first growing season. Thus, the majority of the recovery took place shortly after the treatments were made. Most one-pass and medium impact lanes had recovery by the pre-growing season sampling period, and recovery was generally more than 50 percent complete in the heavy impact lanes, where it increased by only about 10 percent during the growing season.
>
> The relatively rapid recovery of the tractor buggy heavy impacts as compared to those of the light buggy was associated with the tread and weight per unit area characteristics of these vehicles. *In the soft marl soils of the cypress plots, the tractor buggy cut down to bedrock after only two passes.* ...However, after only two passes the edge of the rut was very ragged and began sloughing back into the rut immediately. The light buggy, however, normally took more than seven passes to reach bedrock in this habitat. Because of its lower weight per unit area and smoother tire surfaces, it took longer to wear through the surface layer and underlying soil. With each pass the wide tires pushed some soil and water laterally out of the vehicle tracks, and by the time bedrock was reached, wide cleaned out and thus more stable rut had been produced.

The interesting technical item about the above study is that the researcher did not use a complete sample of all types of ORVs. The tractor tired buggy, termed the heavy buggy, was an example of only one style of buggy equipped with tractor tires. Also the tires on this buggy were not as wide as they could have been. There were and are many buggies with tractor tires, R1 or R2, which have very wide tires. There are tractor tired buggies with tires that range from 10 inches all the way to 30 inches in width. The buggy tested had tires about 12 inches wide while the researcher could have also included, and should have, a buggy equipped with tractor tires that were 16, 18, 20 or 24 inches wide. Thus by the mere structure of the study the researcher has presented a finding that is neither true nor accurate with regard to this type of buggy.

The findings of the researcher with regard to the impacts of the equipment used are not in doubt. But his work does point out that the same amount of impact is caused under normal year in and year out operational practices by all styles of swamp buggies. It is particularly interesting for the researcher to grasp the idea that the impacts caused by a swamp buggy with narrower tires creates impacts that heal faster than those caused by a swamp buggy with wider tires. Thus considering that the public has, since 1928, been using these trails and that there is more than 70 years worth of impacts to these trails it makes little difference what the psi on the ground is. It also make no difference what type of tread a tire has as long as the user remains in these established existing trails/routes. If the user were to travel across new soil then these concerns could be important. And according to a National Audubon researcher the narrow tire would be preferred so as to allow for the soil to heal within one growing season.

I point out again that the majority of the ORV trails were made by the military in the Seminole Indian war campaigns, logging industry, rail roads and trucking interest, cattle industry, farming industry, real estate ventures, fire fighters using bulldozers and private land owners long before the area became public property. The impacts observed today are caused first and foremost by these users, today's ORV operators are merely using the existing transportation trails, and routes to access historically used places.

I do support a 4-psi ground pressure for all ORVs to be used as a new criterion. This is closer to the ground psi of the average person. I cannot support the 2-psi standard. The average adult applies 5-psi on his foot as he walks in the swamps. Thus the 4-psi standard for the ORV is considerably less than what an adult would apply to the ground.

The process to compute the psi via the method developed by Rolligon, Inc. is supported by me. They were paid $2,500 to develop this formula and create a chart of tires/ORV-weights/PSI. The formula is as follows: tire height divided by two times the width of the tire times the number of tires divided into the ORV weight. If the front and back tires are different the same process is used to compute the front and back tires separately and their sum is divided into the ORV weight. The chart has to be enhanced to include the following tires:

13.5 X 26 R1
27 x 12 – 10 AT

This is not an inclusive list but merely two tires, found without much research spent on the issue, which exceed the NPS tire chart values. Without all tires included there could be confusion at the registration location and registrants could be sent home. In many cases this is a one way trip of 80 to 100 miles.

The type of tire tread should be used in computing each tire size's square inch value. Tires with an R1, R2 and R3 tread rating will all have a different square inch value, even if the tire sizes are the same. This is a factor of the computation formulae, which must be considered. Thus the NPS chart provided must be further enhanced to allow for these tire differences.

Tire air pressure will also make a difference in how the tire works on the ground. There will also be an effect caused by the width of the rim the tire is mounted on. Considering all these variables which cannot be figured out and placed on a chart I suggest that the operator be afford the opportunity to actually measure and compute their individual tires ground psi, using the NPS formula, at the registration location.

There is a difference between the psi computed by using the NPS formula and the psi listed in the NPS chart developed by Rolligon, Inc. A few examples follow:

A) 18.4x16.1 R1 4 tires
NPS- 1540.4 sq inches
Goodyear Tire specification book
44.6/2 x18.5 x4 = 1650.2
Thus the NPS tire can support at 2 psi 3,080.8 pounds while the Goodyear tire can support at 2 psi a 3,300.4-pound ORV. There is a difference of 219.6 pounds, which is against the ORV owners.

B) 14.9 x 24 R1 4 Tires
NPS- 1336.8 sq inches
Goodyear Tire specification book
49.1/2 x 15 x 4 = 1473
Thus the NPS tire can support at 2 psi 2,673.6 pounds while the Goodyear tire can support at 2 psi a 2,946-pound ORV. There is a difference of 272.4 pounds, which is against the ORV owners.

C) 11.2 x 24
NPS- 888.8 sq inches
Goodyear Tire specification book
43.4/2 x 11.2 x 4 = 972.16
Thus the NPS tire can support at 2 psi 1,777.6 pounds while the Goodyear tire can support at 2 psi a 1944.32-pound ORV. There is a difference of 166.72 pounds, which is against the ORV owners.

F37 (cont.)

As one can see the NPS formula is not applied correctly. This will cause people to spend enormous amounts of money to bring their ORVs into compliance. At least what they will believe is into compliance but once they arrive at the check station and the NPS tire chart is applied to the buggy the owner will be told the vehicle does not meet the right ground psi. It also appears that some other factor was considered when the NPS tire chart was developed. The formula cannot be as simple, as it appears to be because there is this difference between what is in the real world and in the NPS world. It appears the NPS has developed a trap for the ORV owner and those who want to comply. Thus I strongly suggest that the NPS redo their entire tire/psi chart to conform to the industries tire specifications.

I also strongly encourage the NPS to not rely solely on this chart at the ORV registration location. This is because even by using the tire manufactures' tire specifications these book measurements may not achieve the real world measurement of the tire on the buggy. Many owners do not mount their tires on rims that are designed as the tire manufactures expect. To obtain the best operational results ORV owners often mounted tires on rims that are wider or narrower than those recommended by the tire companies. This will give a different psi measurement when the NPS formula is used than what would be achieved by using book values.

I need to fully understand how the weight is to be computed for the ORVs. It is my understanding the weight is to be the lowest 500 pounds to the weight slip. Thus if the ORV weighs 2400 pounds the weight used to compute the ground psi is 2000 pounds. There should be no rounding up of the ORV weight to compute the ground psi. The current Superintendent has established the issue of computation of vehicle weight in the following email:

> Subj: Re: ORV GMP Process
> Date:8/12/99 4:11:19 PM Eastern Daylight Time
> From:Wally_Hibbard@nps.gov (Wally Hibbard)
> To:LJMoller@aol.com, Bill_Snyder@nps.gov (Bill Snyder)
>
> Jack, I will try to respond - the weight will be rounded down to the next available figure on the chart. Your 4700 will read as 4500. I doubt that Tony will respond as he is no longer with us. He transferred to Everglades. Bill Snyder will be the guy you will want to talk to in the future. You can reach him at bill_snyder@nps.gov, or 941-695-4111, ext 44
>
> _____Reply Separator_____
> Subject: ORV GMP Process
> Author: LJMoller@aol.com
> Date: 8/9/99 11:15 PM
>
> Tony Pernas
>
> Tony Mr. Hibbard explained to me today that the NPS Internet has been down awhile.
>
> I have another question. In reading your spread sheet the ORV weights are in 500 pound increments. Does this mean the ORV weight will be rounded off to a 500 pound increment?
>
> Will the weight be round off to the nearest 500 pound increment using standard mathematical processes?
>
> Or, will the ORV weight, as some have said, be established at the first 500 pound increment below the actual weight?

For example my 4,700 pound buggy can either be 4,700 pounds, 5,000 pounds or 4,500 pounds depending on the answers to the above three questions. Thus I have no way to compute my ground psi until I get an answer to this process.

Thanks
Jack Moller
610 NW 93 Ave
Pembroke Pines, Fl
33024
Em: Wally Hibbard
Received: from imo18.mx.aol.com (198.81.17.8) by ccmail.itd.nps.gov with SMTP (IMA Internet Exchange 2.12 Enterprise) id 00326AEE; Mon, 9 Aug 99 23:13:17 -0400
Received: from LJMoller@aol.com
by imo18.mx.aol.com (mail_out_v22.4.) id zOGFa02415 (2615);
Mon, 9 Aug 1999 23:15:35 -0400 (EDT)
From: LJMoller@aol.com
Message-ID: <dab66398.24e0f357@aol.com>
Date: Mon, 9 Aug 1999 23:15:35 EDT
Subject: ORV GMP Process
To: Tony_Pernas@nps.gov
CC: Wally_Hibbard@nps.gov
MIME-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Content-Transfer-Encoding: 7bit
X-Mailer: AOL 4.0 for Windows 95 sub 214
---------- Headers ----------
Return-Path: <Wally_Hibbard@nps.gov>
Received: from aol.com (rly-yg03.mail.aol.com [172.18.147.3]) by air-yg03.mail.aol.com (v60.25) with ESMTP; Thu, 12 Aug 1999 16:11:19 -0400
Received: from oriole (oriole.itc.nps.gov [165.83.216.27]) by rly-yg03.mx.aol.com (v60.25) with ESMTP; Thu, 12 Aug 1999 16:11:08 -0400
Received: from ccmail.itd.nps.gov (ccmail.itd.nps.gov [165.83.216.134])
by oriole (8.8.7/8.8.7) with SMTP id QAA15814
for <LJMoller@aol.com>; Thu, 12 Aug 1999 16:20:36 -0400
Received: from ccMail by ccmail.itd.nps.gov
(IMA Internet Exchange 2.12 Enterprise) id 00330CA0; Thu, 12 Aug 1999 16:06:40 -0400
Mime-Version: 1.0
Date: Thu, 12 Aug 1999 16:02:00 -0400
Message-ID: <00330CA0.1235@nps.gov>
Return-receipt-to: Wally_Hibbard@nps.gov (Wally Hibbard)
From: Wally_Hibbard@nps.gov (Wally Hibbard)
Subject: Re:ORV GMP Process
To: LJMoller@aol.com, Bill_Snyder@nps.gov (Bill Snyder)
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit
Content-Description: cc:Mail note part

The NPCA has demonstrated their true desire is to remove ORVs from the BCNP. This is being done even though they did not testify before Congress to this effect for the original enabling act and the addition law. They either know what they are doing as they have set a cap of 2,000 pounds for the ORV to weigh. Or, they do not know anything about the construction, use of and need to have an ORV. Their desired 2,000-pound vehicle weight is not achievable unless the only vehicles allowed are the ATVs. Yet they do not want the ATVs in the unit at all. Therefore the only solutions to their desires is no ORVs. It is my opinion that their only objective is to remove the ORV from the Big Cypress National Preserve.

F37 (cont.)

The NPS is again asking that brakes be installed on ORVs. This was done in 1978 and turned down by the NPS when they realized that standard brakes do not work in the water and mud of the swamps. It was also turned down when the NPS realized that ORVs couldn't speed in the swamps. The direction to require operational breaks must be dropped from the plan. When an ORV operator wants to stop they simple take their foot off the gas and the terrain stops the ORV. If there is a need for an emergency stop an ORV with a manual transmission only has to be turned off to stop and one with an automatic can be put into first gear or reverse. Mind you these are techniques used for emergency stopping and they do break the ORV. The desire to have operational breaks is nothing more than a way to get rid of many ORVs. This is because most ORV owners remove anything that adds weight to their machine. Thus the existing machines are built without breaks and no way to add them on to the machine.

ACCESS INTO THE BCNP:

The NPS recognized during the GMP process that by reducing the number of access sites and placing ORVs on designated trails in Bear Island they were going to create greater pressure on less acreage of ground. This was considered to be favorable to having less pressure on greater acreage of ground. This NPS position was accepted by all environmental organizations during the long GMP development process. This process was a true public input process and not a decision being made by a group of five. It now appears the NPS is changing their position on this matter and going in a direction to remove the ORV user from the BCNP.

The NPS position on access into the backcountry, with exception, is supportable. I can support much of this but it is not appropriate to stop entry into the Corn Dance unit from the East Side. This would in turn cause additional pressure placed on 28 miles of ORV trails. The use of airboats on the "cypress line trail" would be stopped and the use of swamp buggies in the Corn Dance unit, for 28 miles, would increase impacts there. If the NPS wants to make the "jump-over" on L-28 the only entry location then so be it. By doing this the NPS would remove a number of users who travel via motor boat and canoe up the L-28 canal and walk back into the Big Cypress National Preserve to hunt and photograph this area. Unless it is the desire of the NPS to stop people from enjoying their lands they should not take the proposed action. In Everglades Restoration the removal of L-28 is called for. Once this is completed the issue of eastern access may have to be redressed. But access should remain at the "jump-over" location even after L-28 is removed.

I find it very important that not only does the NPS work with Florida Fish and Wildlife Conservation Commission (FFWCC) but with knowledgeable users of the Jet Port/Corn Dance units to locate the best entry places into the Corn Dance area. I would like to be able to submit names of sportsmen to the NPS to work with the agency to locate the best entry locations. I have a great deal of concern with the idea of reevaluating the entry points already established as these sites were used before the NPS took the land. I do think the NPS should consider additional entry locations, as I did in our GMP comments. This would reduce pressure on the few entry locations currently allowed.

NATIONAL SCENIC HIKING TRAIL:

I have long sought relocating the National Scenic Hiking trail. I have expressed my views on this matter at every opportunity. An ORV owner driving the trail and his hiking friend painting hiking trail markers on trees created this hiking trail on an ORV trail. There remain locations of the hiking trail that are on main buggy trails. To move the hiking trail would be much simpler than moving the historic buggy trail. The idea of having a no ORV zone of ¼ mile on either side of the hiking trail is sensitive. But it might be possible to do as long as the new location is not on an ORV trail or does not come with in a ¼ mile of an existing ORV trails. Again I would like to work with the agencies to develop the best location for the hiking trail and the proposed ORV crossings of this trail. If the hiking trail is located in the wrong place many thousands of acres of land will be closed off to ORV users. There is no need for this type of closure just as there is not need for conflicts between the hikers and the ORV users. I would like to point out that the hikers who want solitude have 1.5 million acres of Everglades National Park, and many thousands more acres of land in the Fakahatchee Strand State Preserve, and Collier Seminole State Park to hike in. All this property is the near vicinity of the Big Cypress National Preserve.

STAIRSTEP AIRBOAT USE:

The issue of setting a hydrological standard or water level for the operation of airboats in the Stairstep unit is an interesting idea. I understand the NPS is going to use criteria like connectivity of ponds and sloughs and stable water levels. I also understand the NPS is looking for a way to let the airboat operators know when they can make the trip from town to the BCNP and expect to be able to spend the day in the swamps using their airboats. There are many conditions that appear at different times across this big unit of the BCNP. Thus it is doubtful the NPS can develop a workable criteria on this matter. I recommend that the NPS use their automatic phone answering service to allow airboaters to call in before they go to the woods. The airboater could obtain the current status of the unit they plan to use by a mere phone call; open or closed. Additionally there has been no damage to the natural resources by noncommercial airboaters anywhere in the BCNP. The activity is controlled by nature in that one cannot run ground that is not suitable without damaging the boat. Another factor to consider is that most of the major, old airboat trails were created by landowners using a bulldozer. These trails are deeper than the surrounding natural ground elevations and thus hold water in them longer than natural ground. Airboaters can operate in these trails long after the water has left natural ground. Therefore I do not feel that this regulation is necessary!

There has been much said about the "mashing of grass" while frogging. This activity is said to occur mainly by commercial froggers. And, commercial fogging is not legal in the BCNP. Thus the NPS needs to stop commercial frogging as requested in the GMP comments of the Everglades Coordinating Council nearly 15 years ago. The major implements of grass mashing are birds. During certain times of the year and conditions water birds feeding in these pond areas mash the grass. However, it does not matter if the bird or an airboat mashed the grass it all returns to its normal condition in a short time. This has been the case forever. The issue here will be how to either enforce the rule or how to operate and airboat without being ticket for violating this rule. Once ticketed then the operator has to either stand as charged and pays the fine or spends enormous amounts of money to clear his/her name. Under today's rules many other complications can occur from such a Federal offense. While I see little good that can be accomplished by implementing this rule I do consider the negative effects on users from the potential of improperly issued tickets for violating the rule as being significant. I need to know how the NPS plans to enforce the rule and write citations!

ADDITIONAL RECOMMENDATIONS:

The current ORV GMP does not discuss the need for education. There should be a program for the general public, including fliers, for the tourist and road visitor about the use of ORVs in the BCNP. It is important that people not forget the history of the BCNP and the uses that occurred in it before the area became protected by public ownership. Many times ORV users are asked questions about their equipment and use of the equipment while they are loading or unloading their ORVs at roadside. Additionally, many operators are offered money to provide rides in the BCNP. There is a real interest in the ORV and its development.

I also think that the NPS should develop an ORV class which first time ORV permit owners attend before they obtain their permit. This class should be a one-time charge at the time of the class and offered frequently enough so those owners do not have to wait for an extended time to take the class. Also the class should be in the evening hours and on weekends. These attendees will not have to miss work to participate in the class. Volunteers can teach the class or even simpler way would be to have a video loop the new operators could watch. Thus the cost of the program will be kept at a minimum. The Florida Fish and Wildlife Conservation Commission uses volunteers to teach the State's hunter safety program. Thus using volunteers is not a new idea. I suggest that the NPS again work with the Florida Fish and Wildlife Conservation Commission and knowledgeable ORV operators as they develop this program.

F37 (cont.)

ENDANGERED SPECIES ACT ISSUES:

According to Mr. Wally Hibbard, Superintendent Big Cypress National Preserve, the number of collard Florida Panther in the Preserve has increased from 6 in 1989 to 17 in 1999. There are also thought to be numerous un-collard panther in the Preserve. This is evidence that the current levels and uses of ORVs are not harming the Florida Panther.

Since this one sided ORV management plan issue was brought to this point via litigation founded in part on the Endangered Species Act (ESA) utilizing the Florida Panther it is necessary to address this subject. The Plaintiff claim that ORV use and hunting has been a cause of the decline of panther. The recent study done for Dr. J. Clark by doctoral candidate Mr. Janis is neither statistically valid nor scientifically valid. This position comes from the authors' own biased report. Mr. A. Terrell, lawyer for 1000 Friends of Florida, has informed me that "an 80% confidence interval is not scientifically or statistically valid." This 80% confidence interval was obtained from the report. Thus the personal position of the researcher should not be used to establish any additional restraints on the use of ORVs and or hunting. Enclosed is a copy of my evaluation of the document being discussed and an email from the researchers. They admit that they know nothing of the interaction between the panther and the environmental conditions surrounding the panthers movement to and from both the Florida Panther NWR and the Bear Island unit of the Big Cypress National Preserve.

This evaluation has been reviewed by several credentialed professionals who have good knowledge on the subject of the panther and the environmental conditions of this part of SW Florida. The majority of these professionals have said my evaluation is on the mark and leaves out a considerable number of additional errors in the total issue at hand concerning this doctoral report.

*****

August 11, 1999

L. Jack Moller
610 NW 93 Ave
Pembroke Pines, Fl
33024

Mr. Wally Hibbard
Superintendent
Big Cypress National Preserve
HCR 61, Box 11
Ochopee Fl.
34141

Dear Mr. Hibbard:

Please attach this evaluation of the following document to all files the document is stored and recorded in. It is important that future readers understand the research, while sound, is not complete. The author's position on the activities of the panther and human activities are also included as a part of this evaluation. One can understand how a researcher who is limited in funds, time and with due dates to complete their Ph. D. work would not be able to achieve the level of understanding surrounding this animal and land uses in its home range. What one does not understand is why the researcher seems determined to find a negative relationship between hunting on the Big Cypress National Preserve and the Florida Panther. One also has to ask is there another agenda in this work than pure research?

The following evaluation is based on currently known information gathered by others and me. As time goes by this information may increase and additional material may be submitted for attachment to this study.

Jack Moller

"THE EFFECTS OF RECREATIONAL DEER AND HOG HUNTING ON THE BEHAVIOR OF FLORIDA PANTHERS" to Big Cypress National Preserve, NPS, Michael W. Janis, Department of Forestry, Wildlife, and Fisheries, University of Tennessee, Knoxville and Joseph D. Clark, Principal Investigator Biological Resources Division, USGS Southern Appalachian Field Laboratory, University of Tennessee, Knoxville' May 10, 1999

"Short title the Clark Panther study"

Page 73-74: "Habitat loss is a key reason for the imperiled status of the Florida panther, and making habitat on the public lands less useable because of human activity, while, not appearing to have any negative energetic consequences under current conditions, certainly cannot benefit panthers."

This is an example of the mindset of the author's and how they view the man/panther relationship. It is their opinion because panthers moved up to 180 meters away from the ORV trails during hunting season that these activities have degraded the habitat. The study goes on to state that the panther may move from near the trails because their prey, deer, have moved away from the trail. Studies in other areas where there is deer hunting and vehicle use deer move up to 50 meters away from these trails (page 64). Thus the panther habitat has not been degraded but enhanced. It has been enhanced because their prey remains in a more concentrated area and is therefore easier to capture. Thus in the real world the panther is helped by man's use of the BNCP and not harmed.

Another area that demonstrated the biases of the researchers is on page 74. They discuss the population growths in South Florida, 63% on the East Coast and 21% on the West Coast from 1980 to 1990. They go onto express the idea that if the population continues to grow and hunting pressure the same that this will cause a problem with the panther. They completely ignore the fact that hunting on public land is controllable by permits issued from the Florida Fish and Wildlife Commission.

Still the biases of the authors appear on page 12: "When I failed to detect an effect related to hunting, I retrospectively evaluated the statistical power by determining the minimum effect size I could have detected while being sure that I would make the correct decision 80% of the time." In other words the authors found no problems caused by hunting therefore they had to change their statistical methods to show some problems and remain accurate 80% of the time or inaccurate 20% of the time.

Page 37: "The highest average hunting intensity of 1 hunter/3.06km sq./day occurred during the general gun season on Bear Island. There are 250 hunters allowed on 40,000 acres of land. Their count was determined using vehicle counts and not by counting the hunter sign-in slips. Each hunter who hunts in the Big Cypress is required to sign in and out when they enter or leave the area. Thus by counting cars/trucks they counted by using a multiplier of 2 or 4 and if children or non-hunting adults were along they were counted as hunters. By using their method, instead of working with the Florida Fish and Wildlife Conservation Commission (FWCC) who controls the sign-in documents, the authors have been able to skew the count to a higher level of use than what really occurred.

Page 44: The authors again present a situation they make appear to be negative but is it really negative; "In contrast, Van Dyke et al. (1986) found that mountain lions in Utah reduced their activity at sunrise and increased their nocturnal activity near human

F37 (cont.)

422

disturbances." Is this bad? What difference does it make to the well being of the cat? It is also interesting that the authors have for the first time compared the Florida Panther's behavior with that of the western mountain lion. Every time we have tried to use the western cougar to illustrate how the species can and does live near and around man the managers have said we could not as they do not represent the same sub-species. Thus the behavior patterns are not the same but Now that the author has been allowed to compare them to introduce a possible negative concept.

The author goes on to say that the western studies were around areas of habitat alterations (e.g., timber sale areas, and houses) and were not as ephemeral (short-lived) as recreational hunting activity. Considering the author's later position in the document, which states we should not have a break in the hunting season so as to allow the panther to remain accustomed to the presence of man, it appears the Florida Panther, like the western cougar, should be exposed to human activities more often and on a more regular bases. Much as the wildlife is accustomed to cars speeding by on the road as they feed on the shoulder of that road. This is an argument for greater not less use of the BCNP.

The author states about 'activity', on page 45: "However, because panthers are crepuscular (become active at twilight) and because most hunting activity occurs during morning, this is the time when I would most expect to detect and effect." In other words because panther and man both hunt at the prime time, morning, there should be an effect on one or the other's activities.

Movement Rates: Again on page 53 the biases of the author show through on a simple presentation of the facts: "Regardless of the reason, both hunted and none hunted females demonstrated the same trend; thus, whereas I have good evidence to believe that predation success of the females decreased as the field season progressed, I have no data to suggest that their perdition success was affected by human activity that occur during the hunting season." Maybe the cats were able to find and eat the by-product of deer and hog kills before the buzzards did? Thus the cats do not to kill prey as often during hunting season. The author could not find hunting activities effected it in the author's mind to simply say there is not evidence that predation.

However on page 54; the author states; "Nonetheless, I found no evidence to indicate that hunting affects the predation success of female panthers, and the statistical power was sufficient to detect biologically relevant changes that could have occurred." In other words there was not harm to the panther's ability to catch deer and there was enough data to support this finding.

Home Range Size: on page 57 "...whereas the control group for both sexes maintained relatively consistent home range sizes. If cats responded to the onset of hunting by increasing their home range size and did not have enough time after the hunting season for their home ranges to return to normal, this pattern may indicate a real response to hunting activity. However, the *P*- values cannot be dismissed, and they indicate that, given the sample sizes and variance, there is a high probability that the observed pattern of results was produce by chance alone." The author is still looking for something to hang a hat on to inflict damage on the hunting activity but in all honesty cannot do this as the data will not support this position.

On page 58; "These changes are relatively large, and although I was able to detect main effects for treatment and period for the females, power to detect a biological significant interaction effect for these analyses was low; consequently, the results should be considered inconclusive." Well, the author has established a need for more studies. And, what happened to the males? Why only talk about the females?

Home Range Shifts: The data was so strong on no effect by hunting on this factor that the author had to write: page 59; "Whatever the reason, the data do not indicate a reaction to recreational hunting." Mind you that 'data' is plural and not singular thus the entire study doesn't support a reaction to recreational hunting. Also in reading the statement closely we can see the biases of the author against hunting; "Whatever..." is certainly a negative presentation.

Page 60 finds even stronger language to support the known natural evidence that hunting does not effect the panther; "Thus, I have no evidence that cats shifted their home ranges in response to human activity." Of course the anti-hunter will say in the absence of "no evidence" there must not be any hunting until there is evidence to allow hunting.

Distance From Trails: The interesting thing here is that the use of ORVs is why we have these trails yet the study does not address the use of ORVs as a part of hunting. Of course without the ORV there could be no hunting in the humid, wet, hot sub-tropical habitat. The reason this is interesting is that the anti-use people will say that because there is not a study on the relationship between the panther and ORV we cannot allow ORVs on the BCNP Addition lands. The USFWS will most likely have the same position. This is a natural progression to prevent our traditional recreational use of the BCNP as directed by law. If they can keep this additional study from taking place for a long time then all the trails will be gone. These trails will not be created again, as it will require the cutting of vegetation that is significant in size. When in reality this study by Clark is a study of not only the effects of hunting on panther but also the use of ORVs.

On page 64: the author talks about the panther moving away from these trails to an "average of only 180 meters closer to the trails than during hunting." But the study was done only during daylight hours so what happens at night. I suspect the panther steps on the ORV trails and hunts down these natural edge lines for deer and hogs. As we all know these animals travel on the ORV trails during day and night hours. I ask what difference does it matter if the cat lives 10 meters from the ORV trail or 180 meters from the same trail? None.

On page 65; the author states; "In conclusion, although the increase in the average distance from trails that I observed in panthers probably represents a real response, it is difficult to imagine that it has biological consequences."

On page 68; the author seems to counter everything said before about human panther relationships; "...therefore, my results most likely indicate a direct aversion by panthers to human activity." This is said because there is an increase of panther use on land north of Bear Island while there was a reduction of use during hunting season of Bear Island. It is also the reverse of the panthers' uses of the Florida Panther NWR. The author looks at the vegetative habitat in the NWR and north of it. This review shows that the lands north of the NWR are higher and drier than on the NWR. Thus during the wet, pre-hunting, season the cats are living on the drier land north of the NWR. When hunting season starts and the water drops these NWR cats move south onto the NWR off of the drier private lands. The author apparently does not see the habitat differences on Bear Island and the lands north with the same relationship to the land and water. The author does not understand that deer and hog follow the water as it recedes into the sloughs of the area. Thus when the water is high and the Bear Island ridge/island system is high and dry the panther's prey are there. And, as the water drops the panther's prey moves north into the lower slough areas of the private property on the east side of S.R. 29. Additionally, as already stated, hunting on these private lands frequently involves the use of massive amounts of corn to feed, attracted and hold deer and hog in the area. This also brings the panther to prey on these animals. It is easier to pick off a deer/hog at a corn feeder than to track one in the swamps of the Bear Island Unit. As usual the researcher coming to South Florida from the outside has not completely observed all the factors surrounding a

F37 (cont.)

complex issue but focused on only a small portion of the relationships between man, animal and habitat in the area. To the uniformed person who reads this work they will not know of these other factors and draw an incorrect conclusion. A conclusion the author has skillfully try to lead readers to make.

Further on page 68 the author states; "Although the tendency of cats to make less use of Bear Island during hunting has to (be) viewed as a negative impact, I have no evidence to link these shifting use patterns to energy expenditure or the ability of panthers to forage. . Results of my analysis of female movement rates and predation success failed to find changes related to hunting season activity, even when I confined those analyses to only Bear Island and the FPNWR." I think the author is saying it makes no difference to the panther if they move off of Bear Island or the FPNWR and therefore there is no negative effect to the panther by hunting activities. Remember hunting includes the use of the ORV on the trails the author has
focused on.

The author does not address the land uses on property north of the NWR or BI. I know that during hunting season and leading up to hunting season, at least on the BI side of SR 29, the property is leased to hunting groups. These groups use feeders, dogs and ORVs to take deer and hogs. One time a friend of mine, who has a smallish lease, was very upset because the hunt club next to his placed a 500 pound corn feeder on their property. Since my friend's feeder was only a 35-gallon timed release corn feeder it would run out of corn in a short time. While his neighbors 500 pound feeder continued to attract deer, hogs and turkey (all panther food). His neighbor's feeder pulled the game off my friend's property. This is legal under State law for private lands. One can shoot deer and hogs while they are a feeder but not turkey. Still the turkeys come and so do the panther. When I hunted BI we knew where these feeders were and that the hogs would go to these feeders at night. They would return to BI in the morning. Of course we were not hunting over bait, which is not legal on public property, but we did take advantage of the habitat demonstrated by both hogs and deer. We stand these travel routes and take our game. This is what the panther was and is still doing on both BI and private lands.

This feeding factor is very important to know about due to the palmetto berry and acorn crop in 1996 and 1997. In 1996 there was a small palmetto and mass crop. In 1997 there was no palmetto and mass crop. This did not occur only on the public lands but as best I can tell, it happened all over South Florida. A friend of mine has a lease on the Lykes ranch. In 1997 the berry and acorn crop was so poor that hogs were starving to death. This same crop problem also happened in Bear Island, the rest of the Preserve and on the private lands north of the BI and the NWR. I do not know about the NWR but would see no reason for it to be different considering the problem was observed by me from Lake Okeechobee to Tamiami Trail. Thus the feeding stations on the lands north of BI would play a bigger roll in drawing deer, hogs and turkey off BI and the panther following their prey.

The author does not mention that on private lands the hunters are using their swamp buggies to crash, drive through, oak hammocks and palmetto thickets. This has been a common practice in the Everglades region for 50 years. Yet, the panther goes to the private lands. Again the panther is not going there to escape hunters on public lands but to feed on the deer, hogs and turkey attracted to the feeders.

The author does not mention that on the private lands the hunters are using deer and hog dogs. Get the panther goes to the private lands. Does this mean that hunters on public lands are pushing the cats off BI? No, considering all the available facts it merely means that the panthers are being drawn off of BI as they follow their prey; deer, hogs and turkeys.

The author does not elaborate on the habitat differences on each side of S.R. 29. On the west side the land is lower in the NWR and higher on the northern private lands. Thus when the water is high the deer, hogs and turkey are in the northern private lands. As the water drops the panthers' prey move south with the water, water is a driving force of these animals as they follow the water levels and their favorite foods. The panther thus move south into the NWR again following their prey. While this environmental action is taking place on the west side of S.R.29 the opposite is happening on the east side. The lands north of BI where the panther moves to are lower than those in the old farm fields, hammocks and unimproved cattle pastures on BI. Thus when the water is up the deer, hog and turkey are in BI, this is right before hunting season, and as the water drops, after the season begins, the panthers' prey move north. Again these animals are following the water line as it moves.

It is interesting that the panther moves into land north of BI during hunting season even while agriculture activities of tractors running, trucks running, water pump running and people working in the fields. One would think that with these activities the panther, being the shy animal who avoids people (experts would like us to believe) that these cats would not move to areas with so much human noise and activity. After all the cat is, according to the author, is supposed to be leaving an area where human activity in the form of hunting, a quite stealthy activity with slow moving tractor like ORVs operating on known trails and routes. Does the author expect us to think the cat knows these are hunters, who are not hunting the cat, but nevertheless still is moving off BI in an attempt to avoid hunters? Yet the cat is moving into another place with human activity, noises and humans themselves. My knowledge and experiences tell me the panther is not moving from one human noise or activity to another but is following the prey base as it moves due to better feed and water conditions.

Coupled the feeding and environmental conditions one would expect the panther to respond as it does on both sides of S.R. 29.

*****

Email from the primary researcher concerning knowledge about land north of BI and NWR.

Subj: Re: Panthers
Date: 7/28/99 4:07:55 PM Eastern Daylight Time
From: mwjanis@gvtc.com (Michael W. Janis)
Reply-to: mwjanis@gvtc.com (Michael W. Janis)
To: LJMoller@aol.com

Mr. Moller,
Dr. Clark forwarded your e-mail inquiring about activities on the private lands north of our study area to me.

Because of time and cost restraints, I did not conduct systematic surveys for human activities across the study area (e.g. flying aerial transects); however, I did keep field notes regarding human activity that I noticed during panther location flights. Although I occasionally saw people out hunting, fishing, or working cattle, etc., by far the most common activities were associated with citrus or vegetable farming, such as tractors working the fields or workers harvesting the crops. These farming activities occurred both during and outside of the hunting seasons and typically were very localized and were short in duration when compared to the length of the hunting season.

F37 (cont.)

Admittedly, the farming activities are easier to notice from an airplane than someone out hunting, and it would have been nice to know all that was occurring on all tracts of land at all times. However, since this was impossible, I restricted the study to cats that used the public lands, where we had a much better feel for the amount and types of human activity that were occurring.

Sincerely,

Michael Janis

>Dr. Clark
>I have communicated with Dr. Gross about the work he and his staff are doing
>on the ATLSS mapping and Everglades Restoration. I have ask Dr. Gross to
>forward you my email address. But since I locate yours on your web page I
>will be to by pass Dr. Gross's help.
>
>I have just finished reading "The Effects of Recreational Deer and Hog
>Hunting on the Behavior of Florida Panther." While the field work was being
>done did you or your staff notice how much use and the type of uses that were
>being done on the lands north of Bear Island or the Fla. Panther NWR? If so
>could you tell me what these uses were and how intense they might have been?
>Also were the uses going on at the same time the public lands had hunting on
>them?
>
>Thanks in advance for any information you can send me.
>
>L. Jack Moller
>954-432-1361
>

Florida Fish and Wildlife Conservation Commission employee Mr. Steve Coughlin, Biological Administrator II, wrote the following memorandum to his boss. It is evident that Mr. Coughlin has the same thoughts on the Clark panther study as I do. Once again it is evident that the use of ORVs is not a detriment to the Florida Panther.

MEMORANDUM

July30, 1999

TO Nick Wiley, Chief, Bureau of Wildlife Management

FROM: Steve Coughlin, Biological Administrator II

SUBJECT: Big Cypress Panther Report by Janis and Clark

I have reviewed "The Effects of Recreational Deer and Hog Hunting on the Behavior of Florida Panthers" by Janis and Clark and offer the following comments with respect to our hunting program and panther interactions on the Big Cypress WMA.

The panther study on Big Cypress WMA and its environs was conducted to evaluate the impacts of public use on the Florida Panther as a prerequisite to opening the Addition Lands to public use. The variables identified as indicators of human disturbance and evaluated in the study included activity level, movement rates, predation success, home range size, home range shifts, distance to trails, use of Bear Island, and habitat use.

Results of the study indicated current levels of public use on the Bear Island unit of Big Cypress WMA did no affect panther activity, movement rates, predation success, home range size, home range shifts, or habitat use. Consequently, human activity during the hunting season did not produce negative energetic responses which were considered the most direct indicators of the well-being of panthers.

There did appear to be difference between Bear Island and the non-hunted control areas with respect to panther use during the hunting season (defined as the muzzleloading and general gun season and the closed season between). During the hunting season, use of Bear Island by panthers that utilize this area as part of their home range was statistically lower than the levels experienced during the pre-hunt or post-hunt period. Panthers identified as treatment or "Bear Island" panthers were those individuals that spent ≥20% of their time in Bear Island but also used Florida Panther National Wildlife Refuge were likewise assigned to Bear Island regardless of the amount of time the panther spent on the refuge.

The percentage of locations in Bear Island before, during and after the hunting season were 36.6, 30.5, respectively. The lower utilization during the hunting season was attributed to hunting activity on the area, although land use practices on privately owned land north of Bear Island (where panther locations were concentrated) were not considered. Some of the activities that occur on these privately owned areas include the operation of hunt leases and deer and hog feeding stations. These feeding stations concentrate prey and many attract panthers during the hunting season. Anecdotal evidence exists which demonstrates panthers respond favorable to these types of situations, which is not surprising. These types of activities and opportunities that occur on private property may draw panthers into the area and may serve as an alternative explanation for the reduction in panther use in Bear Island during the hunting season. This hypothesis would better explain the quick return of panthers to Bear Island during the post-hunt period. If hunting activity was the sole factor responsible for the observed reduction in panther use, a lag phase during the post hunt season would be expected during which time panthers would slowly filter back into the area. In the absence of a lag phase and without additional information on adjacent land use and other seasonal influences including hydrology, the cause and effect of hunting and shifting use patterns on Bear Island remains speculative.

Additionally, it is unknown how the classification criteria for treatment and control panthers may have affected the data analysis. The justification for determining treatment and control animals was not explained and it is puzzling why a panther utilizing Bear Island 20% of the time and Florida Panther National Wildlife Refuge 21-80% of the time would still be classified as a Bear Island animal without regard to the proportion of the time it spent on the 2 properties. Data from 11 cats were used in this portion of the study. Based on the review of the P value (P=0.093) and raw data, I would expect the reclassification of just 1 animal from treatment to control could result in a finding of non-significance for this variable. It would be interesting and is probably necessary to reevaluate this data with criteria that more accurately reflects a panther's relative use of Bear Island, Florida Panther Wildlife Refuge, and possible private land.

F37 (cont.)

Regardless of the reason for the reduction or apparent reduction in panther use during the hunting season, shifting use patterns had no effect on energy expenditure or predation success. In fact, the researchers observed a rate of predation for panthers utilizing hunted areas that was almost statistically higher (P=0.103) than that of panthers utilizing non-hunted areas.

The final variable that was examined in the study was the distance between panther locations and the closest trail or road before, during and after the hunting season. Results of the analysis indicated panthers were located, on the average, 180 meters further away from trails and roads during hunting and post-hunting periods than the approximate 500 meter distance observed during the pre-hunting season. The validity of this statistic is questionable, however, as the author reports a telemetry location error of ± 200 meters or ±500 meters depending on the source of the data. Therefore, the reported location error exceeds the observed "movement" away from trails and roads which makes this observation suspect. Regardless of the validity of this test, the shift in movement was considered biologically insignificant by the research author.

In summary, the study did not find a response to public use on Big Cypress that would negatively impact the panther population. The study suggests there may be peak use periods on private lands that warrant further study to fully understand movement patterns by panthers. The study also reconfirms the importance of private lands located north of Big Cypress WMA and Florida Panther National Wildlife Refuge as panther habitat and the continued need to assure that these areas remain in a condition suitable for panther use.

In contradiction to the results of the study, the author states "...altering, reducing, or eliminating the hunting activity in Big Cypress may benefit the panthers there" and provides a number of management actions to be considered. The most significant of the suggested management actions included eliminating all deer and hog hunting activity, opening seasons on a weekday instead of weekend, and running all hunts consecutively thereby eliminating non-hunting periods between seasons. These recommendations were based on the presumption that public use during the muzzleloading and general gun seasons resulted in a reduction in panther use of Bear Island.

As previously discussed, the relationship between panther use of Bear Island and public recreation was not adequately addressed in the referenced study and questions remain on the data analysis. Without sufficient information on whether panthers were responding negatively to increased public use during the hunting season, whether they were demonstrating a positive response to seasonal factors on private lands, or whether the classification system used for treatment and control animals was responsible for the observed effect, it would be premature to make adjustment to the hunting program currently in place on Big Cypress WMA. Results of the study indicate panthers have not been negatively impacted under the current hunting season framework and therefore adjustments to hunting season dates are not justified. Additionally, the recommendation to compress the archery and muzzleloading seasons and move the opening of archery season to a weekday contracts the author's supposition that archery is a "less obtrusive" form of hunting and contradicts the data analysis in which archery season was considered part of the "before hunting" time period.

The purpose of the study was to evaluate the impacts of public use on the Florida panther as a prerequisite to opening the Addition Lands to public use. Based on the results of the study, it appears the current level of public use on Bear Island is not affecting the well-being of panthers nor would similar levels of public use affect panthers on the Addition Lands. In developing harvest recommendations and public use rules for the Addition Lands, it would seem advisable to use Bear Island as a template for how to

manage recreational hunting in a fashion that does not impact the Big Cypress panther population.

I hope the information provided in this review is helpful in determining the appropriate management actions to be undertaken for managing recreational hunting in areas utilized by the Florida panther. If you have any questions or need additional information, please give me a call.

WLD3-6

Those who do not want ORV use in the BCNP will undoubtedly stress the impacts ORVs are supposed to have on vegetation and surface water. ORVs operate in a wide verity of vegetative habitats. There is no doubt that a person can see where an ORV has operated. Just as one can see where a person walks. Dr. M. Deuver explained to the Everglades Coordinating Council that one couldn't walk in mash potatoes and not leave a track. However, ORV and soil disturbances have not negatively impacted the function of these different types of habitat. For example in a study done by Dr. Joan L. Morrison, et al for Everglades National Park on the "Non-Breeding Season ecology of the Cape Sable Seaside Sparrow" found "...that the old farm fields in ENP were difficult to delineate these areas on the ground." Dr. Morrison stated that these plowed farm fields could be seen from the air. The habitat in ENP is much softer and has deeper soils than in the BCNP. The use of ORVs on the prairies of the BCNP have not caused these habitats to stop functioning as a prairie as by the end of the growing season all but the heaviest and oldest trails/routes have re-grown.

The operation of ORVs on trails that go through Cypress and uplands are like any normal country road that is frequently under water in the lower cypress portions. These trails are limited in width due to the vegetation and soil. The lumber companies made the majority of these trails as they removed cypress, pine and oak trees from this country. In 1947 there were 60,000,000 board feet a year being removed from the Big Cypress area. With this level of tree harvesting we know there were plenty of buggy roads and trails. Yet the trees have returned and the panther and red-cockadded woodpecker along with many other species of animals and plants are living and doing well in the BCNP.

There will certainly be a good bit of conversation about the U. of GA ORV mapping work. This work was done with the newest and most sensitive technology. It was not ground proofed. It not only showed the active ORV trails and routes but the oldest ones as well. It also showed the oil seismic trails, fire lines made by bulldozer, survey lines cut by private land owners, existing oil roads, trails made by the current Melelauca eradication equipment, cattle operation trails, trails in units of the BCNP that have had no buggies in them for many years. In those units closed to ORVs these trails and logging roads are no longer visible from the ground but can be seen with this newest technology. The map also shows 'gator' trails, cow trails, water lines in Cypress sloughs that reflect like an ORV trail. But even more damaging to the integrity of this mapping work is the researcher included all the old farm fields as areas totally covered by ORV trails. It is evident that this work, while well done under the parameters of the contract and capabilities of the technology, was not done in a manner, which would present a fair and proper representation of the miles of ORV trails/routes in the BCNP. I have been told this U of GA mapping technology is the same being used to locate where Lewis and Clark camped on their trip across America. Any technique that can do this can certainly locate soil disturbances in the Preserve, even very old disturbances not visible to the eye from the ground.

Further, the biggest factor in the map work is the supposed increase in the number of miles of ORV trails. Given the mapping work shows far more than merely ORV trails/routes how could we have gone from 2,500 miles of ORV trails to 30,000. Earlier researchers who saw the current level of ORV trails/routes established the 2,500 miles. These researchers reviewed the existing maps and flew over the BNCP. They either dismissed what they saw as 'back ground noise' or when developing these maps they used a different technique. Having worked with the National Audubon Society on one of the studies I learned that trail researchers had place up to three layers of onion skin paper on the USGS ortho-quad maps. This filtered out the 'back ground noise' and allowed them to develop the 2,500 miles of trails. As a consultant for this

F37 (cont.)

work I told them, in writing, that they were not including enough miles of ORV trails and copied the NPS. There was no change in their document. Thus today it looks like there has been a drastic increase of the BCNP by ORV owners.

Many like to say there has been an increase in the number of ORVs. The numbers of ORVs have actually been drastically reduced by the NPS since 1974. The first few years of the BCNP we purchased our ORV permits from the Florida Fish and Game Commission. We were then told, by the NPS, to get a "FREE GOOD FOR LIFE ONE TIME REQUIRED ORV PERMIT" from the NPS. The purpose of this permit was so they could learn how many ORVs used the Big Cypress National Preserve. According to the NPS records there were 8,000 of these permits issued. It was not to long before we had to pay for the ORV permit and then it has continued to increase. The result of this and the application of the 2,500 ORV permit cap has reduced the numbers of 'traditional' Big Cypress users drastically. That means there has been a reduction 5,500 ORVs since 1974. The NPS has never reached the 2,500 ORV cap.

Thus the current uproar about a supposed massive increases in the number of miles of ORVs trails is not true. It is merely a situation caused by a reporting error from years ago and new more sensitive research techniques.

CULTURE:

Finally, the NPS is charged with protecting the culture of the area. This is not being done via past and present operations of the NPS. They are not protecting the culture of the ORV owners and hunting community. This is pointed out in the ORV study done during the development stage of this current ORV GMP by the University of Virginia. The NPS is charged by the organic act of the Big Cypress National Preserve and its amending act to manage for perpetuity not only those elements of nature we all appreciate but traditional recreational values.

In work done for this current attack on ORV use by Jeffery Marion, Virginia Tech., titled "BICY Off Road Vehicle Recreation and Its Benefits", states the following:

> "Sense of Community and Neighborhood": Burch and Hamilton-Smith (1991) argue that social cohesion is a significant benefit of leisure activities. BICY ORVers speak passionately of a sense of community that is rare in today's faceless, placeless, and segmented society. Most BICY users, especially those with permanent camps (or trespass camps to which they repeatedly return), appear to experience a stronger sense of community than is found in most other contemporary American situations. Unger and Wandersman (1985) and McMillan and Chavis (1986) review the qualities of neighborliness and community in more urban settings. One of the more critical aspects of community is that the members share values, beliefs, memories, and history. It is not, necessarily those group members have participated in the history in order to share it, but they must identify with it (McMillian and Chavis, 1986). Many other qualitities of sense of community and social cohesion are also found in BICY recreation: social interaction, intimate knowledge of setting, sense of mutual aid, sense of membership, and a shared emotional connection. ..."

It is clear that the ORV users are a community and a community has its own culture. Thus the NPS is actively trying to destroy our culture via the application of this 572% user fee increase and the 2-psi ground pressure. Particularly when neither is required to protect the natural resources and to prevent conflicts with other Preserve users.

By pressing the concept of user pays and other aspects sighted in this document the NPS is not adhering to the intent of Congress, the letter of the law, nor the desires of the public who worked to pass the Big Cypress enabling acts.

MORE LIES AND INCONSISTANCIES WITH THE ENABLING ACT:

ORV GMP property owners:

The following position is very offensive and I do not know where the author obtained the ideas expressed or the information to publish such lies.

> Page 73: *The non-federal property owners are not regulated with respect to access to or dispersal from their property; nor to improvements they may decide to make to their property. There are no regulations regarding water quality impacts from their camps, how many visitors they may have, or what type of activities are allowed.*

We are regulated with respect to access because we can only enter at the designated access locations and not anywhere we want as we once did.

We are regulated with respect to dispersal from our property. We can only go where the general public is allowed to go and have no special privileges to 'dispersal' from our properties. It is true we can go to our properties when the public cannot enter the unit because of environmental conditions. But then we can only go on the most direct route and cannot leave our property to enjoy public lands unless the public can.

We cannot make improvements to our property without first getting written permission from the Superintendent. This is an agreement he has worked out with the Counties' building department. If you ask a county for permission to add a room the first thing they request is an approval letter from the Superintendent. Thus we are regulated.

The issue of water quality would come up on day. The NPS has been unable to tell me what standard are we to fallow. I repeatedly ask what is the standard that we have to meet. Is the standard, which was in existence when we started, if so an outhouse is acceptable. If it is the standard that is existing today that is another issue. Considering that front country properties, according to Mr. Hibbard, have to meet the present day standards and backcountry properties do not we meet the standards. Thus I meet the standards that I am expected to meet. Further because of the low levels of use of backcountry uses and the vastness of the area there is no problem with water quality. One has to ask what happens to the water quality issue if a person is camping in the backcountry? Is this a different issue?

The issue of how many visitors a non-federal property owner can have is not a matter of the Government. No one in town has to account to the federal or state government how many visitors they have come to their private property.

The type of activities that go on private property is, indirectly, controlled by the Superintendent. I have been told in writing that if a private property owner allows illegal activities or changes the use of their property to one that is not in line with the intent of the enabling act the Superintendent has grounds to condemn these lands. I am sure that private property owners do not want to knowingly cross the NPS on this matter. Thus there are controls on activities. This Superintendent has acted on activities, or the lack of activity, that is unacceptable to the NPS. He has condemned property, which has not been properly maintained and appears to have been abandoned.

This statement is another example of the intent of the NPS to not live by the enabling act's intent and direction. By starting these types of lies they hope they will have one day have the ability to violate the enabling act as amended.

While the author of this plan is concerned about an apparent lack of sanitary standards on private property the author does not mention this issue with regard to NO sanitary standards or facilities on the National Scenic Hiking Trail. I am sure the hordes of people hiking this trail must relieve themselves as they walk and each morning after camping. One must consider that the majority of hikers will walk the same distance each day they hike. Thus the uplands they camp on will, in time, become nothing more than large receptacles of toilet paper and feminine products. Of course why should the public be concerned about

F37 (cont.)

this, as this is a STANDARD PARK activity? If the NPS decides to install port-a-lets for these hikers to use at selected camping locations I am sure hikers who have to relieve themselves will manage to hold on while walking in the mud, water, heat and with a back pack until they reach one of these facilities. And, then once there the facility will naturally be maintained to the proper sanitary standards. Thus there will have to be a port-a-let service traveling by ORV-pump truck to clean and remove the build up of sewage at each facility. Thus the NPS will create new ORV trails and operate their maintenance ORVs within the no ORV zone. This operation would thus create a sound disturbance to the hikers on the National Scenic Trail.

Perhaps the NPS will decide against the use of port-a-lets and build modern bathroom facilities as have been built on I-75. Thus the 'honey pot' ORV-truck will only have to pump out the facility a few times a month. Of course these ORV-trucks will have to be able to carry rather large volumes of sewage. Thus they will not be able to meet the ground psi sought by the NPS on the recreational user of ORVs. The heavy 'honey-pot' ORV-trucks will create much greater impacts than any current ORV in use by the public. However this is not relevant as the Federal Government, DOI/NPS can do anything they desire by creating an exemption to the rules for their needs. Also it is not likely that the NPS will pass the cost of the sanitary facilities and support services on the National Scenic Hiking Trail as the NPS considers this activity to be normal in all its Units.

It is also interesting that the NPS does not count the non-property owners as visitors. After all we visit the NPS's property more than most of the rest of the people in the USA.

OTHER USER INTEREST:

This is an ORV management plan however some will request a canoe and kayak place. In general the area is not suitable to either, as the water is not deep enough. There are special locations that have the conditions, which are acceptable to these uses, and these uses already have ownership of these areas. For example Turner River is a no motorboat use area only. The entire Big Cypress National Preserve has been made a no motorboat area, no PWC area and accessible by canoe, kayak, airboat or ORVs. Further canoes and kayaks can use the 10,000-island mangrove zone while airboaters cannot. There are also many canals that canoes, kayaks and motorboats can use together. Thus there is no need to designate additional areas for canoe and kayak use only.

LAND RECLAMATION:

The Plan states that areas, which have been impacted, will be graded and reclaimed. The question is –does this apply to all the old farm fields in the Preserve? These fields are prairies, have buggy trails on them and are functioning as a natural prairie. Thus two concerns arise from this idea. The first idea is will this activity be charged to the ORV users, to the old farm operations, to previous landowner, the hiker, the board walk user or to the automobile visitor? Who will pay for this action? The second question is these prairies are functioning as natural prairie now so why should they be graded and bothered with?

EXOTC VEGITATION:

The plan states that ORVs cause the spread of exotic vegetation. This has long been a popular myth the NPS has liked to perpetuate. The fact is that the invasive exotic vegetation in the area is so aggressive that ORVs make no impact on the rate of spread of these plants. The Melaleuca is one of the most aggressive of these plants. In the Art Marshall-Loxihatchee National Wildlife Refuge where ORVs have not been in more than 35 years they have 80,000 acres of Melaleuca. This is a good example of how aggressive this plant is and it does not need an ORV to spread. The seeds attach to animals and birds. They then spread the seed far and wide. We find this tree growing deep in hammocks and cypress areas where an ORV has never been. Thus this tree seed had to have been transplanted there by a hiker or a bird. Another favorite exotic the NPS likes to make people believe is ORV spreads is the Brazilian Pepper. This plant is a favorite food of birds, raccoons, and bear. These animals, particularly the birds, have spread this plant seed to places that few people have ever been. For example we are finding the plant growing on the buttress stumps of cypress trees like an epiphyte. I have personally seen Pepper trees with 6-inch trunks, which appear to have started four feet off the ground in these conditions. Needless to say in both situations, the Melaleuca and Pepper

plants, the entire surrounding suitable habitat had small trees starting to grow. A number of ORV owners have been certified by the State of Florida to be non-commercial herbicide applicators. We took the time to attend a course at the NPS ranger headquarters to obtain this license. The NPS has issued those with this license the NPS approved herbicide and we apply it as we discover these out lying trees. We also report to the NPS where these trees are. The amount of funds we have saved the NPS is uncountable and the good we have done to stop the spread of these plants is unmeasurable. I actually had a DOI representative ask me to get sportsmen to go into the Lox NWR and help them eradicate their Melaleuca. Thus the benefits of our work are known by others outside the Big Cypress National Preserve.

ENVIRONMETAL JUSTICE:

I do not think the NPS has properly reviewed their position this issue. They also have not considered all the factors of their plan on those on fixed income and minorities in Southeast Florida. Miami-Dade County Public School System has only 12% of its student population as white non-Hispanic. Thus I being in this 12% certainly am a minority. Further being on a fixed retirement income I am not rich and though I do not get food stamps or housing assistance certainly cannot afford to replace my ORVs, which without labor cost will be nearly $50,000. Thus I do not think the NPS has properly addressed this matter. The following information is provided as proof as to how they have not and their plan will place undue hardship on my family.

I have four ORVs and none of them comply with the Plan.

A) This buggy is a home made buggy and I have $32,000 in this machine. It has 23.1 x 26 R2 tires on the back and 13.6 x 26 R1 tires on the front. The machine weighs 4,700 pounds. Rounded down as you stated we would do this 4,500 pounds. A review of your documents shows that the 23.1 tire has 673.8 sq inches per tire for a total of 1,347.6 sq inches. The 13.6 tire is NOT in your ORV plan charts thus by using your formula of (Hg/2 x Wd x #tires = sq inches) and the Goodyear tire specification book I get 334.56 per tire for a total of 669.12 sq inches. Thus the total amount of sq inches on the ground that this machine has is 2,016.72 sq inches. Multiplying the total sq inches by 2 psi ground pressure I get a figure of 4033.44 pound machine. Thus 4,500 (rounded down weight) minus 4,033.44 tells me I am 466.56 pounds over the allowable weight. Or another way of stating the problem my ground psi is 2.2313459. Thus I am .23 psi over the allowable amount. This .2 psi overage will cost me the following; A) two new tires, 16.9 x 26 at 225 pounds each and $780.45. Then I have to purchase new rims and build new wheels, about $300. I then have to flip the front axle to keep the buggy level that will be another $400. The labor will run about $1,500 do accomplish these corrections. But the real kicker is the weight of the 13.6 tires I am replacing weigh 123 pounds each. Thus in tire along I am gaining 204 pounds. The tubes, rims and wheels of the new tire will also be additional weight. Thus my 4,700 pound machine, rounded down to 4,500 pounds, is now over 5,000 pounds. Therefore the entire $32,000 machine is no longer useable because I have to change the engine, rear end, and super structure to cut the additional 1,000 pounds in order get the machine to comply with this 2 psi and gain the .2 psi needed to make it comply. Thus if you decided that this machine can be used by me to access my property you have impacted me financially by $32,000 and taken my property because I no longer have reasonable access which I have had.

B) The next machine is the 1972 Jeep truck with four 12.5 x 24 R1 tires. It weights 4,070 pounds and rounded down is 4,000 pounds. Your charts show that these tires give me a 3.9-psi on the ground. There is NO way to modify this machine with bigger tires to make it comply. Taller tires will cause the axles to beak and wider tires will make it too wide to work in the cypress and up-land trails. This machine cost me $6,000 to build. Thus you have now taken $38,000 from me with no compensation.

C) The next machine is a buggy built in 1952 and is a Model 'A' engine. It has 18.5 x 26 tires in the rear and 13.6 x 26 tires in the front. The machine weighs 4,060 pounds rounded down it is 4,000 pounds. Your chart does not have these back tires so gain using the Goodyear specifications and your formula I compute that each tire has 476.2 sq inches for a total of 952.4 sq inches. The font tires have a total of (49.2/2 x 13.6 x 2 tires = 669.12) 669.12 sq inches. The total machine sq inches is 1621.52. This would give me an allowable vehicle weight of 3243.04 pounds. Other words this machine has 2.46682212 psi on the ground. There is no way to get this machine to 2.0 psi on the ground. I have $8,000 in this machine. You have now taken $40,000 from me.

F37 (cont.)

D) The last ORV I own is a 1947 CJ2-A Jeep this machine weighs 2,520 pounds with four 12.5 x 15 tires. Since I do not understand your passenger tire chart, these are tires on this ORV, I will use the 12.5 x 16 agriculture tire and your chart shows a 2,500 pound machine has 3.02 psi on the ground. There is no way to increase the tire size on this machine to make it comply without completely rebuilding it and doing extensive improvement on the drive train. I have about $6,000 tied up in this machine. You have now taken $46,000 from me!

The cost figures above do not take into consideration the cost of labor, transportation and other such factors required to work on these machines.

It is my opinion there will be many more people with similar situations. Yet the NPS is dismissing my situation as not germane to the matter under this regulation. Thus I consider this a violation of the Environmental Justice Act.

WILDLIFE MANAGEMENT:

On page 73 of the plan the NPS states; "...The approved hunting areas, season schedules, and bag and possession limits are all subject to the discretion of the preserve superintendent and are available at the Visitor Center." This is not what the enabling acts say. The original act states; "Section 5. The Secretary shall permit hunting, fishing, and trapping on lands and water under his jurisdiction within the preserve in accordance with the applicable laws of the United States and the State of Florida, except that he may designate zones where and periods when no hunting, fishing, trapping, or entry may be permitted for reasons of public safety, administration, floral and faunal protection and management, or public use and enjoyment. Except in emergencies, any regulations prescribing such restrictions relating to hunting, fishing, or trapping shall be put into effect only after consultation with the appropriate State agency having jurisdiction over hunting, fishing, and trapping activities." Since this was not clear enough for the NPS to understand and they were not to working in a true consultative manner with the State. But the Secretary through the Superintendent was merely asking the State what the State agency thought and then doing what ever the NPS wanted the enabling act was amended. It was amended to say: "The Act of October 11, 1974 is further amended by adding at the end thereof the following new section: "Section 10. The Secretary and other involved Federal agencies shall cooperate with the State of Florida to establish recreational access points and roads, rest and recreational areas, wildlife protection, hunting, fishing, frogging, and other traditional recreational opportunities in conjunction with the creation of the Addition and in the construction of Interstate 75. Three of such points shall be located within the preserve (including the Addition)."

The law clearly does not give the preserve superintendent "discretion" on these matters. The NPS must consult and cooperate with the State on all these matters. Further the intent was clearly stated by Assistant Secretary N. Reed when he testified before Congress on the enabling act and stated the "Florida Fish and Game Commission would be the sole agency to manage wildlife." While it should be common sense to allow the preserve superintendent to have some latitude with the matters this public employee certainly does not have "discretion" to what ever he/she wants to do with these matters.

Because the first preserve superintendent was unable and unwilling to work with the State as the original enabling act required and because his superiors were not able to control the first superintendent's desire to manage the Preserve as a Park section 10 was added to the enabling act. Thus the intent of Congress was clear in 1974 and 1988 on this issue of managing such matters. Congress expected the NPS to allow the State of Florida to manage such matters as Assistant Secretary Reed stated before Congress.

CONCLUSION:

If we are expected to stay off a trail/route until it is fully recovered to a state that is completely natural, as if it had never had a machine operate on it, we will never use this trail/route again. This is not because the trail/route will take that long to recover but because it will have trees in it. These trees cannot be cut. Therefore no one will ever use the trail/route again. Further, if the NPS closes these trails/routes then ORVs will not operate in the Preserve at all because new trails/routes cannot be created. No one will allow trees to be cut as they were before the NPS was given management of these lands. Thus the full application

of these Executive Orders pertaining to this issue at hand creates a catch-22 follow the orders to the letter of the order and there will never be ORVs operation in the Preserve. Further, the same concept would apply to hikers and canoe interest as well. It does not take long before vegetation takes over any area in South Florida. Of course these Executive Orders to do not apply to these favored NPS uses.

F37 (cont.)

09/15/99 14:19 FAX 305 226 5325 LNR 001/001

Rod Lauredo
10301 SW 52 Street
Miami, Fl 33165
(305) 595-3289
rlauredo@lennar.com

September 15, 1999

Mr. Wallace Hibbard
Superintendent
Big Cypress National Preserve
Ochopee, Fl 34141

Dear Sir:

I have reviewed the Draft Recreational Off-Road Vehicle Management Plan as posted on the Preserve's web site and would like to submit the following comments. As we were under hurricane warning, I was not able to attend your Tuesday, September 14, public hearing at FIU.

As background, I have been hiking and bicycling the Preserve, as well as Everglades National Park and Fakahatchee Strand, for many years. I only recently obtained an ORV permit in order to access parts of the Preserve that are too remote to visit purely on foot or bicycle. As such, I plan to use my vehicle (a Jeep Wrangler) mostly as a way of reaching distant starting points on one of the major trails, from which to then go deeper on foot or bicycle.

Consequently, I agree with the draft Plan's thrust of increasing the extent to which ORV travel is restricted to designated trails. I would, in fact, go even further and make this designated path restriction apply everywhere in the Preserve, including the Turner River Unit. Having seen aerial photos of parts of the Preserve, the extent of the "terrain-scarring" that has already taken place is frightening. Alternatively, one option that you might consider is to restrict travel off the designated trails to the drier months.

Furthermore, given the nocturnal activity patterns of the panthers, you might consider barring movement of ORVs at night (in other words, at night you need to have either left the Preserve or have your vehicle sitting stationary at a campsite).

I *disagree*, however, with the "Vehicle Specification" language, at page 18, which addresses ATVs and swamp buggies only and requires 2-psi ground impact. Even my small 3200 Jeep with 275/60 tires exerts about 5.5 psi by your tables. 2 psi is unattainable. My recommendation would be to continue to allow a looser standard for 4x4 "street legals" but in exchange restrict them to designated trails.

Sincerely,

Rod Lauredo

429

F39

A responsible plan is what is needed; probably further study, and perhaps
quieter, lighter-weight vehicles which stick to established "trails" would
be things to be considered.

Thank you for doing all you can to preserve the environment for wildlife and
future generations.

Sincerely,

Mary Lou Hansen
120 Kennedy Rd.
Ft. Wright, Ky. 41011
606-341-2954

Received: from enterprise.fuse.net (206.230.21.11) by
ccmail.itd.nps.gov with
SMTP
  (IMA Internet Exchange 2.12 Enterprise) id 0036D3C4; Fri, 3
Sep 99 17:46:13
-0400
Received: from mllommel (intrepid-333.fuse.net [216.68.41.79])
      by enterprise.fuse.net (8.9.3/8.9.3) with SMTP id
RAA11804
      for <BICY_Superintendent@nps.gov>; Fri, 3 Sep 1999
17:49:00 -0400 (EDT)
From: "Mary Lou Hansen" <garlou@fuse.net>
To: <BICY_Superintendent@nps.gov>
Subject: ORV useage at Big Cypress National Park & Preserve
Date: Fri, 3 Sep 1999 17:49:47 -0400
Message-ID: <NDBBLLFCLLBHLJNODFDGCEIDCAAA.garlou@fuse.net>
MIME-Version: 1.0
Content-Type: text/plain;
      charset="iso-8859-1"
Content-Transfer-Encoding: 7bit
X-Priority: 3 (Normal)
X-MSMail-Priority: Normal
X-Mailer: Microsoft Outlook IMO, Build 9.0.2416 (9.0.2910.0)
Importance: Normal
X-MimeOLE: Produced By Microsoft MimeOLE V5.00.2314.1300

F42

430

Dr. Almut E. Dettmers
13488 Longwood Ave.
Port Charlotte, FL 33981-6131

Superintendent
Big Cypress National Preserve
HCR 61, Box 110,
Ochopee, FL 34141.

RECEIVED
SEP 24 1999
BIG CYPRESS NATIONAL PRESERVE

2141/3333

Dear Superintendent: 18 Sep 1999

I understand that an ORV management plan for Big Cypress will be discussed in a public hearing soon.

ORV's have and are environmentally impact that their use should preferably prohibited, at least minimized to a maximum extent.

ORV's should definitely be prohibited in sensitive wetlands so important to wildlife.

Your management plan must specify criteria when measures with regard to impacts not only on wildlife, but on plants as well, especially those on the endangered and threatened list, impacts on the soil, hydrology etc.

The plan must contain criteria for opening, closing and re-opening of trails, of which there are already too many at present. Some should be closed permanently.

We want to keep and maintain Big Cypress Preserve, don't we? Now is the time to do so right this.

Thank you.

Almut Dettmers.

F46

"Tidal View"
Clark Point Rd.
West Tremont, ME 04612-9702

December 4, 1999

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Superintendent Hibbard:

We feel very strongly that the National Park Service needs to take a proactive role in protecting the resources of Big Cypress National Preserve. We therefore respectfully urge you to:

- devise an Off Road Vehicle (ORV) management plan that is based on science and ensures the sustainability of the resources and recreational opportunities;
- designate appropriate ORV areas and trails, and enforce the use of these trails;
- set aside non-motorized areas for pedestrians, cyclist, human powered crafts (canoes and kayaks) and wildlife;
- set ORV guidelines: set maximum ORV weight limits (2500 lbs.), set strict guidelines for the type of tire used, and develop and enforce a systematic formula to gauge the ratio of tire/vehicle weight displacement via pressure per square (PSI) that will limit the damaging effects of the vehicles;
- set management practices to ensure that recreation will not supercede protection of the resources, such as the Florida panther; and
- prohibit ORV use in the Preserve Addition Area. This relatively new addition to the park has been ORV-free for several years and includes ideal habitat for the endangered Florida panther. This part of the park should remain free from motorized disturbances.

Sincerely,

Bill & Marilyn Voorhies

Bill & Marilyn Voorhies

431

F47

Subject: Big Cypress ORV Comments
Author: Dottie Hodges <dottie.hodges@appnet.com>
Date: 11/30/99 9:15 AM

Hello, I am contacting you in reference to the ORV plan for Big Cypress
National Presserve.

This past spring i visited both the Everglades and Big Cypress and found
Big Cypress in particular to be an incredible place. To preotect this
unique habitat, I urge you to:

-- devise an ORV management plan that is based on science and ensures the
sustainability of the resources and recreational opportunities;
-- designate appropriate ORV areas and trails, and enforce the use of these
trails;
-- set aside non-motorized areas for pedestrians, cyclist, human powered
crafts (canoes and kayaks) and wildlife;
-- set a ORV guidelines: set maximum ORV weight limits (2500 lbs.), set
strict guidelines for the type of tire used, and develop and --- enforce a
systematic formula to gauge the ratio of tire/vehicle weight displacement
via pressure per square (PSI) that will limit the damaging effects of the
vehicles;
-- set management practices to ensure that recreation will not supercede
protection of the resources, such as the Florida panther; ----
-- and prohibit ORV use in the Preserve Addition Area. This relatively new
addition to the park has been ORV-free for serveral years and includes
ideal habitat for the endangered Florida panther. This part of the park
should remain free from motorized disturbances.

Thank you for your consideration.

Sincerely,

Dorothy Hodges
4402 N. 4th Road #3
Arlington, VA 22203

F48

Subject: Fwd:Comment - Off Road Vehicle Management Plan for Big Cypre
Author: BICY Superintendent
Date: 11/23/99 10:13 AM

432

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Superintendent Hibbard:

I am writing to submit my comments on the draft ORV management plan for Big Cypress. Developing a management plan is a step in the right direction, however, the Park Service is proposing a plan that is not based on science and would not adequately protect the resources.

There appears to be a common misconception that the goal of the National Park Service is to balance park protection and preservation to ensure recreational activities. However, under the 1916 Organic Act that extablished the Park Service, the Park Service has but one mandate--"to conserve park resources unimpaired for the enjoyment of future generations." Only after assuring the protection of the resources is the Park Service to provide appropriate and meaningful public access and use.

Please:

1. Devise an ORV management plan that is based on science and ensures the sustainability of the resources and recreational opportunities.

2. Designate appropriate ORV areas and trails, and enforce the use of these trails.

3. Set aside non-motorized areas for pedestrians, cyclist, human powered crafts (canoes and kayaks) and wildlife

4. Set a ORV guidelines: set maximum ORV weight limits (2500 lbs.), set strict guidelines for the type of tire used, and develop and enforce a systematic formula to gauge the ratio of tire/vehicle weight displacement via pressure per square (PSI) that will limit the damaging effects of the vehicles

5. Set management practices to ensure that recreation will not supercede protection of the resources, such as the Florida panther

6.Prohibit ORV use in the Preserve Addition Area. This relatively new addition to the park has been ORV-free for serveral years and includes ideal habitat for the endangered Florida panther. This part of the park should remain free from motorized disturbances.

Thank you for your consideration.

Adam T. Savett
2224 Oakwyn Road
Lafayette Hill, PA 19444-2235

F49

Subject: Big Cypress
Author: "McClory; Valerie" <VMcClory@llamacapital.com>
Date: 11/5/99 9:23 AM

I have just finished reviewing some very extensive literature on the proposed Off Road Vehicle Plan for Big Cypress and I feel compelled to request that you consider the wants and wishes of those of us who are against any type of motorized vehicles in the parks. We realize that complete banning is not the right answer because it serves only one viewpoint, but allowing unrestrained access is most certainly not the answer either. Please take the comments below into consideration and lets try to find a compromise where the needs of all parties are met.

Please.....

* devise an ORV management plan that is based on science and ensures the sustainability of the resources and recreational opportunities;
* designate appropriate ORV areas and trails, and enforce the use of these trails;
* set aside non-motorized areas for pedestrians, cyclist, human powered crafts (canoes and kayaks) and wildlife;
* set a ORV guidelines: set maximum ORV weight limits (2500 lbs.), set strict guidelines for the type of tire used, and develop and enforce a systematic formula to gauge the ratio of tire/vehicle weight displacement via pressure per square (PSI) that will limit the damaging effects of the vehicles;
* set management practices to ensure that recreation will not supercede protection of the resources, such as the Florida panther; and
* prohibit ORV use in the Preserve Addition Area. This relatively new addition to the park has been ORV-free for several years and includes ideal habitat for the endangered Florida panther. This part of the park should remain free from motorized disturbances.

Sincerely,

VALERIE J. MCCLORY
561-632-8480 X 285
vmcclory@llamacapital.com

F50

Subject: Comments on the ORV Management plan for Big Cypress
Author: Robert Rutkowski <rutkowski@terraworld.net>
Date: 9/26/99 1:40 PM

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141
Fax: 941-695-3007
E-MAIL: BICY_Superintendent@nps.gov.

Dear Superintendent:

The National Park Service needs to take a proactive role in protecting the resources of Big Cypress National Preserve. I urge the NPS to:

Devise an ORV management plan that is based onscience; designate appropriate ORV areas and trails, and enforce the use of these trails;
set aside non-motorized areas for pedestrians, cyclist, human powered crafts (canoes and kayaks) and wildlife; set a ORV guidelines: set maximum ORV weight limits (2000 lbs.); set strict guidelines for the type of tire used, and develop and enforce a systematic formula to gauge the ratio of tire/vehicle weight displacement via pressure per square (PSI) that will limit the damaging effects of the vehicles; set management practices to ensure that recreation will not supercede protection of the resources, such as the Florida panther; and prohibit ORV use in the Preserve Addition Area.
This relatively new addition to the park presently has no ORV use and includes ideal habitat for the endangered Florida panther. This part of the park should remain free from motorized disturbances.

Thank you for the opportunity to bring these comments to your attention.

Sincerely,
Robert E. Rutkowski, Esq.

cc: Bob Stanton

2527 Faxon Court
Topeka, Kansas 66605-2086

F51

Subject: (no subject)
Author: Fowlerop@aol.com
Date: 12/3/99 12:45 AM

Dear Superintendent,

The National Park Service needs to take a proactive role in protecting the resources of Big Cypress National Preserve. Please consider the following:

1. devise an ORV management plan that is based on science and ensures the sustainability of the resources and recreational opportunities;
2. designate appropriate ORV areas and trails, and enforce the use of these trails;
3. set aside non-motorized areas for pedestrians, cyclist, human powered crafts (canoes and kayaks) and wildlife;
4. set a ORV guidelines: set maximum ORV weight limits (2500 lbs.), set strict guidelines for the type of tire used, and develop and enforce a systematic formula to gauge the ratio of tire/vehicle weight displacement via pressure per square (PSI) that will limit the damaging effects of the vehicles;
5. set management practices to ensure that recreation will not supersede protection of the resources, such as the florida panther; and
6. prohibit ORV use in the Preserve Addition Area. This relatively new addition to the park has been ORV-free for serveral years and includes ideal habitat for the endangered florida panther. This part of the park should remain free from motorized disturbances.

Sincerely,
Beverly Fowler, O.P.
Received: from imo28.mx.aol.com ([152.163.225.72]) by

F52

Dear Superintendent Kaynor,

Please amend the draft Off-Road Vehicle Management Plan to (1) Prohibit [illegible] in sensitive wetland & habitat areas, and (2) fully analyze the cumulative impacts of off-road vehicle use in Big Cypress Natl. Reserve. Big Cypress Natl Preserve encompasses many sensitive and biologically-rich lands. Please ensure the FINAL O-Road Veh. Plan Plan includes the two above-mentioned items. These lands cannot be replaced!

Robin D. Tyner

Tyner
[illegible] Tammy St
[illegible], NE 68123

NOV 18 1999

BIG CYPRESS

Superintendent Susan Kaynor
Big Cypress National Preserve
HCR 61
Box 110
Ochopee, FL
34141

JOHN JAMES AUDUBON (1785-1851) Gray Fox, 1851 (Hitchcock Pl. 116) Watercolor on paper National Audubon Society

4Q-16-R8GF
printed on recycled paper

F61

Nov. 7, 1999

Wallace A. Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141-9710

RECEIVED
NOV 15 1999
BIG CYPRESS

ORV Management Plan

I have scanned ORV Management Plans.

I want to point out you need to be careful what you open to ORV. Our White River National forest in Colorado has had over 500 miles of user created trail created by the populace when we were stupid enough to open up some areas for ORV, now we are fighting to get these areas closed back down. I feel you are wise to control the areas open to ORV's and allow illegal usage & return to the environment. It sounds like you might be faced with some areas to limited access. This is the only way to control visitors + poachers - like

F62

-2-

RECEIVE

NOV 15 1999

BIG CYPRESS NATIO

we had to do at our Marsh Bed Area. Visitors can only have access by tour buses.

Your proposed action sounds good in protecting your Panthers and other endangered species.

Do restrict the # of ORV that have access at a given time, this is good! I like the idea of increasing ORV fees this will help. Also the length of ~~the~~ time the permits are good for helps eliminate one time abuses. The reduction of impact of the ORV's needs to be done now!!

People at peace with nature are non-intrusive; I as a hiker hate them trying to run me over to get me to go home so they can destroy the environment.

Good luck on controlling the ORV problem; such owners are very aggressive and can be dangerous.

Dorothy E. O'Connell

Dorothy E. O'Connell
P.O. Box 217
Fairplay, CO 80440-0217

435

F62 (cont.)

CARMANAH VALLEY, VANCOUVER ISLAND, BRITISH COLUMBIA

After a major campaign by citizen groups, the government of British Columbia divided the Carmanah Valley in half, making the lower section a park. Logging plans for the upper watershed may result in erosion, creek siltation, and damage to the forests of the lower valley.

Ms. Jean D. Salmon
PO Box 2[illegible]
Santa Clara, CA 95055

10/4/99

Dear Mrs Kaynor,

Please modify the ORV Management Plan that will protect sensitive Big Cypress National Preserves biologically habitat. Fully analyze the cumulative impact of ORV use. The Florida Manatee & Panther need your protection. Don't let Big Cypress go the way of Carmanah Valley. Thanks!

Superintendent Susan Kaynor
Big Cypress Nat'l Preserve
HCR 61, Box 110
Ochopee, Fla

RECEIVE 141

OCT - 8 1999

BIG CYPRESS NATIONAL PRESER

From CLEARCUT The Tragedy of Industrial Forestry.
Photograph copyright © 1999 [illegible]

F63

436

Oct 4, 1999

Dear Superintendent Kaynor,

I am concerned over the (ORVs) destroying the Big Cypress National Preserve. Over 30,000 miles of ORV trails scar Big Cypress, impacting soil, hydrology, vegetation + wildlife in over 148,000 acres.

The management plan to preserve this must in my personal opinion do the following:

Prohibit ORV use in sensitive wetland + habitat areas.

Fully analyze the cumulative impacts of ORV use in the Preserve.

Please help protect one of our national preserves so tomorrow's generation will be able to enjoy its beauty.

Thank you for your help.

Yours truly,

Charlotte B. VanWinkle

Charlotte B. VanWinkle
[illegible]

F64

Dear Mr. Hibbard, 6/3/99

Please do not allow off-road vehicle use in the Preserve Addition area, to accommodate more enjoyable hiking, biking, + camping. Specific biological criteria for opening + closing existing ORV trails should be part of a science-based management plan for the preserve, to protect the endangered Florida panther.

Thank you for your help.

Eve Abraham

F65

Dear Superintendent Kaynor, 10/11/99

The current draft Off-Road Vehicle Management Plan fails to protect Big Cypress from the ravages of ORVs. Please make sure the management plan prohibits ORV use in sensitive wetland and habitat areas and fully analyzes the cumulative impacts of ORV use in the Preserve. The 30,000 miles of ORV trails scar Big Cypress, impacting soil, hydrology, vegetation and wildlife in over 148,000 acres.

Thank you,

Eve Abraham

F68

October 15, 1999

SUPERINTENDENT
BIG CYPRESS NATIONAL PRESERVE
HCR 61
BOX 110
OCHOPEE, FL 34141

RECEIVED
OCT 18 1999
BIG CYPRESS NATIONAL PRESERVE

DEAR SUPERINTENDENT:

AS A LONG TIME BACKPACKER IN THE BIG CYPRESS NATIONAL PRESERVE, I FULLY SUPPORT THE NEW BUGGY PLAN WHICH INCLUDES RAISING ANNUAL FEES, SETTING SIZE, EQUIPMENT AND WEIGHT STANDARDS, AND RESTRICTED ACCESS POINTS. FOR TOO LONG THE BUGGIES, ATC'S, AND 4-WHEEL DRIVE TRUCKS HAVE BULL-DOZED THEIR WAY THROUGH THE BIG CYPRESS AND TORN UP OUR SCENIC "FLORIDA TRAIL" NOT ONLY DOES THIS DAMAGE MAKE THE TRAIL STRENUOUS TO BACK PACK, BUT IT MAKES OUR BEAUTIFUL WILDERNESS TRAIL LOOK UGLY.

I HOPE THIS NEW BUGGY PLAN WILL BE IMPLEMENTED.

RESPECTFULLY SUBMITTED,
Roxanne Featherly
1510 WEST AVE #3
MIAMI BEACH, FL 33139

437

F77

Date: 9/22/99 8:29 PM
Sender: "Steven Neufeld" <steuf@boink.net>
To: Susan Kaynor
Priority: Normal
Subject: Big Cypress ORV Management Plan
9/22/99

2009 W. Pacific Ave. Apt. M
Spokane, WA 99204

Dear Superintendent Kaynor,

I am a native Floridian planning to retire in Florida someday, and I am very concerned about the conservation of Florida's magnificent natural heritage. I am writing concerning the National Park Service's draft ORV Management Plan for the Big Cypress National Preserve Over the decades, ORV use has greatly expanded adversely impacting soils, hydrology, vegetation, and wildlife. I believe you should only support the plan to the extent it does the following:

*The draft ORV Management Plan must be comprehensive and include a comprehensive analysis of past and present commercial ORV use.
* The proposed action must include specific management actions to avoid ORV impacts. If impacts cannot be avoided they must be minimized to the maximum extent practicable, not merely reduced.

* Prohibit ORV's in sensitive wetlands, areas important to wildlife, or when conditions are unsuitable (water too high for swamp buggies or too low for airboats).

* All ORV's must be restricted to a vastly reduced comprehensive designated trail system to avoid and minimize impacts. The ORV trail design should protect resources and maximize monitoring and enforcement. High density braided trail areas should be closed.

* Fully analyze the direct, indirect, and cumulative impacts of ORV use and of the alternatives, including fragmentation and edge effects of the almost 30,000 miles of ORV trails.

* The plan must specify threshold criteria for unacceptable impacts to soils, hydrology, vegetation, wildlife, and recreational conflict.

* The plan must contain supporting data and evidence for the 2 psi ground pressure standard and demonstrate how it complies with the threshold levels for unacceptable resource impacts.

* The plan must include specific and comprehensive threshold criteria for closing, opening, and reopening ORV trails.

* The plan must prohibit ORV use in the northern Addition Lands which are vital habitat for the endangered Florida panther.

* The plan must contain detailed and comprehensive criteria for implementation, funding, monitoring, research and education programs.

Thank you for considering these issues.

Sincerely,

Steven Neufeld

F81

438

Date: 9/22/99 5:15 PM
Sender: "Donald Fontenot" <icypress@uswest.net>
To: Susan Kaynor
Priority: Normal
Subject: Superintendent, Big Cypress National Preserve, HCR 61, Box 1

Superintendent Kaynor,

Concerning the Big Cypress ORV Management Plan and Supplemental EIS, please consider the following:

*The draft ORV Management Plan must be comprehensive and include a comprehensive analysis of past and present commercial ORV use.

* The proposed action must include specific management actions to avoid ORV impacts. If impacts cannot be avoided they must be minimized to the maximum extent practicable, not merely reduced.

* Prohibit ORV's in sensitive wetlands, areas important to wildlife, or when conditions are unsuitable (water too high for swamp buggies or too low for airboats).

* All ORV's must be restricted to a vastly reduced comprehensive designated trail system to avoid and minimize impacts. The ORV trail design should protect resources and maximize monitoring and enforcement. High density braided trail areas should be closed.

* Fully analyze the direct, indirect, and cumulative impacts of ORV use and of the alternatives, including fragmentation and edge effects of the almost 30,000 miles of ORV trails.

* The plan must specify threshold criteria for unacceptable impacts to soils, hydrology, vegetation, wildlife, and recreational conflict.

* The plan must contain supporting data and evidence for the 2 psi ground pressure standard and demonstrate how it complies with the threshold levels for unacceptable resource impacts.

* The plan must include specific and comprehensive threshold criteria for closing, opening, and reopening ORV trails.

* The plan must prohibit ORV use in the northern Addition Lands which are vital habitat for the endangered Florida panther.

* The plan must contain detailed and comprehensive criteria for implementation, funding, monitoring, research and education programs.

Please add my name to your concerned citizen list and please keep up to date on further plans.

Sincerely Donald Fontenot

2230 SE Oak ST

Portland, Or 97214

F82

PO Box 170022
Bryce Canyon, UT 84717

October 5, 1999

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Superintendent Hibbard:

I appreciated receiving a copy of the Draft Recreational Off-Road Vehicle Management Plan (plan). I've taken the opportunity to review the document and would provide the following comments. Please accept them not as criticisms of major faults but as opportunities to improve the plan.

Purpose of and Need and Legislative Mandates sections:

The plan is an excellent start to management of ORVs within the preserve. However, the plan misses the opportunity to restate a fundamental standard from the legislative history that is the standard under which ORV management is to occur. While it is true that national preserves are subject to more extensive recreational use than a national park, the preserve's legislation provides an extraordinary standard not clearly given other NPS areas. While this standard is implied with other NPS laws, it is not implicit as with the national preserve legislative history.

Other national park and environmental laws direct managers to ensure that resources are not derogated. This generally prompts managers to focus on measuring the extent to which activities are detrimental, and, as a result, they feel unable to act until damage to the resource is shown. For example, the Redwoods Act (PL 95-250) directs park managers to ensure resources are not degraded, and the Endangered Species Act requires action when harm to a species is documented (Mantell 1990, Dilsaver 1994). The Big Cypress legislation clearly set a stronger standard: human activities could occur to the extent they are shown to be compatible with the protection of the resources. This clarified two points that bring advantages to management: (1) we do not need to allow an activity until or unless we prove it is detrimental, and (2) the NPS does not have to shoulder the burden of resources to show compatibility between an activity and resource protection. The NPS can and should take a very conservative approach until a level of compatibility is shown. If outside entities believe the activity is compatible at a higher level, they may wish to collect and present data to the NPS themselves.

In the Summary, page iv, second paragraph, and in the Purpose of and Need for the Plan, page 1, second paragraph, the plan uses phrasing such as: "Methods to avoid or *minimize* negative ORV impacts would....." and "ORV activities...need to be managed and regulated to assure that important resource areas and water quality are not permanently impaired and that soil and vegetation are not *excessively degraded*" *(italics added)*.

These statements and the quotes selected in the plan from the legislation and legislative history suggest that ORVs are to be a permitted use within the preserve and managed based upon a determination of when this activity is proven to be a derogation to the resources of the preserve. Only to the extent the NPS proves a certain level or extent of use is detrimental, can the NPS manage or limit ORV use.

The enabling legislation directed several types of uses be permitted within the preserve, subject to reasonable regulation. The test or standard for those reasonable regulations; i.e., how the NPS was to limit or control the use of motorized vehicles and other activities, was not that use determined to be just short of detrimental to the preserve.

F83

Page 5 of the plan quotes a portion of the legislative history. Unfortunately, it does not quote a portion that speaks more strongly to the standard by which ORVs and other activities are to be managed. House Report 93-502, page 6, contains "Criteria for a National Preserve":

> The principal thrust of these areas should be the preservation of the natural values that they contain. They might differ, in some respects, from national parks and monuments insofar as administrative policies are concerned. Hunting, for example, subject to reasonable regulations by the Secretary, could be permitted to the extent compatible with the purposes for which the area is established.

This language and other portions of the legislative history make it clear that hunting and fishing, off-road vehicle use, and grazing are to be allowed to the extent these activities are shown to be compatible with protection of the preserve's resources. This plan needs to utilize this stronger standard as the basis for ORV management. not the lesser and more difficult test of proving detriment or derogation before acting.

This standard was utilized at the preserve when the collection of tree snails was eliminated. We did not need to prove collection of snails was a detriment. In the absence of solid data we took the conservative stand that collection has not been shown to be compatible and therefore would not occur. This approach was sustained.

I would utilize an analogy used by former Regional Director Baker in discussing the issue of cumulative impacts – it is also applicable to this discussion of proving detriment versus showing compatibility. Please envision the many rivets on an airplane and that one by one they are popping off. Can you determine the one rivet that when it pops off, the plane will crash? Very difficult to do and by that point, we are generally too late! However, most passengers would be very comfortable with the airlines stating that they know the plane will continue to fly with only six rivets missing. That level is compatible with continued flying! So too is the NPS on firmer ground avoiding the sometimes impossible task of proving when crossing a specific quantity of use will cause detriment or degradation of resources. It is clearer and more defensible when we state we know a specific level is still compatible. A more conservative level generally but one that allows the NPS to know the resources are still protected.

I would also suggest the opportunity be taken within the **Legislative Mandates and Special Commitments** section to state another fundamental principle. Federal law and policy state that base funds are not to be used for special park uses. Fees are to be collected sufficient to recover those costs. Later sections of the plan indicate ORV fees will recover only a portion of the costs incurred from this activity.

I believe one final item is missing early in the document and at other locations where the General Management Plan is quoted regarding ORV management. The GMP placed a ceiling of 2000 total annual permits for ORVs. Although that number has not been exceeded, its mention is important because it stands as a ceiling against future use. It is also important in that limiting the total number of issued permits is another method for management of ORVs. Appendix B, **Strategies and Tactics, 12.2,** mentions quotas on specific areas or management units but does not mention the reduction of total permits issued; this is a valid strategy and should be included in the plan.

Other Comments:

Page 17:

This page lists a variety of regulations. Number 1 contains a confusing reference. It notes drivers must be 16 years of age but in the last sentence notes "anyone under the age of 16 must wear a helmet .... while operating....an ATV." I do not believe ATV's are excluded from the ORV definition and thus someone 16 should not be operating an ATV. If someone under 16 can operate an ATV, then the sentence should not read a driver must be 16.

Number 4, appropriately mentions "mashing". As noted in the quote on page 30, other activities such as "mudding," racing and tug-of-war contests with ORVs are also prohibited. I would suggest these be listed under item 4.

Page 20:

The last paragraph states "owners of property within the backcountry have established rights of access outside recreational ORV use restrictions." This broad statement is incorrect and may complicated current and future management.

The legislative history does allow for the continuation of inholdings or exempt property within the preserve, as long as that property is not "subject to, or threatened with, uses which are, or would be detrimental to the purposes of the preserve." Some of the properties acquired by the NPS between exempt property and established roads do contain deed restrictions placing those specific pieces of land subject to pre-existing access. Some rights-of-way (ROW) also exist. However, unless an exempt property owner has those specific legal ROWs or pre-existing access rights, there is nothing in the legislation or other laws or regulations which provide a right of access via an ORV. A plan cannot and should not suggest to provide legal rights not inherent in law. This is best exemplified by past circumstances where nonfederal lands did exist within management units closed to ORV use. We did not permit those inholdings to utilize ORVs to access their private property.

Page 27:

The Loop Unit was also chosen as being closed to ORV use because it can stand as a "control" unit for measuring impacts of ORVs. Since the NPS is to management ORVs to assure they are compatible with preservation of preserve resources, a control area must exist that is not impacted by ORV use. The Loop Unit has been closed for the greatest length of time and serves as the best control.

The plan notes under the Bear Island Unit that "expansion of roads and trails could still be considered but would require consultation with.....the Florida Fish and Wildlife Conservation Commission." The legislation is clear that the NPS must consult with the Commission regarding hunting and fishing regulations but does not make this same mention regarding ORV use. While the NPS should cooperate and share information with the Commission wherever possible, the NPS should not impose requirements for formal consultation with an entity except where legally required.

Page 29, Cost Estimates

This section mentions "permit fees would be used to help offset ORV management costs." I would reference my comment for the early part of the document that indicates federal law and policy requires the costs of special park uses be totally recovered. Base funds are not to be used to cover those costs.

Page 54, Nonfederal Property Owners

This paragraph notes "another 100 owners of backcountry properties that must be accessed by ORVs." I would again note that with a few exceptions, these property owners are not legally assured ORV access. The plan should not imply or provide a legal right that does not exist.

Page 73, Impacts on Visitors

The first paragraph notes "the nonfederal property owners are not regulated with respect to access to or dispersal from their property, nor to improvements they may decide to make to their property. There are no regulations regarding water quality impacts from their camps, how many visitors they may have or what type of activities are allowed."

This statement is incorrect. The legislation gives the NPS the positive responsibility to monitor inholdings and assure activities are not subject to or threatened with uses which are or would be detrimental to the

F83 (cont.)

purposes of the preserve. Past versions of the Land Acquisition Plan contained sections that spoke to monitoring of inholdings. County building code and public health standards are just part of the methods for assuring in appropriate use does not occur. Past management actions regarding inholdings, and subsequent case law, emphasizes the NPS can and must take action after determining an inappropriate use is occurring on nonfederal property. The plan should not appear to limit management authority provided by legislation and case law.

Appendix B

As previously mentioned, strategy 12.2, quotas should be expanded to include limitation on total number of ORV permits. This should include lowering the 2000 permit limit mentioned in the GMP.

I compliment NPS personnel for the extensive work represented by this plan. The document is well written, easy to read and comprehend and conveys a clear picture for future management. I believe the minor changes I've suggested will strengthen the document. It will also allow current and future management to accomplish another mandate of the legislation:

> "....the area....will be managed in a manner which will assure its return to the true wilderness character which once prevailed....."

As reflected in my comments, I remain strongly interested in the preserve and its management. I ask that my name remain on your public contact list and that I receive future documents placed on public review. If I can ever assist with consultation on this or other issues, please contact me at 435-834-5322 (work), 435-834-5498 (home) or electronically at "fjfagergren@hotmail.com".

Fred J. Fagergren

F83 (cont.)

RECEIVED
AUG 30 1999
BIG CYPRESS NATIONAL

August 23, 1999

Mr. Wally Hibbard
Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Mr. Hibbard:

The National Park Services off-road vehicle (ORV) management plan for Big Cypress National Preserve will do little to slow the destruction of plant and animal habitat caused by the recreational use of "swamp buggies" weighing two tons and more.

After 25 years of haphazard ORV use at the preserve, the plan must do much more to protect the resources of the preserve. I believe the rule should include provisions to:

1. Designate appropriate ORV areas and trails, and enforce their use.
2. Set aside non-motorized areas.
3. Set a 2,000 lb. maximum ORV weight limit.
4. Set management practices to ensure recreation will not supercede protection of preserve plants and wildlife, such as the endangered Florida panther.

Thank you for your support in halting ORV damage.

Sincerely,

Pamela D. Botticher

Pamela D. Botticher
737 E. Fourth St.
Lawton, MI 49065
pam.botticher@manatron.com

cc: NPCA

F92

Page ①

copy faxed
12-13-99

Att. Wally Hibbard

RECEIVED
DEC 15 1999

I'm writing in Regards to the New Plan Proposal.

First of all, I'd like to Know why all ORV permit holders are not informed of the meetings Regarding the park? We give the park our names, Addresses, and Money, Seems like they could Send us a list of meetings if we were really wanted there.

I'm Strongly Opposed to weight Restrictions and increase in permit fees. We have been regulated enough. We have Complied to the many Rules + Regulations already Thrown at us, and still you Try for more. IT'S TIME TO STOP!

You people hire out of state Contractors to do study's on a Section of land which they are not even effected by, and most have never seen.

My family and I have enjoyed the Cypress for over 30 years, The worst damage we've seen is from the Government. We hear nothing about government damage, So I have listed a few examples.

① I 75 - a great preservation move, including it's beautiful 8' high Chain link fence

Page ②

② well Drillers and their EX Roads + Rods

③ Gates and padlocks to keep us ~~off~~ of what we paid for

④ painted trail markers on the trees, I wasn't aware trees grew Red paint marks.

⑤ Litter from Traffic and Sight Seers

⑥ The killing of trees Classified as non native but, were there before most of us were born.

We're by no means perfect.. but why do this much wrong to us.

There are trashy non-caring Sportsmen But it's a small percentage.

Why punish all of us?

Most of us treasure ~~our~~ time in the woods and respect the woods, yet we get treated like outlaws.

This land was purchased with tax money and we're tax payers. We are tired of being pushed off our land.

We know the Park Service won't be happy until we are gone. Let me tell you we're not giving up so easely.

I was impressed with the fine prices the plan showed, and would like to know who give the price quotes (what a bargain) except they forgot wheels, Tubes and labor for ~~[illegible]~~ Making new wheels, they Should Tripple their Quotes

F106

Page 3

Someone needs to keep in mind that if we're gone, there will be a lot of tax paid employees not needed either. So I'm asking you to back off and throw this proposed plan in the trash.

Extremely determined to stay in the Cypress (and fed up)

David R. Wack

F106 (cont.)

To: Wally Hibbard, Supt.
BCNP
HCR 61, Box 110
Ochopee, FL 34141

From: Frank F Denninger
461 E 40 ST
Hialeah, FL 33013

Re: Comments on Draft Recreational Off-Road Vehicle Supplemental Environmental Impact Statement

Comment No.	Comment	ORV Plan SEIS Location Reference
1)	Should remove all refrence in this plan to pedestrian control unless this sentence is incorrect. According to Pg 1 this plan addresses ONLY the recreational use of ORV's at the preserve.	Pg 1, ¶ 2, last sentence
2)	ORV vs. other user conflicts. There are 9-14000 man days of hunter use each year and no one knows how many others because only hunters are rqd. to check in. So just from this data one could maintain an 80% visitor satisfaction rate if not more than 1800 complaints were received annually. i.e. 9000(.20)=1800 12000(.20)=2400 I think preserve records should be brought forth publicly to justify any ORV restrictions based on this notion.	Pg 5, 2nd line up from bottom and 2nd ¶ from Top. Visitorship Pg 41 Line 1 ¶ 462553 12% + 12% 580226 ¶ 562819 20% 112,500

F107

Comment No.	Comment	ORV Plan, SEIS Location, Refrnc.
3)	First mention of Florida Panther. All refrences to this fraudulent sub-species should be removed from this plan. Panther is correct but not Fla. Panther due to the fact that Melody Roelke discovered the hybridization of this Panther years ago and verified her suspicions with genetic analysis focusing on the APRT enzyme. Cats in Fla. still had South American APRT 6-7 generations after the initial contributions were made by Cats let loose in Everglades Nat'l. Park. Ever since this discovery was made not 1-dime should have been spent on this animal from the Endangered Species Act because this Act ONLY is applicable to pure sub-species. Felis concolor coryi is a "LIE". I'm sure the N.P.S. would not work to promote a "LIE". So please remove all refrences to Florida Panther. Panther is fine just skip the Florida version because it no longer truly exists on this planet Earth.	Pg 7, Line 21
4)	Before trying to separate ORV users from tourists view maybe try educating tourists to the	Pg 10, Pg 15

443

Comment No.	Comment	ORV Plan, SEIS Location Ref.
4) cont'd.	Situation here within the Preserve "not Park." Visible ORV trains are a traditional aspect of this area and are a cultural and historical resource to be appreciated for the ease of access they can afford a tourist to hike the BCNP.	
5)	Be sure to evaluate every other user generated cost in the BCNP along with ORV use before major $ increases begin to be passed on. If the safety enhancement plan which is underway at a cost of $5 million dollars is generated due to Alligator Gawking Tourists (Preserve Visitors) there should be a plan to recoup those funds from them as they walk and cance the soon to be constructed tourist amenities within the BCNP. Also audited records should be made available to verify that construction and maintenance expenses are being recouped at the Dona Drive sewage dump station where the voluntary money drop box is located. Camping, NPS wouldn't need campgrounds without campers. If camping didn't occur campground development would be unnecessary. NPS 53 mandates they should pay if ORV's pay.	Pg 16 Vehicle Permits System "NPS 53"

F107 (cont.)

444

Comment No.	Comment	Sht 4 of 9 ORV Plan SEIS Location Ref
5) Cont'd.	When and if it becomes unavoidable to increase ORV fees the stickers should be transferrable and dated from day to day 1 year apart. Current system unfairly generates extra expense on new vehicles being registered close to June. Various modern payment methods such as checks, MasterCard etc. should be acceptable as is usual with any legitimate business. Cash is hard to track! ORV trail mitigation expense records should be available in an organized, detailed manner for public review so as to build pride in the ORV user in how wisely his or her money is being spent. Maybe all fees should be collected like sewage dump fees at the Dona Drive dump station. That way the NPS could show that they trust ORV users as much as other visitors. Go ahead and raise ORV fee to $300.00 I'm sure every one will just put it in the envelope and drop it in the box. All kidding aside whatever the fee winds up being it SHOULD BE BASED ON VEHICLE WEIGHT. Maybe leave existing sticker price as is with a supplemental weight fee. In no way should a 600# ATV be assesed the same fee as a 6000# Wheel Buggy or Full Track.	Pg 16 Veh. Permit System "NPS 53"

NPS surely wants to be fair with fee structure

Comment No.	Comment	Sht 5 of 9 ORV Plan SEIS Location Ref Func.
6)	What scientific data shows that reduction in ORV noise and other disturbances (un-specified) would likely yield an increase in deer and hog populations substantially greater than reclaiming 120 acres of marshland.	Pg 72 & 73 Impacts on Deer & Hogs Pg 73 Line 9
7)	Until such time when there is real data on other visitor uses i.e. check in for all visitors. No increase in ORV restrictions are warranted. Especially limiting ORV's to Designated Access Points. This has the potential to destroy the wilderness and hunting experience. What, when and where will these ORV - Non-ORV conflicts continue. Let us know i.e. ORV Clubs so we can respond to educate conflicting parties.	Pg 75 Other Visitors
8)	Access points shown on ORV Plan map are totally inadequate regarding the number of them. Brown Rd and Upper & lower Wagon Wheel should be left open so as to facilitate equitable dispersal into adjacent areas. Turner River Rd has existing access at North end of Rd. near I 75 which are not included on map. Not including these will deny access to large areas in the N.W. corner of Turner River Unit which is not justifiable.	Pg 20-23

F107 (cont.)

Sht 6 of 9

Comment No.	Comment	ORV Plan SEIS Location Rfrnc.

8, cont'd. Unless this is some kind of A Hoax (Fl. Panther) habitat enhancement program. Pg 20-23

Americans w/ Disabilities Act will generate extreme costs which are going to be possibly put on other users.

9) a) NPS states this plan is to only address Rortn'l. ORV use. Pg 1 Line 15
[which is true]

b) All Backcountry parties (ORV or Walk In) "Daily Use Permit" (Free) Pg 17 Line 1
[which is true]

c) BMP Tactic 12.1 Per Visit Fee Pg 111 Tactic 12.1

The a, b, c, statements here are as conflicting as anything I've ever seen. Hopefully these are just mistakes or one must assume that there are many other subtle conflicting statements within this document. Something is amiss here that's for sure.

10) True Net Area ORV Trail Affect in BCNP

Assuming the ludicruous 29000 mile figure is correct I believe it is provable that even at this level of usage with the current mix of vehicles in BCNP that no more than 1.4% of pre-add'n BCNP has ever had a tire on it. An additional sheet will be attached to illustrate this mathematically.

11) Troubling language parallels between this plan and Scenic Highway Plan. cont'd.

445

Sht 7 of 9

Location in ORV Plan

11, cont'd. Viewshed Pg 15 Line 1

Visual Corridor Pg 15 Line 2

Visual Intrusion Summary Pg V

Hopefully these phrases and words aren't included as precursors for justification to ban ORV trails which are visible to other users along US 41 "State Scenic Hiway" or other BCNP roads.

Tactics such as these are illegal due to the simple fact that Congress mandated "traditional" uses to be allowed to continue. ORV's and local recreationalists were here long before recent arrivals and domestic and international tourists. Let them adapt to our traditional landscapes trails and all.

In my position as a "Tamiami Trail Scenic Highway" Corridor Mgt. Entity member I will be on the lookout for any attempts to provide linkage between the Corridor Mgt Plan and this ORV plan.

12) Compliments on BMP Section 1 and to NPS

This is the best of the whole ORV Plan. NPS should allow those of us "ORV Users" who Pg 94, 95

F107 (cont.)

12, Cont'd. desire to, to work with them to help facilitate education of ourselves and tourists as to the many subtlties and nuances involved within the BCNP. The ORV plan emphasizes heavily on ORV user education and technique modification. This is not a bad idea.

Exclusive (P. 3.0) with regards to Geo-Web fixation, less emphasis to the long tradition of ORV use in BCNP and the necessity of it. Linear footage might be reinforced by reinforced limitations of MAN without machine. required if reinforced by reinforced limitations of MAN without machine. Trails were all curved away from their origins. If could be saved in all of construction we carry around day to day.

I believe consideration should be given to education of tourists in BCNP and the necessity of it due to the terrain and the physical we should work together in this area first and foremost. In doing so I am sure we would EARN each others respect and dispel alot of myths and cynicisms

Area's except possibly in initial layout of the trail.

In conclusion just let me say I appreciate the opportunity to participate in this process. I hope some of what I am saying here aids the NPS in producing a plan with minimal traumatic effect on ORV users lives. Please remember alot of you will leave this Area some day, WE (ORV users) live our whole lives "HERE" because we truly love the area and we know that there is no where else like the BigCypress. I also volunteer to help in this plan in any other way possible in the future.

P.S.

Next Sheet "True Net Area ORV Trail Affect in BCNP"

Calculation

True Net Area ORV Trail Affect in BCNP

Given Data @ 29000 miles of Trails

(B) Vehicle Mix (Current 1997 ORV Plan DATA)
ATV's 52%
ORV's / Street legal } 48%

(C) 1 Acre = 43560 Sq Ft.

(D) Sqr Affect Tracks

	ATV	ORV
Tire Width	10" + 10"	18" + 18"
	Tot - 20" or 1.66'	Tot - 36" or 3'

Analysis:

ATV 10" Tires: 1.66' × 52500 (1 mile) — Area = 8800 Sq Ft/mile (.202 Acre/mile)

ORV 18" Tires: 3' × 52500' (1 mile) — Area 15810 Sq Ft/mile (.364 Acre/mile)

Net Affected Area per Vehicle Type

ATV 52% of 29000 miles = 15080 miles x .202 Acre/mile = 3046 Acres
ORV + Str. Legal } 48% of 29000 miles = 13920 miles x .364 Acre/mile = 5066 Acres
8112 Acres

Pre-Addn Acreage
BCNP 565,893 Acres

True Net Area ORV Trail Affect in Pre-Addn BCNP $\frac{8112}{565893} = .014 = 1.4\%$

This isn't bad and we know 29000 miles is ludicrudous.

F107 (cont.)

Date: 4/25/99 3:15 PM
Sender: Bill Bang <bang@bellsouth.net>
To: Wally Hibbard
Priority: Normal
Subject: Big Cypress ORV use

Dear Mr. Hibbard,
As a visitor to the area now known as The Big Cypress National Preserve
for more than 30 years I urge you to continue to allow unfettered ORV
access to the preserve and continue the "Traditional Use" of the area as
designated by Congress.

The reason I've chosen to write to you at this time is a result of my
visiting a site on the internet published by The National Parks and
Conservation Association (NPCA) calling for people to write to you based
on their libelous presentation of alleged facts relating to ORV use in
the Big Cypress National Preserve and urge you to stop ORV use in the
area (they are calling it a "park") or to establish designated trails.

After more than 30 years of personal first hand experience in visiting
the area I consider myself to have an expert opinion of the area and of
the effect of ORV use in the area.

What I've seen is a lot of opinions from people who seem to have a
passive perspective of the effects of the ORV use, focusing on finite
details without ever seeing the big picture. What I have come to realize
after years of use and study of The Big Cypress is, that the area is a
giant river basin with an annual sheet flow of water traveling South
[Southwest]. What I have found in using the area is that what is a rut
today, may not be there next month. The sand, silt and other surface
matter is constantly being repositioned by the movement of the water -
just as the rocks and bottom matter in a river are continuously
repositioned by it's water flow.

If you view the area from a satellite, you will notice that the more
heavily used trails follow the rock ridges of what appears to be the
edges of craters formed millions of years ago. The craters (what some
call ponds) are clearly visible from outer space and help one to
understand the area much better.

The buggies run these high rock ridges because in many areas, they are
the only places the buggys can run in the wet season. The muddy basins
quickly fill with water, the silt filters back into the seasonal ruts
and the new growth thrives in the freshly turned mud. Each year the
cycle repeats itself.

For anyone to think that rubber tired vehicles could forever change the
surface of the terrain in the Big Cypress National Preserve either,
simply doesn't understand the power of nature or, the continuous
seasonal changes in the area.

I do respect the misguided intentions of the NPCA to stop what they
think is permanent damage to the Preserve, but they don't understand the
whole picture. If the areas were being permanently damaged by any type
of human activity, I would have to agree with them and urge you to alter
that particular activity.

However, the NPCA on their internet site, a
href=http://npca.org/forms/search.html are trying to convince people
that ORV use is jeopardizing the future of everything from the panthers,
to the bird population numbers, to the rare plant life in the area. The
truth simply doesn't agree with their facts.

You've been down here a few years now and I'm sure by now you have had
the opportunity to ride some of the trails. I'm also sure you've seen
first hand in some of the trail's deep ruts have leveled themselves out
(for example: on the sandy road North of the 2 mile fork off of Monument
road in the Turner River unit or in the "Bean Field" behind the Indian
Village North of Monroe Station) and new ruts have formed elsewhere.

Further you may have found, that some trails can be driven over once,
some twice without a problem and other trails that can be depended on
year round. As long as you are careful not to break through the grass
roots and sub terrainian vegetation with the tires, most areas can be
driven without as much as a rut.

You've also seen for yourself where the water flow has re-filled the
ruts with silt and sand the plant life flourishes and explodes with
blossoms and new growth. As the water goes away, the newer ruts hold
fish and crayfish as well as insects for the birds to eat providing them
with easy to catch meals much longer into the drying season than they
would have normally had.

These 2500 (+ -) buggy permits issued annually should not be stopped nor
should the free access of the area by ORVs be curtailed. Anyone that
truly understands the issues will also understand that establishing
designated trails WILL DO REAL DAMAGE to the area by creating permanent
hydrologic barriers that will interfere with the natural sheet flow of
the basin. You can't run the same trails over and over without bringing
in fill. You can't bring in fill without interfering with the natural
water flow of the area.

Please don't allow the activists of the NPCA "Pave the road to Hades in
the Big Cypress with good intentions" by pushing for designated trails.

Thank you for taking the time to read this letter and for the wisdom to
consider the true facts in the big picture.

Sincerely,
Harold W. Bang
mailto:bang@bellsouth.net

F113 (cont.)

Jerome Sherk

20225 NE 34th Ct. #2518
Aventura, Fl 33180-3308

Phone 305 -931-6527

Oct. 2,1999

RECEIVED
NOV 0 5 1999
BIG CYPRESS

Honorable Superintendent:

The Miami Herald in today's issue reported on a public hearing regarding the regulation of ORV'S in the Big Cypress National Preserve.

The proposed regulations concerning size,equipment and weight standards including limiting the pressure tires exert on the ground to two pounds per square inch and restricted access entrances seem very reasonable.

It would appear that the owners of these vehicles are more concerned with their machines than with the effect these machines have on the environment. The impression given by the report was that these owners were not very sympathetic to views concerning the environment nor were they willing to compromise.

The proposed increase in fees may, indeed, discriminate against low-income operators and seems to assume that higher fees would make these people more careful about preserving the ecology of this park. Such a conclusion is without proof. Though raising the fee would undoubtedly limit the users, it would be discriminatory.

From the reported behavior,one is forced to conclude that ORV operators are not particularly concerned about natural surroundings so much as they are about how effectively their machine can function in an unconfined,unobstructed situation regardless of what happens to the plants and animals in that area.

It is to be hoped that Reason will prevail and the word "Preserve" will be enforced in Big Cypress Natonal Preserve.

Respectfully,

Jerome Sherk

F116

ERNEST A. DERNBURG MEDICAL CORPORATION
2456 BUSH STREET
SAN FRANCISCO, CALIFORNIA 94115
TELEPHONE 415 · 567-5885
FAX 415 · 567-6309

Superintendent Susan Kaynor October 26, 1999
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

Dear Superintendent Kaynor:

Having previously visited the wonderful Big Cypress National Preserve and having seen many off-road vehicle trails scarring this magnificent setting, I respectfully am requesting that the draft Off-Road Vehicle Management Plan should prohibit any ORV use in sensitive wetland and habitat areas. In addition, the plan should contain a full analysis of the cumulative impacts of ORV use in the preserve.

Sincerely,

Ernest A. Dernburg, M.D.

EAD/pjk

449

F119

6721 SW 69 Terrace
South Miami, FL 33143

11/3/99

Superintendent, Big Cypress National Preserve
HCR 61
Box 110
Ochopee, FL 34141

Sir:

I read with interest the off-the road-vehicle controversy in the newspapers and the emotional arguments on both sides. The arguments, in my estimation, have not bearing whatever on the reality of the matter. In fact, the major point has not even been brought up.

In 1982 –4, I and my colleagues at the university of Miami were contracted by the Dade County Port Authority to study the environmental effects of the Dade-Collier Practice Jetport facility construction and operation. This we did and reported upon consequently and re-studied two years later.

Among the findings, was the fact that the maximum effect upon the area was that swamp vehicles had effectively ground down the peaty particles that ordinarily covered and built up on the rock surfaces to form the peat layer. Our estimate was that the finely-produced particles would more readily be oxidized and would eventually result in loss of ion-exchange capacity of the overlying water and in soil subsidence. We urged that more study on this aspect of the ecology be undertaken to see whether there was indeed a problem and, if so, how extensive it was. We even started such studies because of our own interests, but because of lack of financial support, they were discontinued.

Shortly thereafter, the U.S. Fish and Wildlife Service did a survey on a squared area north of Alligator Alley where they ran vehicles back and forth in a systematic manner and wrote up the results. We never saw the report and they may have buried it in the archives, but it was apparently an eye-opener because we never had a chance to talk to the participants, and found out that they had been transferred elsewhere. The one talk I had with them was before they had gotten started when they expressed to me their frustration in trying to find an area that had not been impacted by vehicles and had to settle for an area which had the least impact for their purposes.

I do not know whether this is of any value to you, but I submit it for your general information.

Sincerely,

Leonard J Greenfield, PhD

F124

450

Wally Hibbard
Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

RECEIVE
NOV 05 1999
BIG CYPRESS NATIONAL

Dear Superintendent Hibbard:

The National Park Service needs to take a proactive role in protecting the resources of Big Cypress National Preserve. Please take action on these request:

Devise an ORV management plan that is based on science; designate appropriate ORV areas and trails, and enforce the use of these trails;

Set aside non-motorized areas for pedestrians, cyclist, human powered crafts (canoes and kayaks) and wildlife;

Set a ORV guidelines: set maximum ORV weight limits (500 lbs.), Better yet ---NO ORVs ALOWED!!!!!!

Set strict guidelines for the type of tire used, and develop and enforce a systematic formula to gauge the ratio of tire/vehicle weight displacement via pressure per square (PSI) that will limit the damaging effects of the vehicles;

Set management practices to ensure that recreation will not supercede protection of the resources, such as the Florida panther; and,

Prohibit ORV use in the Preserve Addition Area. This relatively new addition to the park presently has no ORV use and includes ideal habitat for the endangered Florida panther. This part of the park should remain free from motorized disturbances.

Please respond!

Sincerely,

Nick Nichols

[redacted]

F125

Subject: Big Cypress National Preserve
Author: Jean King <whjaking@home.com>
Date: 8/14/99 8:18 AM

Sirs:
The NPS needs to take a proactive role in protecting the resources of
Big Cypress National Preserve. The draft of the first ORV (off road
vehicle) management plan is not based on science, is fiscally questionable, and does not serve as a model to adequately protect the
resources. Big Cypress is home to the endangered Florida Panther, and
ORV use is forcing these precious cats onto potentially dangerous
private property in order to seek refuge.
Thank you.
Jean King
4205 Colgate Way
Livermore CA 94550

F126

Subject: ORV Management Plan for Big Cypress National Preserve
Author: Robert Rutkowski <rutkowski@terraworld.net>
Date: 8/20/99 8:29 PM

Wally Hibbard
Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Superintendent Hibbard:

The National Park Service's first off-road vehicle (ORV) management plan for Big Cypress National Preserve released on August 13 will not satisfactorily regulate the use of ORVs and do little to halt the destruction of plant and animal habitat caused by the recreational use of "swamp buggies" weighing two tons and more. After 25 years of haphazard ORV use at the preserve, the plan must do much more to protect the resources of the preserve. I believe the rule should include provisions to: Designate appropriate ORV areas and trails, and enforce their use; Set aside non-motorized areas; Set a 2,000 lb. maximum ORV weight limit; Set management practices to ensure recreation will not supercede protection of preserve plants and wildlife, such as the endangered Florida panther.

Thank you for the opportunity to bring these comments to your attention.

Yours sincerely,
Robert E. Rutkowski, Esq.

cc: Bob Stanton

2527 Eaxon Court
Topeka, Kansas 66605-2086

451

F128

DENNIS J. LENZ, CPA
36 Cedar Street
Amityville, New York 11701
516-691-3827

Secretary Bruce Babbitt
Department of the Interior
1849 C Street, NW
Washington, DC 20240

August 12, 1999

Dear Secretary Babbitt:

I am writing with regard to off-road vehicle use in Big Cypress National Preserve. In order to ensure the protection of the park's resources, the National Park Service needs to take a proactive role in regulating ORV use by establishing and implementing an ORV management plan, based on science. Key points of this plan should include:

- Designation of appropriate ORV areas and trails, with enforcement of the use of these trails
- Setting aside of non-motorized areas for pedestrians, cyclists, human powered crafts (canoes and kayaks) and wildlife
- Establishment of maximum ORV weight limits (2000 lbs.)
- Strict guidelines for the type of tire used
- Development and enforcement of a systematic formula to gauge the ratio of tire/vehicle weight displacement via pressure per square (PSI) that will limit the damaging effects of the vehicles
- Management practices to ensure that recreation will not supercede protection of resources, such as the Florida panther

In addition, ORV use should be prohibited in the Preserve Addition Area. This relatively new addition to the park has no ORV use and includes ideal habitat for the endangered Florida panther. This part of the park should remain free from motorized disturbances.

I appreciate the opportunity to offer my suggestions about this issue of special concern to me. Thank you for your consideration of my concerns.

Sincerely,

Dennis J. Lenz

Dennis J. Lenz

F129

452

Subject: Comments on ORV plan
Author: Sean Smith <seansmith@earthisland.org>
Date: 9/15/99 2:36 PM

Sept. 15, 1999

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Sup. Hibbard:

The following are submitted as comments on the National Park Services
proposed off-road vehicle plan.

I strongly urge you to amend the plan to include the following:

1. devise an ORV management plan that is based on science;
2. designate appropriate ORV areas and trails, and enforce the use of these
trails;
3. set aside non-motorized areas for pedestrians, cyclist, human powered
crafts (canoes and kayaks) and wildlife;
4. set a ORV guidelines: set maximum ORV weight limits (2000 lbs.), set
strict guidelines for the type of tire used, and develop and enforce a
systematic formula to gauge the ratio of tire/vehicle weight displacement
via pressure per square (PSI) that will limit the damaging effects of the
vehicles;
5. set management practices to ensure that recreation will not supercede
protection of the resources, such as the Florida panther; and
6. prohibit ORV use in the Preserve Addition Area. This relatively new
addition to the park presently has no ORV use and includes ideal habitat
for the endangered Florida panther. This part of the park should remain
free from motorized disturbances.

Thank you for you consideration. I look forward to your response.

Sincerely,

Sean Smith
265 Fell St. #304
San Francisco, CA 94102

F130

RECEIVED
AUG 18 1999
BIG CYPRESS NATIONAL PRESERVE

Big Cypress Superintendent Wally Hibbard
HCR 61, Box 110
Ochopee, FL 33943

Dear Superintendent Hibbard,

I am writing you today to comment on the use of off road vehicles(ORV) in the Big Cypress National Preserve. I believe that the National Park Service should adhere to the following guidlines when it comes to ORV use in the Preserve:

- devise an ORV management plan that is based on science;
- designate appropriate ORV areas and trails, and enforce the use of these trails;
- set aside non-motorized areas for pedestrians, cyclist, human powered crafts (canoes and kayaks) and wildlife;
- set a ORV guidelines: set maximum ORV weight limits (2000 lbs.), set strict guidelines for the type of tire used, and develop and enforce a systematic formula to gauge the ratio of tire/vehicle weight displacement via pressure per square (PSI) that will limit the damaging effects of the vehicles;
- set management practices to ensure that recreation will not supercede protection of the resources, such as the Florida panther; and
- prohibit ORV use in the Preserve Addition Area. This relatively new addition to the park has no ORV use and includes ideal habitat for the endangered Florida panther. This part of the park should remain free from motorized disturbances.

Thank you for attention.

Sincerly,

Dean Ruscoe
1717 Primrose Ct
Port St. Lucie, Fl 34952

F131

Subject: ORVs
Author: acm@chem.ucsd.edu (Andrew Millard)
Date: 8/24/99 2:33 PM

Dear Superintendent,

The National Park Service needs to take a proactive role in protecting
the resources of Big Cypress National Preserves. It should devise an
ORV management plan that is based on science, designating appropriate
ORV areas and trails, and enforcing their use. It should also set aside
non-motorized areas for pedestrians, cyclists, canoes and kayaks, and,
most importantly, wildlife; management practices should be set to ensure
that recreation will not supercede the protection of natural flora and
fauna, such as the Florida panther. ORV guidelines should be set, which
would determine maximum ORV weight limits (at, say, 2000lbs) and strict
guidelines for the type of tire used, as part of a systematic formula to
gauge the ratio of tire/vehicle weight displacement that will limit the
damaging effects of the vehicles. Finally, ORV use must be prohibited
in the Preserve Addition Area. This relatively new addition to the
park presently has no ORV use and includes ideal habitat for the
endangered Florida panther. This part of the park should remain free
from motorized disturbances.

Sincerely,

Dr. Andrew C. Millard
Department of Chemistry and Biochemistry
University of California, San Diego
9500 Gilman Drive, M/S 0339 acm@chem.ucsd.edu
La Jolla, CA 92093-0339, USA http://www-

F132

Subject: Big Cypress National Preserve
Author: TimMary747@aol.com
Date: 9/11/99 5:22 PM

The National Park Service needs to take a proactive role in protecting the
resources of Big Cypress National Preserve. It is importatnt that the Park
Service
devise an ORV management plan that is based on science;
designate appropriate ORV areas and trails, and enforce the use of these
trails;
set aside non-motorized areas for pedestrians, cyclist, human powered crafts
(canoes and kayaks) and wildlife;
set a ORV guidelines: set maximum ORV weight limits (2000 lbs.), set strict
guidelines for the type of tire used, and develop and enforce a systematic
formula to gauge the ratio of tire/vehicle weight displacement via pressure
per square (PSI) that will limit the damaging effects of the vehicles;
set management practices to ensure that recreation will not supercede
protection of the resources, such as the Florida panther; and
prohibit ORV use in the Preserve Addition Area. This relatively new addition
to the park presently has no ORV use and includes ideal habitat for the
endangered Florida panther. This part of the park should remain free from
motorized disturbances.
Sincerely, Mary Mathews 1111 S Waukegan Rd Lake Forest, IL. 60045

F133

Subject: Big Cypress National Preserve.
Author: Robert Rutkowski <rutkowski@terraworld.net>
Date: 8/14/99 3:10 PM

Secretary Bruce Babbit
Department of the Interior
1849 C Street, NW
Washington, DC 20240

Robert Stanton
Director
National Park Service
Washington, D.C.

Dear Secretary Babbit and Director Stanton:

National preserves may permit activities such as hunting, fishing, mineral extraction, and ORVs, but these activities may only take place if they do not jeopardize the natural resources. Unless the Park Service is willing to stand up and protect these valuable resources as it is required to under the Organic Act, Big Cypress National Preserve will lose the very resources to which the hunters so vehemently demand access.

With acknowledgment of ORV recreational use in the enabling legislation, the park nevertheless should enforce the existing regulations, and set a management plan to move forward on practices that will eliminate the destruction of resources.

The greater Everglades Restoration Plan is moving forward and the NPS is a major partner to assure that the natural resources are well protected in the plan. It would be irresponsible of the NPS to advocate the restoration of one part of the ecosystem and allow for the degradation of another.

The National Park Service should take a proactive role in protecting the resources of Big Cypress National Preserve. Please:

devise an ORV management plan that is based on science; designate appropriate ORV areas and trails, and enforce the use of these trails;
set aside non-motorized areas for pedestrians, cyclist, human powered crafts (canoes and kayaks) and wildlife;
set a ORV guidelines: set maximum ORV weight limits (2000 lbs.), set strict guidelines for the type of tire used, and develop and enforce a systematic formula to gauge the ratio of tire/vehicle weight displacement via pressure per square (PSI) that will limit the damaging effects of the vehicles; set management practices to ensure that recreation will not supercede protection of the resources, such as the Florida panther; and prohibit ORV use in the Preserve Addition Area. This relatively new addition to the park has no ORV use and includes ideal habitat for the Florida panther. This part of the park should remain free from motorized disturbances.

Thank you for the opportunity to bring these comments to your attention.

Your sincerely,
Robert E. Rutkowski, Esq.

cc: Superintendent Wally Hibbard
John Podesta

2527 Faxon Court
Topeka, Kansas 66605-2086

Subject: ORV use & Big Cypress Nat. Park
Author: Kris Beaver <kebeaver@earthlink.net>
Date: 9/2/99 9:32 PM

Sept 11,1999

Dear Mr. Hibbard,

I am beseeching you to please undertake a careful and scientific ORV management plan for the Big Cypress National Park. I'm deeply concerned that haphazard ORV use over the past 25 years has been creating heavy resource damage, scarring the landscape and adversely impacting the habitats and the wildlife of the park. We must limit recreational activities that are not sustainable without continued damage to wilderness resources. I would suggest that you please:

1) Devise an ORV / recreational use management plan based upon science- perhaps enlisting the help of such highly respected scientific teams from The Nature Conservancy.
2) Designate appropriate ORV areas and trails
3) Set weight limits for ORVs to minimize habitat destruction.
4) Assess and restore already grossly damaged areas.
5) Designate non-motorized areas for wildlife preservation, especially prohibiting ORV use within the preserve addition area - to keep this area free from motorized disturbance.
6) Protect the habitat of the endangered Florida Panther.

It is criminal that governments at any level give license to Americans' immature attachment to recreational "toys" at the expense of Nature's ecosystems and biodiversity. Please lead the way and help educate these "children" whose penchant for selfish destructiveness has been tolerated long enough. Unmanaged ORV use in a National Park is an oxymoron. Thank you for your consideration. - Kris Beaver
<HTML>
Sept 11,1999

456

Author: "Kathleen Kaeding Turner (Kathie)" <kkturner@execpc.com>
Date: 8/18/99 9:02 PM

Secretary Bruce Babbitt
Director Robert Stanton

I'm writing to encourage you in the strongest terms possible to take a proactive role in protecting the resources of Big Cypress National Preserve. Specifically, I believe that you need to:

1. Devise an ORV management plan that is based on science;

2. Designate appropriate ORV areas and trails, and enforce the use of these trails;

3. Set aside non-motorized areas for pedestrians, cyclist, human powered crafts (canoes and kayaks) and wildlife;

4. Set an ORV guidelines: set maximum ORV weight limits (2000 lbs.),

5. Set strict guidelines for the type of tire used, and develop and enforce a systematic formula to gauge the ratio of tire/vehicle weight displacement via pressure per square (PSI) that will limit the damaging effects of the vehicles;

6. Set management practices to ensure that recreation will not supercede protection of the resources, such as the Florida panther; and

7. Prohibit ORV use in the Preserve Addition Area. This relatively new addition to the park has no ORV use and includes ideal habitat for the endangered Florida panther. This part of the park should remain free from motorized disturbances.

I appreciate all that you do to protect the parks for the use of all of us. Thank you.

Kathleen Kaeding Turner
324 South Locust Street, No. 8
Green Bay, WI 54303

F136

Lisa A. Travis
2142 Stover Way
Sacramento, CA 95822

Secretary Bruce Babbit
Department of the Interior
1849 C Street, NW
Washington, DC 20240

Director Stanton
National Park Service
1849 C Street, NW
Washington, DC 20240

Dear Secretary Babbit and Director Stanton:

I am writing regarding the soon-to-be published Off Road Vehicle management plan for Big Cypress National Preserve. After 25 years of haphazard off road vehicle (ORV) use, the National Park Service (NPS) has drafted the first ORV management plan for Big Cypress. Developing a management plan is a step in the right direction, however, the Park Service is proposing a plan that is not based on science, fiscally questionable ($350,000 to produce an incomplete report) and does not serve as a model to adequately protect the resources.

While I understand that national preserves may permit activities such as hunting, fishing, mineral extraction, and ORVs, these activities may only take place if they do not jeopardize the natural resources. Unless the Park Service is willing to stand up and protect these valuable resources as it is required to under the Organic Act, Big Cypress National Preserve will lose the very resources to which the ORV enthusiast so vehemently demand access. With acknowledgment of ORV recreational use in the enabling legislation, the NPS nevertheless needs to enforce the existing regulations, and set a management plan to move forward on practices that will eliminate the destruction of resources.

The National Park Service needs to take a proactive role in protecting the resources of Big Cypress National Preserve. To achieve that goal, the NPS must:

- Devise an ORV management plan that is based on science;
- Designate appropriate ORV areas and trails, and enforce the use of these trails;
- Set aside non-motorized areas for pedestrians, cyclist, human powered crafts (canoes and kayaks) and wildlife;
- Set ORV guidelines, including maximum ORV weight limits (2000 lbs.) and strict guidelines for the type of tire used, and develop and enforce a systematic formula to gauge the ratio of tire/vehicle weight displacement via pressure per square (PSI) that will limit the damaging effects of the vehicles;
- Set management practices to ensure that recreation will not supercede protection of the resources, such as the Florida panther; and
- Prohibit ORV use in the Preserve Addition Area. This relatively new addition to the park has no ORV use and includes ideal habitat for the endangered Florida panther. This part of the park should remain free from motorized disturbances.

I hope you will consider my opinions and suggestions when forming and implementing the management plan for Big Cypress National Preserve. Thank you for your attention to this matter.

Sincerely,

Lisa A. Travis

F137

Subject: Big Cypress National Preserve
Author: jesse@silverw.com (Jesse Counterman)
Date: 8/13/99 3:21 PM

The National Park Service needs to take a proactive role in protecting the
resources of Big Cypress National Preserve by:

devising an ORV management plan that is based on science;
designating appropriate ORV areas and trails, and enforce the use of these
trails;
setting aside non-motorized areas for pedestrians, cyclist, human powered
crafts (canoes and kayaks) and wildlife;
setting a ORV guidelines: set maximum ORV weight limits (2000 lbs.), set
strict guidelines for the type of tire used, and develop and enforce a
systematic formula to gauge the ratio of tire/vehicle weight displacement
via pressure per square (PSI) that will limit the damaging effects of the
vehicles;
setting management practices to ensure that recreation will not supercede
protection of the resources, such as the Florida panther;
and prohibiting ORV use in the Preserve Addition Area. This relatively new
addition to the park has no ORV use and includes ideal habitat for the
endangered Florida panther. This part of the park should remain free from
motorized disturbances.

Jesse Counterman
3421 Dearborn
Sioux City IA 51104

F138

From: Richard Spotts <spotts@ncis.net> on 08/13/99 09:13 PM GMT

To: President@Whitehouse.GOV
cc: Vice.President@Whitehouse.GOV
Subject: Everglades Restoration should include Stopping ORV damage in Big Cypress National Preserve

Dear Mr. President:

Although I appreciate your Administration's ambitious proposal to begin to restore the world-class Everglades ecosystem, I am concerned that there may be a "blind spot" in this proposal by not aggressively working to stop continuing off-road vehicle (ORV) damage within the Big Cypress National Preserve.

As you may know, the Big Cypress National Preserve is part of this ecosystem, and the Preserve is conducting management planning. ORV uses have caused substantial adverse impacts within this Preserve, including destroying and fragmenting natural habitats, disturbing wildlife, and degrading water flow and quality. It is time to put ecosystem restoration and health above the desires of those seeking to tear up the countryside for their motorized fun.

My family and I have visited the Everglades. We greatly respect its profound ecological and biodiversity significance. And we believe that people have a moral obligation to "tread lightly" given this significance.

Please encourage Interior Secretary Bruce Babbitt, National Park Service Director Robert Stanton, and Big Cypress Preserve Superintendent Wally Hibbard to:

a.. devise an ORV management plan that is based on science;
b.. designate appropriate ORV areas and trails, and enforce the use of these trails;
c.. set aside non-motorized areas for pedestrians, cyclist, human powered crafts (canoes and kayaks) and wildlife;
d.. set ORV guidelines: set maximum ORV weight limits (2000 lbs.), set strict guidelines for the type of tire used, and develop and enforce a systematic formula to gauge the ratio of tire/vehicle weight displacement via pressure per square (PSI) that will limit the damaging effects of the vehicles;
e.. set management practices to ensure that recreation will not supersede protection of the resources, such as the Florida panther; and
f.. prohibit ORV use in the Preserve Addition Area. This relatively new addition to the park has no ORV use and includes ideal habitat for the endangered Florida panther. This part of the park should remain free from motorized disturbances.

Many thanks for your consideration.

Sincerely,

Richard Spotts
719 Orchard Lane
Ashland, WI 54806

F139

458

November 9, 1999

EIRC KIMMEL
12685 SW 200 ST
MIAMI FL 33177
(305)238-5782

Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

RECEIVE
NOV 15 1999
BIG CYPRESS NATIONAL PRESERVE

RE: Big Cypress Wildlife Mgt. Area
Proposed Management Regulations

Dear Superintendent:

I am writing to you with regard to some of the proposed changes to the Big Cypress Management Plan. Being born and raised in Miami, I have regularly enjoyed the Big Cypress throughout my life -- on foot, on ATC, and more recently, by taking my young sons out hunting and exploring in order to teach them to respect the beauty and value of a well-managed natural area as I was able to do and my father before me..

However, as a citizen who has regularly used this public resource, I believe that some of the proposed management changes adversely alter the balance between human use and environmental preservation (keeping in mind the fact that the Big Cypress has been seriously altered by human influences, e.g. water management practices, for many, many years now, and is far from being "pristine"). Some of the proposed management requirements are detrimental both to the Big Cypress and to the public's privileges to use this resource. With this in mind, I have some suggestions and criticisms which may be useful in considering future management practices:

1. Raising ORV Permit Fees: Raising the cost of ORV fees into the Big Cypress areas has priced many out of this particular use of the area. Like myself there are many who have a modest income; and cannot now afford the new increased fee. The permit fee increase will unfairly result in allowing access to the Big Cypress only to those who are able to afford the steep ORV permit fees. By increasing the fee, you have priced the average working person out of enjoying this aspect of the Big Cypress areas.

2. ORV Design Criteria: I was able to meet the 1.5 psi tire inflation requirements on my old 3-wheeled ATCs, but on the newer 4-wheel drives the cost of adaptation is prohibitive. The 2.0 psi on swamp buggies is also an unreasonable requirement -- such huge tires are expensive, and also require ring and pinion gear and axle upgrades to handle the load of the larger tires. The Management Plan's cost analysis to modify buggies to the proposed psi did not include these necessary modifications in order for the larger tires to work. Adding thousands of dollars for each buggy. Once again, the unfair result is that only those who have the income to afford the mechanical upgrades can have access to the Big Cypress on an ORV/ATC. This is discriminatory against working people and minority's. It still does not satisfactorily address the stated goal of reducing ORV impacts in the park.

3. ORV Access Limits: First, limiting ORV use within a certain distance of a highway, such as Hwy 41, Loop Road or Turner River Road promotes degradation of those areas adjacent to the highway. If we are not allowed to use the road, then we will be forced to enter the woods on the ORV, which can cause more adverse impact than had we been allowed to proceed on the road or along the unvegetated road shoulder. Second, limiting ORV access points in and out of the woods will promote a quick and dramatic rut formation and degradation of existing access points as all ORV traffic will be concentrated in fewer areas. It is better to have more access points so that the impact is lessened in each area. It is a good idea to place stabilizing materials along the ORV trailheads for a very short distance but this will be too expensive to keep up. It is a much better idea to open up a few more access points to relieve overuse of the ones we have left Finally, closing the eastern access jump-over is unreasonable, where the reason given is that the Rangers cannot fully control that access. The park has more than enough control on everything now and we don't need anymore barriers getting into the woods than what we have now. The eastern access helps by providing access from another location and thus less damage on some of the buggy trails. And a shorter ride to some of the camps.

4. Stair Step Unit: Hydro-based Criteria for Opening and Closing. I hope that this does not mean that when the water is low enough to close airboat traffic that the area will also be closed for ORV's because the dry season is usually when our family can ride our ATV's within the stairstep area. Also there is a question of whether the Park Service is intentionally allowing the flooding of the Big Cypress as has been witnessed in past years (and brought up at the November 1st meeting at FIU) of dramatic rises in the water without any rainfall. If the Park Service isn't in control of this, they should get with whomever is responsible . This causes far more damage than ORV's do. We can go along with no hunting when there is extreme flooding but we must still be allowed access where we choose when not hunting. There should be some input from the ORV and airboat communities before any closing takes place. There have been too many times that both hunting and camping areas have been closed without adequate justification.

5. Airboats. We are opposed to narrowing the widths of airboats. Narrowing them is unsafe and will result in more accidents, injuries and deaths! A narrower hull will also dig in more in shallow water a wider hull displaces less water floats better causing less of

F140

an impact. It is not feasible to narrow an existing hull. This will again price the average working person out of the woods. I respectfully disagree and strongly feel this is wrong! We also oppose horsepower restrictions as they are unnecessary. The noise difference between a 200hp motor and a 350hp motor is not that big a difference.

6. Safety Zones The safety zone put around the Environmental Education Center on Looproad effects my family very personally. We have been helping maintain the property at 65 Looproad for the past 8 years . Ben Wolfe has lived there since the 60's He has hunted across the street in that slough for years and we have had the the privilege to use it during that time. The past 5 years I have been taking my sons there. It is close enough to Ben's that the kids can walk back and forth to where we set the stands and not have too hard of time. We set up far enough out so as not to interfere with the Center . Setting up past the signs puts us out into the more open areas where the airboats run. The slough we set up in was perfect for us and we were there before the Center was built. We strongly feel that we should be allowed to continue using this area. The Environmental Education Center should never have been built in the first place. I strongly feel it was very hypocritical of the park to build such a compound on this environmentally sensitive piece of property. In other words "practice what you preach". I beg you to please modify the safety zone on the outside of this slough so that my children, indeed all future generations, can continue to enjoy this exquisite natural area as we have always done. No buggy or ATC is needed and my children really see a lot more wildlife in this slough than they do out in the airboat country.

7. Backcountry use permit system. This is another idea that we feel is erroneous. If we want to go for a midnight ride, walk or whatever in our public lands we should not have to check in. This implies a regulation to impose yet another inconvenience and intrusion into the lives of taxpaying American citizens

8. Drivers age. I oppose this unnecessary rule. I rode ATC's dirtbikes and mini bikes all over the woods as a kid, without any major problems. Today there is nowhere else left to ride for families who derive great pleasure together. During both the spring break and summer vacation my wife takes the boys to our camp on Looproad, from there she and my sons ride up and down Looproad fishing at the culverts or just riding the ATC's they have both been riding since they were 5 years old. They ride responsibly and safely because we taught them to respect nature and machinery while under adult supervision. During hunting season when we don't hunt across the street in that slough we ride down Looproad towards the Hump and enter the woods somewhere in between. There is no other way for us to ride to these spots but along Looproad. This rule presents another hardship on citizens like us. On rare occasions we will ride Loop all the way to Monument Lake and have to cross Hwy41 to get there. This rule should be modified so that we can continue our family outings. What is wrong with this system ? ORV riding, camping, hunting, fishing, and watching nature are all good family activities you should be promoting this way of life not trying to destroy it!

I5. Sportmans' Education: Finally, with all the effort that is going into limiting access to and use of the Big Cypress, we have not heard that any effort is going into educating that segment of the population which does use the area, e.g., about responsible conservation habits, how to use an ORV or ATC in ways to minimize its impact, how to recreate in the Big Cypress without trashing it, damaging wildlife or wildlife habitat. It is really the actions of a few disrespectful and irresponsible people who have made the current management circumstances unworkable for those of us who respectfully use our natural resources.

We would rather see you striving to regulate the incredibly detrimental behavior of adjacent real estate developers, commercial industries, and entities such as HABDI who plunder the land for short-term profit and leave an overpopulated, water-starved, paved and poisonous environmental legacy behind for the environment and our children.

Those who are actively in charge of managing the Big Cypress should consider the sports and recreation purpose, as well as the conservation purpose of the Big Cypress, and creatively balance the two uses, but not by severely limiting access by sportsmen as the current proposed regulations do. I cannot now take my boys out into the deeper woods of Big Cypress, even during the dry season when ATC access is reasonable. It is not possible to reasonably walk out to those beautiful areas with children, and it is now too expensive for me to pay for a permit. I am very, very disappointed in the current management proposals.

After attending the meeting at FIU on November 1, 1999 we have a few concerns that hopefully you will answer.

1. Why did the Park Service settle with the Florida Biodiversity project?
The reason I ask this is that the evidence they presented at the Nov.1 meeting was not very truthful or accurate.

2. Who decides and how is it decided what information is given to the contractor who is writing up the new ORV plan?

3. How can the false statements I heard from the representatives of the Florida Biodiversity group be prevented from influencing the new ORV plan?

4. Can someone from the ORV or airboating community oversee what is being written in the new plan?

5. If not what safeguards are in place to make sure this is not a onesided and prejudicial plan as has been presented to us?

6. When the stairstep area is closed to airboats because of low water will we still be able to run our ATC's there? That is the only practical time we can ride there.

7 Can anything be done about the safety zone you put up next to our camp? It is a totally unjust restriction on my sons, not to mention that we have been using that spot many years before the Center was built

F140 (cont.)

460

Overall it saddens me to say that I disagree with most of the proposed plan. I am disappointed that the Park Service was influenced so easily by the different supposedly environmental groups. I hope that in the future you will check out some of the facts before you do any more damage. I grew up being taught that the park was a good idea, but now I see that you never intended to live up to the original purpose of this park.

Please consider and enter into the public record all of the above comments and questions regarding The Big Cypress National Preserve ORV Management Plan.

We would be happy to assist in further study and information regarding this all important subject. Please respond to as many of my questions as possible.

Respectfully

Eric Kimmel
& Family

Eric Kimmel
Cody Kimmel
Travis Kimmel
Michele Kimmel

F140 (cont.)

RECEIVED
NOV 15 1999
BIG CYPRESS NATIONAL PRESERVE

To: Park Service Big Cypress National Preserve
From: David E. Whidden: Land Owner
Subject: ORV Management Plan
Date: November 5, 1999

I am a landowner in the Big Cypress National Preserve my exempt # is 857-40 I am a hunter, fisherman, outdoorsman, conservationist. My main rout into the Big Cypress is the Monument grade, Sand road (the right fork) BuckSkin and Lost Dog prairie. From Lost Dog where Poppenhagers landing strip is located I go three miles to the northeast up an old tram road so I am located about in the middle of it all. We have had a camp there for almost thirty years. I feel I have knowledge of the land and the impact that people and vehicles impose. I am listing my comments and urge you to listen to the comments of all involved and to weigh the wishes of the users of the Big Cypress.

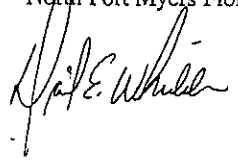
Comments

1. The existing regulations and restrictions should not be changed. Since implementation the Big Cypress has less vehicle traffic than ever before and more animals. We all take better care of it mainly due to your involvement. The entire swamp has benefited and looks better than I have ever observed it. The vehicle rules plus the management of hunting by the Game Commission has brought this about.
2. I am opposed to the 2psi-ground pressure for ORV's this is an unrealistic goal and imposes extreme expense on the ORV owners and in my opinion will do nothing toward any improvement of the flora fauna soil erosion etc.
3. The 2psi-ground pressure looks like another way to just keep the ORV's and their owners out of the Big Cypress.
4. The 1971 law passed in 1974 provides for the land to be used for hunting, fishing and recreation.
5. You already have a very good land and vehicle use plan-established stay with it and enforce it.
6. As a landowner I need a larger buggy to get to and maintain my property.
7. I have no problem with designation of existing roads however if you limit the designated roads to just a few you may increase rutting and erosion on these roads.
8. Grandfather in all permitted buggies and street legals.

F141

9. Give landowners the right to run buggies large enough to maintain their properties.
10. Do not increase the ORV permit fees out of the reach of the average person we are not all rich.
11. Most of us can not afford to build a buggy that places 2psi ground pressure.
12. The part of a tire that touches the ground is directly influenced by the amount of air in it. A 14.50-36 with 5psi has a ground area of approximately 144sq inches if it is mounted on a buggy that weighs 4000Lb. That same tire with 32psi puts approximately 24sq inches on the ground.
13. Closing the Big Cypress during high water makes little since. The deer are not bunched up on high ground, they love the water and the harvest of game is lower when it is wet. The sawgrass areas are a different story, in that environment the deer seek high ground.
14. The Big Cypress basically heals itself. The scars left by the oil exploration equipment back in the 70's is all but gone I have trouble finding where they went.
15. The Game Commission is doing a fine job! the amount of deer and hog has increased to the highest level I have seen in 30 years.
16. Make it mandatory that anyone using the Big Cypress for any reason obtain a management area permit: hunters, fishermen, non-hunters and hikers.
17. Leave backcountry camping open do not make mandatory campsites.
18. Keep street legal ORV's eligible for permits.
19. As a landowner I use my street legal vehicle when it is dry. It is very unlikely that any street legal could pass the weight restriction.
20. ORV issued permits are well below the 2500 quota. With a land area of over 700,000 acres it seems overbearing to change the existing vehicle requirements.
21. In 1993 a panther killed a doe deer less than 300 yards from my camp in corn dance. We had been in camp for four days when the panther made the kill. The panther had no problem living close to the camp and the vehicles didn't scare him away he in fact stayed in our area for the entire season well into the spring before moving on.
22. I do not condone driving through the woods smashing vegetation etc. to hunt. I walk hunt however a vehicle driving on a buggy trail seldom frightens a deer beyond it just hopping off.
23. The rule that states there will be no loaded guns on a vehicle eliminates the old way of shooting deer from a buggy therefore keeping the ridge runners out of the palmetto patches and roughs. Enforcement of this law promotes buggies using existing roads.
24. Keep the Florida trail as it is now used and regulated.
25. Let us use this wonderful beautiful resource without stifling unattainable regulations.

Respectfully:
David E. Whidden
1147 River Road
North Fort Myers Florida 33903



F141 (cont.)

462

November 8, 1999

NOV 15 1999

BIG CYPRESS ... ESERVE

Dear Mr. Hibbard,

In regards to the Draft Recreational Off-Road Vehicle Management Plan, I have reason for concern on some of the issues in your Draft Plan.

The first issue of concern would be the proposed two lbs. per square inch ground pressure on all ORV's. Having 18 years of experience in building and using off road vehicles specifically designed for use in the Big Cypress, I find your proposed changes to be unsafe and problematic for the ORV user. To expect an ORV with the changes you propose to be a dependable form of transportation in and out of the Big Cypress is optimistic at best. It is my opinion that ORV's weighing 3500 lbs. or less with oversized tires could experience many mechanical problems. Insufficient power to turn larger tires, the inability to steer your machine properly, and front hubs breaking from added leverage from larger tires are some of the problems easily predictable. I have also considered that the average ORV owner/builder may not have the financial resources or the engineering ability to build such a machine. This proposal may exclude these people from using and appreciating the Big Cypress.

The second issue of concern is in reference to the drastic increase in the cost of ORV stickers. The National Park Service feels that improvements are necessary to the future of the Big Cypress Preserve. As on ORV user, I feel a responsibility to bear my portion of the expense of improvements made to the area. However, I feel everyone who uses the Big Cypress (i.e. walk hunters, hikers, campers, etc.) should bear equal responsibility of these improvements should they be deemed necessary. One portion of the citizens that enjoy the Big Cypress Preserve should not have to bear the brunt of all the expenses of improvements. I find that discriminating. The improvements outlined in the proposed plan benefit the ORV user as well as hikers, campers and walk hunters.

The third issue of concern is in reference to Trail Heads, or Designated Access Points, with improved roads for ORV users to enter and exit these areas. I believe these Trail Heads could be beneficial if constructed and maintained properly. I would ask that you consider making your improved access points wide enough to allow oncoming vehicles to pass each other. I also believe that elevation should be in a manner to prevent water from ever standing on the surface. In addition, these improved roads should be made long enough so that ORV users will not have to cross low lying areas, such as prairies, to enter or exit.

The fourth issue of concern is in reference to brakes on all ORV's. I would hope that you would not ask ORV users to add weight to their machines. The average 4-Wheel ORV never exceeds 3 mph due to the adverse conditions it must travel through in the Big Cypress. It seems pointless to add additional weight to our slow moving ORV's.

I realize that many man hours have gone into the preparation of this proposed plan. As an outdoor enthusiast I can appreciate all efforts to keep the Big Cypress alive and well. However, I feel that the opinions and life experiences of ORV users, land owners, hunters, campers, hikers, etc., should be considered before any changes take place. Have you considered a committee of such citizens to contribute to your efforts?

I thank you for taking the time to read my thoughts on these matters, and I hope we can work together to ensure a prosperous future in the Big Cypress.

Respectfully,

Tim Griffin

F142

McDONALD & McDONALD
ATTORNEYS AT LAW
1393 S.W. FIRST STREET
SUITE 200
MIAMI, FLORIDA 33135-2386

TELEPHONE (305) 643-5313
FACSIMILE (305) 643-4990
E-MAIL McDonaldLaw@Compuserve.com

DAVID C. McDONALD (1897-1971)
DAVID McDONALD
H.C. PALMER, III
DAVID M. McDONALD

JOHN R. CAMP, JR.
OF COUNSEL

November 24, 1999

NOV 29 1999

Mr. Wally Hibbard
Superintendent
Big Cypress Nat'l. Preserve
HCR61 Box 110
Ochopee, FL 34141

Dear Mr. Hibbard:

I am writing to you with regard to the Big Cypress National Preserve ORV Management Plan. I have reviewed a draft management plan and, from my over 25 years experience in the Stair Steps area as an outdoorman and property owner, have the following comments.

In general, I note that the management plan continually refers to possible consequences of ORV usage such as increased water flows, etc. However, it is clear from a reading of the entire management plan that numerous alleged concerns and "possible" effects of ORV use have not been documented scientifically or biologically, as the case may be. As such, there appearing that there is no supporting scientific data, I strongly question the management plan as it clearly adversely affects property owners, such as myself, and non-property owner users of the resource.

With regard to the width restriction on airboats, whoever drafted this clearly has no experience in operating airboats. First, by allowing wider airboats, the boats will be able to plane at a slower speed thereby minimizing damage and also helping to reduce noise levels. Also, by increasing the width of the airboats, the weight and pressure of the boats passing over the grasses on the trails is reduced. Finally, as anyone who has ever operated an air boat knows, their navigation, especially in a cross wind situation, is not precise; and, anyone who thinks that trail widths are going to be reduced by any measurable quantity by reducing the width of the air boat is completely mistaken.

I also oppose any limits on horsepower on air boat engines. Horsepower does not affect sound levels, exhaust systems do. Additionally, a significant portion of the noise generated by an air boat is from the noise generated by the propeller as it moves through the air. While I have not done any study, from my personal experience as an airboater and as an aeronautical engineer, I do not believe that it is possible to meet the proposed noise limitations with an air boat propeller blade, regardless of the power source. I note that the management plan is concerned about the noise because it "may" affect breeding bird populations. Obviously, there has been no study or empirical data to support this concern.

I also question the concern about restrictions on wheeled ORVs. The concerns about removing bumpers to prohibit damage to engines and running gear seems counterproductive to the management plan. Without protective design, vehicles may become disabled by the breaking of transfer cases, engine oil pans, and transmission casings. All of these could likely result in a petroleum spill of lubricants which would certainly do more harm than allowing protective hardware on the vehicles. Also since there is currently no restriction on pedestrian use of the resource, it appears to me that the restriction of ground pressures for wheeled vehicles to under 2 PSI is nonsensical when walking humans exert over 4 PSI.

Changes in the ORV plan which prohibit the use of certain equipment should allow current ORV owners and operators to be exempt from the new specification requirements, if any.

With regard to the restrictions in the Stair Steps Unit, as planners are no doubt aware, these primary air boat trails were made with bulldozers when the area was farmed prior to the establishment of a preserve. As indicated in my general comments above, there is obviously no hydrological base criteria for temporary closures nor is there any empirical data regarding the actual effect of air boat trails and air boat usage as opposed to possible effects. I note with the recent flooding incurred by South Florida this hurricane season, due to the pumping of flood waters into the Everglades Basin and Everglades National Park, significant flooding was experienced within the Park itself. Prior to the system of canals and pumps currently used to avoid flooding in populated areas, there was more natural area for drainage and water flow. It seems to me that, to the extent that ORV trails may slightly increase water flow patterns, this may help to counteract the negative effects of storm water pumping into the Everglades Basin in order to avoid flooding in populated areas.

With regard to comments about access and parking, access and parking facilities should be provided at the level identified in the general management plan and certainly no less than is currently being provided. The proposed use of trail heads will likely result in sig-

464

nificant overuse of those areas resulting in severe damage to the resource. Allowing the access points currently in use helps to minimize the effect of the usage and the damage caused by ORV use.

Finally, to the extent that there will be a fee for ORV permits, the cost of same should cover only the administrative cost of inspecting equipment, maintaining records, and issuing permits. ORV use in this Preserve is a traditional activity which pre-existed Everglades National Park and the Big Cypress National Preserve. As such, ORV use is not a special park use but is a traditional park use and any fees for such permits should be maintained at the lowest possible cost so as to insure accessibility to the public, regardless of their financial status.

Sincerely,

DAVID M. McDONALD

DMMcD:rt

F143 (cont.)

RECEIVED
OCT 21 1999
BIG CYPRESS NATIONAL PRESERVE

October 16, 1999

Big Cypress National Preserve
HCR 61, Box 110,
Ochopee, FL 34141

Attention: Superintendent Wallace A. Hibbard

Re: ORV Management Plan

Dear Sir:

At the time that I first visited the Big Cypress, ecology was not the household word that it is today. Few people spoke of endangered species and the population explosion, with its resultant loss of wildlife habitat, was not generally understood.

Progress was defined in terms of land cleared, highways built, and Gross National Product. Saving our wilderness was of concern to only a few. Ecology now has become an all-important concept and is everybody's business.

Not to many years ago it was legal to locate polar bears by airplane. It was also legal to hunt grizzlies by baiting. Today, THROUGH THE EFFORTS OF THOSE WHO HUNT AND ENJOY THE OUTDOORS, FAIR-CHASE LAWS HAVE BEEN CREATED AND MANY OTHER CONSERVATION PROBLEMS SOLVED, ALMOST WHOLLY BY THE SPORTSMAN. His license fees and eleven percent excise tax on guns, ammunition, and archery equipment, in addition to the ten percent tax on fishing tackle, raises millions of dollars each year for wildlife projects.

There are, unfortunately, some individuals and organizations who would outlaw hunting. Ignoring biological facts, this faction thinks that nature can cure all the problems our wildlife faces. They condemn, while munching a lamb chop, the killing of wild animals. These people have two standards, holding that domestic animals are born to be slaughtered but that wild animals are sacred. A cut of meat, nicely packaged in the food market, has no more emotional effect on the housewife than a bunch of carrots. Yet it was, just a few days before, a living animal. She is paying the butcher to do her killing.

The hunter does the job himself or herself. Not in a slaughterhouse where the animal has no sporting chance, but in fair chase, matching wits with wild animals in their own terrain.

It must be recognized that the world of wildlife has altered considerably since the days of the market hunter. The buffalo is gone. The plow is turning the prairies to feed our ever increasingly overpopulated world. Elks, sheep, and goats have taken refuge in the mountains. In the lower forty-eight states, grizzly bears exist for the most part only in

F145

parks. BUT, ALMOST ALL OTHER ANIMALS HAVE INCREASED IN GREATER NUMBERS THAN EVER BEFORE.

Early in this century, hunters began to realize that game laws and bag limits were needed, and they set about to establish regulations. Today, millions of their dollars are fed into these projects each year. On the other hand, those who would curtail hunting spend great sums on propaganda and lobbying against hunting, but very little to benefit the very wildlife they hope to preserve. The majority of this group is sincere in its beliefs, although trained wildlife biologists could tell them THAT WILDLIFE CAN BE "PRESERVED" INTO EXTINCTION. That game cannot be stockpiled. If a herd of deer, for instance, is not managed, it can destroy itself, the forests, and other species as well.

I do not mean to say that the hunter is entirely without blame. There is work to be done in this field, also. We must teach more respect and appreciation for the outdoors, more respect and understanding for fair-chase rules, and we must encourage the proper use of gun or archery equipment so that kills may be done as humanely as possible.

Just a few years ago, as many as fifty thousand deer died yearly of starvation and cold in Michigan. Many northern states had this same problem, overpopulation and no food. Hunters were then used by biologists to reduce the herds to the carrying capacity of their range. There is no other practical way to manage wildlife.

At this writing, wildlife habitat is being reduced by thirty-five hundred acres a day in our country. Our world problem is population control. There could soon be no place for wildlife, or people.

The above words reflect the thoughts of Fred Bear, one of this century's outstanding sportsmen. There is much to be gained from his sixty-five years of hunting in the outdoors. I offer this wisdom so that you might understand the reason that sportsmen pursue their hunting with such dedication. I would hope that it will influence your decision to allow hunting, properly regulated, in the 175,000 acres of property known as the Big Cypress Addition Lands.

I appreciate your invitation to submit my comments on control of the ORV use in the BCNP. This subject has needed to be addressed for some time, and I am aware of the study and effort that you and your staff have made to implement a fair use of this means of transportation.

I would suggest that the BCNP would receive little use without ORV'S. There are few people able or willing to walk the Preserve. As an example, I began using the Preserve in 1951. The "Swamp Buggy" was used at that time as a means of getting to camp, transporting the necessary equipment, and returning to civilization. All hunting was by foot. There were few hunters. You would go for days without seeing anyone.

Time, along with the establishment of Turner River Grade, and later, Alligator Alley changed all this. Better buggies were built. Property was bought on the perimeter of the Preserve, and a great deal in the backcountry as well. Oil exploration developed a road on top of the existing buggy trail from the Alley to some two miles below my property. Permitting required that the old buggy trail be used to avoid the removal of trees. I was able to drive a motor home to my camp. Poaching was rampant, and no effort was made to control it. This continued through the early acquisition years of the federal act that established BCNP.

Positive measures were taken as the Park Service became acquainted with the Big Cypress. I am thankful for what has been done, and applaud you for your efforts. It is not an easy task, but I would hate to think of the consequences if BCNP had not been enacted.

It is time for changes to be made. No question of that. Larger buggies, unrestricted use such as busting through the islands, hunting from the buggies, traveling in buggy teams to implement these tactics, all are unsportsmanlike as well as detrimental to the ecology. It needs to be stopped, but I would suggest that you already have the regulations in place to stop this conduct. All that is necessary is to enforce those regulations.

Let me speak to the increased permit cost. This may be necessary to control those things mentioned in the above paragraph. You know your budgetary needs better than I do. My concern is of two references that are made in the draft ORV plan. One is to the reference under strategy 12 on page 110; "Visitors with less commitment to ORV riding or WITH LESS WEALTH will reduce or discontinue their use." I am one of the fortunate ones that can support the increase, but I would not be a party to a policy that would deny those economically disadvantaged the opportunity of enjoying BCNP. The second reference seems to indicate that by enacting a high permit cost we can recoup the expense of additional staff and improvement within the Preserve. To this proposal, I would suggest that reason should prevail. The ORV user should not be singled out as the only segment of Preserve visitor required to provide access or trail maintenance in the Preserve. Hiking and camping are high maintenance visitors, also.

Implementation of maximum ground pressure per psi is needed. I am sure that the study was timely, and expensive. I question if it is practical, as submitted. Two pounds of ground pressure per square inch is attainable, but it is not only expensive, it is not safe. The punishment taken by the frame of such a buggy, the stress of the over sized tires on the axles, all are an invitation for disaster. I would recommend four pounds as a reasonable compromise. Respectfully, I would request that your office consult with those people that build and customize buggies as a business. They can provide proper guidance on this issue. Further, if we compare this formula proposed to the foot print of an average 200 lb. human, I am certain that the foot print would be more damaging than the tire print. Reason and common sense should prevail.

My only other concern is the prohibition on what you call "stump knockers". It is not a big one, but I employ a protective shield ahead of my front axle and steering rod. The

F145 (cont.)

device is to stop me before I strike a cypress knee that could cause damage. If it is considered a detriment to vegetation, I shall remove it, but it is not intended as a ram.

Finally, I understand the wear and tear that Airplane Prairie has taken. You know that most of this traffic is caused by closing off the access from Alligator Alley, which was used by myself and other property owners to get to our properties, the old Cypress Lane. Traversing the prairie is a challenge for machine and rider alike. You have to consider the water level, condition of the ground, previous path of ORV's, limestone underlayment, and other conditions as you move to your destination. I try to hold to a certain trail, but it is impossible to do so in some areas. The most difficult would be the soft area that prevails, running North to South, as you leave the prairie and enter the Cypress. There are few passages in that Cypress strand. When you find one, and use it for a while, the impact is such that the marl upper crust breaks down and you sink below your axles. I mention this, only, to inform you of this unavoidable rutting that occurs. One of the buggies in my group would comply with the two-pound proposal, but because of the restricted passage, and the impact on the upper crust by several buggies, it too sinks into a rutting stage.

I don't know that there is a practical answer to the impact situation on the prairie at this time. Funding and permitting are the long-term needs in order to build designated trails from the access points across the prairie. With your approval, I can remove three buggies from the prairie, those of my family. In order to do this, I need access through the gate on Cypress Lane at Alligator Alley. The buggy trail from that point to and below my camp is one that has existed since the early fifties. It is rough, but beaten out to a limestone base. No impact will result from travel. I am, again, requesting that you consider my entry, basing my request on the last paragraph on page 20 of the ORV Draft. This paragraph states, "The owners of property within the backcountry have established rights of access outside recreational ORV use restrictions. Those within the preserve would continue to be able to directly access their property by ORV, but recreational use of ORV's beyond direct access would be managed as with other ORV users." This requested route is my most direct access. It will benefit the ecology. It does not deny right of entry to other ORV users. Only, those without property. The paragraph indicates that an established right of access exists. Please reconsider your earlier denial.

I hope that my suggestions are helpful. I wish you good luck in your endeavors to provide the public, my children and grandchildren, a beautiful and natural island in this rapidly growing Florida. While I have never met you, I perceive you as a dedicated officer in our National Park Service. Keep up the good work. If I can be of assistance, please call.

God Bless,

Joe F. Garrott
Property #A3961

F145 (cont.)

RECEIVED
OCT 19 1999
BIG CYPRESS NATIONAL PRESERVE

CHRISTOPHER HORGAN
225 RAINBOW DRIVE PMB#12572
LIVINGSTON, TX 77399

October 11, 1999

Mr. Wally Hibbard, Superintendant
Big Cypress National Preserve
HCR61, Box 11
Ochopee, FL 34141

Dear Superintendant Hibbard,

I would like to make a few comments on your proposed ORV management plan for the Big Cypress National Preserve:

Please implement the ORV plan Preferred Option with the exception of the annual ORV fee increase. At the present time no other users are required to pay any fee. The current $35 annual ORV permit fee being increased to $200 is onerous. Charging only ORV users any fee is discriminatory.

The enabling acts allow ORV use & these uses were strengthened in the language of the Addition law when this act stipulated that "traditional" activities are to be allowed.

Please let me know your position on this issue.
Thank you for your time.

Sincerely,

Christopher Horgan

F146

RECEIVED
OCT 25 1999
BIG CYPRESS NATIONAL PRESERVE

October 20, 1999

To Whom It May Concern

RE: The Big Cypress National Preserve Off-Road Vehicle Management

Are you listening? Someone should! For some of us there's a history which shouldn't have a price tag on it! Shouldn't have size or weight standards, designated trails, or a buggy plan! The environmental groups working to protect the Big Cypress have good intentions, but this thing about "Buggy Scars", maybe yes? maybe no! The land has a way of repairing itself. If buggy owners weren't already forced to use specific areas, the so-called "Buggy Scars" would not have appeared. And of course over time, any road trail or path has its traces of use. If the amount of usage we have now is the result of some 70 years, then why now is the land through for public use?

Has anyone considered what circumstances some of the sportsmen may have or why it might be important to them not to make any such changes? Imagine yourself the father of three, ages 12, 8 & 3; then imagine where you would rather have your children around 9:30 p.m. on a Friday night. You could have them riding a buggy through the Everglades, sitting at a campfire with their parents; or you could have them sneaking out and wandering the neighborhood, doing drugs or stealing cars. Now you tell me, if you had the choice, wouldn't you rather teach your children the appreciation for the Everglades that your parents taught you. Some of us would.

The Big Cypress is not only about "hunting, fishing and camping" but about the connection it keeps between living and deceased. You don't think "these guys" just know where they're going do you? They had to be taught, learn; now you do the math (70 years), who would have taught them, fathers and grandfathers. They brought them to the Everglades and taught them a way of life that can't be passed on if these proposed changes are passed! Permits costing up to $200 or tires at $400 a piece. Honestly "Get Real." On top of the size of equipment and weight standards, for a recreational hobby, who can afford that! These people have already bought and made buggies, and to change that now, well it's an insult! Not all of us can afford the extra money to make such changes.

If they are passed, going to the Everglades would be a thing of the past for my family and many others! And the sad result of that would be the father of three would no longer be able to take his children to the Everglades, tell them stories about their grandpa, or even show them the burial headstone where their grandpa's ashes are buried. Teaching them the trails and appreciation for the Everglades would be a waste of time! Do you think the environmentalists have a passion or history with the Everglades like this? No! Their connection is trying to save plants from being flattened and clear water from being stirred and murky. Well, over time the plants re-grow and better yet, stand back up and the murky water once again becomes clear!

So to whom and all it may concern, I am against all proposed changes.

Permits raised up to $200;
Size, equipment and weight standards including one that limits PSI to 2 pounds per square inch;
Only allowing buggies with tires that cost close to $400 each;
Restricted access points.

All these proposals don't help flattened plants or murky water. All they help is downsizing the number of sportsmen traveling the Everglades trails. So please reconsider the rights of your average sportsmen, the sportsmen who not only like to hunt, fish and camp but the sportsmen who want to teach the next generation the appreciation and respect of "The Big Cypress National Preserve."

Lawrence Joyce

Heather Morris

468

James A. Easom
24725 S.W. 163 Avenue
Homestead, FL 33031
Home Phone:(305) 248-2422

RECEIVED
OCT 27 1999
BIG CYPRESS NATIONAL PRESERVE

October 22, 1999 Via: U.S. Mail (Certified)

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

RE: Draft Recreational ORV Management Plan
Supplemental Environmental Impact Statement
for the Big Cypress National Preserve (DORVP)

Dear Mr. Hibbard:

As stated within the first page of the above referenced draft, this letter is being sent to your attention for your review and response. First of all, I would like to thank you for the opportunity to address my concerns regarding the drafted ORV plan and your willingness to allow the public involvement and input in this critical matter. Secondly, I will be more than happy to make myself available to meet or talk to you to discuss any issues relating to the DORVP along with my personal opinions and experiences.

QUESTIONS, COMMENTS, AND CONCERNS

Mr. Hibbard, I have reviewed the entire draft document including its appendixes. I must say that a great deal of study and review has been assembled in this manuscript. However, after my review of the draft I am greatly concerned as to many of its statements and recommendations contained therein.

The DORVP, and especially the proposed action, is full of speculations and unsubstantiated conclusions leading to the proposed recommendations and conclusions. The statements of "uncertain", "the effects are undocumented", "not likely", "speculated", "maybe", "may", "might", "most likely", and "probably" are just a handful of the potentially erroneous remarks that could lead to the actualization of one of the few indisputable statements within the DORVP. As stated on p. 74, "The proposed action would increase costs and add new ORV restrictions that

(Continued on page 2)

would adversely affect ORV users." These indicators point to the certainty that more research is necessary to fully evaluate the pro's and con's to all of the affected parties. In actuality, the adoption of the proposed action may do more harm than good if it is not better analyzed.

ORV Issues

The DORVP has suggested the use of a 2 psi ground pressure requirement for wheeled ORV's. Yet, no calculations are provided to demonstrate why 2 psi of ground pressure would be a maximum. The "flotation" ability of an ORV is greatly variated by the upper soil types and depth, moisture content, and the underlying soil strati and depths. The draft should contain adequate background information, baseline data, statistical information, reasoning, logic, and the appropriate calculations to substantiate any requirements. Furthermore, the average adult human, deer, and hog exert more than 2 psi on the ground.

The draft has also stated that the upgrade costs incurred by the current ORV owners would be on the order of approximately $1,000 for the purchase of new tires. I'm afraid that little consideration has been given to this estimated cost. Initially, the cost to increase tire size is reflected by the lone cost of the tires themselves. A $ 1,000 would be a good minimum for the cost of four new tires, given the recommended sizes shown in Appendix C. However, along with the tire purchase would be the additional costs of the increased sized wheels. Please do not confuse the terms of "tires" and "wheels" as they are separate and absolutely necessary items. With the increase in tire size, there are certain additional bending, shear, and moment forces exerted at the wheel connection points of the drive-train. These increased loads would only be handled by an increase in the drive-train components themselves. These components are some of the most expensive items of an ORV. The increased tire size will also exert increased turning resistance. This is only overcome by the addition of lower gear ratios in the initial and final drives and the increase in engine horsepower and torque. To contend with the increased weights and torques/loads associated with the modified tires, wheels, drive-train and power source, the ORV's suspension will need to be improved. The suspension is connected to the frame which would need to be analyzed to insure that it is structurally capable of handling the increased loads. Furthermore, some ORV's may not be capable of accommodating the increase in overall tire diameter or width. The added overall tire dimensions may be inhibited by the framework, supports, overhangs, bumpers, or any other number of structural members or protrusions. Also, the steering mechanisms may need to be upgraded to be able to turn the direction of the larger tires. The steering system would more than likely be further restricted in its degree of motion due to contact of the tires with other components on the ORV. This would result in larger turning radii and, therefore, increased impact on the environment.

Furthermore, to keep the usefulness that is associated with the size of the ORV and meet the 2

(Continued on page 3)

psi regulation, some or all of the structural frame and infrastructure may need to be constructed of lighter metals and/or metal allows which would be very expensive in both the initial purchase of the materials and in the fabrication and joining of those materials. In fact, to keep the usefulness (i.e., height, maneuverability, hauling capacity, etc.) of an existing ORV, and meet these proposed requirements may not be feasiblely possible for many owners and users.

The minimum ground pressure and the maximum overall width restrictions may conflict with one another in that meeting the 2 psi ground pressure will possibly require wider tires and, therefore, exceed the width requirement. To meet both, the ORV's axles and axle tubes would have to be customized for a shorter length. This would be very costly. In addition, the frame to tire/wheel distance may not have enough clearance. This would also hinder the turning capability and possibly the suspension system.

The DORVP does not properly address the issue of ATV's. For instance, these vehicles are greatly constrained in their capacity of tire size. Will a minimum weight threshold be set for the ground pressure requirement relating to ATV's?

Similarly, street legal 4x4's are not properly addressed. For instance, all street legal vehicles require street legal tires (typically FDOT rated). Very few, if any, street legal tires are available that would meet the size requirements necessary to offset the weight of street legal 4x4's (i.e., pickup trucks). Furthermore, these type of vehicles would be greatly inhibited in their capacity to accept these sizes of tires. Will street legal 4x4's be exempted from the ground pressure requirement?

In essence, the size, engineering, and ultimately the cost of the ORV component material and the construction of such are directly related to the size of tires. An adequate review should be conducted to better realize what the actual costs to the average ORV owner would be if this drafted plan is adopted. I believe that the average ORV owner would find it to be a great financial and time-consuming burden to fund an undertaking of this magnitude. Given the above, it may be more economical for an ORV owner to simply start over and build another ORV. This owner would then be faced with the adverse conditions of attempting to sell a vehicle that is no longer usable within the preserve, high "start-up" costs (whether purchased or built by the owner), many hours of construction of the new vehicle, lost time in the preserve due to the lack of vehicle, etc.

As the NPS and various other governmental agencies have purchased numerous ORV's, I'm sure you understand the associated purchase and/or construction costs. Additionally, I'm sure you would be able to contact many of the vendors who have supplied ORV's to your agency to

(Continued on page 4)

confirm the above.

In reference to airboats, what difference would a 13% increase in horsepower equate to in sound pollution? The large majority of sound produced by airboats is not the engine exhaust but, however, is the sonic disturbance of the propeller blades as they pass through the air. As Mr. Sobczak has stated in his draft of what is labeled as Appendix D, the management of airboat activity "...will take time to develop, implement, and formally adopt." This document by Mr. Sobczak resonates with the idea that more data and criteria need to be obtained and analyzed before a baseline or modified plan is established.

As an option to ORV users, maybe the NPS should purchase a fleet of varying types and styles of ORV's that meet the proposed action and, in turn, offer these vehicles for rental and leasing on daily, monthly, and yearly terms. Of course, the NPS would be responsible for any maintenance, vehicle extraction, and "roadside assistance" and would need to provide communication devices on such vehicles.

Non-Recreational ORV's

The DORVP does not address the possibility of the NPS or other governmental agencies' off-road vehicles meeting any of the new requirements. The very title of the DORVP indicates this. In fact, p. 41 states, "This plan addresses only recreational use of ORVs." The first problem with this is that the governmental vehicles impact the environment in the same way as all other recreational ORV's. What good is it to change part of the problem without changing the whole problem? As the old axiom says, "The chain is only as good as the weakest link." Secondly, how can the authority prescribe and enforce a mandate upon the public if the authority is not going to be regulated by the same rules? Not only has the "pot called the kettle 'black'" but it has asked the kettle to change colors, as well.

Retrospectively, if the NPS ORV's are to be retrofitted, then the cost of such construction should not be passed on to the ORV users. The cost should be absorbed by the general funding of the preserve as there is little correlation between the need for NPS ORV's and the use of ORV's by the public. Additionally, any costs associated with restoration, upgrade, maintenance, etc. of the preserve's trails should be apportioned partly to the NPS general funding and not solely supported by the ORV registration fees, as a certain portion of the environmental impact is caused by NPS ORV's.

Non-ORV Visitors

It is my personal experience that the number of non-ORV visitors away from roadways and easily accessible areas is directly related to the distance from those roadways and easily accessible areas.

(Continued on page 5)

F148 (cont.)

This idea seems to be echoed by the DORVP on page 75 where it speaks of the improvement in hikers' experiences by providing a 0.25 mile buffer. The fact is that the vast majority of non-ORV visitors do not venture past a quarter mile off of the major roadways (i.e., I-75, U.S. 41, Turner River Road, Loop Road, etc.) and, in fact, most are typically sightseeing and/or photographing directly from one of those major roadways' right-of-ways. Therefore, the contact of non-ORV users with ORV's is, in my experience, minimal. Furthermore, of the few non-ORV visitors that I have come in contact with off of the main roadways, our contact has been seemingly pleasant with the casual exchange of "Hello's" or similar greetings. The contacts are generally very brief as the two parties are very quickly separated by the winding trails. However, if for some reason ORV's create an adverse feeling among some or all of the walk-in visitors, I would suggest that the NPS post signs that warn such visitors of the possible encounters with ORV's. Moreover, if these visitors are seeking a place absent of ORV's, maybe the NPS could direct them to one of the units where ORV use is prohibited (i.e., Deep Lake, Loop Road) or to one of the other National or State Parks where ORV's are completely prohibited (i.e., Everglades National Park, etc.).

Costs and Fees

Page 5 of the DORVP points out that one of the long-term goals of the 1997-2002 Strategic Plan for Big Cypress National Preserve relative to the ORV Management Plan is for the increase in amounts of receipts by 20% from use, recreation, and other fees. If no new sources of income were generated, it is logical to assume that all current sources of revenue would need to be increased by 20%. Therefore, if ORV permit fees were increased by 20%, the total new fee would be $ 42 ($ 35 times 120%). Surprisingly though, page 16 states that the preliminary estimates for the ORV permit fee under the new plan would be between $ 120 and $ 200. That's a 343% to 571% increase! And though that would be an increase in overall revenues, the DORVP states that those additional increases would be directly related to the increased costs of the proposed action. It seems that the current fees and proposed fees were calculated by dividing the current costs of $ 70,000 (from p. 33) and proposed costs of $ 400,000 (from p. 29) by an approximated number of users of 2,000 (from p. 42). Regarding the $ 400,000, no calculations were provided to show how this cost was compiled. I would personally consider an increase to $ 50 under the current plan if that money were to be used for such items as mitigation,

maintenance of main trails, and research for revising the ORV Management Plan. Based on 2,000 users, that would be an increase of $ 30,000 to the preserves' annual revenues with no directly related costs.

Non-federal Property Owners

Page 76 addresses non-federal property owners. It states within that no formal methodology for

(Continued on page 6)

interviewing or gathering opinions from these owners has been established. As many of these individuals have owned their land and operated within the preserve even before it was a preserve, it would only seem logical and fair to formally gather their opinions, experiences, suggestions, and recommendations in this matter. These people have invested untold resources of time, money, and energy in both the purchase of their land, the improvements of those properties, and the means of travel to and from their land.

Closures and Designated Trails

It should be highlighted that two of the six units (not including the addition lands) within Big Cypress are already completely closed to ORV traffic (Deep Lake and Loop Road) and that an additional unit has ORV traffic confined to designated trails (Bear Island). In reality, 50% of the preserve's units is already closed or severely inhibited as to ORV use. Additionally, the Stairsteps unit is divided into four areas of varying restrictions of ORV traffic. As previously mentioned, and as listed in the DORVP, there are numerous alternatives to using designated trails that would accomplish the same, if not better, results and cause less, if no, adverse affects to ORV users.

Wildlife & Environment

Page 73 states, "... a recovery of 120 acres of marsh vegetation due to the elimination of ORV use would only provide enough browse for two additional deer." In light of this statement, how effective will the proposed action be towards the betterment of white-tailed deer, feral hogs, and the Florida panther? It seems that the positive effects would be very minimal. Furthermore, page 73 goes on to state, "Preserve staff are of the opinion that increased prescribed burns would improve the habitat for the feral hog and deer population far more than restricting ORV use to designated trails." Page 73 goes on to say, "The no-action alternative would not affect deer and hog populations."

Hunting season typically occurs during the fall and winter seasons. This being the case, the vegetative food sources for deer would be diminished with the colder weather and decreased amount of daylight. Therefore, deer would be more likely to move in search of food sources. This time is also typical of the deer "rut" and mating season which is characterized by increased deer movement. Hunting and ORV activities should not then be the only consideration in the measurement of deer of other wildlife movement as were mentioned on page 73. In any case, hunting and ORV use are mandated as allowable activities within Big Cypress. Walk-in visitor contact will disturb wildlife as much as ORV contact. The mere human presence is usually enough to cause wildlife movement if such presence is sensed by the wildlife.

(Continued on page 7)

F148 (cont.)

Monitoring
Page 26 lists four items of research for the continued monitoring program of the ORV management plan. Surprisingly, impacts to ORV users, walk-in visitors, hunters, etc. are not considered for evaluation. I would ask that the monitoring of the impacts to these users be closely evaluated and considered in ongoing monitoring and in any upgrades to the ORV management plan.

Start of Proposed Plan
The DORVP does not state as to when the proposed plan would become effective or what the "grace" period would be for compliance. It also fails to address any penalties or fines associated with not meeting the requirements.

Satellite Imagery
In respect to pages 42 and 49, the DORVP admits to the need for ground-truthing the mapped areas. As stated on page 49, "The mapping technique was quite sensitive, even indicating residual ORV tracks in the Loop unit that had been closed to vehicles for more than 20 years." Likewise, it is possible that the imagery is picking up game trails. I agree with the acknowledgment that this evidence will require further review before any factual data can be determined.

The 1995 Settlement Agreement
With my initial review, my current knowledge of the matter, and information listed on page 8 of the DORVP, it seems that all of the items of the ORV management plan and SEIS which need to be addressed relating the 1995 settlement are currently addressed under the present mode of operation with the possible exception of number one. In reference to number one, it is my recommendation, as you will see later, that the no-action alternative be selected.

RECOMMENDATIONS

The recently acquired addition lands in the northern area of the preserve have yet to be opened, since under NPS management, to recreational ORV use with the possible exception of non-federal property owners. As I understand, the NPS has yet to finalize an ORV management plan for this area. This area would be, in my opinion, a perfect "testing ground" for the draft ORV plan. Conceivably, the final proposed action could be instituted within this area. Then scientific and statistical evidence would be gathered to analyze the usefulness of the plan. After careful analysis of the data, the plan could then be modified, if needed, and implemented within the remainder of the preserve. This would guarantee that any unnecessary restrictions would not be prematurely imposed upon the ORV users. Appendix D resounds with the need to continually

(Continued on page 8)

monitor and establish existing baselines so that reasonable predictions, conclusions, and practices can be established.

With the extraordinary modifications necessary to achieve the desired ground pressure, I would ask that you 1) raise the maximum psi limit and 2) sincerely consider the option of "grandfathering" any existing ORV's and not apply any such regulations retroactively. This would also allow any owners who are planning to build new ORV's to plan their construction of the new ORV's upon the newly designed plan. Additionally, consideration should be given to any persons who are currently constructing ORV's and should be allowed a grace period on the grandfathering and a chance to review the needed changes before their projects are finalized. For example, if the proposed plan is going into effect on July of 2001, and the proposed plan is finalized one year prior, then allow all vehicles permitted before July of 2002 to be exempted from the new plan.

Appendix B offers numerous ways in which environmental impacts can be reduced with minimal impacts to ORV users. Many of these suggestions have been previously discussed among the ORV community as to why they have not been implemented as of yet.

- Education- A good alternative to the drafted restrictions could be the implementation of training and education among the ORV user community (see p. 23). I have never seen a document produced and transmitted to ORV permit holders which communicates ways ORV operators can improve their driving skills in ways that would better the environment and themselves. Literature could be made available on topics such as low impact driving procedures, vehicle recovery, avoiding least resistive botanicals, etc. Classes could be offered or mandated on these subjects, as well. As mentioned within the draft, the organized ORV community could help publish, distribute, encourage, and facilitate these methods and ideas. The education of ORV users may be the single greatest agent for furthering low impact routines.

- Mitigation and Restoration- These could be furthered by the help from the ORV community. The two biggest costs in environmental mitigation are the plant materials and the labor to propagate them. I would be happy to donate a portion of my time and ORV resources to help in any organized mitigation/restoration projects. Not only would this help to reduce costs and increase the usefulness of such funds, but it could be a tremendous opportunity for NPS, environmentalists, and ORV users to work together in efforts to reduce many of the underlying feelings of animosity.

(Continued on page 9)

F148 (cont.)

- Maintenance of Major Trails- Page 24 states, "Cutting, filling, or ditching to establish new trails or to improve old trails is also prohibited." Page 65 mentions the widening of designated trails in the Bear Island unit due to ORV users' need to avoid impassable routes. Many of the trails that receive frequent use continue to widen due to the deterioration of those trails. Why hasn't any action been taken to maintain those trails? Many of my friends have told me of how the roads used to be. The stories of seeing tourists arriving near their camps in *cars* are always baffling to me when I think of the current condition of some of the main trails. It seems that the NPS could purchase a minimal amount of heavy equipment to grade and maintain some of these trails. This would help to prevent the degradation of the trails and the subsequent widening or the finding and heavy use of other routes. That would eliminate any need for and adverse ramifications of designated trails. Most of this work could be accomplished during the dry season and would, in my opinion, have tremendous, positive effects. This would also tend to restore natural water flow patterns and velocities, reduce turbidity, and have increased plant preservation results.

CONCLUSION

I do not understand why the DORVP only suggests the proposed action and the no-action alternatives for consideration. Concerning the four alternatives for ORV management as contained within the GMP/FEIS, and, as mentioned on page iv of the Summary, what were these alternatives and why were these options not listed and considered in the DORVP? Could not many of other suggestions found within Appendix B of the draft and the many ideas of individuals and entities who have previously and are now voicing their suggestions be used to facilitate the solution? In any case, if only one of the two plans can be selected, then it is clear that not enough information is available to proceed with the proposed action, and, therefore, the no-action alternative must be selected.

Looking to the inside of the back cover of the drafted plan, I assume that the language at the bottom of the page is a "mission statement" for the Department of the Interior. With the previously mentioned fact, as seen on p. 74, that ORV users will be negatively affected by the new plan, how can the mission statement's dedication to "preserving the environmental and cultural values" and "providing for the enjoyment of life through outdoor recreation" be adhered to considering the predetermined uses of Big Cypress National Preserve? ORVing and hunting are not typically allowed in National Parks. However, this being a preserve and having previously designated requirements for the continual furtherance of those activities, they are considered to be part of the cultural values and ways to enjoy life through outdoor recreation.

(Continued on page 10)

Philosophically speaking, humans are considered to be at the top of the "biological organizational chart" which is derived largely in part by their intellectual capacity. Being at the top, we have learned the importance of protecting other creatures' natural habits and activities. But if we were not at the top, and were, in fact, just another one of the "specimens", I wonder what the "higher" beings would allow humans to continue to do in regards to their habits and environment. Would the continued use of ORV's be considered part of their culture and natural habits? Would their impacts be viewed as a simple and allowable result of the ecosystem?

I'm sure that many, if not all, of these sentiments are echoed by many of my fellow outdoor recreationists. I would ask and trust that you will unbiasedly consider the above and all other received responses to this matter. I eagerly await your and your agency's response and decisions.

As the waters which move so temperately across this preserve, may the decisions surrounding this new ORV plan not move so quickly as to unfairly impose prejudicial or too arduous of regulations upon any of the recipients, whether the environment, NPS, or ORV users.

Sincerely,

James A. Easom, Concerned Outdoor Recreationist

JE/je

xc: Businesses & Organizations:
A-OK Fish-N-Bait
Airboat Association of Florida
Arsenal Guns
Everglades Conservation and Sportsman's Club, Inc.
National Rifle Association
National Wild Turkey Federation (Local Chapter)
The South Dade News Leader
UNIFY

Individuals:
As Requested

File

F148 (cont.)

FREEDOM WORTH FIGHTING FOR
11/7/99

RECEIVED
NOV 19 1999

Mr. Wally Hibbard , Superintendent
Big Cypress National Preserve
HCR 61 box 110
Ochopee , Fla. 34141

Dear Mr. Hibbbard ,

I greatly appreciate the opportunity you gave me to speak at the public hearing. I do have great trust in this country and how it survives. I hope you fully understand that I have been a proud Hunter and Outdoorsman. I have been a buyer of your ORV permits since day one. Whether it was my Atc , Street legal 4- wheel drive ,to my now Swamp buggy. The Big Cypress has given me a place to go and stay out of trouble and I'm sure your records of myself on file reflect that , if any. I so badly want my children to experience this as well. I understand also your part in this . The Preserve is not mine , it's everyone who would like to visit it and spend time their. That's where I come in at. I feel I have been very fortunate to have been raised by a man that spent a lot of time hunting and fishing in The Big Cypress long before it was a Preserve. As you are aware of my previous letter my dad frequented the now Preserve first by foot and then by Swamp Buggy. I know your not closing the Preserve just setting guidelines to which ORV's are presently operated. I have further looked over the booklet and feel that most of the changes are without present day scientific and biological backing. The present lawsuit pushing these changes are not showing a fair comparison. I have been able to see a satellite picture of the state of Florida , and I must say the State looks beautiful including the Everglades and the Preserve. I was also able to look at a NASA photo showing the magnification in question of The Preserve and compared this picture with the surround - ing areas and State. The Preserve looks very healthy. I feel the Lawsuit against the Preserve is without validity and frivolous. To have made it this far is amazing to me. The Preserves ORV plan I feel is justified in a clear continuance to enact the ORV Plan , based on a restudy with the so dearly needed present day technology. The inaccuracy of the map in question clearly allows the Preserve and it's Super-intendent (you) to request the lawsuit to be dismissed . I'm sorry I make it sound so easy. I'm sure your job is hard enough.

I do not Hunt on private lands because of the expense . In your outline it mentions raising the ORV cost to as much as $200.00 for revenues needed to maintain the Preserve. It also mentions this cost to keep lower income families from permitting their Buggies. I can't believe I read that ! I took that as a direct insult and felt that over the years all the hard work we have gone through (Buggy owners and Park Serv.) could have been for nothing. Mr. Hibbard this Preserve is a joint effort task we must take on together. We need your Preserve and you need our revenues. The ORV plan is flawed and needs changes less drastic. Many if not all are unachievable and biased . Traditional Recreation is to be Protected and Enhanced .The proposed changes are a direct impact to the fulltime users of this land.

If changes must be made , make them **not** affect performance or **SAFETY.** Also no where in the Plan does it provide provisions for the handicapped. My Father is now handicapped and still loves to hunt. Here are some factors I wish to be added to my original letter. 10/23/99.....
1 . I'm aware you don't like tracked vehicles , but they to need to be considered in your studies. These Orv's are the only ones able to meet your proposals .

2 . Tractor tread (R-1) These tires are the finest for the terrain and the only rule needing to apply is a tread width in excess of 14 inches on the ground. This is for the floatation factor and studies will show the rutting of any tire will diminish .

3 . Designated trails ,I'm aware of the mandate to designate trails. Allow these trails to cover vast areas of the preserve to eliminate the impact of traffic being forced on the "Designated Trails". This damage is very evident in the Bear Island Unit . These trails are in terrible shape . More trails are needed , already established trails can be marked and GPS'd .

FREEDOM WORTH FIGHTING FOR
11/7/99

4 . Water sheet flow, I feel there is much more data needed to support these theories. The r-rating value of the most prevelent soil (marle) has got to be high. I know when the surface is disturbed primarily by digging the water is drawn to this site, but blue marle is clay base and is less likey to allow this drawing effect to take place .Especially in the shallow rutting that has been talked about.

5 . Control burning, I don't care for it at all!!! I've seen the random dropping of those ping pong balls totally wipe out quail covies and turkey's. Burning by helicopter must be cheaper , but it's killing wildlife . The control burning that has had some good is the lighting of a fire at point A and letting it burn itself to point B.

6 . Vehicle weight , Amore compromised weight must be offered . 2000 lbs. Max. is unattainable except by ATC's and tracked vehicles which tracks are banned.

7 . Pounds Per Square inch on the ground , I knew this would back fire . I wrote a letter to the college accepting info on the Preserve a year ago and backed this idea. My view is if an ORV can exert less than a given amount of weight on the ground than it should not be further restricted in weight. For example ; using your chart in the proposed plan a buggy with 21.5x 16.1 can achieve just under 2 psi . on the ground and weigh as much as 4000 lbs. Closer to reality. My point was to make sure buggies meet a given psi on the ground ruling , not both weight rest. and psi . rest .

8 . Permit prices , I fully understand underfunding . By mentioning the lower class persons not being able to afford the proposed price and therefore eliminating the traffic they make is going to blow up in your face and be bad for the connection between the Park Service and Sportsmans. I respectfully ask that this term and all that it implies to be terminated and an apology be forthcoming .

9 . Stabilized Trail heads, this is a glorified term for road development . " **DEVELOPMENT"** What's in existence can be maintained . there are oil roads in three Man. Areas . These roads cover a lot of ground and can be used for such purpose.

Finally I would again like to Thank You for this opportunity and hope that the ORV plan is modified. I know a lot of hard hours went into this. I consider myself part of the solution and not the problem. Please Consider this in your further proposals.

RESPECTFULLY TODD CLARK
1312 DESOTO AVE.
LEHIGH ACRES , FL.
33936

474

FREEDOM WORTH FIGHTING FOR
10/23/99

RECEIVE
OCT 29 1999
BIG CYPRESS NATIONAL PRESERVE

Mr.Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61 box 110
Ochopee , Fla. 34141

Dear Mr.Hibbard;

This letter is of great concern to my family and I. The subject I wish to discuss is the BIG CYPRESS NATIONAL PRESERVE ORV PLAN. First I want to introduce myself. I am married with two children. Two boys age 7 and 5, also I'm a regular attending member of The First Baptist Church of Lehigh Acres. I'm a tax-paying citizen of Lehigh Acres Fla.where I live and own my residence. Raised in Miami Fla. I graduated from North Miami High School. My wife and I were High School Sweethearts. Working my way up the job ladder from mowing yards in Jr. High to being a welder fabricator/mechanic. I was able to put myself through Fire College in Ocala Fla. I'm presently employed with the Cape Coral Fire Dept.and have been with them for the past 9 years. Being a second generation Fireman I'm blessed with the privilege to be able to visit the outdoors here in Fla. quite often. My Father was able to teach me everything I needed to know to appreciate this Freedom Worth Fighting for. (The Big Cypress) Growing up with a Hunter Fisherman was a hunt and fish every chance possible. On weekends my older brother, father and I would load up and drive the 1to 2-hr. trip to the Cypress. My father was a co-owner of a camp in the Big Cypress where we spent most of our time. Safe gun handling was a must, and alcohol was not tolerated. Thanks to my father I've stayed out of trouble and am respected by my peers. Family time together means everything to me. The Outdoors is where I have chosen to spend my better times with my family.

Swamp Buggies have always been the best, safest and most appreciative means of transportation in The Big Cypress. My father built a half-track as a teenager, and still runs today. Built with a 4-cylinder Crosley motor, it stands 4 ½ feet tall and 10 feet long, you can imagine how small it is. This Swamp Buggy was banned and was titled Bad for the environment. This Buggy weighed a mere 1800 lbs., light for Buggies. Track vehicles were engineered for a wide variety of applications. Their primary goal was to exert the absolute least amount of pound per square inch on the ground. This goal was met and places less psi. On the ground than a human foot print. Yet the Park Service was able to push their inconclusive studies on to the lawmakers. I'm aware of the bigger Swamp Buggies out their, but this ban applied to all as if they didn't
Differ in size, shape or weight. Another thing is you rarely heard of Tracks getting stuck in the mud. I presently own a Four-Wheel drive Swamp Buggy that I built frame up. My personal goal was to build a Buggy small, light, and reliable. The best I can do after building 6 Buggies was a Swamp Buggy weighing right at 3000 lbs. This Buggy has been strong, reliable and hasn't let me down yet, but I can't tell you how many times I've been stuck. I presently operate this ORV with tractor treaded tires and have driven this same Buggy with three other types of tire tread designs. The turf treads, 4 whl. Drive truck tires, and airplane tires. The turf tires I found to be good in standing water terrain, but clogged and spun excessively in muddy terrain churning the vegetation below. The 4 whl. Drive truck tires I found to be too skinny and rutted soiling terribly, depending on if your fully loaded or not. Finally the air plane tires proved to lack the traction necessary to travel the diverse terrain that the Cypress has to offer. My favorite and I believe to be the best for the terrain is the tractor tread (R-1). It provides the best floatation, traction, and durability so badly needed for this soil. I talk mainly about the wider than 12 inch tread width designs.
Swamp buggies play such a vital role with the Big Cypress. It is because of Swamp buggies that this land is most appreciated. The Pittman Roberts Act. Clearly reflects the powerful connection Sportsmen and The Big Cypress have with each other. Congress has recognized it many times in the past. In the past Hunters and Fishermen have allowed themselves to be taxed with higher fees for licenses to preserve this Ecosystem. A Management area and Preserve was born.

Licenses for hunting and fishing would go up a certain dollar figure and then if I have this right would be matched to purchase the now Preserve. The Big Cypress is our back yard. The Park Service has made good changes and I'm grateful to them. I've seen more deer and wildlife as an adult than as a child. I've hunted

FREEDOM WORTH FIGHTING FOR
10/23/99

out West and up North, I prefer The Big Cypress. Transportation in the interior of the Preserve is really the only way to truly appreciate The Big Cypress. Out West they use foot, horseback, Atv, and automobile. Up North they also depend on foot Atv's, automobiles, and snowmobiles. Here in the South (mainly the Cypress) foot (if your not carrying enough spend a couple of nights if that due to the heat), horseback is banned during hunting season, ATV's (if the water's not too deep and you can't carry much) 4 wheel drive truck (if you don't plan on traveling far from the road) and finally The Swamp Buggy. More reliable than the Park claims, safer to the operator than any other means of trans., provides revenue through ORV permits (allowing the Park to be closer to self reliant, unlike most other National Preserves/ Parks) and among too many more to give the Preserve can only be reached deep enough by these Buggies to truly provide education to teach the next generations what they are protecting from development. Which is the true enemy here. This land can be swallowed up by development if the people appreciating this land are deterred from entering it . this deterrent is upon us again with the Park proposing new changes .(again not sticking to their word of the Pittman Roberts act. This Act mandated that traditional recreational use of the Preserve be protected and enhanced. The proposed ORV Management Plan violates this Mandate. Ifeel the Swamp Buggy is catching a bad rap from what the Army Corps. Of Eng.did many years ago to drain this land for real estate not recognizing the importance this water shed provided for the survival of South Fla. Again the Park would like to feed ideas that don't hold scientific or biological facts that these ORV's Impact the ecosystem adversely or with irreversible damage. (I can't travel some places 10 years ago I could with no trouble, due to overgrowth of this damaged forever veg.) The Park claims from topographical photos that the Preserve is scarred from the ORV trails in existence today. Scientists have warned against using such powerful degree of magnification that natural indentations or even animal trails will show up as Trails from what could be anything. These photos to this day show the impact logging had and farming had in the 20's, 30's, and 40's. the preserve is endangered from it's borders not the interior. The largest of all has been the water control.

The Preserve is most unique because of it's location. It's mostly surrounded by a canal system, that the Army Corps. Of Eng. Built , highways and levees. Water control is what the Park should be fighting for. The Park claims Buggies are creating roads with their trails and yet they plan on building above grade packed roads into the interior themselves. This is not TRADITIONAL RECREATION this is development. It's been said there are a lot of lazy Buggy drivers that don't want to get our feet wet . Well than why the Park Service wants to accommodate the road idea for no wet feet is beyond me. This is not a National Park, it's a National Preserve with the Park Service given the jurisdiction and the rights to govern it with the Preserves original intent adhered to. The Preserve's natural wet seasons have been shortened by the lack of water control , and the Preserves natural dry season has been lengthened. This has slowly taken it's toll through the Forest Fires of the early 80's as well as the low water levels which allow the introduction of exotic plants, by allowing these plants to take root in dryer soils where as the water was a natural defense against a large percent of the exotic plants we have . This ecosystem has proven to be delicate, but education and honesty needs to apply on both sides of the table. This traditional recreation use , as well as Hunting and Fishing in The Preserve is a ..... FREEDOM WORTH FIGHTING FOR.....

Here are some of the proposals I feel violate the Recreationists privilidges...

1; I strongly oppose the proposal to impose a maximum airboat width restriction of 6.5 feet.(this is unstable and will result in personal injury and or death to the operator and or occupants,,,,this could be lawsuit due to accepting liability of such safety change. Air boats up to a presently manufactured 8.5 should be permitted.
2;I strongly oppose the proposal to limit horsepower on Air boat engines. Horsepower alone does not determine noise levels , furthermore it is impossible to determine engine horsepower by external insp.

3;I do support continued evaluation of airboat technology for the purpose of reducing sound levels without affecting performance.

4; Proposed maximum ORV sound level of 60 decibels must not apply to Air boats and should be measured with ORV engines at idle speed.

F150

FREEDOM WORTH FIGHTING FOR
10/23/99

5 "STUMPKNOCKERS" is an unfamiliar and vague term. Regulations must not prohibit bumpers and guards designed to protect engines, running gear, and other equipment from damage by accidental encounters with stumps rocks, and limbs.

6; I STRONGLY oppose the proposal to limit vehicles to the arbitrary and unattainable maximumground pressure of 2 psi. vehicles must be permitted to apply at least the same ground pressure as a walking human , which is over 4 psi.

7; The proposed action would prohibit tire chains and undefined " bar grips". Tire chains with a cross section diameter of link material not exceeding ½ inch are low impact and should be permitted. The term "bar grips" must not apply to the molded tread designs of rubber tires. The NPS should continue to evaluate new advancements in low impact technology.

8Owners of ORV's currently registered should be grandfathered exempt from the new specification requirements .

9; Planners must be made aware that primary airboat trails in the Stair step unit were made with bulldozers when the area was farmed prior to est. of the preserve.

10; Development of hydrological – based criteria for temp. closures should be based on documented need for the action in consultation with the Fla. Fish and Wildlife Conservation Comm. (FWC) and representatives of the airboating community.

11; In Bear Island unit I support the continued use of a designated trail system provided that necessary improvements are made.

12; In the Corn Dance unit I oppose the NPS proposal to prohibit access into this unit from state lands on it's Eastern border . This proposal would result in increased ORV impacts to soil and veg. In the Unit by requiring preserve visitors to travel several hours overland by swamp buggy to reach this popular destination instead of a short airboat ride through adjacent state land.

13; Designated entry points into the Corn Dance Unit from the Jetport property should be selected in cons. With FWC and knowledgeable ORV users. They should be sufficient in number and appropriately located so as to avoid increased ORV impacts caused by unnecessary detours.

14; Access and parking facilities should be provided at the level identified in the Gen. Man. Plan.

15; Stabilized trailheads are unnecessary and expensive to maintain, however if the NPS desires them for aesthetic purposes they should be short in length so as not to spoil the backcountry experience in the designated use areas. Proposed trailheads up to a mile in length would be excessive and would result in a vast area being closed to traditional access and enjoyment.

16; ORV users must not be required to enter and exit at the same access sites as to do so would eliminate the enjoyment of cross- country excursions.

17; The cost of ORV permits should be structured to cover admin. Costs only, such as insp. Equip. maintaining records, and issuing permits. ORV use in the preserve is a tradition activity, not a "Special Park USE" subject to direct cost guidelines which would increase permit fees to as high as $200 per vehicle. The proposed permit fee increase is disciminatory and is designed to reduce use by eliminating ORV access to low income families or multiple vehicle owners.

Please consider me a concerned citizen and an Outdoor Lover . I appreciate your time and wish to be able to meet you some day. I just feel as though if the people that have paid for this land one way or another should have the most to say about this great land. I to hope to preserve it for my children and so on.

Thank you so much! Todd Clark 1312 Desoto Ave Lehigh Acres Fla. 33936

475

F150 (cont.)

RECEIVED
NOV 04 1999
BIG CYPRESS NATIONAL PRESERVE

Lynwood V. Scott
15313 Boyette Rd.
Riverview, FL 33569
(813) 685-2197

Mr. W. Hibbard
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 33943

Dear Mr. Hibbard;

I am for the protection of the Everglades from development and commercial use. As a taxpayer, I supported the purchase of the Big Cypress to protect it from being destroyed by progress.

Now that the government has supposedly bought the land for the public and its future generations, they have begun to restrict its use. For example, blocking ORV access off Alligator Alley, tearing down private bridges across canals, not allowing ORVs in areas where before government control they were allowed. More people were able to enjoy the interior of the Big Cypress before the government bought the land than after. I am not talking about tourists that stop at the Oasis Ranger Station, drive on the roads, and look for wildlife along the canal. Before the Ranger Station, tourists did the same thing but there was no way to count them. I am talking about people who have been a part of the Big Cypress for years and have a deep love and attachment to it.

We sold our land in the Big Cypress to the government with the oral agreement that we would always be able to hunt and fish the area. Without ORV access we will be unable to do that. It is too far to walk in and carry our camping gear and too far to walk in and out each day. If they further restrict swamp buggies and ORVs or make designated roads in Corn Dance Unit and Turner River Unit, much of the area will be lost for public enjoyment and recreation. I believe those areas and other areas that allow ORVs should be kept as they are. There are more than enough rules now!

I support the no action alternative plan and ORV use being managed as it is at the present time instead of the proposed action because of the following:

A) Exorbitant cost of the proposed ORV permit. ORV owners are being discriminated against. Tourists are not charged extra because you build an Oasis Ranger Station, hire people to handle talks, build observation towers, or have trams for tourists to ride on and observe wildlife. Yet you want to discriminate against the ORV owners and say they need to pay more while our tax money pays for the other things mentioned.

B) In the proposed plan there are not enough access points or parking places proposed on Turner River to handle the number of ORV owners that use that area. Also the access points will cause some people to travel farther in the woods by

F151

ORV to get to where they hunt if there is not an access point close to where they hunt.

C) I believe from experience that ORVs don't cause long term damage. Most of the rutting is made on grass prairies because of the soft terrain. I've noticed that if a buggy ruts a certain area and then uses a different route the next year that within 2 years the prairie is back to normal.

D) No one has mentioned how ORV use can help the fish, raccoons and alligators during the dryer times. The ruts provide a place to hold water longer during the dry season and that allows crawfish, fish, snails etc. to live for a longer period of time and thus provides raccoons and birds a place to feed during the dry season. Also buggy trails through the cypress strands provide deeper holes for fish, crawfish, snails, alligators etc. during the dryer times.

Swamp buggies have been a part of the big Cypress for decades and yet it is still the last stronghold of the Florida panther. I believe ORVs as regulated now have very little long-term impact on the environment in the Big Cypress. The number of permits issued by the Park Service limits the number of swamp buggies and many areas of the Big Cypress are walk-in only. I urge you to keep the present plan and allow swamp buggies to continue being used in the areas where they are presently allowed. I believe the National Park Service already is doing a good job of controlling and limiting the use of ORVs in the Big Cypress.

More rules or restrictions will only make those who enjoy the wonder and beauty of the interior of the Everglades wonder if the government bought the land for itself or for the people!!!

Thank you for the opportunity to be a part of this ORV planning. If you want additional input, please feel free to call me at (813) 685-2197 or write Lynn Scott, 15313 Boyette Rd., Riverview, FL 33569.

Sincerely,

Lynwood V. Scott

Lynwood V. Scott

F151 (cont.)

October 28, 1999

RECEIVED
NOV 0 1 1999
BIG CYPRESS NATIONAL PRESERVE

Mr. Wally Hibbard
Superintendent
Big Cypress National Preserve
HCR 61 Box 110
Ochoppee, FL 34141

Dear Mr. Hibbard:

Please consider and enter into the public record the following comments regarding the draft recreational off-road vehicle management plan for the Big Cypress National Preserve.

The act establishing the Big Cypress National Preserve states that: "in order to assure the preservation, conservation, and protection of the natural, scenic, hydrologic, floral, faunal and recreational values for the Big Cypress Watershed in the State of Florida and to provide for the enhancement and public enjoyment thereof,, the Big Cypress National Preserve is hereby established."

The recreational values and public enjoyment include the use of O.R.V. which have a history of over 80 years in Big Cypress and make up the majority of its interior use. The O.R.V. Management Plan, by the N.P.S.'s own admission, is a device prepared in response to the settlement agreement negotiated between the N.P.S. and the Florida Biodiversity Project in 1995 to the direct detriment of the real users of the Preserve. This is a good example of control and regulation of the majority by the minority, and severely restricts the traditional uses of the B.C.N.P.--all this caused by a group who have little knowledge and almost no experience in the B.C.N.P.

Closing of the East Boundary of the B.C.N.P.

The east boundary of the Preserve north of the L28 levi tie back to I75 is already closed to vehicle traffic and hunting as it is part of the new acquisition. To close the remainder of the east boundary south of the L28 tie back would be counter to the goals of the O.R.V. Plan. There are 7 exempt property owners within 3 miles of the end of the L28 levi and a small group of O.R.V. users who have camps in the Miccosukee Indian Reservation. No entry from the L28 tie back would force 19 O.R.V.s to travel 12 to

F152

18 miles one way from the jetport versus a 2 to 3 mile drive from the end of the L28 levi. Control of an entry point at the end of the L28 tie back could be accessed by the N.P.S. from the 11 mile road and the pipeline grade. Any 4 wheel drive vehicle can travel this route with ease, a total distance of about 16 miles one way. This area is in dire need of more control and an entry point at the end of the L28 tie back would help do this.

2 P.S.I. Footprint Limit for Swamp Buggy's

Weight limits and foot print impact are a reasonable requirement for O.R.V.s, but the 2 P.S.I. restriction is too light. A walking man puts 4 P.S.I. on the surface with each step. Decreasing the weight of a buggy to reach the 2 P.S.I. limit is almost impossible and very expensive. The examples of Page 18-19 of the O.R.V. Plan are misleading and impossible to reach by going to a larger tire and rim. A 3 P.S.I. foot print would be more reasonable.

I could go on and on about some of the inaccuracies of the draft O.R.V. Plan and I am sure you have heard about them till your ears hurt. I won't bore you with anymore.

I want to thank you for meeting with the Big Cypress Exempt Property Owner's Association. group, and hope we can do so in the future. The Preserve, at this time, is totally under water--deeper than I have ever seen it in my life--and if the water level is not reduced will suffer severe damage. I pray that conditions improve.

Thanks for your consideration,

Richard L Houghton

Richard L. Houghton
President
Big Cypress Exempt
Property Owner's Association

F152 (cont.)

Maritza Leon
10930 Southwest 93rd Street
Miami, Florida 33176
(305) 279-5579

November 1st, 1999

RECEIVED
NOV 05 1999

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

Re: Draft Recreational Vehicle Management Plan/Supplemental Environmental Impact Statement

Dear Sirs,

I have included a written statement regarding the Draft Recreational Vehicle Management Plan, which I have read. I was in attendance to the Public Comment Hearing at Florida International University's GC 140 on November 1st at 7:00 p.m. I saw many individuals who had intelligent and eloquently prepared statements. I felt proud to be among them, knowing that their purpose was good and true. My statement is below and I would like it to be entered into public record as well as taken into careful consideration throughout the next phase of this process. Please feel free to contact me via mail or telephone at the numbers listed on this letter.

Many may be able to say " I have been going to Big Cypress my whole life". I am one of them. My first trip was at 6 months old and I have been going there ever since. I have seen the glades of before and have compared yesterday to today. I remember what the white-tailed deer looked like with racks that rivaled those of other Southern states. This is not the case anymore, and things have changed. The recent publications and initiatives would have everyone believe it is the fault of the park user and the ORV user. I am not an environmental scientist, wildlife biologist, or an engineer. I can't speak to you about pounds per square inch, tire size or water quality. I am a researcher, however, who can see some holes in your supposedly comprehensive study. Your index of consultants is impressive, however the everyday Joe that visits the park with reverence and true love of these woods, is not represented and has not been spoken to. In your draft, I find many occurrences of fact-based numbers and percentages. I also find that when speaking of the ORV user, the language is full of "maybes", "possibly's" and "might's". The reason for this is that no one took the time to really figure out what kind of impact this proposal would have on the ORV user, if implemented.

In reading the draft, I can see a written purpose that is good and a step for the betterment of the woods. I know, however, that this is not its only purpose. We have lived through 26 years of new regulations and initiatives. If this plan does not work, will you pull it to implement a new one? No you will not. Instead you will further regulate and restrict us at no end. Why is it that when we visit other Wildlife Management Areas and National Parks we see abundance of wildlife, beautiful scenery, and ecological integrity coupled with the experience of having Wildlife Officers and Park Rangers genuinely happy to see us there? They ask us to come in for coffee and extend more than a smile.

F153

My problem is not with the efforts put forth by this initiative. My father and friends will incur added expense and inconvenience modifying their ORV's. Let there be no doubt. I have an issue when people comment that there is a problem that must be resolved and that this is not the solution. Comments like these have been made by scientists and quoted in the Miami Herald. If this is so, then I have an issue with the over-regulation of the ORV user and with corruption that will and has been ensuing through out the years. How have previous actions by these agencies ensured the natural and ecological integrity of this Preserve. We have witnessed the opposite, seeing water levels mysteriously rise right before hunting season, making the survival of the wildlife in the Preserve almost dangerously impossible.

In the draft, you discuss the reduction of noise that this plan will provide. Let me tell you about noise in the Everglades from the point of view of someone who does enjoy the quiet as well as the aesthetics. It is wonderful to walk in the same woods that I have been walking through for 26 years, but this time with a tree stand on my back and camera equipment hanging around me. I walk until I get to the "perfect spot". Expectations mounting, heart racing, just imagine. After climbing the tree, the sun shines as bright as you have ever seen it and you begin to notice everything, even the little things, squirrels eating, birds racing. You wait to hear rustling in the woods, a sign of a deer feeding, what you came to see. All of a sudden a noise that seems to overpower all of your senses, takes over and you look for the source. As you look up you see a helicopter bearing the insignia of the very governmental agency, which you propose would enforce these ORV restrictions. I prefer the sound of a distant swamp buggy over the harrowing experience of being spied on by a helicopter. Needless to say, no animal came near me that day.

I will also tell you that we hear a hum of a swamp buggy and feel good knowing someone is coming into the glades. We try and figure out where they are, what trail they're on, and sometimes even who they are. Do not waste your precious research dollars on trying to explain the benefits of noise reduction. Instead take a good look at those who you will have enforcing this plan and the checks and balances that must be in place. Do the park officials, researchers, and environmental scientists walk the land, or do they survey it from their steel fortresses in the sky?

If this "guidance" is approved, we will be further "guided" right out of the park one day. My dreams of having my children grow up loving the same woods I did, are coming to an end. The world we live in has changed. The city life boasts a world full of hatred and crime. The one true and beautiful thing I had to offer my yet unborn children was this place. Not just as a wildlife viewing area, or a scenic and natural preserve, but as way of life. You are infringing on that way of life. The feeling of freedom and exhilaration to travel through those woods knowing it was a part of you, not a part of a governmental initiative.

I thank you for your time and careful consideration of all points of view. I believe we can work together with the intention of preserving the way of life of so many people without endangering the natural and ecological integrity of the preserve.

Sincerely,
Maritza Leon

F153 (cont.)

Big Cypress National Preserve
HCR61, Box 110
Ochopee, Fl. 34141

RECEIVED
SEP 03 1999
BIG CYPRESS NATIONAL PRESERV

attn.: Off-road Vehicle Plan

Dear Sir,

I have reviewed the proposed off-road vehicle plan and have included some comments about the plan. The use of vehicles in the Big Cypress Preserve does need some regulation and the proposed regulations for the most part are reasonable. So you know a little about where I am coming from, you should know that I am an exempt property owner, whose private property is surrounded by the Big Cypress Preserve, in the Turner River unit. I have been going into the Big Cypress Swamp since 1974. I have been distressed about the size of some of the vehicles that are using the preserve recently and the damage that they unintentionally do.

The ORV plan make mention of certain rights of access to private property owners, but does not address specifics of how the plan affects these rights. There was some mention of allowing private land owner to access their land by direct route. I would like to add that existing vehicles owned by private land owners should be grandfathered in for direct access to their private property. Recreational use of vehicles by private land owners should be subject to the same regulation as everyone else. A no cost permit should be provided to private land owners for direct access to private property.

There was mention of a fee, for recreational use vehicles. The fee structure seems rather high. I would propose a sliding scale for this fee. The goal of the plan is to lessen the impact of vehicles on the preserve. The less pounds per square inch pressure on ground, the less the impact on the preserve. The plan mentioned a fee of from $120.00 to $200.00 for the recreational ORV permit. I propose the fee should be at the high end for those vehicles that have a high psi on the ground and at the low end for those vehicles that are that are at the low end of ground pressure, such as:

$200.00 for vehicles at 2 psi to 1.75 psi ground pressure
$150 for those at 1.74 psi to 1.50 psi ground pressure
$125 for those at 1.49 psi to 1.0 psi ground pressure
$100 for those at less then 1.0 psi ground pressure.

This would provide incentive to lighten the vehicles and work toward the goal of reducing the impact on the preserve.

The big cypress preserve facility needs to provide weight scales for weighing these vehicles. This existed in the early days of the preserve and for some rational it was discontinued. This was not only a convenience for the people obtaining the permit, but ensured correct vehicle weight. The current system is easily circumvented, because weight

F155

slips are easily obtained without weighing the ORV. Even if some method of ensuring the weight slip was for the ORV being permitted, it would not take long for some one to figure out a way to strip the vehicle for the weigh in and then add back the removed parts for the picture at the preserve headquarters. The only way the correct vehicle weight will be obtained for permit purposes is if the vehicle is weighted in the presence of preserve personnel. As it is, the weight is for an empty vehicle, the 2 psi limit will be exceeded when the gas tank is filled, the ice coolers loaded, and 4 people with their gear get on the vehicle.

In the early years of the preserve, Monument and Sand Road were semi-maintained and graded, this encouraged vehicles to use these routes and then disperse further in the back country of the preserve. Since they are not maintained they have become almost impassable, vehicles have resorted to cutting new trails into the preserve. If these road were again semi-maintained, then ORV owners would use them and the vegetation disruption, most seen by roadside preserve visitors, would be curtailed. These road in there present use, are getting wider and wider at the low spots, as soil is washed further to the outside of the low spots. If a culvert were put in these low spots and a 12 foot width of fill were added over the culvert to form a road, then the road would be passable and the rutting would be discontinued. Desired water flow would be maintained by the culverts. Vehicles would not need to ride the edges and make the situation worse. I know that the "preservationists" would argue against adding fill, but consider the fact that area of the road is no-longer in pristine condition and maintaining the road would reduce the damage and further impact on the adjacent areas, it seems to be a good solution.

Please remember that the law passed by congress allows for historical use of the preserve and that includes vehicles going off road, hunting and recreational access within the preserve. The preserve is to conserved, not regulated out of use, by fees or over regulated with rules.

Sincerely,

Steven B. DeLine

Steven B. DeLine
5673 Orange Road
Jupiter, Florida 33458

F155 (cont.)

August 21, 1999

Mr. Wally Hibbard
Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

RECEIVED
SEP 01 1999
BIG CYPRESS NATIONAL PRESERVE

Re: Draft Recreational Off-Road Vehicle Management Plan

Dear Mr. Hibbard:

I have received a copy of and read the referenced draft.

I am one of the 100 owners of backcountry property (Tract #827-15) that must be accessed by ORV. I would appreciate some clarifications as to how the proposed changes would specifically affect my situation.

According to page 20 of the Draft *"The owners of property within the backcountry have established rights of access outside recreational ORV use restrictions. Those within the preserve would continue to be able to directly access their property by ORV, but recreational use of ORVs beyond direct access would be managed as with other ORV users."*

1. Is there some publication, that I can obtain a copy of, detailing what my established rights of access outside recreational ORV use are as described above?

2. As a property owner, are the ORV's we need to use to get to and from the property subject to the same permitting requirements as those for recreational use?

F156

480

3. Under the proposed Draft, does a property owner still have unlimited access to the property even if the area is "closed" or if the owner has to go through closed areas to get to the property?

Vehicle Specifications (page 18 of Draft and Appendix C) *"The NPS recently contracted with Rolligon Corporation to conduct an ORV ground pressure study (Rolligon Corp. 1999). ..... Preserve staff would use these tables to determine whether ORVs meet the proposed 2 psi ground pressure standard. ..... Implementing the rule would require some owners to modify or replace equipment on their ORV's".* The Draft then gives two examples of possible options for Swamp buggy owners to meet the rule.

4. *"Rolligon developed ground pressure tables for use at Big Cypress National Park based on load per vehicle with four tires and load per tire."*

   Rolligon also came up with the following formula for approximating the psi in lieu of the charts:

   $$\frac{\text{ORV Weight}}{\text{Tire footprint x number of tires}}$$

   What is a Tire Footprint? In going through Appendix C I was not able to find anything identified as "tire footprint". Can you provide a more detailed formula with example or indicate where I can find the Tire footprint information needed in order to use the formula instead of the charts?

5. In Swamp Buggy examples #1 and #2 (pages 18 & 19) two basic alternatives are given for compliance: either reduce buggy weight or replace the existing

tires by looking at the chart and going to bigger tires that will bring the Swamp Buggy into compliance.

Did Rolligon take into consideration that bigger tires means more weight thereby changing the ratio?

Did Rolligon also take into consideration that just because bigger tires are available, doesn't mean that vehicles can use bigger tires?

Has thought been given to the fact that if the Rolligon standard is in reality not achievable because the result would be equipment that is not functional for it's intended use, is it reasonable (and is it legal) to impose such a standard? (The Draft recognizes that backcountry properties must be accessed by ORV's – page 54).

Has the NPS made attempts with it's own fleet of backcountry Swamp Buggies to actually bring them into compliance before imposing the standard on everyone else? If not, does this mean that the NPS will be exempt from achieving the 2 psi standard? These were very expensive, custom-built Swamp Buggies designed for backcountry use so that the Rangers could come and go safely.

6. With respect to backcountry Swamp Buggy use, it seems that safety has been overlooked. One standard (2 psi) for all of the Big Cypress might not work due to varied terrains and distance.

   Has more than one standard been considered to take use into consideration? From the information provided in the Draft, it is just not possible to reduce the weight significantly enough to comply with the

F156 (cont.)

proposed standard **AND** still maintain the integrity of a safe, reliable, ORV for the purpose of going to and returning from the Big Cypress backcountry.

In my case, my property is a good 3 hours from Monroe Station. My family's safety is of utmost concern. We enjoy our trips to the property because we know we can rely on our Swamp Buggy.

As you are aware, you are totally on your own in the Big Cypress backcountry – cell phones and radios often do not work. Weather conditions change rapidly, making it unsafe for helicopters or small craft to fly. It is not the function of nor does the NPS provide assistance if you break down; there is no towing service or replacement part service to come to the rescue nor is there emergency response in the event of accident or injury. Our swamp buggies are our lifeline back to safety and civilization.

Thank you for taking the time to address my concerns. I look forward to hearing from you.

William J. Crawford

William J. Crawford
18755 SW 218 St
Goulds, FL 33170
P.O. Box 924282
Homestead, Florida 33092
Email: gscfmi@gate.net

F156 (cont.)

Subject: Big Cypress National Preserve
Author: "Thomas Denny O'Neal" <tdoneal@mindspring.com>
Date: 8/20/99 10:03 AM

8/18/99

Dear Sir:

We have heard from several sources that Big Cypress is being badly damaged by ORV's. We also believe that the draft ORV management plan does not go far enough in protecting this Preserve, which we have been fortunate enough to have visited. And it sounds like it is not based on good science, either. Furthermore, since the endangered panther is present in this area, extraordinary measures must be taken to ensure its protection and survival.

Therefore, we urge you to come up with very strong limitations, and ideally total exclusion, of ORV use in the entire Preserve. We detest what these vehicles are doing to natural resources throughout our country!

Thank you for your attention. Please keep us on mailing lists concerning this Preserve.

Sincerely,

Denny O'Neal and Helen Drivas
113 Pinecrest Rd.
Durham, NC 27705

F159

482

March 7, 1999

Bruce Babbitt
Secretary of the Interior
Department of the Interior
1849 C St., N. W.
Washington, D.C. 20240

Dear Secretary Babbitt,

I am writing to you to express my concerns with the ORV Management Plan for Big Cypress National Preserve. I have looked at the plan (by the way, it would be nice if it could be down-loaded without the graphics to make things go faster) and feel that the plan does not adequately protect the park's resources.

As you are aware the Big Cypress ecosystem is fragile in many ways. Trails created by ORV's, loggers, hunters, etc. take years to recover. Their impact on the environment can be significant. This plan does not do enough to limit where ORV's are permitted nor does it adequately address how these trails will be rehabilitated after the inevitable damage that will result.

I don't feel that there is enough information available to determine how ORV use affects the park and its resources. Studies are needed to determine how this use impacts panthers (my primary concern) and other wildlife, water quality, rare plants, and other recreational use. Until this information is available this management plan will only be a guess of how to properly mange the park. Missouri. These three are part of the Ozark National Scenic Riverway and deserve pr

Since this is the first ORV management plan I hope that it will serve as a good example for the future for other land managing agencies. Please do what you can to make this a more effective document.

Thank you for helping to protect the Big Cypress National Preserve and for your attention to this matter.

Sincerely,

Robert Cherry
301 Perkins St.
Boone, NC 28607-5313
(828) 265-2827

F161

Subject: Hunting
Author: ChadRuben@aol.com
Date: 8/16/99 11:02 PM

As a Florida resident for over 20 years, and a hunter, I request your reasons
for your support of the proposed restrictions of hunting Big Cypress.

Sincerely,
William D. Barnes
Registered Republican
Broward County, Florida

F162

Armando Rodriguez
610 NW 219 Ave
Pembroke Pines, FL 33029
954 430-4422

RECEIVED
SEP 09 1999
BIG CYPRESS NATIONAL PRESERVE

September 3, 1999

Mr. Wally Hibbards
Superintendent of Big Cypress National Preserve
Big Cypress N.P.
HCR 61 Box 110
Ochopee FL 34141

Dear Mr. Hibbards

I strongly oppose any modification to the existing ORV plan in the park. My family and I have recently rediscovered the recreational opportunities within the park. When I was a small boy we would go to a camp deep in the woods using a buggy and 3-wheelers for transportation. I remember many good times at a camp owned (built) by friends of my father, including Easter egg hunts, campfire stories and day long rides on the buggy and 3-wheelers. Unfortunately, all that ended.

I was to young to understand what had happened. I was told that we could not go back to the camp and that the use of 3-wheelers was no longer allowed. I later learned that the camp was illegal and torn down.

My father's friends were old-timers and resented the changes taking place in what is now the park. I later learned that because of their misconception regarding the changes they ceased enjoying the area. Please do not take it away again.

The main attraction of the preserve is the freedom one enjoys when riding to an area and setting up camp. I consider it the last open semi-free area in South Florida. It seems to me that the only ones who enjoy the park are those of us with ORVs' and foreign northerners who do not pay the taxes which support the park.

Finally, I am sure you have been barraged with a multitude of differing suggestions. However, I would like to add my opinion. I believe educating the public is the answer. When I renew my permit every year, I get a handful of papers with rules, regulations and maps. Why not add one more page with ecologically friendly suggestions. Some might be using established trails whenever possible and other treading lightly principles.

Sincerely,

Armando Rodriguez Jr.

F164

(Communicated via email to Wally Hibbard, Superintendent, BCNP]

16 April 1999

Superintendent
Big Cypress National Preserve
HCR 61
Box 110
Ochopee, FL 34141

Dear Supt. Hibbard,

Please receive these comments on the Federal Register Notice of Intent
to Prepare an ORVMP/SEIS for Big Cypress National Preserve, with public
comments due on/before 16 April 1999.

I'll be brief.

The Notice of Intent describes the concern of Preserve management about
"potential impacts of alternative options for management of off-road
vehicles within the BCNP."

As I read and understand the events which have occurred since the
original Federal Register Notice of Intent appeared in January 1996, the
NPS has utterly failed to address two major issues that must be resolved
before ORV's can be soundly managed in the BCNP. The depth of lack of
understanding by the NPS regarding these two issues indicates that sound
management of ORV use is either not a serious intent of the NPS, or that
the NPS is badly abdicating its responsibility to understand who _all_
the impacted parties include, and what the degree of natural system
impacts is.

First, the NPS has failed to survey in a statistically valid way *all*
of the public which "owns" a piece of the BCNP, to properly and
credibly determine what the impact of ORV use in BCNP is on them. In
fact, the NPS apparently has made an attempt to survey only the ORV user
group itself in any valid and in-depth manner. To deny all the other
classes of users, including those persons who simply call the again to
manage with sensitivity and depth of understanding the impacts which ORV
use can have in BCNP.

The solution to these two short-comings --indeed, abject failures!-- is
simple:

F167

484

1. Do a proper survey of *all* stakeholders of the Big Cypress National
Preserve, and then apply the understanding gained to more equitably and
soundly manage ORV use for all stakeholders.

2. Initiate the environmental impact *and* _sustained_ monitoring
studies required to provide appropriate stewardship of the natural
resources of the BCNP, and to assure that *all* stakeholders are
reassured that the Big Cypress National Preserve is being managed for
natural resources and cultural heritage into perpetuity.

The credibility of the NPS is on the line, and thus far NPS has done
nothing to reassure the BCNP's stakeholders --the Nation's citizens--
otherwise. Here is your opportunity to turn this image around.

Sincerely,

Peter Rauch
105 Ardmore Road
Kensington, CA 94707-1310
510-526-8155

and Plantation, FL.

21 OCT 99

RECEIVED
NOV 0 1 1999
BIG CYPRESS NAT'L PRESERVE

Box 539
GV, PA 19437

SUPERINTENDENT
BIG CYPRESS NAT'L PRESERVE
HCR 61, Box 110
OCHOPEE, FL 34141

DEAR FRIEND:

I AM WRITING WITH RESPECT TO THE DRAFT ORV MANAGEMENT PLAN AND SUPPLEMENTAL E.I.S. FOR BIG CYPRESS NAT'L PRESERVE. I STRONGLY FEEL THAT ANY PLAN MUST CONSIDER THE FOLLOWING POINTS:

- PROTECT RESOURCES BY RESTRICTING ORV USE TO A MINIMAL TRAIL SYSTEM.

- FULLY ANALYZE DIRECT, INDIRECT AND CUMULATIVE IMPACTS OF ORV USE, INCLUDING FRAGMENTATION AND EDGE EFFECTS.

- SPECIFY THRESHOLD CRITERIA FOR UNACCEPTABLE IMPACTS TO SOILS, VEGETATION, HYDROLOGY, WILDLIFE & USER CONFLICTS.

- PROHIBIT ORV USE IN NORTHERN ADDITION LANDS WHICH ARE VITAL HABITAT FOR THE FLORIDA PANTHER.

THANK YOU FOR YOUR CONSIDERATION.

SINCERELY,

JEFF VOLK

F167 (cont.)

F169

October 3, 1999

RECEIVED
OCT - 6 1999
BIG CYPRESS NATIONAL PRESERVE

Dear Superintendent Hibbard,

I would like to add my comments to the proposed Big Cypress National Preserve off road vehicle management plan

The National Park Service is charged, as is pointed out a number of times in this document, with protecting the integrity of the resource, unimpaired for future genereations, with no loss of long-term productivity. That is certainly the goal to which all of us who love and enjoy the Big Cypress should strive For.

1. Since the document acknowledges significant negative impact from present management strategies, it seems obvious to me that continuing the present strategy under a no action alternative is totally unacceptable and that this alternative should be totally rejected.

2. The Park Service preferred alternative, in my view, falls far short in restriction ORV impacts to the Degree necessary to protect the ecological integrity of the preserve. Greater weight restrictions, And restrictions on trails are necessary to minimize the negative impacts. I feel we need to do whatever is necessary to maximize the prey base for the Florida Panther, and obviously the less Disturbance from mechanized vehicles the larger the numbers of Deer and hogs, the panther's prey Base. And I feel it absolutely necessary to minimize the damage to plant life and waterflow, and That entails restricting the weight and areas traversed by the ORVs. I am sympathetic to those who Have used the preserve area unrestricted for many years, but the resource must come first. If that Entails more walking in the act of hunting, so be it. When I hunt, I would not think of using Any mechanical device as an aid. We must all adjust to protect this place which we cherish.

Thank you,

Harlan K Sandberg

3750 Galt Ocean Dr. #709
Ft Lauderdale, Florida 33308

F170

RECEIVED
OCT - 8 1999
BIG CYPRESS NATIONAL

6904 SW 96 St.
Miami, FL 33156

October 5, 1999

Superintendent Susan Kaynor
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Superintendent:

Big Cypress National Preserve needs our help!

As a member of Friends of the Earth, I would like to speak out against the destruction being done to the Preserve by Swamp buggies, motorcycles and other off-road vehicles. The result of these trails is not only defacement, but has an impact on soil, hydrology, vegetation and wildlife.

As you know, Big Cypress encompasses some of this country's most sensitive and biologically rich lands. These wetlands are the home of 34 endangered and protected species, such as the Florida Panther and the Manatee.

The Off-Road Vehicle Management Plan which you have released unfortunately fails to protect the Preserve from the ravages of ORVs. It must prohibit their use in these wetland and habitat areas. Do not forget the cumulative impact of these off-road vehicles.

I thank you for your consideration.

Sincerely,

Justine Buisson

cc REp. Ileana Ros-Lehtinen, and Senators Graham and Mack.

F171

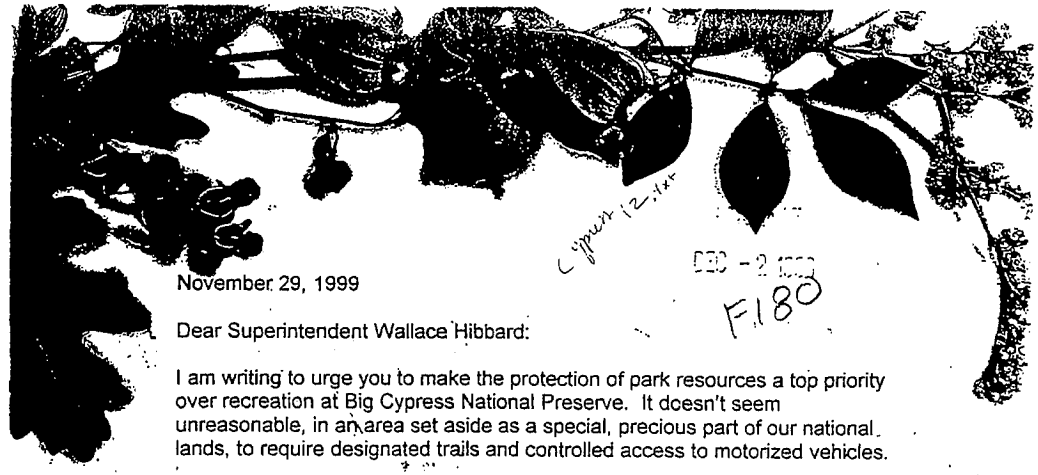
10/7/99 1:23 PM
MarthaWDB@aol.com
Susan Kaynor
Normal
Big Cypress National Preserve

The Big Cypress National Preserve is being destroyed by swamp buggies,
motorcycles, and off-road vehicles(ORVs). Over 30,000 miles of ORVs trails
scar Big Cypress, impact soil, impact water flow and health, impact
vegetation, and scare or kill wildlife in over 148,000 acres.

The 729,000 acres in Big Cypress includes some of the nations most sensitive
and biologically rich lands. 90% of the preserve is classified as wetlands
which hosts 34 endangered, threatened, and protected species, including
Florida Panther and the Manatee.

The Big Cypress management plan must protect the sensitive wetlands and
habitat areas. The Big Cypress Management plan must fully analyze the
cumulative impacts of ORVs use in the preserve. ORVs must be prohibited in
Big Cypress Preserve as they are too destructive for a National Preserve.
Received: from imo19.mx.aol.com (198.81.17.9) by
ccmail.itd.nps.gov with SMTP
(IMA Internet Exchange 2.12 Enterprise) id 0005DC04; Thu, 7 Oct 99 13:41:00
-0400
Received: from MarthaWDB@aol.com

F175



November 29, 1999

DEC - 2 1999

F180

Dear Superintendent Wallace Hibbard:

I am writing to urge you to make the protection of park resources a top priority over recreation at Big Cypress National Preserve. It doesn't seem unreasonable, in an area set aside as a special, precious part of our national lands, to require designated trails and controlled access to motorized vehicles.

My husband and I have volunteered at Big Bend National Park, working in the back country, and we've seen first-hand how vehicles going off-road leave scars that only encourage more of the same, creating a vicious cycle which doesn't allow the fragile environment to recover. We also volunteer for the USFS, BLM and USF&WS...in the majority of situations where there's been violations to rules (to protect the ecosystem) it's been due to sheer ignorance on the users' part.

I think visitor education is an important part of this equation...it's illegal at Big Bend to do so, but with a large territory to cover with limited law enforcement staff, education is a must. I believe most people who enjoy exploring via motorized vehicles do not even think and consider the impact they are making on the environment and the denizens that call these jewels home.

The National Park Service is man-dated to protect the natural resources of our most-precious lands...I trust you will do your part for the stewardship of Big Cypress National Preserve.

Sincerely,

Sherry J Metzger

Sherry J. Metzger
PMB 350
1003 E Concho
Rockport, TX 78382

cc: Jerry Belson, National Park Service Southeast Regional Director

F180

Marcus Libkind
1391 Moselle Court
Livermore, California 94550

Phone: (925) 455-5816
FAX: (925) 455-4826
E-mail: mlibkind@juno.com

October 14, 1999

Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

RECEIVE
OCT 21 1999
BIG CYPRESS NATION

Dear Superintendent,

The following are my comments on the draft ORV Management Plan for Big Cypress National Preserve. The plan needs to be amended to:

1. Include a comprehensive analysis of past and present commercial ORV use.

2. Include specific management actions to avoid ORV impacts. If impacts cannot be avoided, they must be minimized to the extent practicable, not merely reduce.

3. Restrict ORVs to a vastly reduced designated trail system, designed to protect resources and maximize monitoring and enforcement. High density braided trail areas should be closed.

4. Fully analyze the direct, indirect, and cumulative impacts of ORV use and alternative forms of recreation, including fragmentation and edge effects of the almost 30,000 miles of ORV trails within the preserve.

5. Specify threshhold criteria for unacceptable impacts to soils, hydrology, vegetation, wildlife and recreational conflict.

6. Contain supporting data and evidence for the 2 psi ground pressure standard and demonstrate how it complies with defined threshholds.

7. Include specific and comprehensive criteria for closing, opening, and reopening ORV trails.

8. Prohibit ORV use in the northern Addition Lands which provide vital habitat for the endangered Florida panther.

9. Contain detailed criteria for implementation, funding, monitoring, research and education programs.

Thank you for your time and consideration.

Very truly yours,

Marcus Libkind

487

F184

Bunny Gabel . 72 Jane Street . New York, NY 10014

Superintendent Susan Kaynor
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Superintendent Kaynor:

RE: Off road vehicle management plan in Big Cypress National Preserve

A management plan to control the use of off road vehicles must prohibit their use in wetland and habitat areas and must fully analyze the cumulative impacts of ORVs in the Big Cypress National Preserve.

We count on you to protect the Big Cypress and its rich environmentally sensitive lands, and to curb the use of ORVs in the over 30,000 miles of trails that scar the Big Cypress and create impacts on soil, hydrology, vegetation and wildlife.

The draft Off Road Vehicle Management Plan that has been released fails to protect the Big Cypress. A stronger plan is needed.

Sincerely,

Bunny Gabel

Copies to: Congressman Jerrold Nadler
Senators Mack and Graham

F185

488

RECEIVED
OCT 29 1999
BIG CYPRESS NATIONAL PRESERVE

Wallace A. Hibbard
Big Cypress National Preserve
HCR 61 Box 110
Ochopee, FL 34141-9710

Subj: Draft ORV Management Plan and SEIS

Superintendent Hibbard:

The plan is quite good but I have the following comments.

I believe the plan leans in favor of recreational use over resource protection. Trails should be designated and access controlled for all motorized vehicles in the preserve.

Will the park service have the funding and personnel to enforce the plan and to monitor ORV impacts in order to make adjustments in the future?

The lasting impact that ORVS have is clearly seen on the aerial map of the Loop Unit. Are you sure that unauthorized use of ORVS is not occuring in that unit?

Future plans should address use by hikers, cyclists, canoeists Etc.

Dennis De Mots
11 Ricky Lane
Oakdale, CT 06370

F186

RECEIVED
NOV 08 1999
BIG CYPRESS NATIONAL

8404 SW 181 Terrace
Miami, FL 33157
305/233-9017
<bobmerkel@earthlink.net>
November 4, 1999

Attn. Supt. Wallace Hibbard
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141-9710

Dear Sir:

We sat next to you and your wife at the Nov. 1 ORV meeting at FIU. Didn't speak. This note is just to add a few thoughts to the official record.

#1. Members of the Florida Trail Association and other hikers have just as much love for the Preserve as do the ORV users, and comparable familiarity with the parts crossed by hiking trails. HOWEVER I do not agree with the ORV users' statements about ruts caused by wheeled ORVs. The ORV users only see the ruts from on high, so to speak, through their self-interested perspective. As a hiker, I see new ruts without grass and old ruts with grass (sawgrass, sedges, whatever). Walking the red-blazed and blue-blazed trail sections about 3 miles north of oasis a hiker crosses DOZENS of pairs of ruts. It is not fun, nor are they visually attractive. That is the "ground truth" we see. The ruts do NOT go away and the numbers of ruts increase every year.

#2. Many speakers complained about actions of the SFWMD such as control of C111 floodgates during Hurricane Irene. Pertinent to the Big Cypress, however, are SFWMD actions to control water flow west of the L28 canal. Without attacking or defending the Water Management District, though, I think the public ought to remember two other things that have changed in the last few years.

One is that Florida's population has passed 15,000,000 and is still climbing* - the Big Cypress has been and WILL be affected as more people demand more flood protection and more water during droughts. SFWMD puts more water in the west of WCA 3A to avoid sending more water across the notorious 8-1/2 sq. mile area.

The second is that people forget the weather from the last few years. In the last 5-6 years we've only had one year in which rainfall was "normal." In all of the other years rainfall was well above normal in the fall and winter - including 1999 thanks to Hurricane Irene. I too remember much dryer years before that.

#3. I want to criticize the first speaker and others who complained bitterly about increased annual ORV fees. Someone who can afford an ORV can, I'm sure, afford to spend $200 a year to use it in the Big Cypress. Can two people go to a Miami Dolphin football game for that?

Robert S. Merkel
Florida Trail Association

* It wasn't the National Park Service that converted half the Glades to farms and malls.

F187

CHRIS CURLE
388 LAMPLIGHTER DR.
MARCO ISLAND, FL 34145-4542

RECEIVED
NOV 10 1999
BIG CYPRESS NATIONAL PRESERVE

11.8.99

Superintendent Wally Hibbard
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Superintendent Hibbard,

I saw in the paper that the Park Service is looking for public input on the issue of off-road vehicles in the Big cypress National Preserve.

I am writing to say that I support the National Park Service plan that would limit off-road vehicle access in the preserve, ban tire chains and cleats and stump-knockers, restrict entry to the preserve, and raise the annual permit fee.

I also agree with the opponents of the plan who say that the sugar farmers' pollution and the U.S. Army corps of Engineers' canal-digging has done as much if not more damage to the Big Cypress as have off-road vehicles.

Regards,

• Ph: 941-394-0011 • Fax 941-394-0095 • Marcochris@aol.com

489

F188

Leigh Brooks
32642 2nd Avenue
San Antonio, FL 33576
352-588-4147
lbrooks2wd@3oaks.com

RECEIVED
NOV 10 1999
BIG CYPRESS NATIONAL PRESERVE

November 7, 1999

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

RE: Big Cypress National Preserve Draft Recreational Off-Road Vehicle Management Plan

Dear Mr. Hibbard:

The National Park Service has a daunting task, no doubt, in coming up with a plan that will balance ORV use with ecological protection. While the proposed action should result in ecosystem improvement compared with the no action alternative, I am very disappointed that there were only two alternatives considered. This unreasonably simplifies complex issues and limits creative alternative strategies.

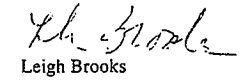
I have read the above draft plan. These are my specific concerns:

1. The proposed development of designated parking areas would have an aesthetic impact. This would bring "development" into what is now a non-developed natural area. They will also admittedly impact hydrology as fill will be needed for wetland sites. I hope that these hardened areas will not be paved. If they must be made, I would like to see recreational and interpretive information available at the parking areas for non-ORV users and non-hunters to encourage the general public to venture in by foot or bicycle. Also, please set up some sort of registration system so the park service can gauge these other visitor uses.

2. Not enough information was included in the Supplemental EIS to describe how protected species would be managed. For instance, mention is made of bald eagle nests but the federal requirement for limiting human activity within certain distances is not included. Will airboats be able to run below an eagle nest? If endangered Florida panthers prefer to den in tall saw palmettos, will these upland areas be off limits to ORV use?

Further, I would like to see more existing trails designated for bicycle use. A shockingly small number of miles of trail are available for biking, especially compared to the hundreds, if not thousands of miles of ORV trails. I have ridden several times at Big Cypress and have bicycle camped there. I really enjoy it and wonder why bikes are restricted from many ORV trails even though bikes have much less impact. I have seen a hunter on bicycle and wonder if he is limiting himself to hunting on bicycle trails. See the irony?

Respectfully submitted,



Leigh Brooks

F189

490

At 09:42 PM 8/18/99 -0400, rdegraaf wrote:
>Dear Mr. Hibbard,
>
>I represent off-road cycling interests in South Florida. Please send me a
>copy of the current Big Cypress NP ORV draft plan. I have been involved in
>this ongoing ORV plan review and comment period over the last two years or
>so. I plan to continue voicing my interests and speaking on behalf of other
>off-road bicyclists in Florida, concerning our continued access and
>enjoyment of the Preserve. I'd especially like to see the New Acquisition
>Lands remain vehicle free -- being open only for passive recreational use.
>This (lack or minimal use of motorized vehicles), in my opinion, is the
>ideal situation for long term preservation of the Big Cypress ecosystem.
>Other areas, including the Bear Island segment, could also benefit
>ecologically through a decrease in use by motorized vehicles.
>
>My mailing address is: 12803 Thonotosassa Rd, Dover FL, 33527-3701
>
>Thanks for your continued work on this project and for taking my comments on
>the matter,
>
>Sincerely,
>
>Rob DeGraaf
>Florida Bicycle Association -- Off-Road Bicycle Committee Member
>Dover, Florida
>(813) 986-2128
>rdegraaf@gateway.net
>Guide to South Florida Off-Road Bicycling
>www.geocities.com/pipeline/9330/sflgde.html

Sept. 10, 1999

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61 Box 110
Ochopee, FL 34141

RECEIVED
SEP 13 1999
BIG CYPRESS NATIONAL

RE: Draft ORV Management Plan

Dear Mr. Hibbard,

It has been a long time since we have met: around 3 years ago we discussed off-road bicycle access in the New Acquisition Lands. At the time I was representing FORBA (the Florida Off-Road Bicycle Association), and was accompanied by a female friend also with FORBA. Since then I have written and published a book, *Guide to South Florida Off-Road Bicycling*, which is being reviewed at present for purchase and resale in the visitor's center. Perhaps you have seen it? Both the New Acq. Lands and Bear Island trails (those open to cyclists) are in the Guide.

Anyhow, that matter is not the focus of this letter. I am writing today to state that I have received the proposed ORV Mgmt. Plan. I will not be able to make either public meeting concerning the ORV Mgmt. Plan, so wanted to take the time to write this letter. In general, it appears that the changes do not directly affect off-road bicyclists in any way at all. If I am mistaken, please inform me otherwise. It seems that the proposed changes can only benefit passive recreational users including off-road bicyclists, thus I am in favor of the changes. Furthermore, the changes would seem to greatly benefit the natural environment and ecosystems encompassing the Preserve, and help further protect endangered species like the Florida Panther, Florida Black Bear, etc. For all of these reasons I am in favor of the Plan's proposed changes. I think that limiting ORV access points, increasing user fees, controlling time of use (closed if too wet), regulating tire size, width and pressure, etc., are alterations which should benefit the Preserve in the short and especially in the long term.

Mr. Hibbard, thank you for your continued efforts with this plan. It has been a long time in the making and the end fortunately appears to be in sight!

Sincerely,

Rob DeGraaf, author
Guide to South Florida Off-Road Bicycling
12803 Thonotosassa Rd.
Dover, FL 33527
Rdegraaf@gateway.net

Off-Road Committee Member – Florida Bicycle Association.

Date: 8/18/99 10:21 PM
Sender: Robert K Michaels Jr <BobMichaels@worldnet.att.net>
To: Wally Hibbard; Susan Kaynor; "rdegraaf" <rdegraaf@gateway.net>

Priority: Normal
Subject: Re: ORV draft plan

Rob:

Thanks and congratulations for staying involved in this effort.

Be aware, that most Federal agencies group users into two groups:
1) vehicles which includes bikes
2) non vehicular which includes hikers and horses.

It sure doesn't make sense, and we'll told them so, but that's the way they
frequently do it.

In the National Forest review plan efforts, FORBA put in hours and hours of
verbal comments. When it came to written comment, we said we wanted to
focus on one issue because it was so important. That was not to classify
bikes with 4x4's, ATV's and motorcycles. We even pointed out that bikes
have a max of 1/6 horsepower and weighted 25 lbs so as a minimum they
should at least have the access of the 2,500-3,500 pound one full
horsepower things. All to no avail.

Bob Michaels

491

F193

12/12/99

DEC 20 1999

Dear Mr. Hibbard,

I strongly urge you to protect the Big Cypress park's resources more effectively by establishing designated trails and controlled access for all motorized vehicles! Your ORV plan does not adequately balance resource protection with recreation! I urge the Park Service to implement designated trails and limited areas for the variety of users in the park. Hikers, kayakers and cyclists damage the park, as well as airboats, swamp buggies and ORV's. The study documented nearly 29,000 miles of user trails that displace soil, alter vegetation, and fragments wildlife habitat! The analysis indicates that park vegetation has NOT recovered as quickly from recreational uses as the Park Service orginally estimated, per Kim Swatland, NPCA's south Florida field representative.

Your assistance in this most urgent matter would be much appreciated! What we do now is so important for the legacy to our future generations!

Thank you,

Lydia

Ms Lydia Garvey
PO Box 487
Rosebud SD 57570-0487

cc: SE Reg Dir
Jerry
Bob Sc

F194

492

RECEIVED
AUG 20 1999
BIG CYPRESS NATIONAL PRESERVE

MR W. Hibbard
Big Cypress National Preserve
HCR 61 Box 110
Ochopee, FL 33943

8-13-99

DEAR MR Hibbard,

The following is IN Regard to the BCNP ORV Management PLAN

I HAVE NOT yet seen the PLAN and would Like to Be Placed on the Mailing List.

Donald H. Fleming
18320 SW 224 ST
Gould, FL 33170-3507

I WAS BORN IN DADE County, FL IN 1937 AND HAVE HUNTED AND FISHED IN WHAT IS NOW EVERGLADES NATIONAL PARK AND The B.C.N.P. ~~EXTENDED~~ All my Life. I HAVE ALWAYS USED Some TYPE OF BOAT, AIRBOAT OR Swamp Buggey to Get to Those AREAS.. JUST AS The INDIANS have Their CULTURE ORV's ARE A PART of MINE. Please DO NOT Take That AWAY

I WAS Recently GIVEN ~~AN~~, UNOFFICIALLY, A FORMULA for Tire Size to weight to Reach A POUNDS Per Square Inch. IF This is the CASE My FOOT Print, SQ Inches to weight, IS HEAVIER. THAN My Buggy.

Page 2

I Recently READ A COPY of "PARK WATCHER Flash MARCH 1999" STATING "AN INCREDIBLE 30,000 Miles of ORV TRAILS" IN the BCNP. NOT ONLY IS IT INCREDIBLE IT IS INCONCEIVABLE IT IS OBVIOUS to ANYONE WHO HAS BEEN to/ Flown over the Preserve KNOWS that EVERY GAME TRAIL AND ALLIGATOR DRAG will show UP.

Please Allow ORV use IN the ADDITION LANDS AS this will SPREAD the ORV use OVER A GREATER AREA AND LESSEN the IMPACT ON CERTAIN AREAS. I AM NOT IN FAVOR of DESIGNATED TRAILS (Although I KNOW They ARE INEVITABLE) BECAUSE they will Become The I 95's AND Palmetto EXPRESSWAYS of The BCNP. I BELIEVE the Long term Impact will BE GREATER THAN the "LOCAL" TRAFFIC we HAVE NOW.

THANK you for your ATTENTION AND Please DO NOT Destroy "My ORV culture".

Yours Truly
Donald H Fleming

P.S. I UNDERSTAND WITH REGARD to the ORV MANAGEMENT PLAN YOU ARE Compiling A LIST of TIRE SIZES/MANUFACT. ETC. Please INCLUDE MINE 18.5/44-15LT GATEWAY Gumbo MONSTER Mudder. Thank you
Donald H Fleming

F198

November 4, 1999

Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Mr. Hibbard:

I am writing in opposition of the proposed ORV Management Plan. I am honorary spokesperson for family and friends which have all signed this letter with me. First, I'd like to say, as members of the Collier Sportsman & Conservation Club we have a passion for the woods that words cannot begin to decribe. We want our children to be able to enjoy the preserve as we have done and for generations to come. There is nothing like taking a moonlit ride and having an owl follow your buggy from tree to tree, or hearing a hundred alligators singing to different tunes from a flag pond. This is what it's all about, teaching our children about the preserve and the respect it's so deserved.
We all are in agreement with the ridiculous Vehicle weight and tire specifications. As many stated in the meeting last night, some of us are hard working people who just don't have the finances to meet the specifications. And as for permitting, we feel this is a tactic to squeeze more dollars out of hard working people.
Whether you enter the preserve on foot, on a buggy or ATV or by airplane, we all have a common bond and that is preservation and enjoyment of the land our forfathers toiled on.
We feel there is lack of scientific evidence that ORV use in the preserve in way hinders the vegetation and wildlife from carrying out it's natural cycle of life in the woods. We do agree that there is always a few who are bent towards breaking the rules and make it tough for those of us who cherish our time in the woods. We feel very strongly towards punishment of those who abuse what God has given us.
In closing, there are far more important issues to deal with than ORV use and "visitor conflict" in a preserve this size. And some of the speakers at last nights meeting summed it up: We aren't going anywhere, we believe in what we stand for. We trust that when this goes before congress that the American constitution will prevail.

Sincerely,

dawn Patterson

Jeff & Dawn Patterson
3811 12th Ave. N.E.
Naples, FL 34120

493

F199

RECEIVED
SEP 10 1999
BIG CYPRESS NATIONAL PRESERVE

RECEIVED
SEP 16 1999

September 04, 1999

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 110, Box 11
Ochopee, Florida 33943

Gary Knowles
5000 SW 103 Place
Miami, Fl. 33165

RE: Off-Road Vehicle Management Plan for Big Cypress National Preserve

Dear Mr Hibbard,

This letter is written to you to comment on the ORV Plan for the BCNP. As I have not actually seen for myself, the proposed plan or any official documentation on this subject, I have been informed of some of the changes proposed to the Preserve regarding vehicle use. (I have attempted to retrieve the information via the NPS website but I have been unable to do so.)

Just to give you a little information about myself; I am a native Miamian, and a Police Lieutenant with 18 years in law enforcement. My wife and I spend as much time as we can enjoying the Big Cypress area. I grew up in the Everglades, as my father had a camp, airboat and buggy that we also enjoyed as much as time permitted. I have an airboat that I use for hunting, fishing, sightseeing, photography, educating friends about the Everglades and just transportation to remote areas of the preserve, that would be otherwise unaccesible.

There have been expensive studies done by out-of-state researchers and universities that state airboats do extensive damage to the environment. I could not disagree more. Of all the ORV's that are in use today, the airboat certainly has the least amount of impact on the environment. Even during the busiest time of the hunting season, airboats have little impact on the area. What vegetation is disturbed during this time quickly rejuvenates itself. Airboats have been a part of the Big Cypress Stairstep Unit for 50 years. If there was a problem with them, we would have seen it by now. There is not.

With oil-exploration by big corporations, the Indian tribes dredging, filling and building, sugar cane / cattle pollution, and encroaching development from both coasts, water-management effects etc., people should stop trying to blame ORV's for the destruction of the environment. There are current regulations in effect that control ORV's in the Preserve and they are sufficient. I have an airboat so I speak on this particular ORV. However, there are other areas of the Preserve that are only accessible by wheeled vehicles and these vehicles are being attacked also.

I am opposed to any changes or additions to the ORV regulations that would affect airboats in the Preserve. This would further restrict users and impose undue financial hardship on people with ORV's. I presently own an airboat that is 6 feet, 9 inches across the top of the gunwale, and ten feet long, excluding the grass catcher. I understand that there is a proposal to limit airboat width

F201

to 6 feet, 6 inches. Would this mean that I have to scrap my present hull, and spend $6,000 on a new one that is a mere 3 inches narrower? This idea is not acceptable to me. There is no logic in it whatsoever.

Among other proposed changes, I understand that there is a proposal to increase the ORV fee to over $100 per year. I am opposed to this. The preserve should be open to all economic classes, not only to the affluent. It does not cost that much to administer the permit process and this amounts to unlawful taxation for use of a national treasure owned by all the people of the country.

I would like to write several pages but I will close with this simple response to ORV usage in the Preserve. **I am opposed to any changes in the current ORV use regulations or requirements in the Big Cypress National Preserve.**

Please enter my letter into the Federal Register for the Off Road Vehicle Management Plan of the Big Cypress National Preserve.

Sincerely,

Gary Knowles

F201 (cont.)

Mr. Hubbard

This letter is concerning the proposed management plan for Big Cypress. My family and I are orv users belonging to local orv clubs in Fla. and national orv clubs. It has come to our attention that the management plan for Big Cypress has a preferred option. This proposal would be acceptable except for the fact that the fees are to be raised from $35.00 to $200.00. This is totally unfair and unacceptable. This cost is prohibitive of use and discriminatory. Although most orv users are willing to pay a fee, this is totally out of whack with other users. Various other groups pay nothing for use. We feel that traditional activities in the preserve need to be permitted without undue hardship on the user. This hike in fee is an undue hardship. Please consider this when making your decision. Our group needs to be represented in a positive manner. We love the use of our Government lands and respect the use just as much as other users.

Thank You for your time and consideration,
Sam A Mento & Family

Members of; Florida Trail Riders, South Eastern Enduro and Trail Riders Assoc., American Motorcycle Assoc., and Blue Ribbon Coalition.

Sam A. Mento
6347 Sunhigh Dr.
New Port Richey, FL 34655

F204

Subject: ATC\ORV permits
Author: Heretic287@aol.com
Date: 8/23/99 4:41 PM

Dear Big Cypress National Preserve
As a child my father and I have been out in the everglades for at least
my whole life.Camping, Hunting, and just plain joy riding. When we go out
hunting we usually do it off our ATC. And do not want to pay $125 to $200
for a permit to ride in the Cypress. We are not chasing panthers off the
land and there is no scientific data to support this. Just the opposite all
the science work shows the panther gets along fine with us. And, the NPS has
managed ORVs in the Big Cypress National Preserve for the last 25 years.
The numbers of ORVs is much fewer than 25 years ago. And Congress said the
use of ORVs was ok in 1974 and then again in 1988.

Sincerely,

Cod
y Wilson

her
etic287@aol.com

F205

December 9, 1999

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Fl 34141

DEC 13 1999

RE: ORV Management Plan

Dear Mr. Hibbard:

I hope my views are not too late and you have made up your mind regarding the ORV Environmental Impact Plan Statement.

In analyzing the report I find that the author had several good ideas and several drastic measures in order to achieve those ideas, in addition I hope the taxpayers did not participate in paying for this Report.

Let me begin by stating that I am 52 years old and I have been hunting, camping and enjoying all of that region from the West side of the Fakahatchee Swamp (since 1967 I owned a hunting camp inside the preserve) to Bear Island (previously called La Floresta Perdida) and to the East, Conservation areas 3, 2a, 2b, etc. In other words I have seen the area change in the last 35 years with time and the effects of development aswell as interference from SFWM.

It is my opinion the greatest harm to the **flora and fauna does not come from ORV's,** but comes from the constant high levels of water that seem to be the norm rather the exception. It is obvious that the high levels of water kill the grass, kill the small crustacean life that the hogs, raccoons and most rodents feed from, which in turns affects birds, etc. The mammals, recitals and all animals must concentrate in high ground to find a place to nest and to give birth to their young's, do you think that the gators nest in 18" of water?. This high levels of water are increasing the mortality rate of all animals in this swamps. The Everglades have been an area of seasonal flooding and not constant high levels of waters as we have seen lately.

F210

If we must accept the constant high water levels as a fact of life for the Big Cypress, then limiting the weight of the ORV is a real necessity, but to require a maximum of two(2) PSI of ground pressure is radical. For instance, my weight is 226 LB and my footprint is 30.5 square inches per, at any given time I will be placing 7.40 PSI for every step I take in the woods. In order to follow the ORV Plan of two(2) PSI or less for vehicles it will be necessary to perform expensive modifications to the equipment ($5,000) which may not be possible for the existing ORV operating at the present time. The two explanations given in the report are without merit, as some of these ORV are simple frames and weight can not be just shed off as suggested in the Plan. Major increases in tire sizes as suggested by the Plan will dictate costly and large expenditures, which are not limited to just tires, new rims, drive trains, transmissions and engines. For instance any person that has some mechanical knowledge, knows that the bigger the tires, the bigger the torque to the axles, therefore bigger axles and higher gears must be utilized to turn those big tires as suggested in the Plan. I have attached several photos of the tires indicated in the report that I must use in my F-250(5420 pounds) Ford truck in order to meet the recommendations of the Report. The Report says that my truck needs 28 L 26, or 20.8 R 38, or 23.1- 32, as you may see a photo of a 1997 John Deer 644G that has 23.5 x 25(cost of tires and rims about $1200 each) tires **that** the report says that are not big enough to provide a two (2) PSI ground pressure. Look at the size of the tires and compare it to the person driving the loader, do you see the axles?, can you imagine hundreds of ORV's this size in the woods?. This rig costs $98,000. What is the author thinking about?

Lets be realistic, by the time you add the additional weight of bigger tires to an existing ORV it may increase the weight by as much as 800 additional pounds, therefore I suggest that 3.5 PSI to 4 PSI range may accomplish the intent of the Plan with out vanishing all ORV users from the woods.

The construction of roads as suggested in the report will dam areas, which in turn may increase the stagnant waters and will breed mosquitoes and decompose matter throughout the woods, rotting the flora and killing the fauna is not what the report wants to do, and needless to say the enormous amount of tax payers money that will be thrown away.

In the report he indicates something to the effect, that vanishing or restricting ORV's for hunting will enhance hunting experience for those who hunt on

foot, This guy has never ever kill a deer deep in the woods and had to walk it out in water to his knees, I challenge him to do it. I can see that the author has never walk in the woods more that fifty yard with 12" or 16" of water as many of us have tried and risked a heart attack or heat stroke as it happened to me my cousin three younger than me and to his son twenty two years old. (By the way you should have some cold Coca-Cola machines at the Oasis Station, that day thanks to one of your rangers he gave us an emergency diabetic sugar supplement and saved us from having a stroke). Imagine to kill a deer, say 1/2 mile(880 yd.) from any road and then to drag it out of the woods on foot this would be impossible, this is a heart attack for sure to must of us. The report on this issue has no merits as it will keep all people over thirty years old out of the Big Cypress, this is discrimination and violation of our Civil Rights.

In another irrational statement the author refers as to viewing opportunities of natural scenery, wildlife and habitat. Very little can be observed three hundred yards from US 41.

The report also suggests that the hunters compete with the panther for deer. Again the report has no merits on this issue as the panther seeks sick deer and yearlings rather than a buck in it prime as they should be in the hunting season. But any one knows that the panther rather catch easier prey such as otters, raccoons, rabbits, and rodents. Further, we know that studies have indicated the panther's problems may be related to high mercury contents in the water as result of fertilization occurring in the Northern regions inducing infertility among all the animals in the food chain, other studies suggest inbreeding also may be the cause of the panthers problems.

The report does not go into oil explorations and oil extractions as he/she may be afraid to get in deep waters with big money interest groups.

It is my opinion the Park should allow all existing ORV's with presently registered permits, in all areas of the Big Cypress National Preserve, including Deep Lake and Loop Road and limit the number of vehicles per areas, as to evenly spread the number of ORV's per square acres, so all areas are traveled evenly more or less during the hunting season, which is obviously the time that is most traveled. Those ORV's allowed in the Preserve as suggested in the Report, should be kept from 3.5 PSI to 4.0 PSI of ground

F210 (cont.)

pressure. All new ORV's that apply for future permit must meet a maximum of 3 PSI along with the suggested noise restriction of the Plan.

These are my views on the matter, if you feel that it has merit and would like to discuss them further, I would be glad to meet you at your convenience, please do not hesitate to call me at 305-649-8446 or write to Armando Cardona, 3021 SW 11th Street Miami, Fl 33135.

Respectfully,

Armando Cardona

cc: ORV file

F210 (cont.)

Preserve

Subject: ORV Management Plan for the Big Cypress National

Author: "Dennis S. Rentschler" <dsrbodie@together.net>
Date: 1/1/80 2:27 AM

Dear Superintendent Hibbard,

I am an avid outdoor recreationist who understands the importance of public involvement in outdoor recreation. I often encourage people to get out and enjoy the outdoors in what ever manor they so enjoy. I have ridden ORV's and understand the thrill and challenge of ORV trail riding. At the same time I also relish in the beauty and solitude of undisturbed natural areas.

I have seen the, sometimes irreparable, damage which ORV's can inflict on sensitive terrains. I have inflicted some of those wounds myself. I have heard the quiet shattered by the noise of ORV's and am also guilty of disturbing the peace. Balance of interests is not an easy thing to manage. Often times, I feel, balance is not possible. I do know that, in the wrong place, and without balance, ORV use can upset the natural order for generations. I would, therefore, urge you in your development of an ORV management plan for the Big Cypress National Preserve to consider the following:

1. The primary goal of the NPS is "...to conserve park resources unimpaired for the enjoyment of future generations." Only after

F215

498

assuring the protection of the resources is the NPS to provide appropriate and meaningful public access and use.

2. If item #1 can be satisfied and ORV use is determined to be an appropriated recreational use of Big Cypress, motorized and non-motorized areas should be established and enforced.

3. If necessary (to protect motorized areas from themselves) ORV guidlines should be established to limit the size and weight of ORV's allowed.

4. As much as possible, the development of an ORV management plan should be based on science to ensure resource sustainability and recreational opportunity.

5. Since the Preserve Addition Area has not been exposed to ORV use this area should be kept off limits to ORV's.

I hope you will seriously consider my comments. I wish you luck in obtaining 'balance'.

Sincerely,
Dennis S. Rentschler
PO Box 33
W. Wardsboro, VT 05360-0033

F215 (cont.)

Subject: Off Road Vehicle Management Plan for Big Cyress
Author: Michele L Hall <wantacookie@juno.com>
Date: 12/7/99 5:28 PM

Ms. Michele Hall
2002 College Ave. SE
Grand Rapids, MI 49507

December 7, 1999

To those at the National Park Service,

I am very concerned with the Off Road Vehicle Management Plan for Big Cypress National Park. Developing this management plan is a great step in the right direction for protecting this park, but the plan being proposed will not adequately protect the resources in danger. It is my understanding that the goal of the National Park Service is-- "to conserve park resources unimpaired for the enjoyment of future generations." (The 1916 Organic Act that established the Park Service) Allowing ORVs to use trails creates many problems, such as, altering the natural landscape and vegetation: The fact is that ORVs cause trail scars, for example there are only 60 miles of official NPS designated ORV trails in Big Cypress, but remnants of ORV tracks remain today in areas of the preserve that have been closed for over 20 years. ORV tracks in Big Cypress have made certain trails impassable for pedestrians and ORV users, which accounts for the reason ORVs create new tracks to go around the impassible areas.

I think it is important for people to enjoy themselves at Big Cypress, but these trails are very detrimental to the fragile plant life and surrounding ecosystems in the park. I want to ask you to please take in consideration the long term effects of these trails before you finalize the plan. I just ask to please set management practices to ensure that recreation will not super cede protection of the resources, such as the Florida panther and prohibit ORV use in the Preserve Addition Area. A suggestion that could also help is if guidelines are set to restrict the types of ORVs that are allowed in the park, for example a weight limit of 2500 lbs, only allow certain tires, and set up a formula to gauge the ratio of tire/vehicle weight displacement via PSI, that will limit the damaging effects of the vehicles. Non-motorized areas should also be set aside for pedestrians, cyclist, human powered crafts (canoes and Kayaks) and wildlife. I have faith that you will do your best to make the right decisions in this case.

Thank you for your time and consideration.

Sincerely,

Ms. Michele Hall

F217

Date: 12/12/99 2:03 PM
Sender: Thomas D Bussing <tdbussing@juno.com>
To: Susan Kaynor
Priority: Normal
Subject: Draft ORV Management Plan - Big Cypress National Preserve

---

Superintendent, Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

BY EMAIL: Susan_Kaynor@nps.gov

RE: Draft ORV Management Plan for the Big Cypress National Preserve

---

The draft ORV Management Plan for the Big Cypress National Preserve is inadequate and fails to protect the preserve from damage. It should be reworked from top to bottom.

The rapid development of almost 30,000 miles of ORV trails should not be given de facto status as a permanent impact on the Preserve. The pressure to do so comes from a small special interest group, and conflicts with the public interest in wildlife protection.

Beginning with a full assessment of the negative impacts of ORV trails (direct, indirect and cumulative) including alternatives, a Management Plan that is effective must be science based and action oriented. The draft ORV Management Plan is not.

ORV use in sensitive wetlands and uplands, and when conditions are unsuitable, should be prohibited. If impacts cannot be avoided, they must be minimized to the maximum extent practicable.

ORV use must be restricted to a comprehensive designated trail system based on avoiding and minimizing impacts, until research determines the long-term ecological effects of ORV impacts. To continue the current overuse, and to accept the current pervasive maze of trails, is not acceptable management.

Specific threshold criteria that are comprehensive is needed to make sound decisions on closing, opening and reopening trails. This will require specific and comprehensive criteria for implementing and funding in the area of ORV management, monitoring and research.

To insert a short-sighted and inadequate Plan, at a time when the explosive increase in mechanized entertainment has made such a pervasive and disastrous inroad into the Preserve, is to abdicate the lawful obligation of the National Park Service to protect the public's long-term interest in these public lands. Please rework the Plan to correct this flawed approach.

Thomas D. Bussing PhD
1832 NW 11th Road
Gainesville FL 32605

499

Public Comment on the Off-Road Vehicle Management Plan
for: Big Cypress National Preserve - Florida
December 8, 1999

DEC 13 1999

Attn: Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Mr. Hibbard,

After reading the Draft Management Plan for Off-Road Vehicles I offer the following comments:

I found the Draft to be well put together, concise, informative and easily readable. However, I felt that an additional, more-restrictive plan should have been included for comment and consideration. At the outset, I will state that I am not a fan of ORV usage in our National Park System.

Of interest to me was your inclusion of the NPS mandates which direct the "agency to conserve the scenery, the natural and historic objects, and the wildlife, and to provide for the enjoyment of those resources in a manner that *leaves them unimpaired for future generations*," and, of including the purpose of the Big Cypress Preserve, to be administered in a manner that will ensure its "*natural and ecological integrity in perpetuity.*"

I found this of interest, and at the same time a bit puzzling. Puzzling, because there appears to a conflict between these mandates, and the continued operation and permitted impacts of ORV usage. Florida has a rather long and complex natural history. While I commend the scientific achievements that have been made in comprehending how the various south Florida ecosystems function, I would venture to say that we are still in a rather primitive stage of knowledge and understanding. It is more than likely that we have not even named all the species extant in this region, nor have we ascertained the millions, or trillions, of interconnections between them. We are at a further loss in that the natural, historic, and healthy functioning of this area has been severely altered prior to any, even superficial, scientific inquiries into it's innerworkings. The baseline data necessary to support any assertive scientific statements in this regard have long since vanished. I would also suspect that an ecological equilibrium has not yet been reached, the result of past, and continuing, anthropogenic disturbances upon this region. It has only been forty years since some of the most significant alterations have been made. To suggest that severe ecological and environmental degradation will not continue to evidence itself from these past events, let alone present disturbances, would be stretching our present knowledge past it's possible bounds, bordering on fantasy, if not outright and intentional falsehood. To put it more simply, there is just too much we still don't know.

My observations pertaining to "natural systems management" is that it is undoubtedly an oxymoron. Humans can't, nor ever have, successfully "managed" nature. This is nowhere more evident than here in Florida. I do not make this statement in an effort to suggest we abandon our moral and legal responsibilities of stewardship of these resources, rather, to point out our continued intellectual failings that we label as "management." The essential brunt of these statements is to encourage us to act conservatively, erring on the side of caution, based on what we don't know, which is assuredly more substantial than what we do know. I do not believe that this can be rationally refuted.

While I understand that Congress has directed that six type of uses be permitted (subject to reasonable regulation), it appears that the burden of proof of what is reasonable lies squarely on

500

your shoulders. While I don't envy your position Mr. Hibbard, your duties remain unequivocal and specifically mandated.

.....

Draft Plan specific comments:

While it may not have been your intent in depicting Figure 2. ORV Use Areas, I found the color photos both, disgusting and disheartening. On examination and comparison of the GMP ORV Trails from 1984 to 1995, I was further astounded by their obvious and widespread impacts, despite your disclaimer of what constitutes an "ORV trail." It is not just the apparent exponential increase of trails, rather the idea that so little of this preserve remains unscarified. In the section on prairies in the Draft Plan it is stated that, "many of the prairie areas were so heavily trafficked that mapping the trails was impossible." I fail to see the benefits for a "protected" land, worse, the idea that this is a sustainable activity. Even given the fact that you intend to limit permits to 2500, the present and continuing degradation occurring in such a short geologic time scale assures the fact that we are failing in our mandate to protect this area in perpetuity, and for future generations. If current percentages of increase in general visitation persist, than clearly, the opportunity to enjoy this "preserve" is diminished for the greatest number, by the select and privileged few. This simply does not fit into my idea of why these lands were designated by the NPS in the first place.

In regard to the noise impacts of ORVs; I find it laughable that straight-faced serious scientists can state that the noise generated by ORVs, whether they are restricted to "60 decibels at 50 feet, except...", is not impacting wildlife negatively. And, that they are willing to claim that we have enough information to state that, wildlife is not significantly impacted by both the humanly detectable noise, as well as, the ground and water conducted vibrations which occur as a result of their operation. The fact that airboat operators wear noise mufflers over their ears would lead me to suggest that they be required to provide these remedies to all who are in range of this audible offense. I believe that we should cease their operation in all of the Park and Preserve, whether for recreation, enforcement or research activities. The noise from airboats is at the very least patently offensive for all they come in contact with. Their current use has no place in the National Park System whether by the public or by Park personnel.

As to the survey of ORV users conducted by mailed questionnaire: It is well accepted that surveys can be skewed and inaccurate in many ways. I found inconsistencies in the Draft Plan in this regard. Is the reader, and the Park administration, expected to place faith in the respondents claims? For example, "Seeing wildlife" is among the most highly rated items, while it is stated that "ORVs are used predominantly for hunting-related activities." So, I have to conclude that the respondents wish to "see wildlife" for the brief instant before they slaughter it. It is not surprising that "I am very attached to the ORV I use in Big Cypress," is the most strongly rated statement, yet, the surveyor sees fit to make the statement that "'man and machine versus nature' holds little or no attraction to preserve ORV riders" based on other multiple choice-like responses. It is also said that the ORV users see themselves as "skilled risk takers, they prefer little managerial intervention, and they want to protect the natural environment." A similar response could also be garnered from any of the major developers, industrial managers, sugar barons, cattle ranchers, or for that matter, any of Florida's citizens who have just purchased a gas-guzzling Sport Utility Vehicle. We all believe that we are environmentally responsible and see ourselves quite differently from what our actions depict. Any psychologist will attest to this. While I empathize with ORV users in that they believe it is their right to access National Park property with these vehicles, the realities of ORV impacts upon federally mandated protected land seems at odds with this usage. Of interest to me is the demographic make-up of respondents to the survey: 98% Male and 78% White. - A similar composition exists in the highest echelons of our Defense Department on which the American public places such a high degree of trust. How much faith would we put in a mailed

questionnaire asking Florida drivers about their driving habits? Would we expect to find a strong correlation between their response on whether they regularly exceed the speed limit, versus, the realities that exist on our roadways?

I would also like to state that, my experience with our national and state resource protection efforts are that they are chronically crippled by a lack of adequate funding and personnel. I am confident that this is the case with Big Cypress Preserve, as well. Given this reality, I would urge the most restrictive regulations possible for ORV usage in Big Cypress, such that their impacts are minimized in every extent available given the paucity of resources needed to oversee their activities.

I also failed to see the logic, or fairness, in the fact that "ORV permit fees would only partially offset ORV management costs." I assume that the taxpayer will bear the additional costs needed to cater to this select, high-impact, user group. Further, given the limited budget of the NPS, this is likely to deter and hamper the overall protection of Big Cypress Preserve. I do not see where the benefits to all American taxpayers and users of Big Cypress play into this situation.

While the funding to litigate these matters is assuredly weighted on the side of the ORV proponents, I would be disappointed if this fact affects the regulations necessary to fairly and equitably administer this preserve for the benefit of all user groups, in perpetuity..

Personally, I am continually disappointed by the poverty of efficiency and the lack of integrity of our resource protection managers and administrators. If there is anything that can be conclusively said about the condition of our natural resources it is that "time is of the essence" in radically changing our ways of doing business and reducing our deleterious impacts to these resources. My observations of the Florida Keys National Marine Sanctuary, the Everglades National Park, the Florida Department of Environmental Protection, the South Florida Ecosystem Restoration Task Force, the South Florida Water Management District, the Army Corps of Engineers, and other related agencies is, that they are mired in political inefficiencies, egotistical personalities, wholly under-funded and completely unable to perform the specific and essential tasks which they were created and mandated to accomplish. These are entirely human failings for which the biotic community and future inhabitants of this planet will suffer immensely. The argument is no longer for the rights of humans to prosper upon this planet, rather, the arguments now are for the rights to plunder these fragile resources to support our lavish and luxurious lifestyles. The use of ORVs in Big Cypress is a perfect example of this mentality.

"Looking back to the days when South Florida was a beautiful wilderness filled with magnificent wildlife and then contemplating the wreck of today, is enough to sicken the heart of a lover of nature, yes, even of any sensible person who has a true valuation of the useful and beautiful. If things go on here as they have done in the past few years this can only end in the destruction of all that is lovely and of value that nature has bestowed on us." This was written in 1932 by Charles Torrey Simpson. What would he say today, in 1999? What would he say about ORV impacts on nationally protected lands?

Sincerely,

Norman M. Trabulsy Jr.
127 Atlantic Ave.
Tavernier, FL 33070

cc: Office of the Governor - Florida
U.S. House of Representatives - Peter Deutsch
NPS Denver Service Center - Mary Magee
Dept. of Interior - Fish and Wildlife Service

F219 (cont.)

Subject: (no subject)
Author: KeimOP@aol.com
Date: 12/3/99 7:17 PM

Dear Superintendent,

The National Park Service needs to take a proactive role in protecting the
resources of Big Cypress National Preserve. Please consider the following:

1. devise an ORV management plan that is based on science and ensures the
sustainability of the resources and recreational opportunities;
2. designate appropriate ORV areas and trails, and enforce the use of these
trails;
3. set aside non-motorized areas for pedestrians, cyclist, human powered
crafts (canoes and kayaks) and wildlife;
4. set a ORV guidelines: set maximum ORV weight limits (2500 lbs.), set
strict guidelines for the type of tire used, and develop and enforce a
systematic formula to gauge the ratio of tire/vehicle weight displacement
via pressure per square (PSI) that will limit the damaging effects of the
vehicles;
5. set management practices to ensure that recreation will not supersede
protection of the resources, such as the Florida panther; and
6. prohibit ORV use in the Preserve Addition Area. This relatively new
addition to the park has been ORV-free for several years and includes ideal
habitat for the endangered Florida panther. This part of the park should
remain free from motorized disturbances.

Sincerely,
Susan Keim, O.P.

501

F220

Subject: Protect Big Cypress National Preserve
Author: "Zinn; Robert" <RZinn@mail.intracorp.com>
Date: 12/8/99 12:32 PM

Superintendent:
The National Park Service needs to take a proactive role in protecting the resources of Big Cypress National Preserve.
I urge you to:
* devise an ORV management plan that is based on science and ensures the sustainability of the resources and recreational opportunities;
* designate appropriate ORV areas and trails, and enforce the use of these trails;
* set aside non-motorized areas for pedestrians, cyclist, human powered crafts (canoes and kayaks) and wildlife;
* set a ORV guidelines: set maximum ORV weight limits (2500 lbs.), set
strict guidelines for the type of tire used, and develop and enforce a systematic formula to gauge the ratio of tire/vehicle weight displacement via pressure per square (PSI) that will limit the damaging effects of the vehicles;
* set management practices to ensure that recreation will not supercede protection of the resources, such as the Florida panther; and
* prohibit ORV use in the Preserve Addition Area. This relatively new addition to the park has been ORV-free for several years and includes ideal habitat for the endangered Florida panther. This part of the park should remain free from motorized disturbances.
Sincerely,

Robert K. Zinn
12 Winding Way
Mullica Hill, NJ 08062-2514
rzinn@erols.com

F223

502

10/5/99 3:33 PM
camara <tcamara@earthlink.net>
Susan Kaynor
Normal
Big Cypress National Preserve

Dear Superintendent Kaynor,

I am writing comments regarding the Draft Off-road vehicle Management
Plan
and Supplemental Environmental impact Statement for Big Cypress National

Preserve (BCNP). While I am encouraged that the National Park Service is

finally trying to address the adverse impacts from ORV use we are concerned
that the proposed action is inadequate to avoid and minimize these impacts.

The BCNP is one of our nations' most sensitive and biologically rich
areas
and requires a high level of natural resource protection.

There is ample evidence that ORV use is causing serious adverse impacts
to
the preserve's soil, hydrology, vegetation, and wildlife. Some of these
impacts may not be reversible. The recent University of Georgia study
that
estimated almost 30,000 miles of ORV trails raises a new alarm about the
vast
scale and intensity of ORV impacts.

I am concerned that the plan is not action oriented and does not identify
and implement specific management actions that would avoid and minimize
the
adverse impacts of ORV use.

I recommend that the draft plan:

* Be comprehensive and include commercial use and the Addition lands.

* Implement a drastically reduced designated trail system until research

establishes what level of ORV use is safe to assure the ecosystem process and
protect sensitive species.

Thank you for consideration of these comments.

Sincerely,

Tom Camaraa
474 Green Glen Way
Mill Valley, CA 94941

F227

RECEIVED
OCT 13 1999
BIG CYPRESS NATIONAL PRESERVE

10/12/99
#1103
6825 Grenadier Blvd.
Naples, FL 34108

Superintendent Wallace A. Hibbard
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Superintendent Hibbard:

The following comments address the ORV Management Plan. Last night I attended the ORV Management Plan discussion/debate held by the Conservancy in Naples, FL. My comments are, in part, a result of listening to that discussion.

Big Cypress National Preserve allows ORV use subject to regulation. Current permit holders who may use ORV's in the Preserve number about 2,000 a year. A variety of vehicles may be used by the permit holders, including street legal 4X4's, airboats, swamp buggies, and all terrain cycles. The use of all of these vehicles is potentially damaging to the Preserve. The larger and heavier vehicles have the potential to severely damage the Preserve by cutting deep ruts into the soil, killing vegetation, muddying water, and creating tracks and trails that may remain unrecovered for years or even decades. The University of Georgia satellite map, as controversial as it may be, gives an indication of the extent of the tracking visibly detectable in the Preserve.

The National Park Service (hereafter NPS) has produced an ORV Management Plan. The plan has created a storm of controversy for at least two reasons: 1) The issues surrounding ORV use on National Preserve lands is inherently controversial. 2) The Management Plan has been issued without a base of research to support it. The absence of this research and the factual data it should have produced has encouraged the debate to degenerate into name-calling and stereotyping. Absence of sound research is a dead-certain recipe for insuring that people already divided from one another on the issue of ORV use in the Preserve will be driven farther apart instead of being brought closer together to reach a fair and workable solution.

The NPS must, at a minimum, produce a plan that will do the following:

1) provide a working interpretation of the phrase "subject to regulation" in the Preserve's mandate to allow vehicles to be used in the Preserve. For example, what end is the

1

F229

regulation to serve? The NPS cannot hope to "regulate" effectively such use until it has a clear grasp of what end the regulation is to serve.

2) provide a comprehensive analysis of past and present commercial ORV use

3) provide an analysis of the impact that current levels of ORV use in the Preserve are having on the Preserve

4) provide a projection of the expected increase in ORV use in the Preserve over the coming decade and the effects of the increase on the Preserve

5) provide a listing of the existing cypress forests, prairies, hammocks, pinelands, and other environments in the Preserve which identifies those areas in which ORV's should not be allowed at all

6) provide a listing of those areas of the Preserve in which ORV use can be sustained while still preserving the natural integrity of the areas

7) provide an accurate map of the Preserve with acceptable ORV trails clearly marked

8) provide threshold criteria for unacceptable impacts by ORV's on soils, hydrology, vegetation, and wildlife, with the steps to be taken to end ORV use in those areas

9) provide a clear and workable plan of enforcement of all rules and regulations in place to control ORV use in the Preserve

10) provide a comprehensive plan for implementing, funding, monitoring, and enforcing the Plan when it goes into effect

The above is only a minimum list of what the Plan must do if it is to be effective in bringing the various interests together in a meaningful and effective discussion of ORV use in the Preserve. Only if the NPS produces such a Plan can we hope to protect the Preserve from serious degradation over time and also bring together the currently warring interests in a discussion leading to a mutually acceptable resolution of the problems surrounding ORV use in the Preserve.

Sincerely yours,

Kinley E. Roby

503

F229 (cont.)

Subject: Off Road Vehicle Plan
Author: "Wally Elton Authorized User" <eb@vermontel.net>
Date: 11/10/99 10:19 PM

Dear Superintendent Hibbard:

I am writing to comment on the draft Off Road Vehicle (ORV) Plan. I have visited South Florida a number of times and have been impressed by the biodiversity of the area.

I am pleased that the preserve is finally developing a plan for managing ORV use, and commend you for taking this step. There is no doubt that the proposed action would increase the protection of park resources over the current situation.

However, I believe that considering only two alternatives, one of which is the no action alternative, is insufficient. In my view, the proposed alternative will not "ensure natural and ecological integrity" of the preserve as required.
I also am concerned about the specific effects of ORV use on movements and habitat use of the Florida panther. The first concern of the plan should, of course, be adequate protection of the resources in the preserve.
I urge that the final ORV plan accomplish the following: 1) Assure the designation of both specific ORV trails and use areas and ''ORV free" areas for wildlife and non-motorized recreation, and the enforcement of such designations;
2) Since the largest ORVs clearly cause the greatest amount of and longest lasting resource impacts, place an upper limit on the weight of allowable ORVs of around 2000 pounds; 3) Require the collection of data on the relationship of such factors as tire type and pressure to resource damage and ensure the adoption of restrictions on these factors to limit such damage; and 4) Keep the Addition Areas, which offer good panther habitat and have been ORV free for some time, off limits to ORV use.

I appreciate the opportunity to comment on the proposed plan.

Sincerely,

Wallace Elton
69 Elm Hill Street
Springfield, VT 05156

F230

504

P.S. Unless The 7 listed below are met I do not support The Draft SEIS and recommend a moratorium, close all trails to ORVs.

TROPICAL ENVIRONMENTAL CONSULTANTS, INC.
24550 Sailfish Street
Bonita Springs, Florida 34134
Phone & Fax: (941) 948-1600

DEC 14 1999

FAXED
1230 hrs.
DEC 12 1999
BY: Dawn

TO: BIG CYPRESS NATIONAL PRESERVE
c/o Superintendent W. Hibbard

From: Gary Lee Beardsley
Gary L Beardsley

Fax #1-941-695-6007

RE: Public comments on The Draft Recreational Off-Road (ORV) Vehicle Mgmt. Plan, SEIS.

Dear Superintendent Hibbard:
I have perused The draft plan and conclude The follow:

A. There is a lack of science upon which I can evaluate The two alternatives presented.
B. The document should be a declaratory document, one clearly addressing past, present and forcast effects of ORV use, instead it is very subjective with no cumulative effects analysis.
C. Standard of care requires The most current, best available information upon which to make management decisions - This is lacking!
D. I see no appropriate funding source from which to conduct monitoring, surveil and enforcement. Inappropriate to solely use user fees.
E. Management decesions must, in The BCNP, be resource based yet I see status quo as The dominant driving force.
F. I strongly regrest The FEIS + ROD be held up until The proper data and analysis is obtained.

Gary Beardsley

F231

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61 Box 110
Ochopee, Fl 34141

DEC 10 1999

Dear Mr. Hibbard,

Please consider and enter into the public record the following comments regarding the Big Cypress National Preserve ORV Management Plan.

Congress recognized the powerful cultural connection sportsmen and sportswomen have with the Big Cypress region and provided a clear mandate that traditional recreational use of the land was to be protected and enhanced. The proposed management actions are in violation of that mandate.

The draft ORV Management fails to identify a scientific or biological need for the proposed actions and fabricates alleged adverse impacts to justify unnecessary restrictions designed to reduce traditional recreation, again in violation of the law that created the Big Cypress National Preserve.

Vehicle Specifications

"Stumpnocker" is an unfamiliar and vague term. Regulations must not prohibit bumpers and guards designed to protect engines, running gears, and other equipment from damage by accidental encounters with stumps, rocks, and limbs.

I Strongly Oppose the proposal to limit vehicles to the arbitrary and unattainable maximum ground pressure of 2 PSI. There is no explanation of how this figure was obtained or why. According to the Goodyear Tire & Rubber Company's website (Information is included at the end) a typical golf cart, for example, unit pressure is only about 5 PSI in contrast the walking pressure of a golfer is around 24 PSI!

According to page 18 of the draft ORV Management Plan, example number 1 maintains in order to reach the 2 PSI tire size should be changed from a 16.9 X 24 to a 16.9 X 30 tire, which will lower ground pressure to 1.98 PSI, and only cost the owner $1140, however this is not true. Because of the additional weight of the rim and tire will make the buggy be over 2 PSI.

F240

According to Long Wheel and Rim Company in Jacksonville, Fl, a rim for a 16.9 X 24 weighs 116 Lbs. at a cost of $185; a 16.9 X 30 rim weighs 170 Lbs. at a cost of $285. According again to the Goodyear website (see attached information) the 16.9 X 24 tire weighs 148.389 Lbs. and costs $ 225, while the 16.9 X 30 tire weighs 169.439 Lbs. and costs $ 285. Then you must add $ 50 for a new tube. By changing the tires to 16.9 X 30 you will increase the weight of the buggy by 300Lbs. plus the weight of a tube, and will cost the owner $ 2480 plus any applicable sales taxes.

The chart at the end of the Draft ORV Management Plan, for calculating ground pressure for a specific tire size states that a buggy weighing 3500 Lbs. with a 16.9 X 24 exerts 2.17 PSI. After changing the tires to 16.9 X 30 the buggy would weigh around 4000 Lbs., which according to the chart the buggy would still, exert 2.21 PSI.

Further more this chart does not take into consideration rim size or the air pressure in the tire. Either or both rim size and tire air pressure will affect the size of the footprint left by a tire. The size of the footprint will affect the amount of pressure exerted onto the ground, for example a tire running low air pressure will make a wider track than a tire with high air pressure, thus exerting less ground pressure. This chart fails to even cover airplane tires, which is one of the oldest types of tire used on ORVs.

In example number 2 on page 18, the plan recommends going from a 18.4 X 16.1 agricultural tire to an 18.4 X 24 tire, the 18.4 X 24 is a tire used on a front-end loader which means the tire weighs considerably more than the 18.4 X 16.1 tire. Goodyear does not have a listing for either one of these types of tires, except in an all weather diamond tread for the 18.4 X 16.1.

According to the Rolligon Corporation's website (Information included at end), they give an example of a low ground pressure vehicle. This vehicle is equipped with a standard tire size of 40 X 50 X 12 or an optional 44 X 42 X 20. These tires will make the vehicle be over 10 feet wide because each tire is around 4 feet wide and you must have at least 2 feet between the tires so that the tires would fit between the frame of the vehicle. This vehicle is too wide to fit in the existing trials, and would cause more damage in the long run.

The proposed plan would prohibit the use of chains and undefined "bar grips." Chains are not as damaging to the ground has bar grip tractor tread tires especially those of the R3 design. An R3 design is a tire that has a tread height of over 4 inches above the smooth surface of the tire. I feel that more studies are needed on the types of tires used on ORVs.

The proposed fees for ORV permits of $120 to $200 are outrageous and unwarranted. There are people who have ORVs that could not afford to pay this much for a permit to use their ORVs. The cost of a license tag for a vehicle to drive on highways is no where near this expensive, so why are the ORV permits going to be this expensive? There are many people who use the Preserve throughout the year and do not pay a dime for using the Preserve. Such as the many tourists that use the Preserve's boardwalks, why not charge them for using the boardwalks?

We are exempt landowners inside the Big Cypress National Preserve, and have been at our existing location since 1962. However our roots in this area go deep, we are third, fourth, and fifth generation users of this area. I am inclosing a copy of a hunting license that was issued in Everglades City in 1928, to our grandfather, great grandfather, or great-great grandfather. Please note that he was 72 years old in 1928, and he still bought a hunting license! We volunteer our time to the Florida Fish and Wildlife Conservation Commission has Hunter Education Instructors, because we want to educate others on how to be safe hunters and users of the land. We normally donate around 120 hours per year to the Hunter Education program. And we spend about 45 days a year in the Big Cypress National Preserve throughout the entire year.

Please add my name to the mailing list for any future ORV Management proposals. We also would be willing to help the management of the Preserve in coming up with a sound ORV Management plan and even taking researchers into the back country of the Big Cypress National Preserve.

Signed Charles W. Hampton
Name CHARLES W. HAMPTON
Address 1115 NW Livingston St
ARCADIA, FLORIDA 34266 863 494-4727

F240 (cont.)

Signed Doug Christ
Name Doug Christ
Address P.O. Box 1352 NOCATEE, FL 34268

F241

Signed Charles Wade Hampton Jr
Name Charles Wade Hampton Jr.
Address 1115 NW Livingston St Arcadia, FL 34266

F243

Signed Steven K. Hampton
Name Steven K Hampton
Address 1115 N.W. Livingston St Arcadia FL 34266

F244

Signed Harold Hampton
Name 1018 N.E Livingston St.
Address Arcadia, Florida 34266

F245

506

December 1, 1999

Superintendent, Big Cypress National Preserve

Comments on Off-Road Vehicle Plan 1999

I was pleased to see after 20 years Big Cypress had finally come up with an ORV plan. That is to say, I was pleased until I read the plan.

To start with it is a sad commentary on the management of the preserve that a private group (Florida Bio-diversity) had to sue the park service, in order to force the service to develop a plan that the legislative act and federal law required. It is obvious that the current administration of the preserve had to be dragged kicking and screaming every step of the way to take action.

My credentials speak for themselves; I was the first ranger to work in the Big Cypress. I was assigned the duty of showing people like Senators Jackson and Bible and others around in order to get legislation enacted to purchase the land. It embarrasses me to see how long it has taken to carry out their intent.

Starting on page 7 number 4 of the plan.
I am amazed that anyone could distort the enabling act to say there is a mandate for ORV use. The enabling act clearly states that mortozied vehicle use will be limited and controlled. This was also the first item addressed in PL Act 93440. It should be clear there was andobvious concern to those who drafted and passed this act into law.

I believe that <u>controlled</u> ORV use is acceptable in the preserve, but the park service has really done nothing, to date, to truly monitor or control ORV use.

The thing I dislike most about the "ORV Plan" is it is not a plan at all, but rather an outline or plan to write a plan in the future. There are too many perhaps, maybes and ifs in the plan. There is little base line or scientific data stated in the plan.

I find there are a few good points, but for the most part I find they do not make any sense at all. The good points of the plan as I see them are;

1) The 2-PSI is good and reasonable.
   Having built swamp buggies for over 45 years commercially, I know that the 2-PSI figure is easy to achieve. Almost anyone could understand that the less PSI you have the less likely you are to damage soil, by rutting or getting stuck. I built the first 4 swamp buggies for the park service in the 1970's, with this point in mind. I built a buggy in 1990 that I sold to the National Audubon Society at Corkscrew Swamp Sanctuary.

   This vehicle can carry six people, plus cargo. The buggies weight is 3,100 pounds. I used parts, including motor and tires that are readily available to anyone.

   The first buggy I built for the park service weighed 1800 lbs. It was six-wheel drive and had transported six people and half of a piper Cherokee air craft at the same time.

   A human with both feet on the ground applies from 1.8 to 2.2 PSI. Measure the square inches on the bottom surface of your hunting shoes times two to get the your PSI. Anyone can figure this out for himself or herself.

   There should however also be a maximum weight limit – other wise in theory it would be possible to put enough tires on a semi truck to achieve the 2 PSI. It is important to consider what kind of impact such a vehicle would have on the soil and vegetation.

   I have always considered it unnecessary to have a buggy that weighed over 4,000 lbs., unless it is used for fire fighting or commercial purposes. It is imperative that the preserve look at the weight limit before people spend a lot of money on building heavy vehicles, to only find out later they will be outlawed for use in the preserve.

2) I agree with no access over L28 from the Miccosukee or State Land. However, you might want to consider allowing landowners within 1½ miles of L28 to <u>park their airboats on the East Side of the levee</u> and walk over the levee to a <u>designated site</u> where they can park their swamp buggies.

3) The reason we first decided on a limit of 6½-ft. width on airboats is because in the 1970's that was the normal maximum width of boats in use. By not allowing wider boats, the trails would not be widened in the future. Probably 7 ft. maximum is reasonable.
4) Vehicles should ONLY be allowed on designated elevated trails in Bear Island.

5) Off road vehicle use should be kept clear of the Florida Trail. ORV trails may need to be re-routed.

6) There must be a plan to discontinue airboat use during extreme low water. During extreme high water conditions, all ORV use should be discontinued.

7) Tire chains and tractor tires were prohibited and should still be!

I disagree with the following.

A) Horsepower has little to do with noise from airboats. Limiting horse power would prevent running dry ground but so would a hydrologically based ORV plan.

B) Nobody seems to know what a stump-knocker is. I have built buggies for many years and find this a vague description at best. Guards to protect tie rods and steering arms are not a problem. Limiting ORV's to trails would better address this issue.

C) I cannot agree with higher ORV fees, unless it is a nation wide park service policy. It seems the higher fee favors the wealthy user and could be considered discriminatory

D) I am opposed to preventing private property owners the right to go from their property with ORV's. Backcounty inholders can, so why should a person living on a road have to trailer their vehicle miles to a launch site and leave the transport vehicle there to be vandalized or stolen? In my personal case, I often go for a 10 or 15-minute ride in my airboat. If I have to trailer my airboat 2 1/2 miles to launch it, it isn't worth it. Yet any other airboat operator can ride up to my backyard day or night, yet I would not be allowed to go from my property into the preserve. I would suggest perhaps a system be set up where people like myself could telephone in a float plan to the preserve dispatch, giving the route and time of departure and return. I would even agree to the prohibition of transporting firearms or wildlife to or from my property. If a record of use were the purpose of this rule, the phone call would take care of that. If illegal hunting is the issue no game or firearm transport takes care of that.
If the purpose is to not have trails near or to private in-holdings then the entire area near all in-holdings for one mile should be closed to all ORV use and strictly enforced. I purchased my land in the 1950's because of the airboat access. To prevent me that access, I believe, amounts to a "partial taking" and the park service would have to somehow justly compensate me for my loss of use.

E) ORV effects on wildlife have not been taken into consideration, except for the panther. Studies indicate they tend to migrate out of the preserve when hunting season begins and return when it ends.
I know from personal observations that ORV's particularly airboats do cause a number of wildlife species to change their normal habits. A good example is that deer tend to move into areas of dense vegetation, and start feeding and traveling at night. Years ago I had both bear and panther come into my yard during the spring and summer, but they would leave for several months around hunting season. They then would return after things quieted down. There are a number of ground nesting birds that are effected by airboat activity. This is evident from February to June or July when many of these ground nesting birds are on nest or with young. Some years you can 't operate an airboat in Feb.-May due to dry conditions, but for the last 10 years there has been sufficient water. The birds that are effected most are the Cape Sable Seaside Sparrow, Common Moorhen, Purple Gallinule, Least Bittern, Pied Billed Grebe, Florida Duck/Mallard, Limpkins and Coots. These are all "ground" nesting birds, that are often run over by airboats. It is difficult to avoid hitting these birds as they often swim or fly directly into the path of the boat and are crippled or killed! When frog hunting, from an airboat at night, it is even harder to miss them. Also effected is the rare Everglades Mink, which frequents sawgrass areas, feeding at night, they are easily run over. The Round Tailed muskrat builds a floating nest like the grebe and the nest and rats are often destroyed when airboats go cross-country And not on a well used trail. What effect this has on populations and health of these species is completely unknown as no studies have ever been done. At the very least some kind of monitoring should be done and

F242 (cont.)

F246 (cont.)

F249

a study.plan devised to address this issue

F) Another issue the "plan" does not address is how many trails per square mile or given area are needed for reasonable access? How many miles of trail parallel and cross each other and are unnecessary. Prior to the preserve being acquired, hunting season started November 20th and ended January 1st. There was no; archery, muzzle-loading or spring gobbler season. So there may not be more ORV's today, but they are used more often! Also before 1970, ATC' were almost non-existent, and what was available was costly and unreliable.

G) Last but certainly not least. I am again amazed that the plan does not address commercial use of ORV's. This plan should be comprehensive! Especially after the Ochopee prairie debacle, the present Everglades tours at 22,364 airboat rides per year, the negative effect on the resource from noise, vegetation and soil damage. This issue needs to be address now not, after the damage occurs.

In is imperative that the preserve remembers its mission and that is to protect the natural resources of BICY and then **permit only activities that are compatible with that mission.** It should not be left to the whim of park mangers, or special user groups but rather on solid science and monitoring.

There is nothing wrong with ORV use in the preserve as long as it is controlled use that leaves the preserve un-damaged and as natural as possible, so the future generations can enjoy it as I have.

Thank you for the opportunity to respond to the plan.

Sincerely, Fred E. Dayhoff

Fred E. Dayhoff
Retired US Park Ranger and Everglades Guide

cc: Nathaniel Reed
FK Jones Miccouskee Tribe
Dan Sholly
Ron Clark
Kevin Kacer

F242 (cont.)

Charlie & Barbara Henry
BIG CYPRESS SANCTUARY
12717 W Sunrise Blvd PMB 179
Sunrise, FL 33323
Tel (954) 384-7218

RECEIVED
NOV 12 1999
BIG CYPRESS NATIONAL PRESERVE

November 8, 1999

Mr. Wally Hibbard
Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141

Dear Mr. Hibbard:

We have lived in the Big Cypress Addition Lands for the past 20 years and our commitment to the preservation of this beautiful land is our foremost concern. We have many friends and acquaintances on both sides of this divisive and complicated issue, and over the years we have come to the conclusion that the one and only solution to the restoration and preservation of this primal landscape is limited and controlled access. We admit that we dearly loved to ride across the terrain on the big-wheeled buggies — just so long as you didn't look behind you at the deep and lasting ruts created while traversing a lovely prairie. This would later — when it dried up — provide an ideal seedbed for such invasive exotics as shinus and melaleuca. What is truly ominous is the degree of spread of these invasive monocultures in a relatively short period of time. Lygodium is already present in various locations in the Addition Lands and is particularly severe in cypress strands on the Seminole Reservation, which abuts the Preserve.

We therefore make the following comments regarding the Big Cypress Preserve Draft Recreational Off-Road Vehicle Management Plan Supplemental Environmental Impact Statement and we urge the adoption of the Action Alternative of the Draft ORV Management Plan with the following amendments:

- The plan must be comprehensive and include an analysis of past and present commercial and recreational ORV use.
- The proposed action must include specific management actions to avoid negative ORV impacts. If impacts cannot be avoided, they must be minimized to the maximum extent practicable — not merely reduced.
- Prohibit ORVs in sensitive wetlands and uplands, areas important to wildlife, or when conditions are unsuitable.

F246

- All ORVs must be restricted to a vastly reduced designated trail system to avoid and minimize impacts. The ORV trail design should protect resources and maximize monitoring and enforcement. High-density braided trail areas should be closed.
- Fully analyze the negative direct, indirect, and cumulative impacts of ORV use and of the alternatives, including fragmentation and edge effects of the estimated 29,799 miles of ORV trails.
- The plan must contain supporting data and evidence for the 2 psi ground pressure standard and demonstrate how it complies with the threshold levels for unacceptable resource impacts.
- The plan must include specific and comprehensive threshold criteria for opening, closing and reopening ORV trails.
- The plan must prohibit ORV use in the northern Addition Lands, which are vital habitat for the endangered Florida panther.
- The plan must contain specific and comprehensive criteria for implementation, funding, monitoring, research and education programs.

Charles R. Henry

Barbara R. Henry

509

F246 (cont.)

December 12, 1999

L. Jack Moller
610 NW 93 Ave
Pembroke Pines, FL
33024

Mr. Jerry Belson
Regional Director
Southeast Region
Atlanta Federal Center
1924 Building
100 Alabama St., S.W.
Atlanta, Georgia 30303

Dear Mr. Belson:

Is it the policy of the National Park Service to develop regulations that they know violate the equal justice act and act in a discriminatory manner? I speaking directly to the current ORV management plan of the Big Cypress National Preserve. This plan states that purpose for raising the ORV user fee is to allow only those who can afford it and are willing to go the extra mile to participate in ORV activities in the Big Cypress National Preserve. Thus many users will be eliminated.

As a retiree I do not accept Mr. Hibbard's response to me when I presented the idea that retirees are not being treated properly under the equal justice act. He stated; "one could go back to work." Sure I could but then why should I as I have worked hard, saved money, done well, and fought to stop the Big Cypress from being developed so why should the NPS leaders say I could go back to work. Further there are many over 62 who cannot go back to work. We should be able to enjoy the Big Cypress as we did with our fathers and grandfathers.

Of course we could have a sex change, race change and change our nationalities listed on our birth certificates all to meet NPS expectations and acceptable personal traits. The NPS could tell everyone to get a job and make mega bucks so they can enjoy the use of their land as permitted by the enabling act. I do not think these changes and ideas are right just as I do not accept the explanation of go back to work to purchase an ORV permit, a permit that is to charge an unnecessarily high price for punitive reasons.

I am eagerly looking forward to your response.

Sincerely,

L. Jack Moller

F249

510

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141

Dear Mr. Hibbard:

Please consider and enter into the public record the following comments regarding the Big Cypress National Preserve ORV Management Plan.

Cultural and Legislative Issues
Congress recognized the powerful cultural connection sportsmen have with the Big Cypress region and provided a clear mandate that traditional recreational use of the area was to be protected and enhanced. The proposed management actions are in violation of that mandate.

The Draft ORV Management fails to identify a scientific or biological need for the proposed actions and fabricates alleged adverse impacts to justify unnecessary restrictions designed to reduce traditional recreation.

Vehicle Specifications
1. I **strongly oppose** the proposal to impose a maximum airboat width restriction of 6.5 feet. Airboats up to 8.5 feet should be permitted.

2. I **strongly oppose** the proposal to limit horsepower on airboat engines. Horsepower alone does not determine noise levels, furthermore it is impossible to determine engine horsepower by external inspection.

3. I **support** continued evaluation of airboat technology for the purpose of reducing sound levels without affecting performance.

4. Proposed maximum ORV sound level of 60 decibels **must not** be applied to airboats and should be measured with ORV engines at idle speed.

5. "Stumpknocker" is an unfamiliar and vague term. Regulations **must not** prohibit bumpers and guards designed to protect engines, running gear, and other equipment from damage by accidental encounters with stumps, rocks and limbs.

6. I **strongly oppose** the proposal to limit vehicles to the arbitrary and unattainable maximum ground pressure of 2 psi. Vehicles **must** be permitted to apply at least the same ground pressure as a walking human, which is over 4 psi.

7. The proposed action would prohibit tire chains and undefined "bar grips". Tire chains with a cross-section diameter of link material not exceeding ½ inch are low impact and should be permitted. The term "bar grips" must not apply to the molded tread designs of rubber tires. The NPS should continue to evaluate new advancements in low impact technology.

8. Owners of ORVs currently registered should be grandfathered, i.e., **exempt** from the new specification requirements.

Stairsteps Unit
1. Planners must be made aware that primary airboat trails in this unit were made with bulldozers when the area was farmed prior to establishment of the preserve.

2. Development of hydrological-based criteria for temporary closures should be based upon documented need for the action and in consultation with the Florida Fish and Wildlife Conservation Commission (FWC) and representatives of the airboating community.

Bear Island
I **support** the continued use of a designated trail system in this unit provided necessary trail improvements are made.

Corn Dance Unit
1. I **oppose** the NPS proposal to prohibit access into the Corn Dance Unit from state lands on its eastern border. This proposal would result in *increased* ORV impacts to soil and vegetation in the Corn Dance Unit by requiring preserve visitors to travel several hours overland by swamp buggy to reach this popular destination instead of a short airboat ride through adjacent state land.

2. Designated entry points into the Corn Dance Unit from the Jetport property should be selected in consultation with the FWC and knowledgeable ORV users. They should be sufficient in number and appropriately located so as to avoid increased ORV impacts caused by unnecessary detours.

Florida National Scenic Trail
The hiking trail should be rerouted to avoid possible conflicts with ORV use. As the trail will have a ¼ mile ORV-free buffer, **consultation** with the FWC and representatives of the ORV and hiking community is necessary in order to select the optimal route and ORV-crossing sites.

Access and permitting
1. Access and parking facilities should be provided at the level identified in the General Management Plan.

2. Stabilized trailheads are unnecessary and expensive to maintain, however if the NPS desires them for aesthetic purposes they should be short in length so as not to spoil the backcountry experience in designated use areas. Proposed trailheads up to a mile in length **would be excessive** and would result in a vast area being **closed** to traditional access and enjoyment.

3. ORV users **must not** be required to enter and exit at the same access sites as to do so would eliminate the enjoyment of cross-country excursions.

4. The cost of ORV permits should be structured to cover administrative costs only, such as inspecting equipment, maintaining records, and issuing the permits. **ORV use in the preserve is a traditional activity, not a "Special Park Use"** subject to direct cost guidelines which would increase permit fees to as high as $200 per vehicle. **The proposed permit fee increase is discriminatory and is designed to reduced use by eliminating ORV access to low income families or multiple vehicle owners.**

Additional Comments:

Signed_____

P) Name: _____

R) Address: _____

I) City, State, Zip: _____

N) E-mail address: _____

T) Mr. Hibbard, please add my name to your mailing list for future ORV Management proposals.

F250

August 23, 1999

Mr. Wally Hibbard, Superintendent
Big Cypress National Preserve
HCR 110, Box 11
Ochopee, Florida
Wally_Hibbard@nps.gov or
BICY_Superintendent@NPS.GOV

Dear Mr. Hibbard:

Subject: Off Road Vehicle (ORV) management plan for the Big Cypress National Preserve.

Stair Step Unit:

1. Hydro based criteria for opening and closing. The NPS must work with the FFWCC and airboat users to make sure that this component is developed in an acceptable manner that does not prevent airboat use. In the real world it is not needed as when the water is gone the airboat cannot work properly thus activity is self-regulating. Additionally, the major airboat trails were made by property owners long before the NPS gained control of the land by the use of a bulldozer.
2. Bear Island:
   1. I support the NPS maintaining the current trail system and to continually evaluated for potential impacts on the Florida Panther. I support the trail system being improved so has to help keep ORV operators on the trails. This is acceptable to me. The NPS must continue to work with users groups to locate proper trail placement.
3. Turner River Unit:
   1. The National Scenic Hiking Trail will rerouted to avoid conflicts with ORV use. This has long been a goal of the ORV users as the hiking trail was built on an ORV trail.
   2. There will be a no ORV use zone of ¼ mile on each side of this trail read the Hiking trail plan from many years ago, with ORV crossing locations. I have no problem with this measure but the NPS must work with State of Florida's Fish and Wildlife Conservation Commission and knowledgeable local ORV users so as not to cause large areas of the Preserve to be closed.
   3. The ORV entrance locations will be reevaluated. I can support this but as in item 2 the NPS must work with these people to make sure the locations are proper.
   4. No ORV operation within a certain distance of any highway. One cannot enter the swamps at one location, run along the highway, and come out at another entrance location. There is no problem with this item as long as entry points are connected by backcountry trails.
   5. Trailheads will have stabilizing material placed on the ground for a distance, ¼ mile to a mile, from the highway and all ORV use must follow these Trails. There is no problem with this as long as the ORV users are not charged with the cost of developing and maintaining. These improvements are neither needed nor wanted by the ORV users but are wanted by the anti-ORV people. Thus the cost is not to be sent to the ORV users under the concept of the 'user pays." These trailheads have been in continual use since the 1930s.
4. Corn Dance Unit:
   1. No eastern access; this means the "jump-over" will be closed. This is not new, they wanted to do this in the GMP because the Rangers cannot control the access like they can at other access places on the road ways. This is not acceptable, as ORV users will have to use a 28-mile cypress trail as opposed to an airboat trail. Thus greater pressure will be placed on the cypress trail.
   2. Designated entry points into Corn Dance from the Jet-Port Unit. This is acceptable as long as the NPS again works with the FFWCC and ORV users to site these designated access sights.
   3. ATVs are to have 1.5 pounds per square inch on the ground with a 200-pound load used to compute the psi. ATVs should have the same psi ground contact values to use as the ORV and the 200 pound (man load) should be dropped.

The following ORV design criteria is being proposed by the National Park Service:

1. NO stump knockers; I do not support the removal of this vital equipment from ORVs using the area.
2. Pounds per square inches on the ground of 2 pounds per square inch. I cannot support this as a standard to be adopted by the NPS. The NPS must adopt a 4-psi standard as established by the formula above. The average adult applies 2.5-psi per foot thus while walking each foot applies 5-psi. The 4-psi ORV standard would apply fewer psi to the ground than a walking adult. Current ORVs are to be grand fathered as they are to the owner.
3. Any style tire tread is to be allowed. I can support this design criterion.
4. NO chains, NO bolt on cleats or steel. This does not pertain to track vehicles and I can support this part of the plan.
5. Airboats can have existing horsepower. This is a good idea.
6. Airboat prop noise will be continually evaluated for ways to reduce the noise and airboat mufflers will be continually evaluated for ways to reduce the noise. This is not a bad idea but must not be mandated in a manner that will cause financial hardship on these users.
7. I support Airboats having a maximum of 8.5 feet wide at the gunwale and should not be regulated to only 6.5 feet wide. The idea of an airboat is to build a hull that will slide across the grass, soil and water with as much floatation as possible. Thus it is better to not require boats to be narrower. Also the airboat trails do not allow excessively wide boat hulls.
8. The motor decibel value is not be applied to airboats and is to be measured only when the engine is at ideal speed.
9. I support the use of tire chains made with a chain of less than ½ inch diameter. Chain is to be allowed.
10. The term 'bar cleat' does not apply to the modeled tread that is on rubber tires and if so is supportable. If it applies to the modeled tire tread design then the term and idea is not supported.Owners will have 5 years to get their equipment in order. This also should be dropped to allow all existing ORVs to operate as designed and grandfathered to the owner. This equipment has been operating as build since the BCNP was created in 1974 and has done no harm to natural resources. New equipment should have the new rules apply to them. Loop Road, Deep Lake will see no change. Both of these units must have center ORV trails returned to them as they had before the NPS took control of the property. There are very few people who use these areas because ORVs have been banned. I do not support the closing of the eastern side of the Preserve to access. This will cause additional pressures on more than 28 miles of buggy trails going north of Tamiami Trail. It will also stop entry to the Preserve by those with a canoe, kayak or motorboat to hunt, fish, camp and sight see by using L-28 canal.

ORV permits will cost between $125 and $200 per ORV. This idea is promulgated because of the concept of 'user pays', which is favored by Congress and established in NPS Director's Order #53. The use of ORVs was initiated by the NPS during Congressional testimony thus the concept of Do #53 is not applicable. The use of ORVs was a preexisting activity before the NPS gained control of the land and has been in continual use since. The activity is a standard and traditional activity, which is allowed by the enabling acts thus this large fee is illegal and initiated by the DOI/NPS in 1974 and 1988. NO other user of the Preserve, at this time, pays any user fee. We have reasonable fees today, which cover the cost of the ORV permitting process

Please enter my letter into the Federal Register for the Off Road Vehicle General Management Plan of the Big Cypress National Preserve.

Sincerely,

Name:

Postal Address:

Email Address:

Additional Comments:

512

FRANKLIN B. ADAMS
761 15TH STREET N.W.
NAPLES, FL. 34120-1913

OCTOBER 10, 1999

MR. WALLACE A. HIBBARD, SUPERINTENDENT
BIG CYPRESS NATIONAL PRESERVE
HCR 61, BOX 110
OCHOPEE, FL. 34141-9710

Dear Superintendent Hibbard:

Thank you for the opportunity to offer my comments and suggestions on the Draft Recreational Off-Road Vehicle Management Plan/ Supplemental Environmental Impact Statement for Big Cypress National Preserve.

Hopefully the comments and feed-back from the draft will serve to begin resolution of the conflicting questions surrounding the use of ORV;S in Big Cypress.The final product I hope, will lead to a settlement of the litigation and put the ORV issue behind us. There are more important issues to be concerned with in my opinion.

I will begin with some general observations and then list specific responses to the Draft by page number.

I have been enjoying the Big Cypress for over 50 years as a South Florida native. I knew Big Cypress before the construction of I-75, (Alligator Alley) the so-called water Conservation Areas, L-28 levees, Turner River Road, Birdon, Wagonwheel, Burns and 11 Mile Roads. The Loop Road and SR-29 canal had been constructed before my time. My reason for mentioning this is that the Tamiami Trail and all these man-made structures and canals have had a far greater negative impact past and present on Big Cypress than all other impacts including ORV'S. I-75 and the Tamiami Trail are still effectively dams across the Glades and Big Cypress even with all their improvements. Their impacts are of a magnitude that makes ORV use a very small part of the impacts to this system. In spite of the continued use of ORV'S , the water quality and the wildlife surpass that of Everglades National Park. It has been so for a long-time.

It is important to remember that the State of Florida gave the federal government 40 million dollars of CARL funds to use towards the purchase of Big Cypress. This was done with the support of the hunting and ORV community. The committment of Floridians goes deep and all we ask for our efforts is to be treated fairly and honestly so that we may continue to enjoy Big Cypress.

100% Post-consumer waste

Summary- P.111. 4th paragraph, change "park" to preserve.

P. 1V- I fully support and volunteer to sssist in education and development of an ORV manual.

P. V- Increased enforcement administered with common-sense and fairness would not inconvience responsible ORV users. In fact it would be welcomed.

P. 10- Question that West Indian Manatee would be adversely affected by ORV use in anyway. Documentation?

P. 10- "Other visitors." I agree that noise and visual intrusion resulting from ORV use may? adversely affect other preserve visitors in a campground, or near Tamiami Trail, but I do not think this is a significant problem, especially, in the back country.

P. 16- Proposed action: "The proposed action would reduce impacts on the preserve by: protecting specific sensitive areas by establishing areas where ORV use would not be allowed."

Comment: Request examples of such known areas. What criteria would N.P.S. use ?

P. 16- " Vehicle Permit System and Operating Standards."

Comment: I feel that the present fee structure is adequate. ORV use in the preserve is a congressionally authorized use. As such it is my opinion that "Special Park Use Guidelines, NPS-53" do not apply to orv permits. Orv owners did not request that their activities become subject to further regulation or additional expenditures of N.P.S. funds. (Also we are talking abount a preserve-not a park.) The Biodiversity lawsuit "settlement" has resulted in the N.P.S. making a sincere effort to develop new ways of dealing with orv use and impacts. If orv users had requested trail improvements, camp grounds, or staging areas to be constructed , then NPS-53 might have validity and higher permit fees might be justified. Raising the permit fee to 120.00 to 200.00 is excessive and would be a hardship on those on a low or fixed income. Suggest that other sources of funding be explored. Hunters and orv users have always paid their way but in this case raising the permit fee is unjustified.

P.19- "Other orv equipment."
Comment: Very few buggies have a braking system. Its just not necessary as low geared as they are. In addition brakes increase the weight of the buggy and cannot be maintained in the environment in which they are used.

100% Post-consumer waste

F252

P. 20- "Access Points." Strongly support identification of ORV crossings on US 41 for safety reasons. Reduce speed, signage and road striping. A very positive recommendation.

P. 55-56- "Impacts on water resources, surface water flows." Quote, " although impacts to surface water flows are localized (Duever et al. 1986) the cumulative impacts may have permanent, long-term effects on fish and wildlife populations in the Preserve."

Comment: While there "may" be localized negative impacts from orv trails, ruts or airboat trails, one must look at certain positive benefits created by trails and ruts.

While not naturally occurring features these areas none the less do provide some benefits to certain species of fish and and wildlife. Ruts in buggy trails since they are of lower elevation than the surrounding areas serve as concentration points for many aquatic organisms when water levels recede in the winter or spring dry seasons. Fish , crayfish, frogs and snakes prey on those food species that are concentrated in the buggy trails deeper ruts. This is in a way analagous to the concentrations that seasonally occur in the centers of cypress heads(domes) and shallow ephemeral ponds. These concentrations serve as a biological "soup" for wading birds, small mammals and reptiles. The same concentrations can be observed in the airboat trails in the Stairstep area of the Preserv south of US-41.

Orv trails, particularly on pine islands are habitually used as travel corridors by the Florida Panther and its primary prey species, white-tailed deer and hogs. The openess of the trail allows them to travel with less expenditure of energy and to most likely detect predators and prey more easily. Certain panthers regularly use buggy trails as evidenced by their tracks on a regular basis. Deer can often be approached very closely on a quiet swamp buggy, whereas a person on foot would be more likely to spook them at a greater distance. Preserve mammals are use to vehicular motorized sounds and normally do not seem to associate them with danger. Based on my personal experience,orv trails do provide some positive benefits not only to people but also the critters.

P. 57- "Cumulative impacts, water quality."

Comments: There are several external threats to the water quality of the Preserve. Pesticides, herbicides and fertilizers to name the most obvious ones. We strongly support a preserve wide network of water quality monitoring stations. A full-time hydrologist position must continue to be a preserve priority.

513

100% Post-consumer waste

P. 62-63- "Old growth pinelands etc."

Comment: N.P.S. needs to refine their "prescribed fire methods. Prescribed burns needs to be done when ground moisture levels and winds are conducive to "controlled burning." There are pine islands north of the Trail where so-called controlled burns have actually killed fairly mature pine stands. Also I have witnessed in the past couple of years, willow heads that have been in place for a long-time that were literally burnt out of the ground. Burning needs to be done more frequently and more acreage needs to be burned. Otherwise fuel loads are excessive and hot crown fires can occur. Burning of course when properly done is of great benefit to both flora and fauna.

P.66-67- "Florida Panther, Impacts on Protected Species."

Comments: Regarding panthers and prey. & ORV'S.

I have attached a copy of personal correspondence that I received from David Maehr in August 1995 regarding the Florida Panther. Mr. Maehr was the principal panther researcher for the Florida Game & Freshwater Fish Commission for over 8 years. I had requested that Mr. Maehr write down his thoughts on any possible adverse impacts that orv's or hunters might have on the panther. This later was used as a basis for his affadavit in the Biodiversity lawsuit, Mr. Maehr's opinion was orv's and hunters were not a significant concern in preserving the Florida Panther.

P. 72- "West Indian Manatee" "Analysis of proposed action impacts." "In the preserve, manatees only occur in the estuarine portions of Zone 1 of the Stairstepw unit; which is designated as critical habitat. Under the proposed action Zone 1 would remain closed to recreational airboating.

Comments: Recreational airboating poses no threat to the manatee. In fact I have never seen a manatee on the Stairstep airboat trail. It is to shallow for a manatee to move about. For a number of years I reported manatee sightings to the Florida Department of Natural Resourses (now DEP.) in the Turner River area. I have never seen a manatee above McKinney Mound on the Turner River. Also no sightings in the New River. Where specifically is there a problem with airboats and manatees

The manatee should not be used as a reason to keep the Ochopee Prairie or the Stairstep Airboat Trail closed to recreational airboats. This area is essentially the only area available to those living on the western side of the Preserve for airboat access. Commercial airboats should no be permitted. Recreational airboating during periods of adequate water levels should be permitted. What justification is there for this continued closure?

100% Post-consumer waste

F252 (cont.)

514

P. 73- "Impacts on white-Tailed deer & hogs."

"Analysis of No-Action Impacts."
"Preserve staff are of the opinion that increased prescribed burns would improve the habitat for the feral hog and deer populations far more than restricting orv use to designated trails."

Comment: I fully support an increase in burning throughout the Preserve as originally outlined in the "fire management plan". Regular burning will not only benefit deer, hogs and panthers it will also serve to maintain native vegetative communities that are fire dependent. It would also help to increase the population of the Osceola wild turkey and the Bob-White Quail which were once abundant in the Turner River unit of Big Cypress.

P. 81- "Organizations."

Comment: #14 on list should read Florida Wildlife Federation.
#22 should read National Wildlife Federation.

P. 92-#6. "Reduce or prohibit traffic in sensitive areas."

Comment: Have these sensitive areas been identified and mapped? Has a preserve wide effort been completed to determine which areas are considered sensitive and which areas are not? What criteria will be used to determine degree of sensitivity?

P. 93- "Reduce orv use in general."

12.2- "establish Quotas."

Comments: Quotas already exist for the number of orv's allowed and numbers of hunters permitted in the Preserve during hunting season. It is important to remember that the permitted number of orv's are never in use in the Preserve at any one time. Opening (quota) of general gun season is the time of heaviest use and even then many orv's are not used in the Preserve for various reasons. Had to work, illness, major repairs required, family emergencies etc. I mention this because uninformed people comment that since there are over 2,000 orv's permitted it must be incredibly damaging with all of these vehicles running around at one time.

12.3- "MAKE ACCESS MORE DIFFICULT."

Comment: Its already difficult enough. Access points are already greatly reduced when compared to the many access points that existed when the Preserve was established 25 years ago.

100% Post-consumer waste

12.4- "Limit length of stay."

Comment: Why? This is not a problem. Very few people stay for any extended length of time, even in the exempt camps. For many hunting season is their once a year vacation. They plan their vacation to coincide with the opening of hunting season. Obviously, not every one that goes to the woods is a hunter. I personally know several individuals who rarely hunt. They just enjoy being in the woods.

12.5- "Require certain skills."

Comment: If you mean mandatory attendance at a class on responsible ORV operation and ethical outdoor behavior then I fully support this. Classes would have to be scheduled on Saturdays most likely.

12.6- "Regulate area of use to reduce conflicts."

Comment: What are the conflicts and where do they occur? I have never had any conflict with any other responsible user of the Preserve.

P. 94- Tactic 1.2-"Promote adoption of low impact orv use practices."

Comment: Fully support.

P.95- Tactic 1.4- "Require attendance at an orv low impact workshop."

Comment: Strongly support.

P.96- Tactic 2.1"Prohibitparticularly damaging practices."

Comment: Support-but "high costs" need to be defined. Are we talking specifically monetary costs?

P. 96- Tactic 2.2. "Increase enforcement efforts."

Comment: Support. If N.P S. does not have the enforcement personnel to actively patrol the backcountry on a regular basis then at least be prepared to respond to notification that someone is breaking the law. Poaching, operating an orv ina purposely damaging manner etc. Flying over in a helicopter has its limitations.

P. 96- Tactic 2.3 "Prohibit practices that cause visitor conflict."

Comment: Again, is there a present problem with visitor coflicts? I am not aware of any. Certainly we want to avoid creating any conflicts in the future.

100% Post-consumer waste

F252 (cont.)

P.97- Tactic 3.1 "Encourage visitors to avoid existing trails in remote areas."

Comment: Sounds good in theory but may not be practical. In remote areas that receive light use there are frequently fewer available to travel. Many orv trail locations were established due to physical limitations to travel. Examples are trails crossing through cypress strands. Trails around deep low wetland areas. Trails on higher elevations due to not being able to traverse prairies during the wet season.

P. 98- Tactic 4.2. "Prevent or reduce resource damage by encouraging the repeated use of a common but limited set of orv trails."

Comment: If orv traffic is required to use a limited set of trails there will be heavier increased impact on these trails. Again, there may be areas where this is frasible. A common-sense approach recognizing that attempts to maintain these trails would not only be expensive it could actually cause new or increased impacts from the types of equipment that would be required to do the maintaince work.

P. 98- Tactic 4.3 "Concentrate use by designation access points."

Comment: If you provide us with a specific proposal as to location then we could respond as to whether or not this would permit access to exempt properties and camps. Seems dificult to manage and enforce.

P. 99- Tactic 4.4 "Select and mark resistant trails."

Comment: Willing to give it a try. Important to remember that these efforts are going to be much more restrictive than previous requiements. Implementation will require that NPS. personnel also be educated as to how requirements will be enforced. This process if implemented will need to phased in gradually with common sense enforcement efforts.

P. 99- Tactic 4.5 " Require use of designated trails in selected areas."

Comment: Would be willing to to explore this idea. The problem is that most trails of any length contain various degrees of resistant areas i.e. pine islands, cap rock areas, and non-resistent areas such as short stretches of marl prairie, muck substrate etc. May not be practical due to size of preserve and magnitude of maintaince.

P. 101-Tactic 5.2 " Make access to problem areas more difficult."

Comment: To quote the draft, if this policy is considered, then, "the policy must be communicated with supporting documentation of its rationale."

100% Post-consumer waste

P. 101- Tactic 5.3. "Establish quotas for use in problem areas."

Comment: Inholder-exempt property owners should not be considered to fall under the quotas of discouragement. Its going to be a real challenge to figure this one out. Documentation and data probably dont exist. Probably not a viable idea.

P. 102- Tactic 5.4 "Prohibit traffic in problem areas."

Comment: Permanent prohibitions should only be considered in extremely rare instances. This would be to protect some endangered flora for example. Supporting documentation would be required. There already exists an example. The closure of the Ochopee Praire/Stairstep Airboat Trail access. The area was justifibly closed to airboat use as a result of overuse by commercial airboats. The resource impacts were not a result of recreational airboaters. However, the area remains closed to recreational airboaters even though the area has recovered its resource values. The feeling seems to be that if an area is temporairly closed for study or restoration that in effect it becomes a defacto permanent closure.

P. 104- Tactic 7.1 "Add fill material in problem areas."

Comment: Questionable. If native limerock material is used it must be placed and compacted during the dry season. When wet season comes it may eventually washout if not culverted. This would cause some localized turbidity of a short-term. Suggest that this be done in an area and monitored to see how effective this expensive idea is is. Do not want to create a situation where street legals would be able to move into more remote areas of the preserve where they do not presently go.

P. 106- Tactic 8.2 "Restore Vegetation."

Comment: Let natural re-vegetation process occur. Continue to monitor and remove exotics, schinus and melaleucca.

P. 107- Tactic 9.1 "Specify orv weights, psi/displacement, clearance, engine size or tires."

comments: This obviously is a difficult issue to gain agreement on. I do not have a recommendation on psi. Weight and tires are more important issues than clearance and engine size,

Tactic 9.3 "Reduce orv noise."

Comment: All wheeled vehicles are presently required to have a functional muffler. All mufflers should have baffles. No straight through pipes. Suggest active enforcement of this requirement.

On airboats those with automobile engines can be muffled down to be very quite. The prop noise is presently not able to be satisfactorily controlled.

100%-Post-consumer waste

F252 (cont.)

516

P. 108- Tactic 10.1 "Discourage use of particularly damaging types of orv's."

Comment: There are a few orv's that due to their extreme size and weight are in facr particularly damaging is some areas. The primary reason for their causing deep rutting in marl areas is the way they are often operated. Some of these heavy buggies are used by bush-wackers to bust palmetto thickets on pine islands in order to jump deer off their beds. It is an unethical, illegal way to "hunt". These individuals need to be caught in the act and busted. They make it difficult for the ethical hunter.

P. 109- Tactic 10.3 " Restrict use of particular orv types in sensitive or problem areas."

Comment: This will require a great deal of time and research to develop sound criteria in order to decide what is acceptable and what is not.

P. 109- Tactic 11.1 "Discourage use during times of resource susceptibility."

Comment: Shifting the timing of hunting season is not practical. Hunting season begins near the end of the peak wet season and continues into the beginning of the winter dry season. This is an issue that must be discussed with the Florida Fish & Wildlfe Conservation Commission. There are biological reasons for setting hunting season dates.

P. 110- Tactic 11.3 "Regulate timing of use to reduce crowding and conflict."

Comments: In my over 50 years of coming to the Big Cypress I have never experienced "crowding and conflict", it doesnt exist now. The vast majority of orv users and non-orv users time their visits to coincide with the opening of the fall hunting season. Many plan their annual vacation at this time of year. The present hunting season schedule is probably the proper time to have this more intensive use. The weather is cooling off, the rains are diminishing and the Thanksgiving and Christmas holidays are coming. Its the best of times to bring the family and friends to the woods.

P. 110- Tactic 12.1 "Increase orv use fees."

Comment: This would be discriminatory and obviously a blatant attempt to discourage orv users in BICY. Many cannot afford high fees in order to enjoy the Big Cypress. This is not the way to improve or regulated orv use. The present $35.00 is sufficient.

P. 111- Tactic 12.2 "Establish quotas."

Comment: This idea seems to be a difficult one in which to develop a realistic and fair selection or numerical basis. Orv use in BICY varies from month to month and year to year. Weather and water levels dictate to some ectent the amount of orv use. As mentioned previously, hunting season is the period of greatest use.

100% Post-consumer waste

P. 111- Tactic 12.3 "Make access more difficult."

Comment: Access sites have already been greatly reduced in the last 25 years. Many former access sites have been closed off by guard rails and deterioration of former rough bridges that crossed the US-41 canal. Many former buggy trails have grown over due to not being used by former camp owners.

If you want to reduce visual aesthetic impacts at the road (US-41) in certain areas it may be possible to funnel orv's off the road then allowing them to disperse to other trails once they are away from the general public's view. My experience has been though that the great majority of visitors are very curious about orv and actually enjoy seeing them up close.

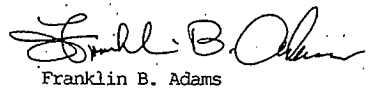
Tactic 12.4 " Limit length of stay."

Comment: This would not be effective. It could cause more damage due to people coming and going more frequently. Once we reach camp where we may stay 4-5 days, The buggy usually sets in camp. We walk out from camp on a daily basis. The buggy is normally used once we are in camp to bring game back to camp or to reach areas that we may wish to hunt if they are not within walking distance. Our primary use of the buggy is to get to and from camp and when it is not hunting season to visit favorite areas of the preserve.

Tactic 12.6 "Regulate area of use to reduce conflicts."

Comment: I am not aware of any "social conflict problems" with other user groups that has occurred. If the problem does not exist-lets not make it one.

Conclusion: If you wish to discuss any of these issues, please do not hesitate to contact me. My telephone number is (941) 455-1567. I know that this is a difficult and time consuming effort and I am willing to assist if I can.



Franklin B. Adams

100% Post-consumer waste

F252 (cont.)

AFFADAVIT OF FRANKLIN B. ADAMS

Mr Franklin Adams
701 15th St NW
Naples, FL 34120

I am a native of Miami, Florida. I first visited the Big Cypress Swamp in 1945 with my father G.B. Adams a registered land surveyor who surveyed in the Big Cypress and Everglades National Park. I also accompanied my father and friends on duck hunting trips to West Lake prior to the establishment of Everglades National Park.

My family and friends have spent our vacations for many years in the Big Cypress camping and hunting during the fall, winter and spring months. During the summer we visit the Big Cypress to experience the solitude that the wet season brings to the area.

Beginning in 1955 I built my first swamp buggy in my parents backyard at night after school and began to go to the woods on my own at every opportunity. My greatest enjoyment was exploring the Big Cypress by walking, riding and camping in those years.

The earliest trails in the Big Cypress began with ox carts and then logging for pine and cypress from the 1930's up until around 1954 with most of the logging in the 1940's. Subsequently, oil seismic and exploration activities created additional vegetative and trail impacts to the Big Cypress region. When swamp buggies began to use the Big Cypress they naturally used the existing logging roads to access the interior. New trails were created as hunters expanded their use of the areas while camping and hunting.

I remember the Big Cypress as being much wetter with a longer hydro-period in the late 1940's and 1950's. In some years the water was to high to operate most buggies during the summer wet season. Most of the roads that now intersect the Big Cypress region were not in existence prior to the 1960's. In particular Alligator Alley had not severed the Big Cypress and the so-called Conservation Areas had not been built. Water quality was much better than it is now in my opinion.

During the late 1950's and up until the early 1970's there was more intensive use of the Big Cypress on a year around basis than exists today. Particularly during the opening weeks of the fall hunting season when there were no quotas on hunters or limits on ORV's as there exists today. The actual on the ground impacts of swamp buggies was much heavier prior to the establishment of the Big Cypress National Preserve in 1974. Prior to 1974 the entire area was open to swamp buggie with no restrictions as to area or operation. Hunting activity was much heavier, especially around Monroe Station and in the stairsteps areas. There were many more trails in use than exists today, Many of the buggy trails that I once used are now overgrown and no longer in use. Access to several long time trails from the Tamiami Trail was severed some years ago when guard rails were installed.

100% Post-consumer waste

During the 1950's wood-cleated track vehicles (Olivers) were used in the New River marsh during the dry season . This needle grass marsh is the transitional area where the Big Cypress and Everglades National Park boundaries meld. The cleated vehicles did extensive damage to this particular area in a relatively short time. There were ruts that were probably three feet deep and four feet in width. Today you could not determine where these impacts occurred due to the redistribution of the soils by over thirty years of wet season restoration by nature. Once the heavy tracked rigs stopped using this area and people went to airboats and small light full-tracks, the impact was substantially less. When the wet season rains return each year there is somewhat of a restorative season in the Big Cypress.

Today there are a total of 2500 Orv permits available for airboats, swamp buggies and atvs in Big Cypress National Preserve.(Half-tracks and full tracks have essentially been banned from the area.) While 2500 ORV'S may sound like a large number to some persons, it is very important to remember that only a small percentage of these vehicles are being used at any one time in Big Cypress. Obviously, the largest percentage of use occurs at the opening week of general gun season each year in November. The rest of the year and particularly in the wet summer months ORV use is limited throughout Big Cypress.

While I was a founding member of the Florida Trail Association and walked many areas of the Big Cypress, I no longer have the time or inclination to do so. To spend any length of time in the back country it is necessary to use a swamp buggy in order to transport camping equipment, groceries and ice in what is essentially rugged terrain. State and federal authorities and researchers all use either airboats or swamp buggies in their work in Big Cypress. These orvs are used for patrol, fire fighting, prescribed burning and search and rescue.

Today ORV use and hunting have decreased substantially due to the management regulations put in place by the National Park Service in consultation with state and other federal agencies. Impacts have been reduced and the Deep Lake and Loop Road units have been totally closed to all vehicles.

Based on my years of experience in the area it is my personal opinion that the visual and physical impacts caused by swamp buggies in the Big Cypress are esthetically unpleasing. But, the impacts are not of a substantial or long term impact to the hydrology, wildlife or wetland vegetation of the area. In fact the rutted trails can have what appears to be a positive affect on the wildlife. For example, as the water levels drop during a normal winter the airboat and buggy trails tend to concentrate aquatic organisms in the areas of lower elevation. Fish, frogs, and crayfish are easily fed on by wading birds, snakes, otters and racoons in the trails. Mammals in Big Cypress travel the buggy trails since it provides easier walking and we frequently see fresh Florida Panther tracks in the buggy trail that passes through the area we camp in.

100% Post-consumer waste

F252 (cont.)

During the late spring and summer wet season water levels rise and this has a rejuvenating effect on the vegetation and soils of the area. Obviously, the impacts do not disappear in just one wet season but the higher water levels coupled with less orv use in the summer do have a mitigating effect on the damage caused during the hunting season. The impacts are very localized and do not in my opinion jeopardize the overall biological integrity of the region.

The Big Cypress and its preservation mean a great deal to me personally. Over the years I have dedicated a major portion of my time to being a spokesman for the protection and restoration of the Big Cypress and the Everglades. I have attended meetings and public hearings ranging from Tallahassee to Washington, D.C. to lobby for the preservation of the Big Cypress. I have done this on my own time and at my own expense. I have served on a number of boards, committees and advisory groups both private and governmental dealing with conservation of our natural environment and and in particular the Big Cypress-Everglades ecosystems.

Some of the past positions held were Collier County Chairman of the Friends of the Everglades, member of the Coalition to Restore the Everglades, Executive Director of the Environmental Confederation of Southwest Florida, Regional Govenor of the Izaak Walton League of America a national position, and conservation representative on the Florida Speaker of the House's state Water Task Force. I am presently serving as the Conservation representative on the Big Cypress Swamp Advisory Committee for the state of Florida. I am the President of the Cypress Chapter of the Izaak Walton League of America and Chairman of the Florida Wildlife Federation. I am considered an expert on the cultural and natural history of the Big Cypress.

It is my intention to continue to enjoy the beauty and solitude of the Big Cypress National Preserve and to share it with my grandson, family and friends. In order to do so it will be necessary to use my swamp buggy to reach the interior areas that we enjoy so much. Some of those we have taken into the Big Cypress are elderly and children and it would be impossible for them to experience and enjoy the area without off the road transportation. In conclusion I have found that almost without exception that those who have the opportunity to ride a swamp buggy or airboat into the back country for the first time return with a new understanding and appreciation for the difficulty of access without these forms of transportation.

SIGNED

STATE OF FLORIDA
COUNTY OF COLLIER
SWORN TO AND SUBSCRIBED BEFORE ME THIS 2ND DAY OF JUNE 1995.

ANDREA L THOMSON
FLORIDA NOTARY
PERSONALLY KNOWN

ANDREA L. THOMSON
MY COMMISSION # CC266401 EXPIRES
June 10, 1998
BONDED THRU TROY FAIN INSURANCE INC.

10% post consumer waste

Franklin.

After reading through the lawsuit I put the following together when I should have been writing my dissertation. I may want to add a little bit to it, but thought I'd get you to look at it first. I'll be in the office most of the day if you want to call me 645-2404. Dave

There is absolutely no published evidence that off-road vehicles (ORV's) disturb Florida panthers in the Big Cypress National Preserve (BCNP) or elsewhere that I am aware of To target the panther as a natural resource that has suffered from the use of this equipment contradicts available information

First, Florida panthers exhibit an abundance gradient from northwest to southeast in south Florida. Higher reproduction, better physical condition, and stable demographics are characteristics of panthers using private ranchlands in Collier and Hendry counties, the Florida Panther National Wildlife Refuge, the BCNP addition lands, and the Bear Island Unit of the BCNP. While these areas exhibit a variety of land uses, they are all similar in supporting abundant, productive upland forest, healthy prey populations (white-tailed deer and wild hogs), and ORV use. The landscapes of eastern BCNP and Everglades National Park (ENP), while presumed by many to be important panther habitat, are likely unimportant to the future of this endangered subspecies. As the Plaintiff's Motion for Partial Summary Judgment observed, virtually all of BCNP is covered by [illegible] Panthers prefer uplands where their food, cover, and reproductive requirements can be consistently met. That ENP and BCNP have not been more important to panthers is primarily the result of a predominance of low productivity soils, sparse forested cover, inundated landscapes, and low prey densities. Even a complete moratorium on ORV use in BCNP would not change this pattern

It is instructive that the only local panther population in Florida to have experienced extinction during the last decade was in ENP where hunting and ORV use have been banned for a half century. Eastern BCNP has supported a very sparse panther population in the face of moderate to light hunting and ORV use. In contrast, Bear Island annually sustains the highest ORV and hunter density in BCNP and yet has exhibited more panther use and reproduction than any other unit of the preserve This is not to say that there is a cause and effect relationship between high ORV use and panther abundance, but merely points out that the reasons for panther population distribution and performance are more likely the result of other factors unrelated to ORV's or hunting

For several years, the NPS has enforced a system of designated trails in Bear Island that appear compatible with wildlife. An example of this was exhibited by an adult female panther during 1993. Number 48 denned in late October and gave birth to her first litter (2 females, 1 male) in a saw palmetto thicket near a heavily used ORV trail in north central Bear Island. After her one-week-old kittens were handled by researchers, #48 moved her litter across the designated trail to another palmetto thicket equidistant from the same trail but on its north side. For the next two months, during the peak of the general gun season, #48 maintained a normal pattern of movements and den attendance despite heavy ORV traffic within 50 yards of her den, the discharge of firearms, and the presence of hunters on foot throughout the area surrounding her den and within her hunting grounds. In addition,

F252 (cont.)

toward the end of the denning period, a prescribed fire was inexplicably set by the National Park Service (NPS) that burned to the edge of the palmetto thicket containing #48's den. With the exception of entering her original den and handling her kittens, none of these activities appeared to alter #48's behavior (it is my understanding that the NPS monitored vehicle traffic on the designated trail, so it is possible that these data may still exist, and may be a useful yardstick for documenting quantitatively the level of ORV use that this panther tolerated). The key to this apparent compatibility seems to be the fact that hunters are active primarily during the day, while panthers are primarily active between sunset and sunrise. Further, the designated trail system limited ORV traffic to predictable pathways and prevented random, unpredictable movements of swamp buggies and other ORVs. Thus, just as wading birds, waterfowl, and other wildlife that use roadside waterways (canals, drainage ditches, etc.) become accustomed to heavy automobile traffic such as is found along US 41, CR 951, and SR 29, panthers appear to adjust to human activities when a repeating pattern exists.

The future of the panther in Florida depends on the management of large, contiguous forests, not on elevating perceived symptoms of problems that are no more than distractions to panther recovery. Unfortunately, due to the natural patterns of soils, primary productivity, and hydrology of all NPS lands in south Florida, it is unlikely that the value of this predominantly wetland landscape can be improved for panther. At best, this vast area can remain connected to a larger system of public and private lands that supports the bulk of the panther population and produces most of its reproduction. Only drastic drainage, fertilizing, and revegetation campaigns could convert the [illegible] BCNP and ENP to better panther habitat. But in these more enlightened times of "ecosystem management", such actions would be contrary to more important issues related to hydrological restoration, pollution control, exotic plant control, esthetics, and the management of many plant and animal species dependent upon wetlands. Further, the continual targeting of sportspersons as a measurable negative influence on panthers serves only to alienate a segment of the public that is an important ally in panther recovery.

My opinions on the relationships between ORVs and panthers stem from over 8 years of experience studying this animal and supervising field research for the State of Florida (1985-1994). During this time I authored or coauthored many refereed journal papers that provide the bulk of the written, empirically-based information on this subspecies. I have appended my curriculum vita which contains a list of publications that detail panther data and their interpretation relative to habitat use, activity patterns, reproduction, mortality, distribution, food habits, and management issues.

F252 (cont.)

Dear Superintendent Hubbard June 2, 2000

We believe the draft Off Road Vehicle (ORV) plan does not adequately balance resource protection with recreation. Please implement designated trails and limited areas for the variety of park users.

Park vegetation has not recovered from past recreational users.

Please establish controlled access for all motorized vehicles.

Thank you.

Sincerely,

Mr. & Mrs. J. L. Denison

F253

520

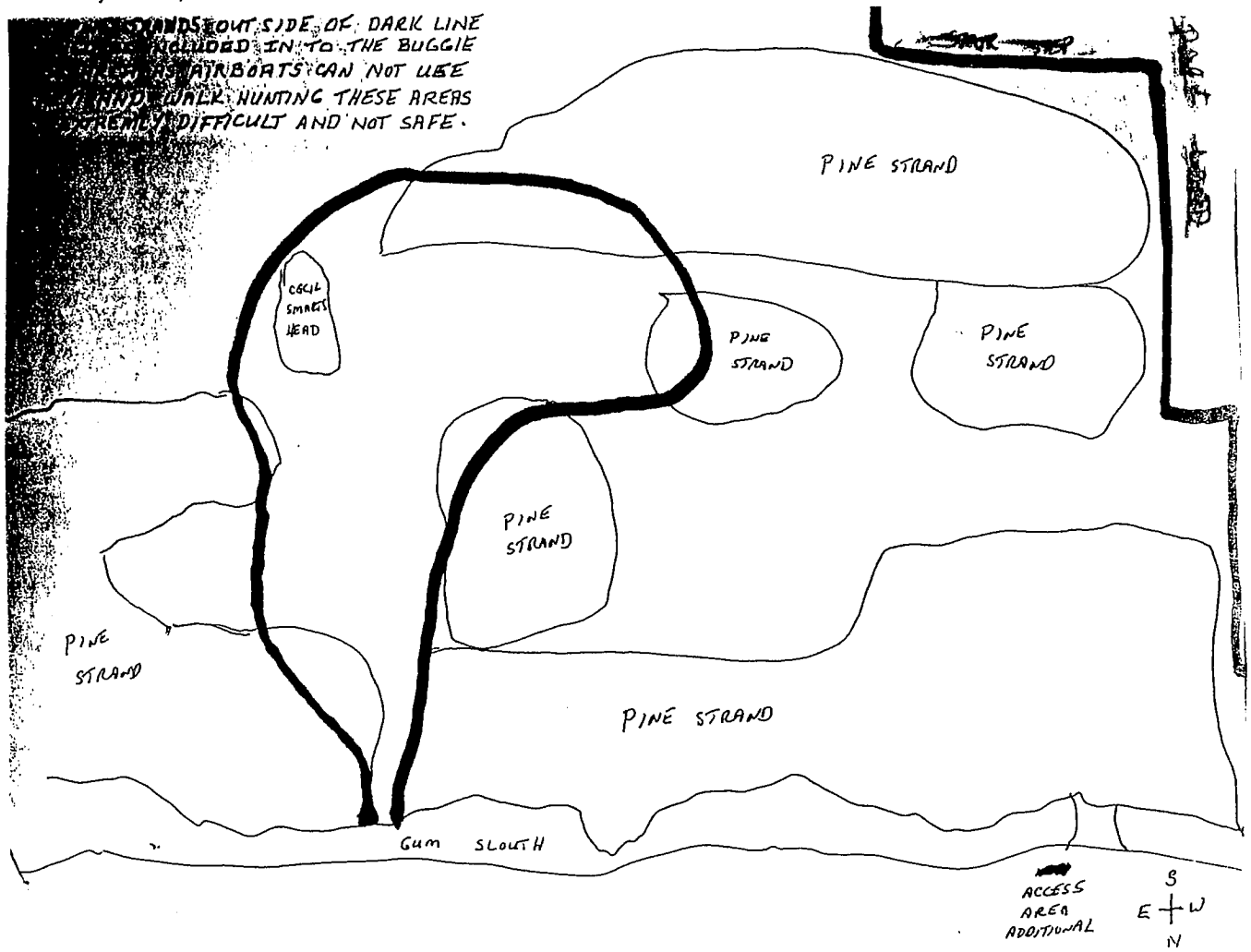
Mr. Hibbard,

In addition to this form letter I wish to add a couple of matters that we have already discussed on the phone and in writing. The first issue is the ORV (buggy) use south of gum slough. The area that was marked off for buggie use should have included the pine strands to the west and east of the area now marked for buggies. This would reduce the impact that is now being done by confining vehicles to a very small area. The areas in question were used by long time camp owners and are still being used by most as the park service does not have the resourses to monitor the area and enforce its regulations. This is not done by all but is being done by some and will not stop even if the area south of gum slouth were closed completely, as this was the answer I received from one of your park rangers when he was confronted at the oasis. I have attached a map of the area now set aside and also the area that should be added.

The next issue is camping off road. When an area is found to set up tents there is no reason that the camp area need be removed between seasons. We would suggest to you that these areas be left up from the begaining of hunting season and removed at the end each year if the tent owner so desires.

Please consider these issues as they may not be important to the park service but they are to me, and I am one of the people that the park was set aside for.

David A. Kent
5340 SW 98th Court
Miami, Florida 33165



F254

C. Robin Youse
19360 S.W. 128 Ct.
Miami, FL 33177

November 1, 1999

National Park Service
Big Cypress National Preserve
HCR 61 Box 110
Ochopee, FL 34141

To whom it may concern:

Thank you for giving me an opportunity to express my opinion. I am a native Floridian who is raising a family of three children in South Florida.

I have read the Impact Statement regarding the Big Cypress, and I have the following questions and concerns:

1. In regards to the 20% of increase of receipts--will all users of the Big Cypress equally be responsible for this increase, including R.V. users?

2. On Page 8--It was stipulated that the National Park Services involve the public. Who from the O.R.V. users did you contact to help create this plan?

3. On Page 10--Limiting O.R.V. use in some areas may enhance the hunting experience for those who prefer to walk but they are not the majority of the hunters and you are looking for 80% satisfied visitors.

4. On Page 10--You say noise and visual intrusions resulting from O.R.V. use may adversely affect other preserve visitors? Who?

5. Preliminary cost of permits of $120 - $200 per year. Do costs go back down? This cost is too high.

6. Designated access points would be visually intrusive and restrict water flow.

With the onset of the C-111 project, I would suggest no change to O.R.V. practices for two years so all impacts of the project can be evaluated on their own.

Cont'd...

I would also suggest that N.P.S. work with all registered O.R.V. users to voluntarily use designated trails and form a committee to develop a more user friendly plan for all Big Cypress visitors.

I will finish with this. As a parent, it is my responsibility to teach my children about their world. One of the ways I do this is through nature. How important all animals and their environments are. We must protect and save all of them. Nature allows me quality time with them--it teaches them camping, hunting, fishing and life.

Sincerely,

Robin Youse

RY:ml

522

[redacted]eland
I support the continued use of a designated trail system in this unit provided necessary trail improvements are made.

Corn Dance Unit
1. I oppose the NPS proposal to prohibit access into the Corn Dance Unit from state lands on its eastern border. This proposal would result in *increased* ORV impacts to soil and vegetation in the Corn Dance Unit by requiring preserve visitors to travel several hours overland by swamp buggy to reach this popular destination instead of a short airboat ride through adjacent state land.

2. Designated entry points into the Corn Dance Unit from the Jetport property should be selected in consultation with the FWC and knowledgeable ORV users. They should be sufficient in number and appropriately located so as to avoid increased ORV impacts caused by unnecessary detours.

Florida National Scenic Trail
The hiking trail should be rerouted to avoid possible conflicts with ORV use. As the trail will have a ¼ mile ORV-free buffer, consultation with the FWC and representatives of the ORV and hiking community is necessary in order to select the optimal route and ORV-crossing sites.

Access and permitting
1. Access and parking facilities should be provided at the level identified in the General Management Plan.

2. Stabilized trailheads are unnecessary and expensive to maintain, however if the NPS desires them for aesthetic purposes they should be short in length so as not to spoil the backcountry experience in designated use areas. Proposed trailheads up to a mile in length would be excessive and would result in a vast area being closed to traditional access and enjoyment.

3. ORV users must not be required to enter and exit at the same access sites as to do so would eliminate the enjoyment of cross-country excursions.

The cost of ORV permits should be structured to cover administrative costs only, such as inspecting equipment, maintaining records, and issuing the permits. ORV use in the preserve is a traditional activity, not a "Special Park Use" subject to direct cost guidelines which would increase permit fees to as high as $200 per vehicle. The proposed permit fee increase is discriminatory and is designed to reduce use by eliminating ORV access to low income families or multiple vehicle owners.

ditional Comments: OVER →

ned: Donna Lehman
ne: Donna Lehman
ress: 4161 Sherri Ct.
State, Zip: Lk. Worth, FL 33461
ail address:

Hibbard, please add my name to your mailing list for future ORV Management proposals.

After a through field verified map of the current ORV trails have been documented it would a better time to evaluate where + why all entry points + designated trails are to be located with communicable conversation between the various Gov't. offices + their background investigators qualifying their position + the public including the various Environmental groups. When ever man walks, breathes + uses the earth's given beauty there will be compromises + this is no exception. A reasonable situation for use of the Big Cypress must be reached. A meeting with Q+A avail. to + from all interested + decision making parties needs to be held – it might take several weekends to fully accomplish this. Use of all lands is God Given so we must reach a qualifying way to enjoy it. Just as the RV user needs his or her spaces to enjoy the Big Cypress, the other users ex. RV campers, trail bikers hunters must be a part of the compromises yet. All should be at the meeting + becoming active investors in the preservation + enjoyment of the Big Cypress. We all want to know what is going on with the water, the wildlife management and the availability to enjoy it without destroying it unreasonably. A work together environment needs to be created starting with the Dept. of Int. Parks coordinating with all. Then we can accomplish something

F256

above. The average adult applies 2.5-psi per foot thus while walking each foot applies 5-psi. The 4-psi ORV standard would apply fewer psi to the ground than a walking adult. Current ORVs are to be grand fathered as they are to the owner.
3. Any style tire tread is to be allowed. I can support this design criterion.
4. NO chains, NO bolt on cleats or steel. This does not pertain to track vehicles and I can support this part of the plan.
5. Airboats can have existing horsepower. This is a good idea.
6. Airboat prop noise will be continually evaluated for ways to reduce the noise and airboat mufflers will be continually evaluated for ways to reduce the noise. This is not a bad idea but must not be mandated in a manner that will cause financial hardship on these users.
7. I support Airboats having a maximum of 8.5 feet wide at the gunwale and should not be regulated to only 6.5 feet wide. The idea of an airboat is to build a hull that will slide across the grass, soil and water with as much floatation as possible. Thus it is better to not require boats to be narrower. Also the airboat trails do not allow excessively wide boat hulls.
8. The motor decibel value is not be applied to airboats and is to be measured only when the engine is at ideal speed.
9. I support the use of tire chains made with a chain of less than ½ inch diameter. Chain is to be allowed.
10. The term 'bar clear' does not apply to the modeled tread that is on rubber tires and if so is supportable. If it applies to the modeled tire tread design then the term and idea is not supported.Owners will have 5 years to get their equipment in order. This also should be dropped to allow all existing ORVs to operate as designed and grandfathered to the owner. This equipment has been operating as build since the BCNP was created in 1974 and has done no harm to natural resources. New equipment should have the new rules apply to them. Loop Road, Deep Lake will see no change. Both of these units must have center ORV trails returned to them as they had before the NPS took control of the property. There are very few people who use these areas because ORVs have been banned. I do not support the closing of the eastern side of the Preserve to access. This will cause additional pressures on more than 28 miles of buggy trails going north of Tamiami Trail. It will also stop entry to the Preserve by those with a canoe, kayak or motorboat to hunt, fish, camp and sight see by using L-28 canal.
ORV permits will cost between $125 and $200 per ORV. This idea is promulgated because of the concept of 'user pays', which is favored by Congress and established in NPS Director's Order #53. The use of ORVs was initiated by the NPS during Congressional testimony thus the concept of Do #53 is not applicable. The use of ORVs was a preexisting activity before the NPS gained control of the land and has been in continual use since. The activity is a standard and traditional activity, which is allowed by the enabling acts thus this large fee is illegal and initiated by the DOI/NPS in 1974 and 1988. NO other user of the Preserve, at this time, pays any user fee. We have reasonable fees today, which cover the cost of the ORV permitting process

Please enter my letter into the Federal Register for the Off Road Vehicle General Management Plan of the Big Cypress National Preserve.

Sincerely, [signature]

Name: EDUARDO DE MATEO

Postal Address: 12230 SW. 194 ST. Miami, Fl. 33177

Email Address: FREDDIEBEAR@HOTMAIL.COM

Additional Comments: I URGE YOU TO PLEASE CONSIDER THE CHANGES OUTLINED HEREIN, AS I BELIEVE THE EXISTING PROPOSALS ARE UNFAIR, UNREASONABLE AND APPEAR CLEARLY PREJUDICED TOWARD ELIMINATING ENTIRE CLASSES OF USERS OF OUR RESOURCES.

523

Bear Island

I support the continued use of a designated trail system in this unit provided necessary trail improvements are made.

Corn Dance Unit

1. I oppose the NPS proposal to prohibit access into the Corn Dance Unit from state lands on its eastern border. This proposal would result in *increased* ORV impacts to soil and vegetation in the Corn Dance Unit by requiring preserve visitors to travel several hours overland by swamp buggy to reach this popular destination instead of a short airboat ride through adjacent state land.

2. Designated entry points into the Corn Dance Unit from the Jetport property should be selected in consultation with the FWC and knowledgeable ORV users. They should be sufficient in number and appropriately located so as to avoid increased ORV impacts caused by unnecessary detours.

Florida National Scenic Trail

The hiking trail should be rerouted to avoid possible conflicts with ORV use. As the trail will have a ¼ mile ORV-free buffer, consultation with the FWC and representatives of the ORV and hiking community is necessary in order to select the optimal route and ORV-crossing sites.

Access and permitting

1. Access and parking facilities should be provided at the level identified in the General Management Plan.

2. Stabilized trailheads are unnecessary and expensive to maintain, however if the NPS desires them for aesthetic purposes they should be short in length so as not to spoil the backcountry experience in designated use areas. Proposed trailheads up to a mile in length would be excessive and would result in a vast area being closed to traditional access and enjoyment.

3. ORV users must not be required to enter and exit at the same access sites as to do so would eliminate the enjoyment of cross-country excursions.

4. The cost of ORV permits should be structured to cover administrative costs only, such as inspecting equipment, maintaining records, and issuing the permits. ORV use in the preserve is a traditional activity, not a "Special Park Use" subject to direct cost guidelines which would increase permit fees to as high as $200 per vehicle. The proposed permit fee increase is discriminatory and is designed to reduced use by eliminating ORV access to low income families or multiple vehicle owners.

Additional Comments: A ¼ mile buffer zone for ORV's on the Fla. Nat. Scenic Trail is some what unfair since one can hardly recognize it from more than 50yds. away. Very few people can navigate the Big Cypress with the precision necessary to know exactly when they could be in this proposed Buffer Zone.

Signed Gary L. Trumbly

Name: GARY L. TRUMBLY

Address: 2300 SW 127 Ave

City, State, Zip: Miami, Fla. 33175

E-mail address:

Mr. Hibbard, please add my name to your mailing list for future ORV Management proposals.

524

11-1-99

To Whom it May Concern;

I attended the meeting at FIU & Agree with the Locals + views. If you must do something, come see for yourself what the Everglades is all about.

I've Lived in So. Fla. All my Life, this is home. We love to camp & Live and work in the Everglades. We ~~deserve~~ to use our Airboats & ORVs. Please don't take them away from us.

So. Fla is a tourist attraction. Airboating is a business. You shut ~~His~~ us down & we're UNEMPLOYED Please Look carefully into this before making a final decision. This matter is Serious.

As for the Sound Scape. It makes No SENCE.

I Listened to All that spoke. If you CAN Review MARTIZA Leons Speach - I Agree with Everything she spoke about. She spoke with Love & passion for the Everglades. Come see it & Enjoy it. There's so much to do. It's Wonderful!!

Sincerely,

Susan N. Wilsey
24050 SW 8th St
Miami, Fl.
Mailing Add: P.O. Box 655034
Miami, Fl. 33265

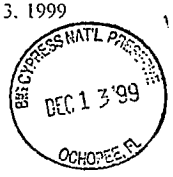
Miccosukee Tribe of Indians
of Florida

Business Council Members
Billy Cypress, Chairman

Jasper Nelson, Ass't. Chairman
Max Billie, Treasurer

Andrew Bert Sr., Secretary
Jerry Cypress, Lawmaker

December 13, 1999



Superintendent Wally Hibbard
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, FL 34141-9710

Dear Superintendent Hibbard:

The Miccosukee Tribe reviewed the Off-Road Vehicle Management Plan prepared by the Big Cypress National Preserve. We appreciate the opportunity to comment on this Management Plan. Our comments are as follows:

The Preserve, after 20 some odd years, has finally developed an Off-Road Vehicle ("ORV") Management Plan. In reading this plan, we discovered that it is a plan to develop a plan in the future, very similar to the ersatz Environmental Assessment developed for the commercial airboat rides originating in Everglades City. There are a lot of could be, would be, may be phrases that lead to what? There is no scientific basis for this plan, no baseline data to support or condemn anything, particularly ORV use. There were some limited preliminary studies done in the 1970's and 1980's that had no definitive conclusions other than further investigation was needed. There was no effort from the Preserve to conduct the necessary additional studies called for from these investigations. The Georgia Study that was done obviously had a major flaw in that the satellite photos used to determine ORV trails were never ground proofed. The Preserve has lost the opportunity to make the contractor go out and ground proof their flawed findings. Are those really ORV trails or are they natural features? Furthermore, this plan does not set forth the traditional and customary use rights of the Miccosukee people nor does it state how this plan may or may not affect those rights. Moreover, the Tribe opines that the Miccosukee are not subject to any permits for ORV use, hunting, fishing, occupancy, or any other permitted use in the Preserve. Those uses are explicitly stated in the enabling act of the Preserve and need no permits to allow them to continue. We have read the comments of the U.S. Fish and Wildlife Service and the U.S. Environmental Protection Agency and those comments indicate that this plan is seriously flawed. The simple explanation for this is the ORV plan is not a plan, just a framework for a plan.

The Everglades City Airboat Tours were not included as part of this plan, yet they still qualify as Off-Road Vehicles. These should be included as part of this plan, even though they are in the addition lands due to the impacts these commercial tours have on the mangrove, prairie, and estuarine ecosystems in the Preserve.

P.O. Box 440021, Tamiami Station, Miami, Florida 33144, (305) 223-8380, fax (305) 223-1011
Constitution Approved by the Secretary of the Interior, January 11, 1962

It is unfortunate that the Preserve fails to follow the guidelines developed by the National Park Service. The Director of the National Park Service has stated that all decisions of this sort must be based on science, and should not be based on the pretense of science. The alternatives offered in this plan are arbitrary and capricious. They are not based on science because the science is lacking or non-existent. This seems to be the pattern for decisions made by the Preserve.

The Tribe concurs with the Preserve to allow no access into the Preserve from the L-28 levee system from state or Miccosukee lands. This would pose a problem for the Tribe if access were allowed from the L-28 levee system through persons with Tribal Permits claiming they're hunting in the Preserve and persons with Preserve Permits claiming they're hunting on the Reservation.

The Tribe believes that the proposed ORV fees should be the same as the National Average for ORV fees in other National Parks, Preserves, Forests, and other federal lands.. The fees that are collected should go back into the ORV program. Charging a $100 - $200 fee will not fund the ORV program. These proposed high fees will prevent the average person from experiencing the back country portions of the Preserve.

There is no provision in this proposed management plan to allow street-legal 4 X 4's in the Preserve. These vehicles should be allowed to operate on above ground grade roads, such as those found in the Bear Island Unit. The use of these vehicles will allow the non-hunting visitor to experience Bear Island for sight-seeing, birding, hiking, and other non-hunting uses.

The Tribe strongly regards law enforcement as the key to any management plan. Enforcement of the existing rules and regulations would prevent the ORV abuse of the habitat that is occurring. The Tribe suggests that the Preserve consider revoking not only the ORV Permit but also the Management Area Permit of the person driving the vehicle for a period of time as the strongest enforcement tool you can utilize. Repeat offenders would be barred from the Preserve for a period of 5 years or longer. Fines do nothing but allow the person to pay money and then they come back out and do it again. This type of punishment is quite effective and is utilized by the Tribe and also on the Avon Park Bombing Range. This would entail keeping good records by letting Park Rangers know who is allowed back on the Preserve and who is not.

G1

Thank you for the opportunity to comment. Please contact Mr. Steve Terry of my staff if you require any additional information or clarification.

Sincerely,

Billy Cypress
Tribal Chairman

PC: Secretary Babbitt, DOI
Director Stanton, NPS
Regional Director Belson, NPS
Dexter Lehtinen, Tribal Counsel
Steve Terry, Land Resources Manager

G1 (cont.)

APPENDICES, GLOSSARY, BIBLIOGRAPHY, AND INDEX

APPENDIX A: DRAFT – PROPOSED APPLICATION OF TEMPORAL RESTRICTIONS TO AIRBOAT OPERATIONS IN THE SOUTHEAST CORNER OF BIG CYPRESS NATIONAL PRESERVE

Bob Sobczak and Bill Snyder
Big Cypress National Preserve

3/29/00

Abstract:

Water level thresholds are proposed for applying temporal restrictions to airboat activity in the southeast corner of Big Cypress National Preserve (Zone 4 of the Stairsteps Unit). Our preliminary proposal calls allowance of airboat operation in designated trails when water depths are suitable throughout the entire zone, as opposed to recommendation of trail-specific or landing-specific criteria. Restrictions would be applied when P34 stage is greater than 4.0 feet above sea level (asl), when P34 stage in the summer-fall season (June through December) is below 2.2 ft asl, and when P34 stage in the winter-spring season (January through May) is below 3.0 ft asl. Application of the proposed thresholds under 1990 conditions would have resulted in the affected area being closed 47 percent of the time, in comparison to the estimated 32 percent closure frequency that actually occurred (both NPS-imposed and self-regulated closure). The proposed restrictions are believed to offer improved protection of the natural resource, allow reasonable visitor access during suitable environmental conditions, and provide a basis for consistent, predictable, and timely decision-making by resource managers. The criteria may be subject to modification based on continued field observation and development of new information.

Study Site:

Big Cypress National Preserve (est. 1974) comprises the approximate easternmost third of the Big Cypress Swamp in South Florida (Figure 1). The enabling legislation of the Preserve specifies that off-road vehicles (ORVs) may be operated in a manner that does not negatively impact the natural environment. Under current conditions (May 2000), a portion of the Preserve is closed to ORV activity, but the majority is open to permitted wheeled ORVs and airboat use unless special restrictions are in effect. Airboat activity almost exclusively occurs in the area south of the Tamiami Trail and Loop Road known as the Stairsteps Unit (Figure 1). Zone 4 of the Stairsteps Unit is generally regarded as the premiere airboat country in the Preserve because of its well-established network of trails and suitable hydrologic environment.

Airboat Operations:

Traditional motorboats are useless in the affected environment because they draft too much water and rely on submerged propellers. Airboats are a type of boat customized for the shallowly flooded environment of the sawgrass prairies in south Florida. Instead of a submerged propeller, they rely on a much larger propeller (2-5 meter width) that is fixed and caged on the back of the boat. Typically, the propeller and engine that drives it are taken from airplanes, thus giving the boats their name. In order to glide across the prairie, the boats have a flat hull that drafts only a few inches of water. Airboats run best on 6-18 inches of water in open prairie, but are capable of

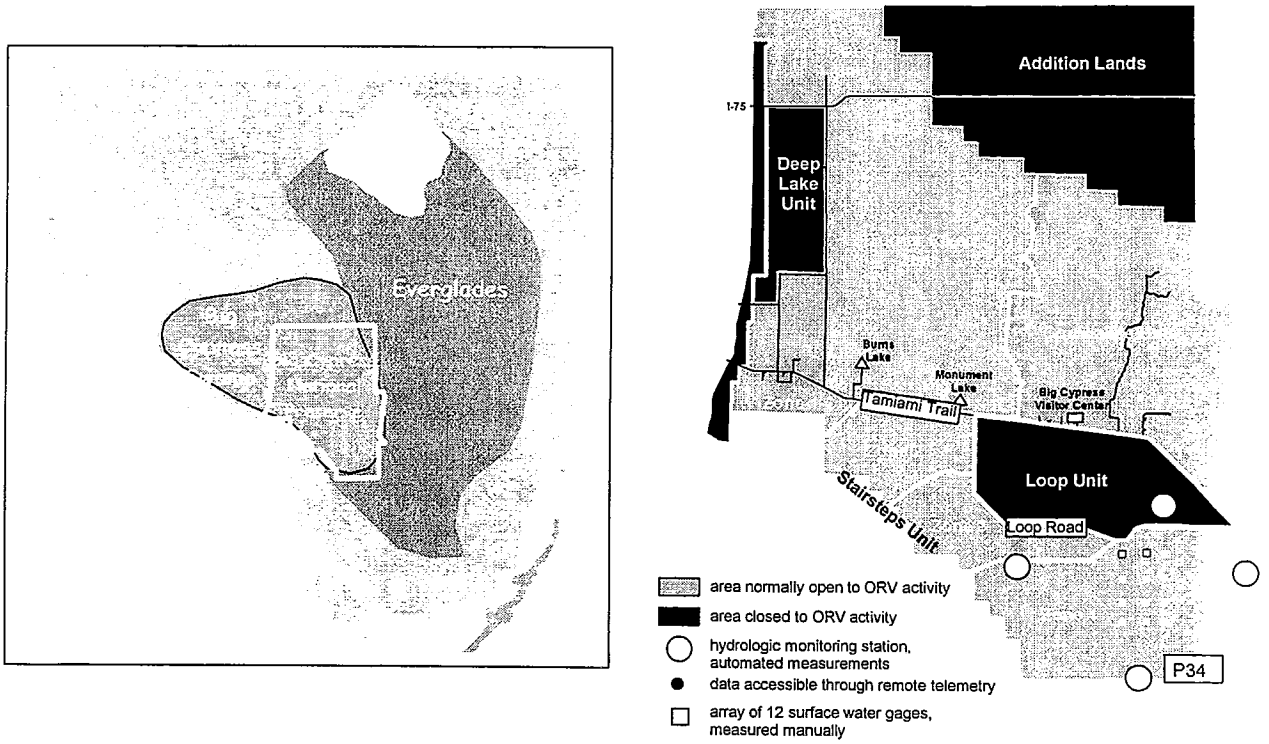


Figure 1. Overview of south Florida and Big Cypress National Preserve

running directly across the ground in patchy surface water, moist soil, or even dry conditions and in deeper water (such as canals). Airboat operators tend to favor a network of well-established trails that accommodate the fastest travel time from a landing to the desired destination and also offer minimal exposure to limestone outcrops. Operators will generally depart from the major trail once they reach their destination, whether this be for hunting or recreation purposes.

Airboats are generally regarded as the least damaging of the ORVs allowed in the Preserve. Swamp buggies are thought to cause the greatest degree and spatial extent of environmental impact because soils are easily deformed by direct tire contact and operators tend to detour around or at the edge of existing trails to avoid areas that are heavily mudded or rutted out. These impacts occur primarily, if not exclusively, during times when surficial soils are saturated or inundated with water. Recent management initiatives by the Preserve to lessen impacts caused by swamp buggies has focused on spatial restrictions, including establishment of designated trails and closure of areas subject to longer soil saturation. In comparison, airboats generally do not make direct contact with the land surface and tend to stay on the main trail out of preference. Application of a temporal restriction is desirable for airboat activity because it causes minimal disturbance to the natural environment so long as environmental conditions are adequate. It should be pointed out that airboat activity is self-regulating to an extent under low water conditions because operators tend to avoid dry trails as they become dry and discontinue use in the area altogether when the primary trails go dry. However, it is desirable to impose restrictions prior to the onset of this "self-regulating" mode. Potential impacts of airboat activity in thin and patchy flooding conditions include formation of shallow channels in the trails, exposure of bedrock

where soil is thin, reduction of vegetation, alteration of surface water drainage and duration; and also threat of similar disturbance in the adjacent areas of the prairie that have not been disturbed.

Current Management Practices:

Unusual meteorological circumstances in 1999 resulted in closure of the affected area due to both periods of extended high and low water conditions. The low water closure extended from 4/13/99 to 6/18/99. This closure was prompted by observations of patchy water coverage in primary airboat trails and the absence of standing water in the adjacent prairie. The channelization of existing trails gives a perception that the entire area is still flooded, when in fact the trails may be the only areas with standing water. The high water closure extended from 10/5/99 to 12/31/99. This closure was prompted by observations that water depth in the prairies was at or above deer chest heights and that islands of upland habitat (tropical hardwood hammocks and pinelands) were inundated with water. This condition is thought to cause excessive stress on wildlife; including limited mobility and food availability, elimination of dry refugia, increased exposure to water, and increased vulnerability to hunting pressure.

Airboat restrictions were lifted in both cases when the area was thought to be suitable for airboat activity, but the lack of pre-defined objective thresholds made the restriction periods controversial, difficult, and time-consuming to defend. Table 1 reports P34 stage on the day relative to restriction periods that occurred in 1999. The absence of clearly defined criteria makes application of restriction periods subject to the ethos, availability, and experience level of resident resource managers and therefore open to unsubstantiated change in the future. For example, there is no record of airboat closures in the early 1990s despite an extended dry condition during this period.

Table 1. Water levels at P34 during and a week prior to imposing and lifting airboat restrictions in the affected area during 1999.

Date	Management Decision	Water level at P34 during day of decision	Water level at P34 1 week prior
4/13/99	Low water restriction imposed	1.98	2.11
6/18/99	Low water restriction lifted	2.79	2.13
10/5/99	High water restriction imposed	3.98	4.10
12/30/99	High water restriction lifted	3.95	4.10
3/21/00	Low water restriction imposed	2.52	2.60

The previous week is reported because field observations were generally made on a weekly basis, therefore the environmental condition that prompted management action generally fell between these two dates.

Methods:

Depth of standing water is a major, if not primary, determinant of airboat suitability in the affected area. Other variables include wildlife sensitivity, presence of threatened or endangered

species, and visitor use patterns. The size of the affected area makes it impractical to characterize surface water depth in all areas, but the flat relief of the landscape means that a limited number of water level observation point(s) can be used to characterize the hydrologic regime of the entire area. Water stage is measured continuously at several hydrological monitoring stations within and adjacent to the affected area (Figure 1). Preference of this work is given to P34 because it is within the affected area and can be accessed remotely through telemetry.

A network of 12 surface water gages were installed in the field to determine P34s suitability as an index well and to provide a hydrologic basis for designating low and high water thresholds (Figure 1). Individual gages were located approximately 1 mile apart in a 3 by 4 matrix, and sampled over the course of a half year in order to capture a range of surface water conditions. Comparisons between water depths at the 12 stations and water stage at P34 is shown in Figure 2. The correlation coefficients are generally high, suggesting that P34 serves as a reasonable indicator for flooding depths in the affected area.

Proposed Management Practices:

Our preliminary proposal calls "zone-wide" allowance/restriction of airboat operation in designated trails based on suitability of surface water depths. Restriction would be applied when water levels at P34 are greater then 4.0 feet asl, when summer-fall season water levels (June through December) are below 2.2 ft asl, and when winter-spring water levels (January through May) are below 3.0 ft asl. Separate summer-fall and winter-spring threshold levels are recommended because the relationship between P34 stage and water depths in the affected environment were observed to be different during wetting (summer-fall) and drying (winter-spring) periods. This is likely due to P34's placement at the downgradient end of the affected area. The area was determined to be hydrologically suitable for airboat activity flooding when P34s wet-season stage rises above 2.2 ft asl and when P34s dry-season stage remains above 3.0 ft asl. When surface water levels at P34 rise above 4.0 feet asl, prairie depth is generally greater than 18 inches and islands of upland habitat are approaching inundation.

Adoption of the proposed thresholds will result in the affected area being closed to airboat activity an average of 47 percent of the year, based on water level conditions that have prevailed over the past 10 years (1990s). A monthly summary of anticipated closure frequency is shown in Table 2. The majority of proposed closure time (69 percent) would occur in the 6-month period from January to June.

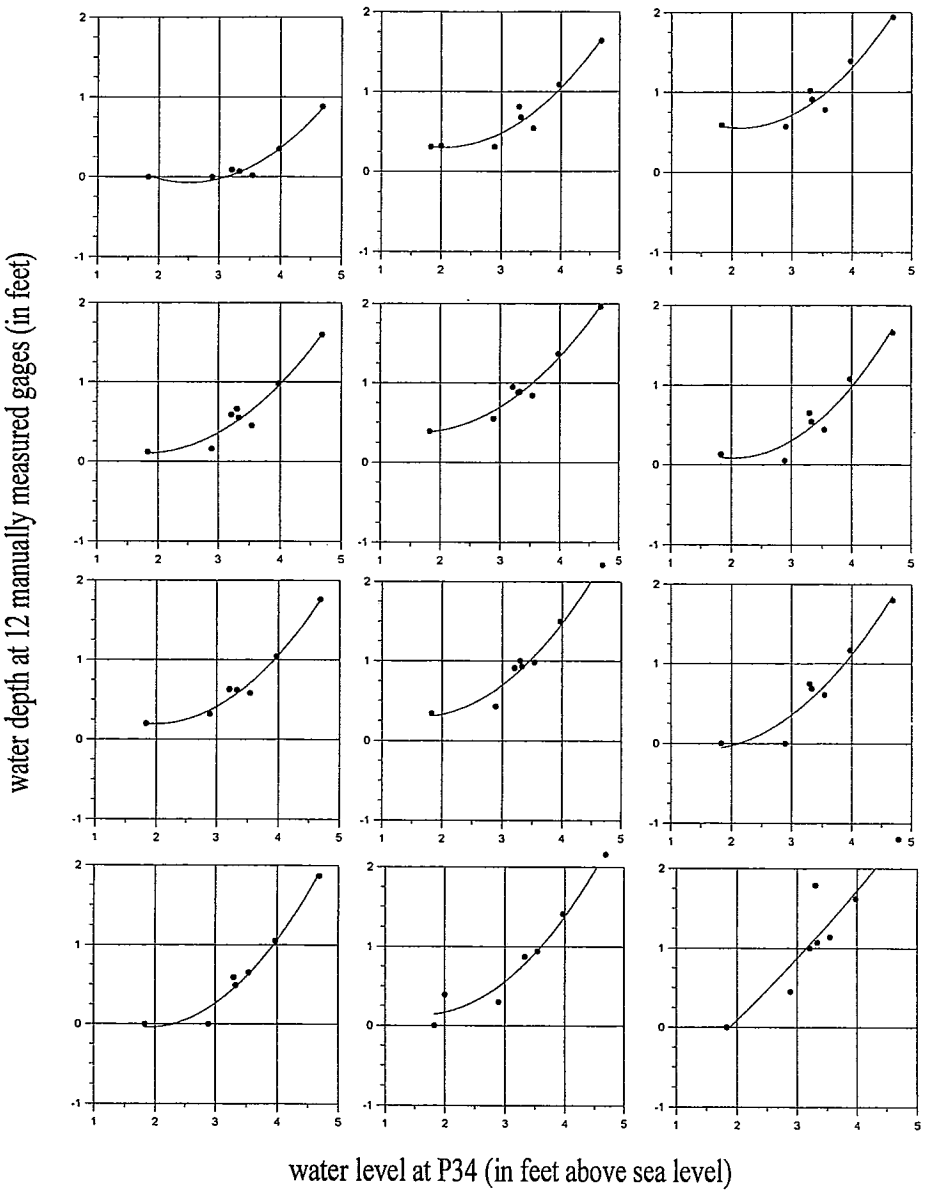


Figure 2. Regression graphs between water depth measured at 12 manually-measured gages and water elevation recorded at P34 (plots are in identical layout to layout of gauges shown in Figure 1).

Table 2. Anticipated Airboat Restriction Frequency in Zone 4 of Stairsteps Based on 1990 hydrologic conditions (in percent)

	P34 < 3.0 Low-water threshold for winter-spring restriction	**P34 < 2.2** Low-water threshold for summer-fall restriction	**P34 > 4.0** High-water threshold for entire year	**Total restriction frequency**
January	57	NA	10	67
February	63	NA	6	69
March	80	NA	0	80
April	87	NA	0	87
May	90	NA	0	90
June	NA	37	3	40
July	NA	5	1	6
August	NA	0	4	4
September	NA	0	14	14
October	NA	9	22	31
November	NA	10	25	35
December	NA	16	21	37

A visual comparison between the actual closure conditions that occurred in the 1990s and the closure condition that would have resulted if the proposed management rules had been in effect are shown in Figure 3. It is estimated that airboat activity was restricted from the affected area for 32 percent time in the 1990s as a result of self-regulating environmental conditions (severe drydowns) and NPS-imposed restrictions (Figure 3, top diagram). NPS-imposed restrictions were fairly infrequent in the 1990s (hatched bars) but the area was subject to "self-regulating" closures during severe drydown conditions (gray bars). The estimate provided in this analysis assumes that the majority of airboat operators avoided the area when P34 dropped below 2.2 ft asl, although it is likely that some airboat use continued under these conditions and lower. The effect of the proposed high-water (black bars) and low-water (white bars) closure criteria is shown in the lower diagram of Figure 3.

Future temporal restrictions are anticipated to fall in line with seasonal trends observed in the 1990s, with low water closures mostly occurring in the winter-spring season and high water closures occurring less frequently in summer-fall season. High water closures are most likely to conflict with hunting season (general gun runs from November to early January). Had the proposed thresholds been in place during the 1990s, restrictions would have been in effect 30 percent of the general gun season (mostly as a result of high water conditions).

Implementation:

Establishment of the lower and upper water level thresholds is believed to offer improved protection of the natural resource, allow reasonable visitor access during suitable environmental condi

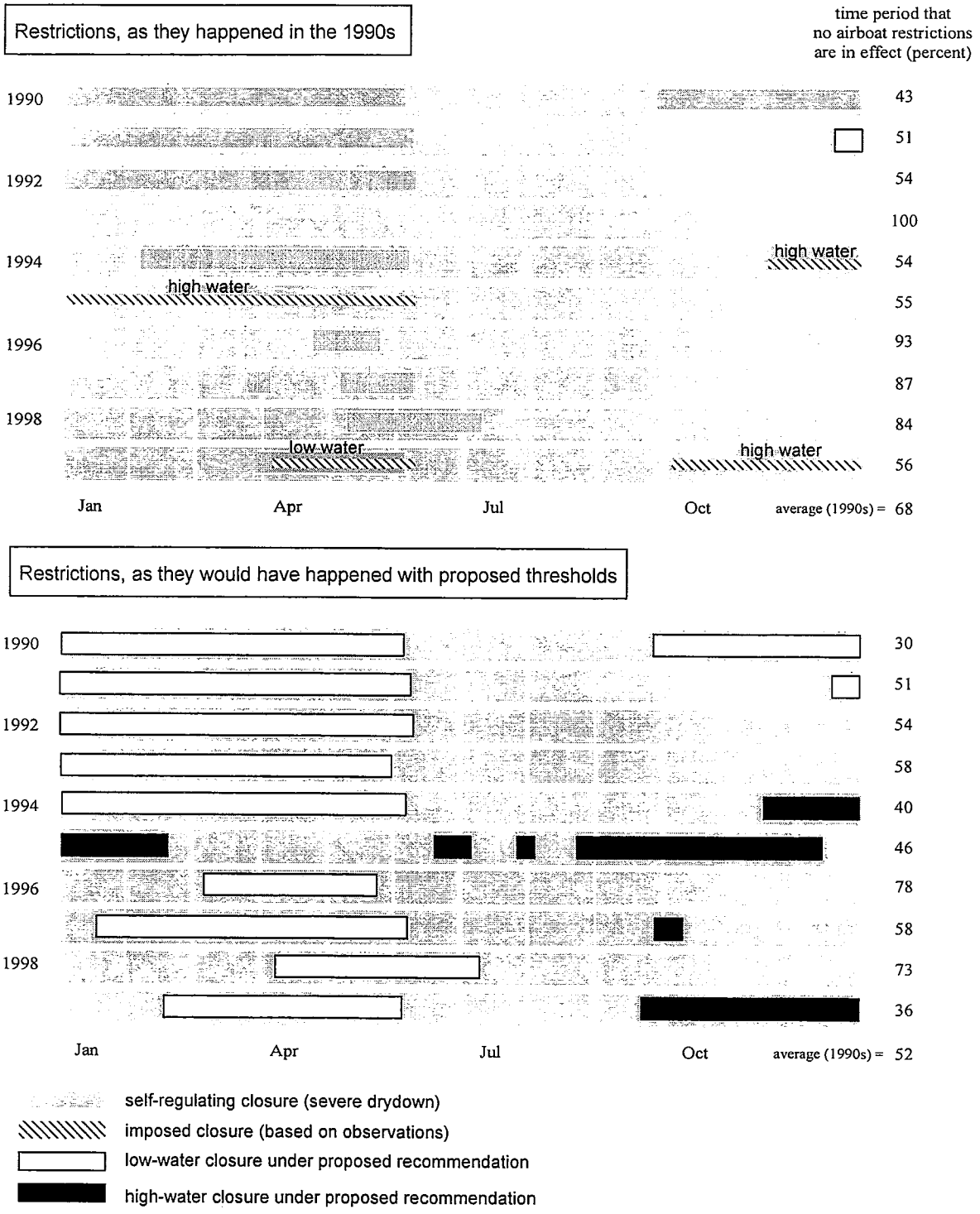


Figure 3. Diagrams displaying airboat restriction periods to Zone 4 of the Stairsteps Unit in the 1990s, as they actually occurred (top diagram) and how they would have occurred with the proposed management criteria (bottom diagram).

tions, and provide a basis for consistent, predictable, and timely decision-making by resource managers. Water levels at the P34 hydrologic monitoring station can be accessed both daily and remotely, increasing the response time to resource protection, decision-making, and disseminating the decision-making to the affected public. Water levels are straight-forward to interpret, making them relatively easy to defend in real time and over time via reference to the historic record. Other information should be used to complement decision-making, including other natural resource information, anticipation of future meteorological conditions, and conditions in adjacent lands, but the proposed water level rules are thought to provide the best base-line for imposing and lifting temporal restrictions in the affected area.

Additional Work:

The proposed management rules were developed with a year's worth of monitoring information and observations, therefore they will be subject to review, modification, and improvement through continued field observations and development of new information. The spatial variability of flooding regimes within the affected area needs to be more closely considered, including mapping and selected surveying of representative prairie and upland hammock habitats. The threshold criteria proposed in this work are designed for the entire affected area (Zone 4), and do not attempt to define landing-specific or trail-specific criteria. It has been observed that Mitchell's Landing and the trails that directly connect to it hold water longer into the dry season than the Border Line landing and trails. Landing and/or trail specific thresholds may be considered in the future as a designated trail system is formally adopted in the affected area and additional hydrologic information is considered. Separate criteria should also be considered for Zone 3 of the Stairsteps Unit. Differences in water stage response during drying and wetting periods needs to be more closely considered. Thresholds need to be established for other nearby continuous recorder(s) in the event that P34 is malfunctioning or does not adequately represent the entire affected area. It may be desirable to establish another station more centrally located in the affected area as an index well, either in replacement of or to complement P34. Existing trails may need to be surveyed and monitored to quantify environmental effects and visitor use patterns. Biological, soil, and hunting-specific information also need to be considered.

The effect of upstream water management practices and structures need to be considered relative hydrologic conditions in the affected area. These upstream effects are thought to have altered the natural hydrologic regime of the affected area since the establishment of the Preserve. Major modification of landscape disturbances and water management practices to occur over the next twenty years as a result of the South Florida Comprehensive Review Study (Restudy) are anticipated to alter the hydrologic regime in the future.

Conclusion:

Temporal restrictions are proposed for limiting airboat activity in the southeast corner of Big Cypress National Preserve (Stairsteps Unit: Zone 4). A continuous hydrological monitoring station was selected for imposing and lifting airboat restrictions. Our preliminary proposal calls allowance of airboat operation in designated trails when water depths are suitable throughout the entire zone, as opposed to recommendation of trail- or landing-specific criteria. Restrictions would be applied when water levels at P34 are greater then 4.0 feet above sea level (asl), when summer-fall season water levels (June through December) are below 2.2 ft asl, and when winter-spring water levels (January through May) are below 3.0 ft asl. Application of the proposed thresholds under

1990 conditions would have resulted in the affected area being closed 47 percent of the time, with the majority of the closures (69 percent) occurring from January to June. The proposed restrictions are believed to offer improved protection of the natural resource, allow reasonable visitor access during suitable environmental conditions, and provide a basis for consistent, predictable, and timely decision-making by resource managers. The criteria may be subject to modification based on continued field observation and development of new information.

APPENDIX B: PRELIMINARY REPORT – OFF-ROAD VEHICLE TRAIL ACCURACY ASSESSMENT

The University of Georgia

Center for Remote Sensing
and Mapping Science (CRMS)

Roy Welch, Ph.D., Director

June 14, 2000

Mr. John Donahue, Superintendent
Big Cypress National Preserve
National Park Service
HCR 61 Box 110
Ochopee, Florida 34141

Dear Mr. Donahue,

This letter constitutes a preliminary report on the project, "Off-Road Vehicle (ORV) Trail Accuracy Assessment", undertaken as part of Cooperative Agreement 5120-00-001. The areas corresponding to six U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles within the Big Cypress National Preserve (BICY) were surveyed during the period May 1-12, 2000.

Background

Maps of ORV trails in BICY were originally produced (in 1997-1998) from USGS National Aerial Photography Program (NAPP) color infrared aerial photos of 1:40,000 scale (enlarged to 1:10,000 scale) recorded in the winter months of 1994 and 1995 (Cooperative Agreement 5280-7-9002). At the time the photos were recorded, canopy cover was minimal and heavy rainfall had flooded many of the trails, accentuating their visibility on the air photos (Welch and Madden, 1998*).

The reliability of these ORV trail maps and the accuracy of classifications and trail length figures are the catalysts for the current assessment. Consequently, the quads selected (Burns Lake, California Slough, Deep Lake, Lostmans Trail, Monroe Station and Thompson Pine Island) are geographically distributed throughout the Preserve, represent various vegetation types and include areas of both active and historically restricted ORV use.

Methods

Four transects, approximately 15 to 20 km in length, were created across each quad area – two in a roughly north-south direction and two in an east-west direction. Each transect consists of multiple three- to four-kilometre segments that zig-zag and cross as many trails as possible. Helicopter surveys were conducted involving a crew of two Center for Remote Sensing and Mapping Science (CRMS) personnel, a BICY observer and a pilot. The pilot flew along the transects which were defined by

latitude/longitude coordinates input to the helicopter Global Positioning System (GPS) navigation unit prior to each flight. In addition, a laptop computer was linked to a Trimble Pro XRS GPS unit for which a Coast Guard beacon receiver was mounted on an exterior bracket attached to the helicopter. The computer-GPS combination provided differentially corrected coordinates accurate to within a few metres, and allowed the track of the helicopter to be continuously displayed on a digital map of ORV trails. As the helicopter passed over the intersections of the ORV trails with the transect, (i.e., the observation points), the CRMS and BICY personnel determined if: 1) the trail was obviously created by ORVs; 2) the ORVs were using an existing road; 3) the trail appeared to be some other linear feature such as a game trail or survey cut; or 4) there was no evidence of a trail. If the trail was deemed an ORV trail, it was classified as primary, secondary or tertiary. These classes are based on field measurements of trail width as noted below (Table 1).

Table 1. ORV Trail Classes**

ORV Trail Class	Width on the Ground (metres)
Primary	>10 to 20
Secondary	>5 to ≤ 10
Tertiary	2 to ≤ 5

** These trail width parameters are slightly narrower than those noted for primary, secondary and tertiary classes on the original ORV trail maps compiled from the 1994-95 air photos.

All observations were stored in a digital database. During the flights and at regular intervals along the transects, photographs were taken with a 35 mm camera and digital images with a Kodak Digital Science Field Imaging System (FIS) 265. The hand-held Kodak digital camera was connected to a Garmin III Plus GPS which "stamped" the location, time and date on each image. Since Selective Availability (SA) was terminated on May 1st, the uncorrected GPS locations recorded by the Garmin receiver and stamped on the digital images are expected to be accurate to within approximately ± 10 m (as compared to ± 100 m with SA). These images, along with those scanned from 35 mm slides, are being input to ArcView to provide a pictorial record of field observations that document the validation process, depict current conditions of trails in BICY and illustrate the ORV class designations.

Results

Figure 1 and Table 2 provide preliminary results for each of the six quads areas selected for accuracy assessment. The number of intersections or observation points within each quad, listed as (a) in Figure 1, ranged from 232 for Burns Lake to 260 for Monroe Station, for a total of 1487 observation points. The proportion of observation points classed as: (b) ORV Trails; (c) Roads Used by ORVs; (d) Other Trails; or (e) No Trails Visible are also listed in Figure 1 and Table 2. Results are discussed below for: 1) Quads with ORV Access: and 2) Quads with Restricted ORV Access.

1) Quads with ORV Access (Burns Lake, California Slough, Lostmans Trail and Thompson Pine Island)

In areas where ORVs are allowed access, the percent of observation points that were mapped as ORV trails and noted as active or abandoned ORV trails during the helicopter surveys ranged from 93.1 percent for Burns Lake to 73.9 percent for Thompson Pine Island. A small percentage of mapped ORV trails were noted as roads used as ORV trails (e.g., 2.6 percent in Burns Lake and 2.8 percent in California Slough). Also, a small percentage of the previously mapped ORV trails were categorized as Other Trails which included survey lines and trails created by large game animals (11.6 percent and 9.8 percent in the case of Lostmans Trail and Thompson Pine Island, respectively). The percentage of observation points for which no ORV, roads or other trails were visible ranged from 16.3 percent for Thompson Pine Island (due to pine and cypress tree cover obscuring the ground) to 3.0 percent for Burns Lake.

2) Quads with Restricted ORV Access (Deep Lake and Monroe Station)

In quads where ORV use has been historically restricted, Deep Lake and Monroe Station, only 48.8 and 41.1 percent of the previously mapped ORV trails could be identified as ORV trails from the helicopter. Other Trails - mainly game trails in Deep Lake and a mix of game trails and old survey cuts or possibly logging tram lines in Monroe Station, accounted for 15.1 and 15.8 percent of the observation points, respectively. A considerable proportion of the mapped ORV trails in Deep Lake (35.3 percent) and Monroe Station (43.1 percent) were not visible. Although further investigation is required to determine the origin of linear features identified on the aerial photographs and mapped as ORV trails within the Deep Lake and Monroe Station (inside the Loop Road) restricted areas, it is possible that very old ORV trails, survey cuts and tram lines are visible on the 1994/1995 aerial photos but not from the helicopter due to recovery and vegetation regrowth.

Revised Estimate of ORV Trail Length

Based on the results of the ORV accuracy assessment, an adjustment of ORV trail length within the six-quad study area was estimated by applying the percentage of observation points noted as ORV trails in each quad to the total length of mapped ORV trails (Table 3). The total length of ORV trails in the six-quad area is therefore reduced from 16,217 km to an estimated 10,977 km.

The estimate of ORV trail length for the entire BICY Preserve was revised using two accuracy values - one for areas with ORV access and one for areas of restricted ORV access. An accuracy value of 82.4 percent was derived for areas with ORV access by dividing the total number of observation points noted as ORV trails (803) by the total number of observation points (975) in the four quads where ORV access is permitted

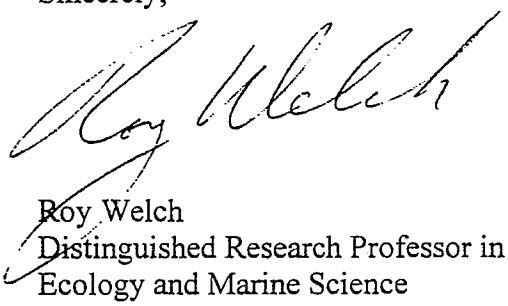
(Burns Lake, California Slough, Lostmans Trail and Thompson Pine Island). For areas of restricted ORV access the number of observation points noted as ORV trails (230) divided by the total number of observation points in the Deep Lake and Monroe Station quads (512), provided an accuracy value of 44.9 percent. These two accuracy values were then applied to ORV trail length as tallied by ORV Management Units.

The ORV Management Units in which access by ORVs is permitted include the West Addition Area, Bear Island, Northeast Addition Area, Turner River, Corn Dance and Stairsteps Management Units. Total trail length for these units as depicted on the original ORV trail maps is 42,169 km. This figure is reduced to an estimated 34,747 km when multiplied by 82.4 percent. Similarly, the mapped trails in the ORV Management Units with restricted ORV access totaled 5,789 km. Application of the 44.9 percent accuracy figure as noted above reduces the length of trails in the Deep Lake and Loop Road units to an estimated 2,599 km. A summation of these estimates (34,747 + 2,599 km) indicates that a trail length figure of about 37,346 km is a good estimate for BICY, as compared to the 47,958 km determined from the original mapping effort.

Please note that the above results are based on surveys undertaken in dry season, leaf-on conditions six years after the date of the photos from which the maps were produced. Thus, some discrepancies are to be expected. Nevertheless, it remains clear that ORVs greatly impact the terrain in those management units where access is allowed.

In conclusion, although we will be submitting a final report that will document the technical approach and provide pictorial examples, I do not expect any major changes in the results noted in this preliminary report. Please feel free to contact me if you have any questions.

Sincerely,



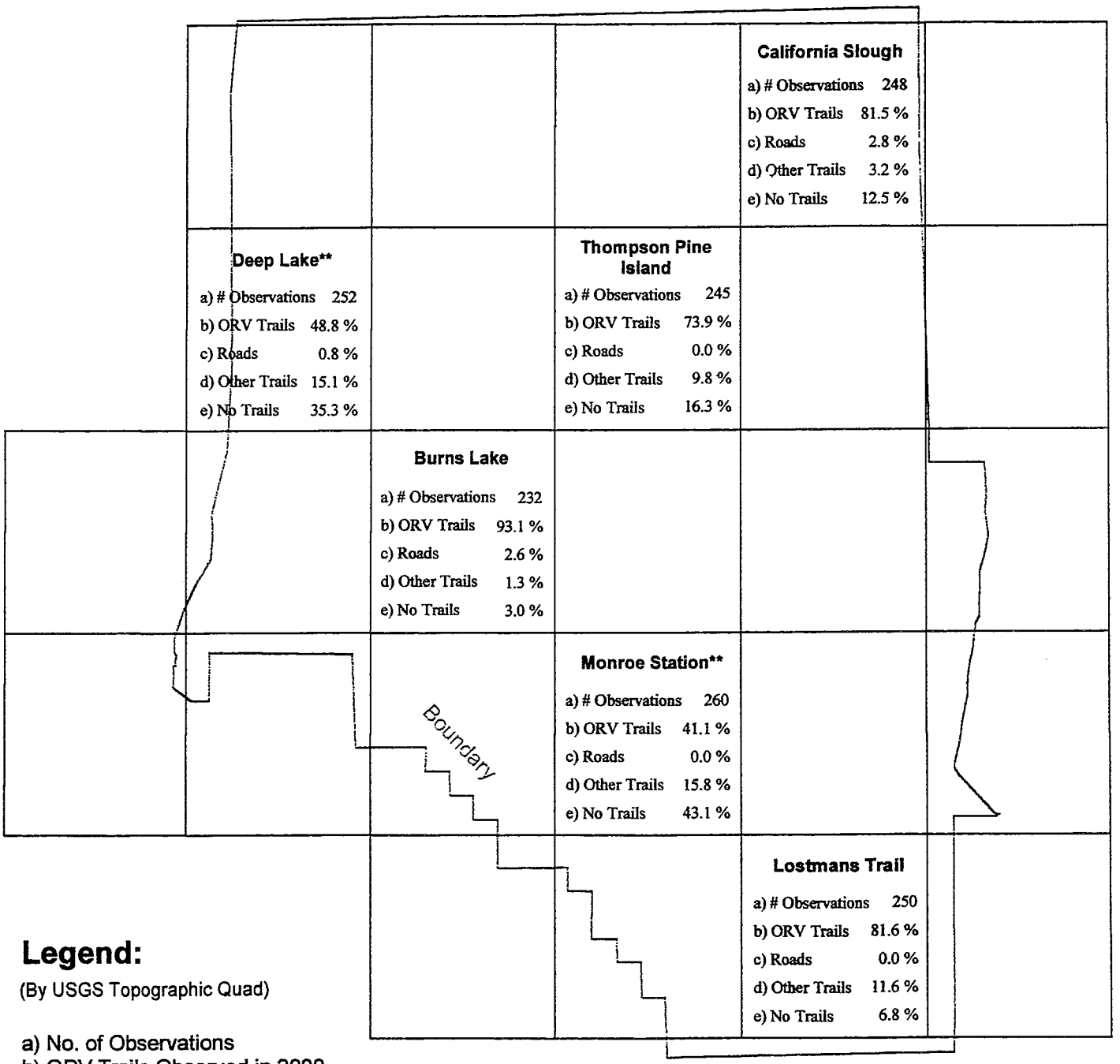
Roy Welch
Distinguished Research Professor in Geography,
Ecology and Marine Science

* Welch, R. and M. Madden, 1998. *Off-Road Vehicle Trail Database for Big Cypress National Preserve.* Final Report to the U.S. Dept. of Interior, National Park Service, Cooperative Agreement 5280-7-9002, Center for Remote Sensing and Mapping Science, University of Georgia, Athens, Georgia: 30 pp.

cc M. Soukup
R. Doren

Figure 1

Big Cypress National Preserve (BICY)
ORV Trail Database Accuracy Assessment*



Legend:

(By USGS Topographic Quad)

a) No. of Observations
b) ORV Trails Observed in 2000
c) Roads used by ORVs
d) Other Trails (e.g., game trails, survey cuts)
e) No Trails Visible in 2000
% Vaules are the Proportion of Observations

5000 0 5000 10000 Meters

* Preliminary results from ORV Trail Database accuracy assessment using helicopter surveys and GPS - conducted May 1-12, 2000 by the Center for Remote Sensing and Mapping Science (CRMS), The University of Georgia, and the National Park Service, Big Cypress National Preserve

** Restricted ORV use in Deep Lake and Monroe Station quads.

UGA-CRMS 6/8/2000

Table 2. Preliminary Results from ORV Trail Accuracy Assessment

Quad Name	# Observ. Points	ORV Trails (%)	Roads Used by ORVS (%)	Other Trails (%)	No Trails (%)
a) Burns Lake	232	93.1	2.6	1.3	3.0
b) California Slough	248	81.5	2.8	3.2	12.5
c) Lostmans Trail	250	81.6	0.0	11.6	6.8
d) Thompson Pine Island	245	73.9	0.0	9.8	16.3
e) Deep Lake	252	48.8	0.8	15.1	35.3
f) Monroe Station	260	41.1	0.0	15.8	43.1
Quads with ORV Access (a - d)	975	82.4	1.3	6.6	9.7
Quads with Restricted ORV-Use (e-f)	512	44.9	0.4	15.4	39.3

UGA-CRMS 6/8/2000

Table 3. Adjusted ORV Trail Length

Quad Name	Mapped ORV Trail Length (km)	ORV Accuracy (%)	Adjusted ORV Trail Length (km)
Burns Lake	2429	93.1	2261
California Slough	2262	81.5	1844
Lostmans Trail	2397	81.6	1956
Thompson Pine Island	2930	73.9	2165
Deep Lake	2637	48.8	1287
Monroe Station	3562	41.1	1464
Total	16217		10977

UGA-CRMS 6/8/2000

APPENDIX C: BIOLOGICAL OPINION FOR THE FINAL RECREATIONAL OFF-ROAD VEHICLE MANAGEMENT PLAN AND SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT: BIG CYPRESS NATIONAL PRESERVE, FLORIDA

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
P.O. Box 2676
Vero Beach, FL 32961-2676

July 14, 2000

John Donahue, Superintendent
Big Cypress National Preserve
HCR 61, Box 110
Ochopee, Florida 34141-9710

Log No.:	4-1-00-F-550
Project.:	ORV Management Plan for Big Cypress National Preserve
Dated:	July 8, 2000
Applicant:	National Park Service
Counties:	Collier, Monroe

Dear Mr. Donahue:

This document transmits the Fish and Wildlife Service's (Service) biological opinion for the *Final Recreational Off-Road Vehicle Management Plan Supplemental Environmental Impact Statement* (NPS 2000) (ORV Plan) for Big Cypress National Preserve (BICY) located in Collier and Monroe Counties, Florida, and the effects of the ORV Plan on the endangered Florida panther (*Puma concolor coryi*) (panther), endangered wood stork (*Mycteria americana*), endangered red-cockaded woodpecker (*Picoides borealis*), endangered Cape Sable seaside sparrow (*Ammodramus maritimus mirabilis*), endangered West Indian manatee (*Trichecus manatus*), the threatedned bald eagle (Haliaeetus leucocephalus), and threatened eastern indigo snake (*Drymarchon corais couperi*) in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (ESA).

This biological opinion is based on information provided in the draft and final ORV Plans for the BICY, field investigations, meetings, and phone conversations with the National Park Service (NPS); Service staff, and other sources of information. A complete administrative record of this consultation is on file at the Service's South Florida Field Office in Vero Beach, Florida.

Consultation History

On April 1, 1999, the Service received an advance copy of the draft ORV Plan from NPS. Since the Service was also named in the lawsuit that prompted the formation of the ORV Plan, we were given the opportunity to provide comments prior to the publication and comment period for

review of the ORV Plan. The Service provided comments to NPS in a letter dated May 20, 1999.

On August 31, 1999, NPS announced the dates for two public meetings to provide the public an opportunity to comment on the draft ORV Plan. One was to be held in Miami, the other in Naples.

On October 1, 1999, the Southwest Florida Regional Planning Council provided comments indicating the draft ORV Plan was "regionally significant and consistent" with the Southwest Florida Strategic Policy Plan.

In an October 26, 1999, letter to the Corps, the Florida Fish and Wildlife Conservation Commission (FWC) provided their comments on the revised draft ORV Plan to NPS. The Service provided additional comments on the revised draft ORV Plan in a letter dated November 12, 1999. The Service stated that the revised document appeared to be a planning tool and recommended a more action-oriented document be presented for additional review and comment.

The Environmental Protection Agency (EPA) also provided comments on November 12, 1999. They stated that they had "environmental objections" to the proposal and recommended additional information and specifics be included in the final document.

The firm of Meyer & Glitzenstein submitted comments to NPS on behalf of the Florida Biodiversity Project in a letter dated November 13, 1999.

From January 18 to January 20, 2000, the Service met with NPS staff to discuss the revisions necessary to improve the ORV Plan. The Service was present to provide technical assistance in the informal consultation process.

On March 3, 2000, a meeting of all stakeholders was held in Naples. The purpose of the meeting was for NPS to solicit additional input from interested parties. Service staff attended to meeting to further facilitate the informal consultation process.

Additional meetings were held at BICY from March 7 through March 9, 2000. Additional analysis of specific actions NPS intended to include in the final ORV Plan were discussed and informal consultation continued. Service staff attended and provided technical assistance to facilitate the formation of the plan and analysis of the effects of the proposed action on federally listed endangered and threatened species.

A final meeting to review the revised ORV Plan was held at BICY on June 7 and 8, 2000. This was to be the final meeting in the informal consultation process. Service staff attended and provided comments to NPS to facilitate the use of the final ORV Plan as NPS biological assessment for their initiation package as required in 50 CFR part 402.12.

A letter from Superintendent Donahue requesting formal consultation dated July 8, 2000, was received by the Service. In the letter, NPS determined that the proposed action would have no effect on the endangered West Indian manatee (*Trichecus manatus*), and threatened eastern indigo snake (*Drymarchon corais couperi*). They also determined that the proposed action may

affect, but is not likely to adversely affect the endangered red-cockaded woodpecker (*Picoides borealis*), endangered wood stork (*Mycteria americana*), endangered Everglade snail kite (*Rostrhamus sociabilis plumbeus*), endangered Cape Sable seaside sparrow (*Ammodramus maritimus mirabilis*), and threatened bald eagle (*Haliaeetus leucocephalus*). A determination of may affect, likely to adversely affect was made for the proposed actions' effects on the Florida panther (*Puma concolor coryi*).

The Service concurs with these determinations and offers the following biological opinion for the Florida panther. The red-cockaded woodpecker, Cape Sable seaside sparrow, wood stork, Everglade snail kite, and bald eagle are also discussed in the effects of the action section of this biological opinion.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

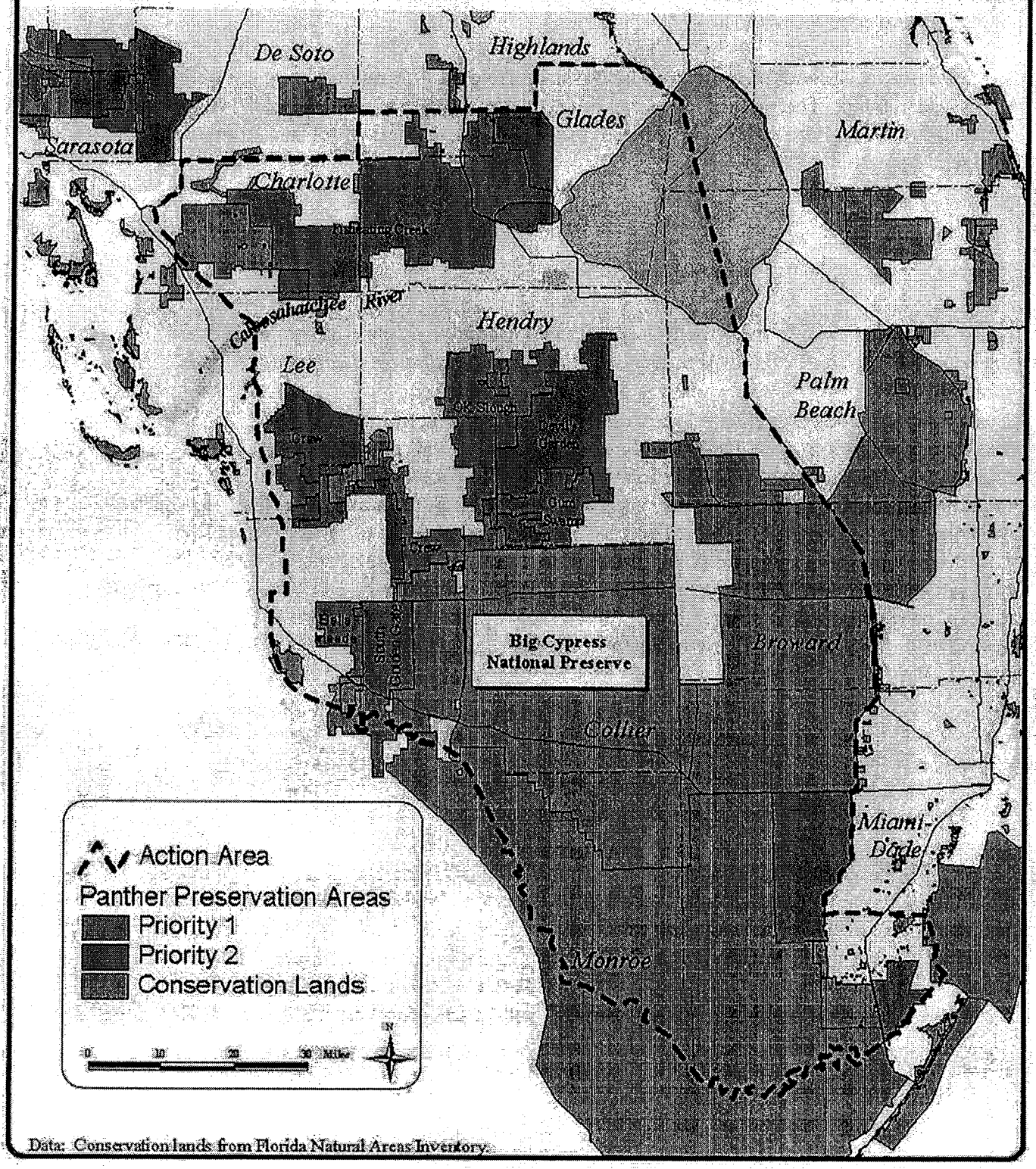
The applicant proposes to implement the preferred alternative as described in the *Final Recreational Off-Road Vehicle Management Plan Supplemental Environmental Impact Statement* (NPS 2000). The proposed action includes provisions to restrict ORV's to designated trails and access points; an integral research component to determine such things as the best areas through which to route ORV's and the most effective trail protection techniques; a restoration program to improve conditions of closed or impacted areas; application of the precautionary principal; use of adaptive management techniques to improve ORV management and visitor experience for both motorized and non-motorized users of BICY. A detailed description of the proposed action may be found in the ORV Plan referenced above. The proposed action addresses ORV use within the original boundaries of BICY, ORV activites on the addition lands will be addressed in future consultation on the addendum to the *General Management Plan and Final Environmental Impact Statement: Big Cypress National Preserve, Florida. Volume 1* (NPS 1991).

In the course of plan implementation, permits to place fill in wetlands may be required; the applicant will seek those permits when actual impacts have been quantified.

Action area

The BICY is located in Collier and Monroe Counties, Florida (Figure 1). For the purposes of this consultation, the action area includes the current occupied range of the panther in south Florida (Figure 2). The Service reviewed panther radio-telemetry data, known den sites, and other information to delineate an action area that includes lands in Charlotte, Glades, Hendry, Lee, Collier, Palm Beach, Broward, Miami-Dade, and Monroe Counties, as well as the southern portion of Highlands County. Developed urban coastal areas in eastern Palm Beach, Broward, and Miami-Dade Counties, and in western Charlotte, Lee, and Collier Counties were excluded because they contain little to no panther habitat and it is unlikely that panthers would use such areas. The Florida Keys, in Monroe County, were excluded for the same reason. Other species considered in this biological opinion would be adequately addressed by the use of this action area.

Figure 1. Big Cypress National Preserve and action area.



Data: Conservation lands from Florida Natural Areas Inventory.

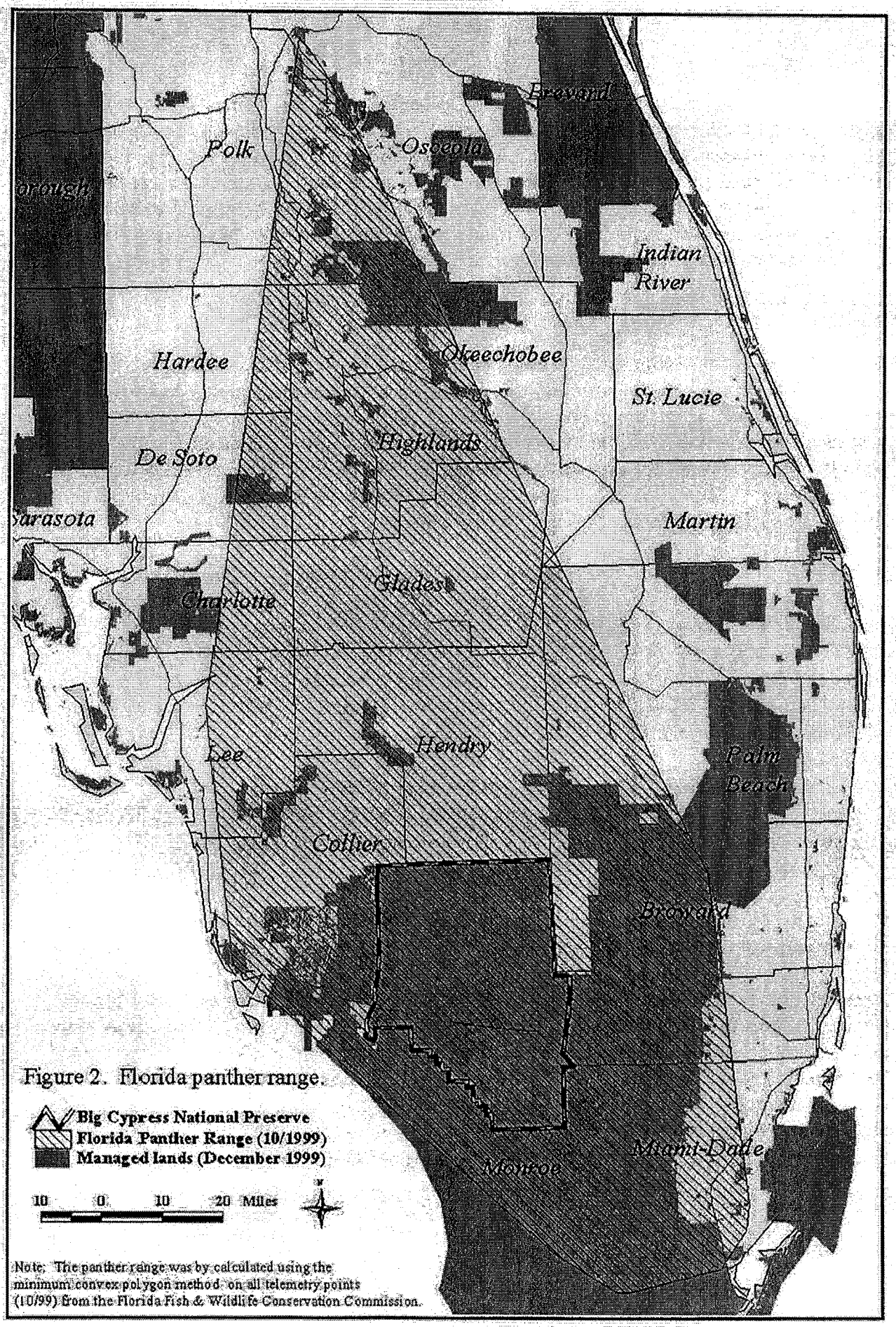


Figure 2. Florida panther range.

Note: The panther range was by calculated using the minimum convex polygon method on all telemetry points (10/99) from the Florida Fish & Wildlife Conservation Commission.

The action area is larger than the proposed action identified by the ORV Plan. The current range of the panther in south Florida is about one percent of a historic range which extended from eastern Texas eastward through Arkansas, Louisiana, Mississippi, Alabama, Georgia, Florida, and parts of Tennessee and South Carolina. The current small panther population size has not precluded the ability of panthers to move over large distances in relatively short periods of time. Therefore, potential adverse effects to individual panthers in proximity to the proposed action may effect the remaining small panther population.

STATUS OF THE SPECIES

This section presents the biological and ecological information relevant to formulating the biological opinion. Appropriate information on the species' life history, habitat and distribution, and other factors necessary for survival are included. This analysis documents the effects of all past human and natural activities or events that have led to the current status of the species. When the Service's review focuses on the effects of the action on a discrete recovery unit or designated critical habitat unit, this section describes the status of that unit and its significance to the species as listed or to the designated critical habitat.

The Service has determined the following species may occur within the action area:

Cape Sable seaside sparrow - (E)(CH)	(*Ammodramus maritimus mirabilis*)
Snail kite - (E)(CH)	(*Rostrhamus sociabilis plumbeus*)
Wood stork - (E)	(*Mycteria americana*)
American crocodile - (E)(CH)	(*Crocodylus acutus*)
West Indian manatee - (E)(CH)	(*Trichechus manatus*)
Florida panther - (E)	(*Felis concolor coryi*)
Red-cockaded woodpecker - (E)	(*Picoides borealis*)
Bald eagle - (T)	(*Haliaeetus leucocephalus*)
Eastern indigo snake - (T)	(*Drymarchon corais couperi*)

(E) = federally listed as endangered
(T) = federally listed as threatened
(CH) = federally designated critical habitat

A summary of the status of the panther across its entire range, as well as the biological and ecological information relevant to our analysis of effects is provided below. The analysis of the species and critical habitat likely to be affected is also provided. This analysis will be presented in more detail later in the *Effects of the Action* section of this biological opinion. Detailed information regarding the status of the above-mentioned species along with the biological and ecological information utilized by the Service in evaluating potential adverse effects can be found in the *South Florida Multi-Species Recovery Plan* (MSRP) (Service 1999). That document is incorporated here by reference.

Florida panther

A complete panther life history discussion can be found in the MSRP. No critical habitat has been designated for the panther, therefore, none will be affected.

Species description

The panther is a medium-sized subspecies of puma or mountain lion, that is characterized as being relatively dark tawny in color, with short, stiff hair (Bangs 1899), and relatively longer legs and smaller feet (Cory 1896) than other subspecies. Skulls of the panther have been described as having a broad, flat, frontal region, and broad, high-arched or upward-expanded nasals (Young and Goldman 1946).

The coat of adult panthers is unspotted and typically rusty reddish-brown on the back, tawny on the sides, and pale gray underneath. The long cylindrical tail is relatively slender compared to some of the other subspecies (Belden 1988). Panther kittens are gray with dark brown or blackish spots and have five bands around the tail. The spots gradually fade as the kittens grow older and are almost unnoticeable by the time they are six months old. At this age, their bright blue eyes slowly turn to the light-brown straw color of the adult (Belden 1988).

Three external characters are often observed in panthers remaining in southwest Florida which are not found in combination in other subspecies of *P. concolor.* These characters are: (1) a right angle crook at the terminal end of the tail, (2) a whorl of hair or "cowlick" in the middle of the back, and (3) irregular, light flecking on the head, nape, and shoulders (Belden 1986). The light flecking may be a result of scarring from tick bites (Maehr 1992a).

Adult male panthers reach a length of around 2.15 meters (seven feet) from the nose to the tip of their tail and have reached or exceeded 68 kilograms (150 pounds) in weight, but typically average around 54.5 kilograms (120 pounds). They stand approximately 60 to 70 centimeters (23 to 27 inches) at the shoulder. Female panthers are considerably smaller with an average weight of around 34 kilograms (75 pounds) and average length of about 1.85 meters (six feet).

Habitat

Maehr (1990a) estimated the occupied range of the panther to be 2.2 million acres (880,000 hectares) in south Florida. Later estimates by Logan *et al.* (1993) indicated the occupied range to be at least 3.1 million acres (1.2 million hectares). Native landscapes within the Big Cypress Swamp region of south Florida, within occupied panther range, are dominated by slash pine (*Pinus elliottii*), cypress, and freshwater marshes, interspersed with mixed-swamp forests, hammock forests, and prairies (Duever *et al.* 1979). Private lands represent about 50 percent of occupied panther range in south Florida. The largest contiguous tract of panther habitat is the Big Cypress National Preserve/Everglades ecosystem in Collier, Monroe, and Miami-Dade

Counties. Suitable habitat extends into Lee, Hendry, Charlotte, Glades, Broward, Palm Beach, and southern Highlands Counties. Poorer-quality (low nutrient, frequently saturated) soils prevalent south of Interstate 75 (I-75) in south Florida do not produce the quality or quantity of forage required to support large herds of deer and other panther prey items. The influence of soils on primary productivity makes it unlikely that habitat in BICY and Everglades National Park is as productive as habitat on private lands in northern and western Collier County in terms of panther health, reproduction, and density. Better soils and drainage also make private lands north of I-75 more suitable for intensive agriculture and urban growth (Maehr 1992a).

Native upland forests are preferred by panthers in southwest Florida (Maehr 1990a). Highly preferred habitat types are relatively limited in availability but are sought by panthers as daytime resting cover (Maehr *et al.* 1991a). Understory thickets of saw palmetto have been identified as the most important resting and denning cover for panthers (Maehr 1990a). Early telemetry investigations (n=6) indicate that panther use of mixed swamp forests and hammock forests was greater than expected relative to their availability within the panthers' home range (Belden *et al.* 1988). As investigations expanded onto private lands between 1985 and 1990, it was determined that panthers preferred native upland forests, especially hardwood hammocks and pine flatwoods, over wetlands and disturbed habitats (n=26) (Maehr *et al.* 1991a). Hardwood hammocks were consistently preferred by panthers, followed by pine flatwoods (Maehr *et al.* 1991a). This may be related to the fact that, among major vegetation types in Florida, hardwood hammocks had the greatest potential for producing white-tailed deer, an important panther prey species (Harlow 1959, Belden *et al.* 1988, Maehr 1990a, Maehr 1992a, Maehr *et al.* 1991a).

Male panthers use more cover types and have larger home ranges than females. The home range size of male panthers is influenced by the percentage of hardwood hammock, hardwood swamp, water, grass, agricultural land, barren land, scrub, and brush in the landscape. Smaller male home ranges have greater percentages of hardwood hammocks and hardwood swamp, while larger home ranges have greater percentages of water, grass and agricultural land, barren land, shrub, and brush. Larger female home range size has been positively correlated with higher percentages of dry prairie, shrub swamp, and shrub and brush (Maehr 1992b). Similar to male home range size, female panther home range size is inversely related to habitat quality, which may also influence reproductive success (Maehr 1992b, Maehr *et al.* 1989b).

Dispersing males may wander widely through unforested and disturbed areas. Agricultural and other disturbed habitats, freshwater marsh, thicket swamp, and mixed swamp are not preferred, and are either used in proportion to their availability or are avoided (Maehr 1990a). Habitats avoided by panthers include agriculture, barren land, shrub and brush, and dry prairie. Panthers have not been found in pastures during daytime telemetry location flights but may travel through them at night (Maehr *et al.* 1991a, Maehr 1992a).

Telemetry research is biased toward heavily forested public lands where a majority of panthers have been captured and radio-collared. Telemetry data are collected just after sunrise and at a

time when panthers are bedding down for the day. Other panther activities must be interpreted from the location of the telemetry reading in the landscape and from field investigations. Consequently the value of habitats characterized as "not preferred" or "avoided" is understated. These habitats provide food and cover for panther prey, provide a buffer against more intensive land uses such as urban development, have a capacity to be restored to a native condition more conducive to panther use, and are part of the rural landscape matrix that has allowed the panther to persist in south Florida.

Reproduction and demography

Panthers are essentially solitary. Interactions between panthers were infrequent during a 1985-1990 study (Maehr *et al.* 1991a). Most interactions occurred between adult females and their kittens. Interactions between adult male and female panthers were second in frequency. Interactions between males and females lasted from one to seven days and usually resulted in pregnancy. Documented interactions between males were not uncommon and resulted in serious injury or death to some individuals. David Maehr (University of Kentucky, personal communication, 1998) indicates that intraspecific aggression is the number one cause of mortality in panthers. Aggressive encounters between females have not been documented (Maehr *et al.* 1991a).

The pattern of Florida panther distribution involves several males maintaining large, mutually exclusive home ranges containing several adult females and their dependent offspring. This spatial arrangement seems to be a prerequisite for successful reproduction (Maehr 1993).

Male panthers are polygymous. Breeding activity peaks in fall and winter (Maehr 1992a). Parturition is distributed throughout the year with 81 percent of births occurring between March and July. Litter sizes range from one to four kittens, with a mean of 2.2 kittens per successful litter[1] (Maehr *et al.* 1991a). Intervals between litters range from 16 to 37 months.

Den sites are usually located in dense, understory vegetation, typically saw palmetto (*Serenoa repens*) (Maehr 1990a). Den sites are used for up to two months by female panthers and their litters from parturition to weaning and are also used in subsequent years. Female panthers losing their litters generally produce replacement litters. Five of seven females whose kittens were brought into the captive breeding program successfully reproduced an average of 10.4 months after the removal of the litter (Land 1994).

Age at first reproduction has been documented at 18 months for females (Maehr *et al.* 1989a). The first sexual encounters for males has occurred at approximately three years of age (Maehr *et al.* 1991a). Dispersal of young typically occurs around 1.5 to two years of age, but may occur as early as one year of age (Maehr 1992a).

---

[1] A successful litter is one in which the kittens have survived to an age of at least six months.

Infant mortality is characterized as relatively high with fewer than half of all births resulting in offspring that survive beyond six months of age (Roelke *et al.* 1993). The kitten survival rate between age six months and one year has been estimated at 0.895, based on a sample of 15 radio-instrumented kittens monitored from six months to one year of age (Land 1994). Young panthers are considered recruited into the population when they have successfully reproduced (Dennis Jordan, Service, personal communication, 1997).

Females are readily recruited into the population as soon as they are capable of breeding (Maehr *et al.* 1991a). Males appear to have more difficulty being recruited. Sub-adult male recruitment is complicated by the lack of dispersal habitat and competition with adult male panthers for territories. Without large areas of suitable habitat to accommodate dispersal, young males have few opportunities for recruitment as residents. As a result, the panther's ability to increase and outbreed has been severely restricted. Successful male recruitment appears to depend on the death or home range shift of a resident adult male (Maehr *et al.* 1991a). Turnover in the breeding population is low; documented mortality in radio-collared Florida panthers is greatest in sub-adult and non-resident males (Maehr *et al.* 1991b).

Land and Taylor (1998) documented that panther mortality (n=67) averaged 3.5 deaths per year from 1978 through June 30, 1998. Male panthers accounted for 57.6 percent of mortality. Sub-adult panthers (up to three years of age) of both sexes accounted for 45.5 percent of mortality. Specific causes of documented panther mortality include road kill (37.9 percent), intraspecific aggression (21.2 percent), disease and old age (18.2 percent), causes unknown (12.1 percent), shootings (9.1 percent), and research-related (1.5 percent). These mortality figures only include panthers endemic to south Florida, not introduced Texas cougars.

Foraging

Food habit studies of panthers in southwest Florida indicate that the feral hog (*Sus scrofa*) is the most commonly taken prey followed by white-tailed deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), and nine-banded armadillo (*Dasypus novemcinctus*). Deer and hogs accounted for 85.7 percent of consumed biomass north of I-75 and 66.1 percent south of I-75 (Maehr 1990a). No seasonal variation in diet was detected; however, panthers inhabiting an area of better soils consumed more large prey. Differences in prey abundance and availability were indicated by an eight-fold greater deer abundance north of I-75 versus south of I-75, although the estimated number of deer consumed did not differ between the north and south portions of the study area. Hog numbers were lower south of I-75. Fewer large prey may, in part, explain the poorer physical condition, larger home ranges, and lower reproductive output of panthers south of I-75. Hogs dominated the diet of panthers in the north in terms of both estimated biomass and numbers. In the south, deer accounted for the greatest estimated biomass consumed, whereas raccoons were the highest estimated number of prey items consumed. Domestic livestock were found infrequently in scats or kills, although cattle were readily available north of I-75 (Maehr *et al.* 1990a).

Movements and dispersal

Adult panthers occupy available habitat in southwest Florida in a pattern similar to that of western cougars (Land 1994). Over 7,000 telemetry locations on 26 radio-collared panthers between 1985 and 1990 indicated that home-range size varied from 53 to 1,183 km^2, averaging 519 km^2 for resident males and 193 km^2 for resident females. Home ranges of resident adults were stable unless influenced by the death of other residents. Home-range overlap was extensive among resident females and limited among resident males (Maehr *et al.* 1991a).

There are no known differences in seasonal movements, wet and dry season habitat use, seasonal variation in diet, or effects of season on road crossings. There may be a response to fluctuations in water levels; however, the response is believed to be unmeasurable (Maehr 1989; Maehr *et al.* 1990b, 1991a).

Prior to, and during, the early construction converting State Road (SR) 84 (Alligator Alley) to I-75 and installation of wildlife crossings, only male panthers were detected successfully crossing this roadway. A female panther was killed on SR 84 in 1986. The highway may have been a deterrent to female movements (Maehr *et al.* 1991a). Since the completion of I-75 and the associated wildlife underpasses, male panthers and a female panther have regularly used the wildlife crossings (Lotz *et al.* 1996).

Dispersal distances average 58.7 km for sub-adult males and 16 km for an adult female. Mean dispersal age was 17.9 months. Dispersing males wander widely through unforested and disturbed areas (Maehr 1992a). The limited dispersal opportunities for sub-adult males may encourage fighting among males (Maehr *et al.* 1991a).

Activity levels for panthers peak around sunrise and sunset. The lowest activity levels occur during the middle of the day. Females at natal dens follow a similar pattern with less difference between high and low activity periods. Although some travel occurs during the day, panthers are mostly nocturnal (Maehr *et al.* 1990b).

Relationship to other species

The panther requires extensive, biotically diverse landscapes to survive. Large carnivores are considered critical in maintaining ecological integrity in many large forested systems (Terborgh 1988). Landscapes through which the panther ranges support a vast array of south Florida's faunal and floral diversity.

The panther's most important species association is with its prey species. Deer, hog, and raccoon are the most important prey species taken in term of biomass and numbers (Maehr *et al.* 1990a).

The panther is also influenced by man. Human activities, including road construction, residential/commercial development, and agricultural development have had impacts on the distribution, abundance, mortality, and dispersal and colonization opportunities for the panther.

Comparisons of food habits, habitat use, and movements revealed a low probability for competitive interactions among the panther, bobcat (*Lynx rufus*), and Florida black bear (*Ursus americanus floridanus*). All three species preferred upland forests but consumed different foods and utilized the landscape in ways that resulted in ecological separation (Maehr 1997).

Status and distribution

A small population of panthers in south Florida, estimated to number between 30 and 50 adults (30-to-80 total individuals) (Service 1999), represents the only known remaining wild population of an animal that once ranged throughout most of the southeastern United States from eastern Texas, Arkansas, Louisiana, Mississippi, Alabama, Georgia, Florida, and parts of South Carolina and Tennessee. The panther presently occupies a contiguous system of native forests, agricultural lands including rangeland, and rural areas totaling from two to three million acres (800,000-to-1,200,000 hectares) on public and private lands in Charlotte, Glades, Lee, Hendry, Collier, Miami-Dade, Broward, Palm Beach, Monroe, and Highlands Counties in south Florida.

Of the 27 recognized subspecies of *P. concolor* described in Hall (1981), the Florida panther is the sole remaining subspecies that occurs in the eastern United States. The population of this large cat may have numbered as many as 500 at the turn of the century (Seal *et al.* 1989). Historically, the panther was distributed from eastern Texas or western Louisiana and the lower Mississippi River valley east through the southeastern States in general, intergrading to the north with *P. c. cougar*, and to the west and northwest with *P. c. stanleyana* and *P. c. hippolestes* (Young and Goldman 1946) (Figure 3). Hunting, habitat loss from residential and agricultural development, and the loss of the panther's prey base have led to the decline of this species since that time (Belden *et al.* 1988, Maehr 1992a). In 1950, the panther was declared a game species in the State of Florida. This action resulted in the first regulation of panther harvest. By 1958 the panther was listed under Florida state law as an endangered species. The population was estimated at 100 to 300 statewide in 1966 (Smith 1970, Schemnitz 1972). The Federal government listed panthers as endangered in 1967. The Service cited heavy hunting and trapping pressures, the inability of the species to adapt to changes in the environment, and developmental pressures as the reasons for the decline of the panther (Service 1967).

In the 1970s, the FWC established a Florida Panther Record Clearinghouse to ascertain the status of the panther. The first field searches were made in 1972. Telemetry investigations began in 1981, primarily on public lands in southwest Florida. At the end of February 1997, 20 panthers are radio-instrumented in an area encompassing Everglades National Park, BICY, Florida Panther National Wildlife Refuge, Fakahatchee Strand State Preserve, and private lands in Collier, Lee, and Hendry Counties. Maehr *et al.* (1991a) estimated the density of panthers in southwest Florida between February and July 1990 to be one panther/110 km^2. When extrapolated over a 5,040 km^2 area thought to be occupied by radio-instrumented panthers in southwest Florida, the estimated population of the area was 46 adults (nine resident males, 28 resident females, and nine transient males) between December 1985 and October 1990. This population estimate assumed homogeneous density and similar age and sex composition over

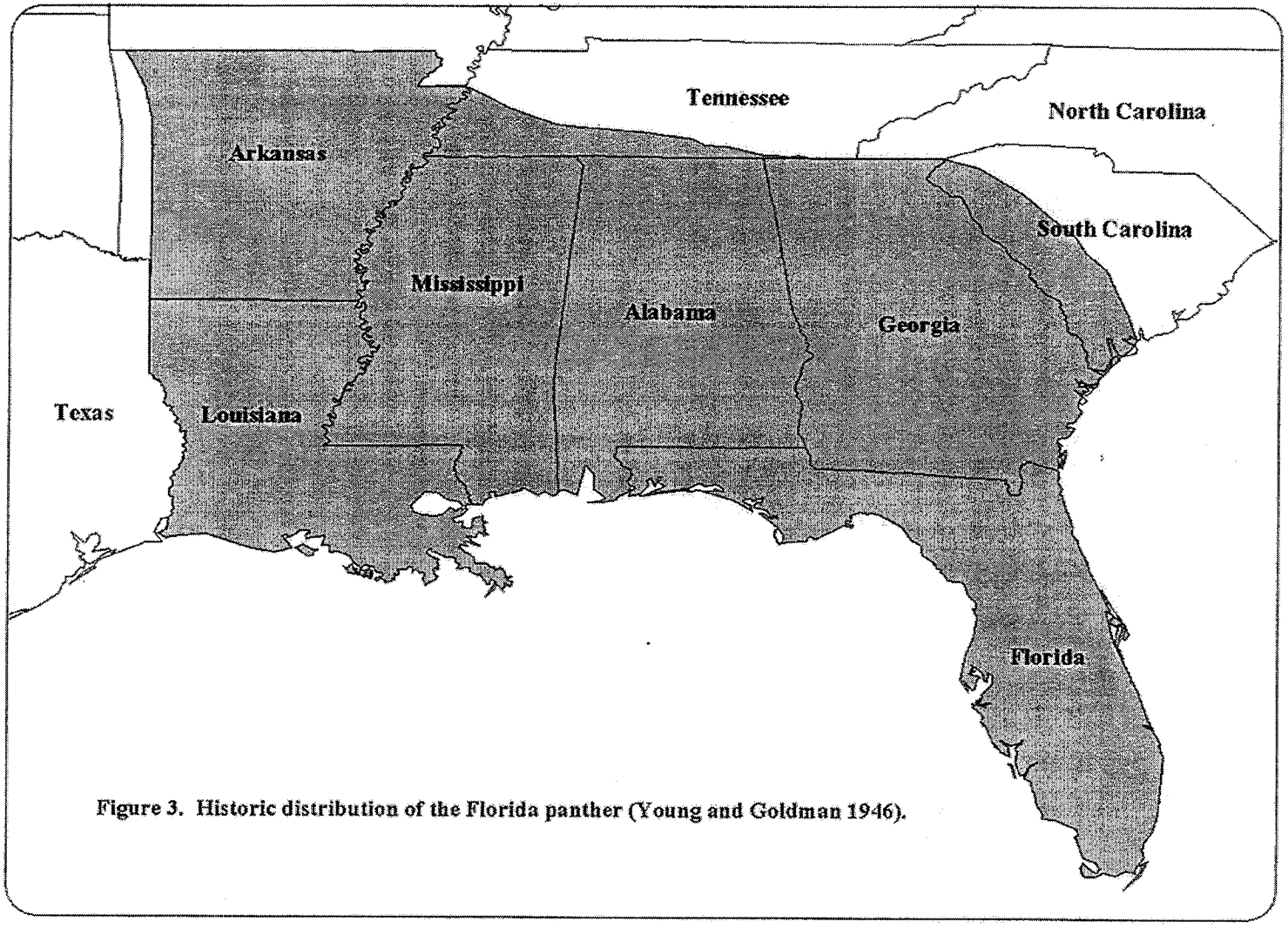


Figure 3. Historic distribution of the Florida panther (Young and Goldman 1946).

time and space. The total population in south Florida was likely higher, because the estimation technique excluded panthers in Everglades National Park, eastern BICY, and areas north of the Caloosahatchee River (Maehr *et al.* 1991a). Logan *et al.* (1993) reports that based on road kills, tracks, scat, and a decade of radio telemetry data, the only reproducing panther population occurs in Collier, Miami-Dade, Hendry, and Lee Counties in south Florida.

Natural gene exchange between the Florida panther and three other subspecies ceased when the panther became geographically isolated, probably over a century ago (Seal *et al.* 1994). Isolation from *P. c. cougar*, *P. c. stanleyana*, and *P. c. hippolestes*; habitat loss; reduced population size; and inbreeding have resulted in loss of genetic variability and diminished health (Service 1999). Data on polymorphism and heterozygosity, when combined with multiple physiological abnormalities, suggest that the panther is experiencing inbreeding depression (Roelke *et al.* 1993, Barone *et al.* 1994). Inbreeding depression has been related to decreased semen quality, lower fertility, lower neonatal survival, and congenital heart defects in a variety of domesticated and wild species (Lasley 1978, Rails and Ballou 1982, Wildt *et al.* 1982, O'Brien *et al.* 1985, Roelke 1991).

Population viability analysis data indicate that a minimum of 50 adult panthers are needed to ensure demographic and/or genetic health (Seal *et al.* 1989). The present population is estimated to be at or below this level. Maehr (1990a) indicates that there is no unoccupied habitat suitable for dispersal by sub-adult panthers. Inbreeding increases when dispersing individuals can no longer immigrate into the fragmented population, resulting in inbreeding depression, loss of genetic variation, declining health, reduced survivability, lower numbers, and eventual extinction. Continued loss of panther habitat results in less dispersal opportunity, thus adding to inbreeding problems.

Geographic isolation, habitat loss, small population size, and associated inbreeding have resulted in the loss of approximately half of the panther's genetic diversity (Roelke 1990). Natural gene exchange between the panther and other subspecies of *P. concolor* stopped when the panther became geographically isolated from other populations. Early population viability analyses projected extinction of the panther in 25 to 40 years under existing demographic and genetic conditions (Seal *et al.* 1989, 1992). To restore genetic health and genetic viability, a genetic management program was implemented with the release of eight female Texas cougars (*P. c. stanleyana*) into south Florida through the spring and summer of 1995. This program should restore the depressed panther genetic pool through the replacement of material from this formerly contiguous subspecies, without significant alteration in the basic genetic makeup of the panther or swamping the existing gene pool which may be adapted to local environmental conditions (Service 1994b).

A recent population viability analysis using a non-spatially explicit model known as VORTEX indicates a high probability of persistence for 100 years (Maehr *et al.* 1999). The Service has convened a panel of scientists tasked with completing a population viability analysis using a spatially-explicit model known as RAMAS and updated demographic parameters. The results will then be used to better guide recovery decisions. The panther persists as a small, isolated

population and a catastrophic natural event, such as disease, could accelerate extinction significantly.

Disease is a threat to small inbred populations (Roelke 1991, Barone *et al.* 1994, Seal *et al.* 1989). Panthers have tested positive for feline immunodeficiency virus (FIV) (Barr *et al.* 1989, Roelke and Glass 1992, Taylor 1997). FIV has a long incubation period but leads to non-specific immunosuppression and death in domestic cats (Roelke 1991). Its significance to the panther is unknown. Other diseases, such as feline infectious peritonitis (FIP), feline leukemia virus (FeLv), *Cytauxzoon felis*, and *Bartonella henselae*, are present in varying degrees (Roelke 1991, Roelke and Glass 1992, Dunbar 1993). Parasites found on 12 panthers examined between 1978 and 1983 included one protozoan, two trematodes, three cestodes, seven nematodes, six ticks, and one flea. The trematode *Alaria marcianae* and a hookworm *Ancylostom pluridentatum* were the most prevalent and abundant (Forrester *et al.* 1985).

Other recovery efforts include the establishment of two additional populations within the historic range of the panther (Service 1987a, 1995). Between 1988 and 1995, twenty-six Texas cougars were released near Okeefenokee National Wildlife Refuge and Osceola National Forest. Studies have concluded that Florida panther reintroduction is biologically feasible (Belden and Hagedorn 1993, Belden and McCown 1996) based on available habitat in north Florida and south Georgia. However, complex social issues must be addressed prior to population reestablishment (Belden and McCown 1996).

Twenty years of radio-telemetry data suggest that the south Florida population may be at or near carrying capacity for existing habitat conditions. Demographic and genetic health depend on maintaining suitable habitat to support a viable population. Therefore maintaining sufficient habitat for resident adults and recruitment of dispersing sub-adults is essential to facilitate gene exchange and to prevent problems associated with inbreeding. Continued deterioration, fragmentation, loss of habitat, and further reductions in the current extent of the occupied range will likely reduce the south Florida population below the level necessary for demographic and genetic health.

Analysis of the species likely to be affected

The endangered panther occupies two to three million acres (800,000-to-1,200,000 million hectares) of land in south Florida, six to nine percent of Florida's total land area, and about one percent of a historic range that included all of six, and part of two, southeastern states. Geographic isolation, small population size, and associated inbreeding have compromised the genetic health and viability of the panther. The panther is a wide-ranging species that requires extensive, biotically-diverse landscapes to survive. Sub-adult males wander widely through unforested and disturbed habitat and limitations on recruitment into the breeding population result in intraspecific aggression and mortality. Approximately 50 percent of occupied panther range in south Florida is on private lands: these lands include preferred panther habitat such as native upland forests. The habitat productivity on some public lands may be reduced as a result of low nutrient, frequently saturated soils which limit the quality and quantity of forage required

to support panther prey species. Private lands in south Florida are subject to increasing and intensifying agricultural and urban development, including associated infrastructure such as drainage canals and roads.

Road mortality

Florida panther road mortality (n=24) between 1978 and June 30, 1998, averaged 1.2 panthers per year and was almost evenly divided between males (n=13) and females (n=11). Although the relative significance of highway deaths to other sources of mortality is not entirely known, it has been the most often documented source of mortality (Maehr 1989, Maehr *et al.* 1991b). Vehicle collisions resulting in the death of sub-adult panthers of both sexes exceeds sub-adult mortality due to intraspecific aggression (23.4 versus 10.9 percent) and equals all other forms of sub-adult mortality combined (Land and Taylor 1998). Total mortality figures may be biased toward road mortality because the only documented deaths of non-instrumented panthers are the results of vehicle collision.

Habitat loss and fragmentation

Although road mortality is a concern, habitat loss, habitat fragmentation, and increased human access resulting from agricultural and residential development in south Florida are greater threats to the panther. Between 1936 and 1987, statewide cropland and rangeland increased 1.72 million hectares (4.23 million acres) or 30 percent, urban areas increased by 1.60 million hectares (3.95 million acres) or 538 percent, while herbaceous wetlands declined by 1.57 million hectares (3.88 million acres) or 56 percent and forests declined by 1.74 million hectares (4.30 million acres) or 21 percent (Kautz 1993, Kautz 1994). Continued development associated with the expansion of Florida's urbanized east coast, increasing growth on the west coast, and the spread of agricultural development in the south Florida interior have placed increasing pressure on panthers and panther habitat (Maehr 1990b, Maehr *et al.* 1991a, Maehr 1992b). Rapid development in southwest Florida is compromising the ability of natural habitats to support a self-sustaining panther population (Maehr 1990b, 1992b). Maehr (1990a) reports that there are approximately 2.2 million acres (880,000 hectares) of occupied panther range in south Florida and that approximately 50 percent of the known breeding distribution is comprised of landscapes under private ownership. Agricultural and urban development continues to replace and fragment panther habitat. Over 83 percent of the 648,000 hectares (1.6 million acres) of agricultural land in southwest Florida; (Charlotte, Collier, Glades, Hendry, Lee and Sarasota Counties) is categorized as rangeland. Between 1986 and 1990, row crop acreage increased by 3,640 hectares (8,990 acres) or 21 percent, sugarcane increased by 6,475 hectares (16,000 acres) or 21 percent, citrus increased by 21,850 hectares (54,000 acres) or 75 percent, and rangeland, much of it suitable for panther occupation, decreased by 64,750 hectares (160,000 acres) or ten percent. Rangeland losses were about evenly divided between agricultural and urban development (Townsend 1991). Maehr (1990a) indicates that unchecked development of private lands will limit panther habitat to landscapes under public stewardship and result in extinction of the panther. Maehr (1990b) also reports a lack of unoccupied, suitable habitat for sub-adult

dispersal. This suggests that available landscapes are at or near carrying capacity under existing habitat conditions.

Panthers consistently use large areas with few major highways (Maehr and Cox 1995). Belden and Hagedorn (1993) observed that Texas cougars used in a population reintroduction study established home ranges in an area with one-half the road density of the region in which the study was conducted. In particular, the study animals tended to avoid crossing more heavily traveled roads in favor of more lightly traveled roads. Female panthers rarely establish home ranges bisected by highways and maternal dens are located at distances one kilometer or greater away from highways (Maehr 1997).

Because of their wide-ranging movements and extensive spatial requirements, panthers are particularly sensitive to habitat fragmentation (Harris 1985). Past land use activity, hydrologic alterations, road construction, invasion of exotic plants, and lack of fire management have affected the quality and quantity of panther habitat. The effect of invasive plants on panther habitat utilization, particularly such species as melaleuca (*Melaleuca quinquenervia*) is unknown. Panthers may have increased their use of suboptimal wetland habitat, because forested uplands have been developed. As the remaining forested uplands are lost, sloughs containing cypress, marsh, and shrub wetlands comprise a greater percentage of the remaining habitat available to panthers, relative to habitat historically available to the species.

Panther/human interactions

Florida panthers were hunted for bounty during the 1800s and for sport up until the 1950s. Three studies of western puma indicate that there are short- and long-term responses to habitat alteration, road density, and human population density. Two recent studies have attempted to quantify the response of Florida panthers to hunting and prescribed fire. Prescribed fire is probably the single-most important habitat management tool available to public land stewards. Current information on panther and human interactions is summarized below.

Seven panther shootings, six fatal and one non-fatal, occurred between 1978 and 1986. A female Texas puma introduced for genetic restoration was shot twelve years later in 1998 (Land *et al.* 1999). Education, self-policing among hunters, and regulation are the tools by which shootings are minimized. All free-ranging puma in the southeastern U.S. are protected by a "similarity of appearance" provision in the ESA.

Reactions of *P. concolor* to logging and other human activities were studied in northern Arizona from 1976 to 1980 and in south-central Utah from 1979 to 1982. Resident puma were rarely found within one km of sites logged within the past six years. Puma two to three years old were found in logged areas more often than older puma, but four of five young puma that visited logged areas did not maintain residence there (Van Dyke *et al.* 1986). Puma in undisturbed areas tend to be inactive at mid-day, more active at mid-evening and sunset, and most active at sunrise (Ackerman 1982, Van Dyke 1983). Puma in areas disturbed by humans shifted activity peaks to after sunset, concentrated other activity during evening hours, and were inactive rather

than active at sunrise. Dispersing juvenile puma encountered human disturbances more frequently than resident puma. Residents, and transients that became residents, selected home ranges with road densities lower than the study area average, no recent timber sales, and few or no sites of human residence (Van Dyke *et al.* 1986).

Janis and Clark (1999) compared the behavior of panthers before, during, and after the recreational deer and hog hunting season (October through December) on areas open (BICY) and closed (Florida Panther National Wildlife Refuge, Fakahatchee Strand State Preserve) to hunting. The variables examined were; (1) morning activity rates, (2) movement rates, (3) predation success, (4) home range size, (5) home range shifts, (6) habitat selection, (7) distance from panther locations to trails, and (8) frequency of panther use in the Bear Island Unit of Big Cypress National Preserve. The authors failed to detect any relationship between ORV use and the first six variables. Of the last two variables they determined that the distance of panther locations from trails increased an average of 180 meters (0.31 mile) and that the frequency of panther use in the Bear Island Unit decreased from 30 up to 40 percent during the hunting season. An analysis of movement rates, a measure of energy expenditure, and predation success, a measure of energy intake, do not indicate any direct, negative energetic responses to increased human activity during the hunting season. However, the increase in average distance from trails and decrease in panther use of the Bear Island Unit are indicative of a behavioral change.

Janis and Clark (1999) surmise that the increase in the distance of panther locations from trails is "biologically minor" and probably related to prey behavior; *i.e.* white-tailed deer moving deeper into the forest to avoid ORV users. The decrease in panther use of the Bear Island Unit is balanced by an increase in use of private lands north of BICY as "refugia." The authors assert that this pattern would be of serious concern if panther habitat on private lands were lost.

Dees *et al.* (1999) examined panther use of habitat in response to prescribed fire at Florida Panther National Wildlife Refuge and BICY between 1989 and 1998. A positive temporal response to prescribed fire occurred in the year following the burn and is likely due to the rapid regrowth of vegetation which in turn attracted white-tailed deer. Panther use of the burn area gradually declined after the first year and ended after four years. Prescribed fire rotations on both study sites is four years but unfavorable weather conditions and logistics may sometimes extend the rotation.

Spatial responses to fire depended on scale. Panthers positioned their home ranges in areas more likely to be burned, whereas use of burned areas within the home range was less than non-burned areas. Although burnable habitats (pine) were not preferred within panther home ranges, they were used, with about 36 percent of the locations occurring in previously burned areas. Dees *et al.* (1999) concluded that resource managers could improve panther habitat by reducing the proportion of area comprised of burns older than four years but cautioned that shorter burn rotations could alter vegetative patterns and have a negative impact at the landscape level.

ENVIRONMENTAL BASELINE

The first bounty on Florida panthers was passed in 1832. Another Florida law passed in 1887 authorized a payment of $5.00 for panther scalps (Tinsley 1970). Agricultural land clearing in the southeast between 1850 and 1909 totaled 12.8 million hectares. Lumbering reduced the original southern forest nearly 40 percent from 121.4 million hectares to 72.0 million hectares (300.0 million to 177.8 million acres) by 1919. Some 36.4 million hectares (89.9 million acres) of pine forests were considered cut-over by 1920 with one-third classified as restocked with saw timber, one-third restocked with cordwood only, while one-third remained barren (Williams 1990). Meanwhile the white-tailed deer, primary prey of the panther, was reduced from a range-wide population of about 13 million in 1850, to under one million by 1900 (Halls 1984). Over a 100-year period, bounty hunting, land clearing, lumbering, and market hunting of deer contributed to the range-wide decline of the panther leaving only a remnant population in the impenetrable Everglades and Big Cypress swamps of south Florida.

Of the 27 *P. concolor* subspecies described in Hall (1981), the Florida panther is the only one remaining in the eastern U.S. The population in Florida numbered about 500 at the turn of the century (Seal et al. 1989). Kautz (1994) estimated that a loss of 1.74 million hectares (4.3 million acres) of forests in Florida between 1936 and 1987 was the equivalent of 35 to 70 male panther home ranges and 100 to 200 female panther home ranges. The Big Cypress population was estimated at 125 in 1969 (DOI 1969) and a south Florida population at 92 in 1972 (Schemnitz 1972). The State of Florida declared the panther a game species in 1950 and an endangered species in 1958. The Florida Panther Act, a State law enacted in 1978, made killing the panther a felony.

The Service listed the panther as endangered in 1967 (32 FR 4001). Although there were prior consultations, the records on file in the Naples Suboffice contain only those consultations completed after 1980. Between June 3, 1980, and December 21, 1999, the Service has provided technical assistance on 32 projects; concluded informal consultation on 23 projects and concluded formal consultation on 40 projects affecting the panther and panther habitat in the action area. Thirteen percent of these actions occurred between 1980 and 1989 (average 1.3 per year) while 87 percent occurred between 1990 and 1999 (average 8.7 per year). The highest number of actions reviewed was 22 in 1999. Several important consultations are summarized below.

On March 29, 1984, the Service provided a biological opinion to the Corps of Engineers on the proposed construction of an automobile test track, maintenance and office buildings on a 530-acre tract located 11.0 miles northeast of the proposed action in sections 22, 27, and 34, T49S, R28E, Collier County, Florida. A ten-foot high chain-link fence resulted in a loss of 530 acres of habitat. Habitat loss from the project footprint included three acres of hammock, 87 acres of pine flatwoods, and 40 acres of wetlands. Indirect impacts from disturbance and cumulative habitat losses were discussed but not quantified. The Service noted that "the loss of habitat has been and continues to be the greatest threat to the Florida panther" and concluded that the proposed action would not jeopardize the panther.

On February 21, 1985, the Service provided a biological opinion to the Federal Highway Administration on the conversion of two-lane SR 84 to four-lane I-75. The opinion covered I-75 from County Road 951 in Collier County to US 27 in Broward County, through 40 miles of known panther habitat, for a total distance of 76 miles. Habitat lost to the project footprint was not addressed. The opinion focused instead on a 1,000 percent increased risk of panther mortality from vehicle collisions. Proposals to construct an interchange at State Road 29 and recreational access points in BICY were tabled for future consultation. The Service noted that the Broward County segment would not adversely affect the panther and that construction could proceed immediately but that the Collier County segment, without the recommended 25 crossings, 13 bridge extensions, and proper fencing, would jeopardize the panther.

On February 10, 1989, the Service provided a biological opinion to the Federal Highway Administration on the proposed interchange at SR 29 and I-75 in Collier County, Florida about 20 miles northeast of the proposed action. The project footprint would impact 85 acres of habitat. Indirect impacts included an increased potential for development of 25,600 acres of panther habitat along SR 29 and an increased potential for injury and mortality of panthers from vehicle collisions (as of the date of consultation 38 percent of the road kills had occurred on SR 29). The threat of development was reduced when the Collier County Board of Commissioners passed a resolution giving State and Federal agencies 60 days to review zoning variances requested of the board. The Florida Department of Transportation (FDOT) committed to provide wide, grassy shoulders on SR 29 that would allow motorists a better chance to avoid collisions with panthers and they committed to posting panther warning signs with reduced nighttime speed limits. As a conservation recommendation the Service suggested that FDOT turn management authority of four square miles, the intersection lands, over to the appropriate State or Federal agency. The Service concluded that the project would not jeopardize the panther.

On December 31, 1991, the Service provided a draft jeopardy biological opinion to the Corps on the proposed improvement of Miller Boulevard Extension in sections 25 and 36, T51S, R27E in Collier County, Florida. Improvement of the one mile long dirt road would not result in direct impacts to the panther or panther habitat. Improvement of the extension, connecting Miller Blvd. proper with Highway 41, would have indirectly increased the potential for development of 50,000 acres in South Golden Gate Estates by reducing travel time from Naples about 55 percent. The proposed action would also have increased the potential for injury and mortality of panthers from vehicle collisions. The Service was unable to provide any Reasonable and Prudent Alternatives. The County eventually withdrew the permit but continues to make, and table, improvement proposals.

On January 14, 1992, the Service provided a biological opinion to the Corps for a 32-acre citrus grove (Dooner Gulf Coast Citrus) and a water retention area on 40 acres within an 80-acre parcel located south of Immokalee Road (section 36) in Collier County, Florida about 12 miles north of the proposed action. The opinion stated that the project would "fall just short of the jeopardy threshold for the panther," noting the potential cumulative impact of conversion of native habitat to citrus and other agricultural land. The Service recommended that the applicant acquire and

place under conservation easement and perpetual management, approximately 40 acres of land identified as high priority for panther protection. The Service also recommended that the grove detention pond not discharge into pine habitat on the remaining undeveloped 40 acres of the tract to avoid upland habitat impacts from flooding.

On February 23, 1993, the Service issued a jeopardy biological opinion on panther impacts associated with a permit application by Lee County Department of Transportation to upgrade Corkscrew Road in southern Lee County, located 26.0 miles north of the proposed action. The Service in issuing its jeopardy opinion identified a wildlife crossing as reasonable and prudent alternative (RPA) to allow the applicant to proceed with the project while avoiding jeopardy to the panther. On June 18, 1993, the applicant agreed to implement the RPA and the Service determined that the modified action was not likely to jeopardize the panther. The dirt road was then paved by the county. No known vehicle/panther collisions have been reported.

On October 5, 1993, a jeopardy opinion was drafted for a proposed 1,000-acre housing development (The Habitat DRI), located 26.0 miles northwest of the proposed action, because of traffic and cumulative development impacts to the panther. As a result of modifications to the project proposal, including reduction in habitat impacts, site design changes, and proposed applicant funding of panther habitat acquisition, a jeopardy opinion for the panther was avoided.

On October 27, 1994, the Service provided biological opinions for the 760-acre Florida Gulf Coast University, the 787-acre Timberland & Tiburon DRI, and 60-acre Treeline Boulevard. The opinions determined that the projects would adversely affect but not jeopardize the panther and recommended speed zones on Corkscrew and Alico Roads, traffic management strategies to encourage speed zone compliance, posting wildlife crossing signs in panther habitat on Alico Road, Corkscrew Road, and Treeline Boulevard, day and night speed zones on Treeline Boulevard, initiation of a traffic compliance study, a local educational program under the leadership of the University, and a region-wide analysis of the cumulative impacts of growth on the environment and the panther. The Corps permit subsequently provided 560 acres of habitat purchase, habitat restoration, and management for the University and Treeline Boulevard (a $2 million commitment from Lee County). Approximately 400 acres of habitat acquisition to minimize adverse effects to the panther was provided by the Corps permit issued for the Timberland & Tiburon DRI.

On August 7, 1995, the Service provided a biological opinion to the Corps for a proposed 36-hole golf course (Bonita Bay East Golf Course) on 1,000 acres located in sections 18, 19, and 20, T48S, R27E, Collier County, Florida. The project footprint would impact about 129 acres of native habitat and 380 acres of improved pasture. The proposed action included preservation of 464 acres of native habitat (78 percent of 593 acres) and restrictions on night-time golf. The proposed action did not include housing. Based on this information the Service concluded that the proposed action was not likely to adversely affect the panther.

On March 27, 1998, the Service provided a biological opinion to the Corps on the proposed expansion of Willow Run quarry in sections 11 through 14, T50S, R26E, Collier County,

Florida. The site of the proposed action, 549 acres, included 162 acres of existing mine, 288 acres of jurisdictional wetlands, and 99 acres of uplands. The proposed action would involve temporary impacts to 17 acres of wetlands and excavation of 104 acres of wetlands, including 36 acres of Priority 1 panther habitat. Wetland mitigation included restoration, enhancement, and preservation of 136 acres of wetlands and 54 acres of uplands. This land, about 190 acres of Priority 1 panther habitat, would be placed under easement to FDEP. The Service concluded that the proposed action would not jeopardize the panther. Suggested conservation recommendations included a panther education program for truck drivers at the quarry and reduced speed limits on the entrance road.

On November 9, 1998, the Service issued a biological opinion for the Daniels Parkway extension which would connect existing Daniels Parkway at Southwest Florida International Airport to Gunnery Road in southern Lehigh Acres. On September 3, 1999, the Service reinitiated consultation with the Corps in response to the Corp's July 30, 1999, request to amend the original biological opinion based on further project analysis by the applicant, Lee County DOT. The amended biological opinion, dated September 17, 1999, indicated that the effects to the panther resulting from the roadway would be minimized by a final plan to purchase and manage 94.4 acres of habitat in the CREW Ecological Unit to satisfy the 50.5 functional units of minimizing credits set forth in the November 1998 opinion.

On December 8, 1999, the Service issued a non-jeopardy biological opinion to the Corps for the proposed development, by Kaufmann Holdings, Inc., of a 47-lot rural subdivision on 239 acres in section 32, T48S, R27E, Collier County, Florida. Effects to the panther were minimized by a plan to purchase, preserve, and manage at least 24 acres of forested land in, or adjacent to, the Corkscrew Regional Ecosystem Watershed project.

On April 17, 2000, the Service issued a non-jeopardy biological opinion to the Corps for the proposed development of a 1,323-acre mixed use residential golf course community by Miromar Development, Inc. in sections 11 through 14, 23, and 24, T46S, R25E, and sections 18 and 19, T46S, R26E, Lee County, Florida. Effects to the panther were minimized by a plan to purchase, preserve, and manage, in perpetuity, the functional equivalent of 194 acres of Priority 1 panther habitat adjacent to existing public lands.

Status of the species within the action area

Florida panther

The uncertain status of the panther led to the establishment of a GFC Florida Panther Record Clearinghouse in the 1970s. Records were compiled prior to extensive field surveys and radiotelemetry research of remaining animals (Belden 1977). The first field surveys began in 1972. Radiotelemetry research began in 1981 and through 1983 was limited to Fakahatchee Strand State Preserve and BICY (Belden et al. 1988). The research program gradually expanded to include Everglades National Park, Florida Panther National Wildlife Refuge, Picayune Strand State Forest, Okaloacoochee Slough State Forest, the Corkscrew Regional Ecosystem Watershed, and private lands in Collier, Hendry, and Lee Counties. A total of 79 panthers (44

male, 35 female) have been radio-collared since telemetry research began in 1981. As of June 30, 1999 there were 27 panthers (14 male, 13 female) being monitored (Land *et al.* 1999).

Ten Florida panther kittens, five male and five female, were removed from the wild between February 1991 and August 1992 for captive breeding purposes. The kittens ranged in age from ten days to eight months and represented progeny of 11 different adult panthers. Two females died in captivity in 1992. One died after heart surgery in an attempt to correct an atrial septal heart defect and one died of unknown causes. Two captive males died of severe respiratory distress after being released to the wild in southern BICY in 1997. Six panthers remain in permanent captivity, one male and one female each, at White Oak Conservation Center in Yulee, Florida, Lowry Park Zoo in Tampa, and at the Jacksonville Zoo (Land and Taylor 1998).

The Picayune Strand State Forest, Fakahatchee Strand State Preserve, Florida Panther National Wildlife Refuge, BICY, Big Cypress Seminole Indian Reservation, and ranches located in southern Hendry County and northeastern Collier County provide a contiguous landscape that supports the only extant breeding puma population east of the Mississippi River.

Cape Sable seaside sparrow

Presently, the known distribution of the Cape Sable seaside sparrow is restricted to localized areas on the east and west sides of Shark River Slough which is entirely contained within the action area (Figure 4). The status of the Cape Sable seaside sparrow after the breeding season in 1995 is provided below.

By 1995, subpopulation A, located in the western marl prairies, on the west side of Shark River Slough, and representing approximately 50 percent of the total population in 1992, had disappeared from all but a few locations. It was noted in the Service's October 1995 biological opinion on Test 7 of the Experimental Program, that the Cape Sable seaside sparrow was now represented by a single viable subpopulation (subpopulation B) and two subpopulations (subpopulations A and C-F) too small to persist over the long term. Subpopulation A increased slightly to 272 birds in 1996 and 1997, and declined again in 1998 to 192 birds.

The smaller subpopulations located in the eastern marl prairies are struggling to persist. For example, subpopulations C, D, and F appear to have been extirpated in 1995, but the 1996 and 1997 surveys located a small number of birds at each of these sites. The 1998 survey results in subpopulations C, D, and F estimated 80, 48, and 16 birds, respectively, or approximately five percent of the total 1998 rangewide estimate. The 1995 estimate for subpopulation B, considered the most stable of all the sparrow subpopulations, was 2,128 birds. This subpopulation declined to 1,888 birds in 1996, increased to 2,832 in 1997, and declined again in 1998 to 1,808 birds. Subpopulation E, the remaining eastern prairie subpopulation, had a 1995 estimate of 352 birds, declined in 1996 to 208, increased in 1997 to 832, and again increased in 1998 to 912.

Over 100 birds were present in Zone 4 of the Stairsteps Unit of BICY in 1999. Although the number of birds present in 1998 was similar, they were more widely distributed within Zone 4.

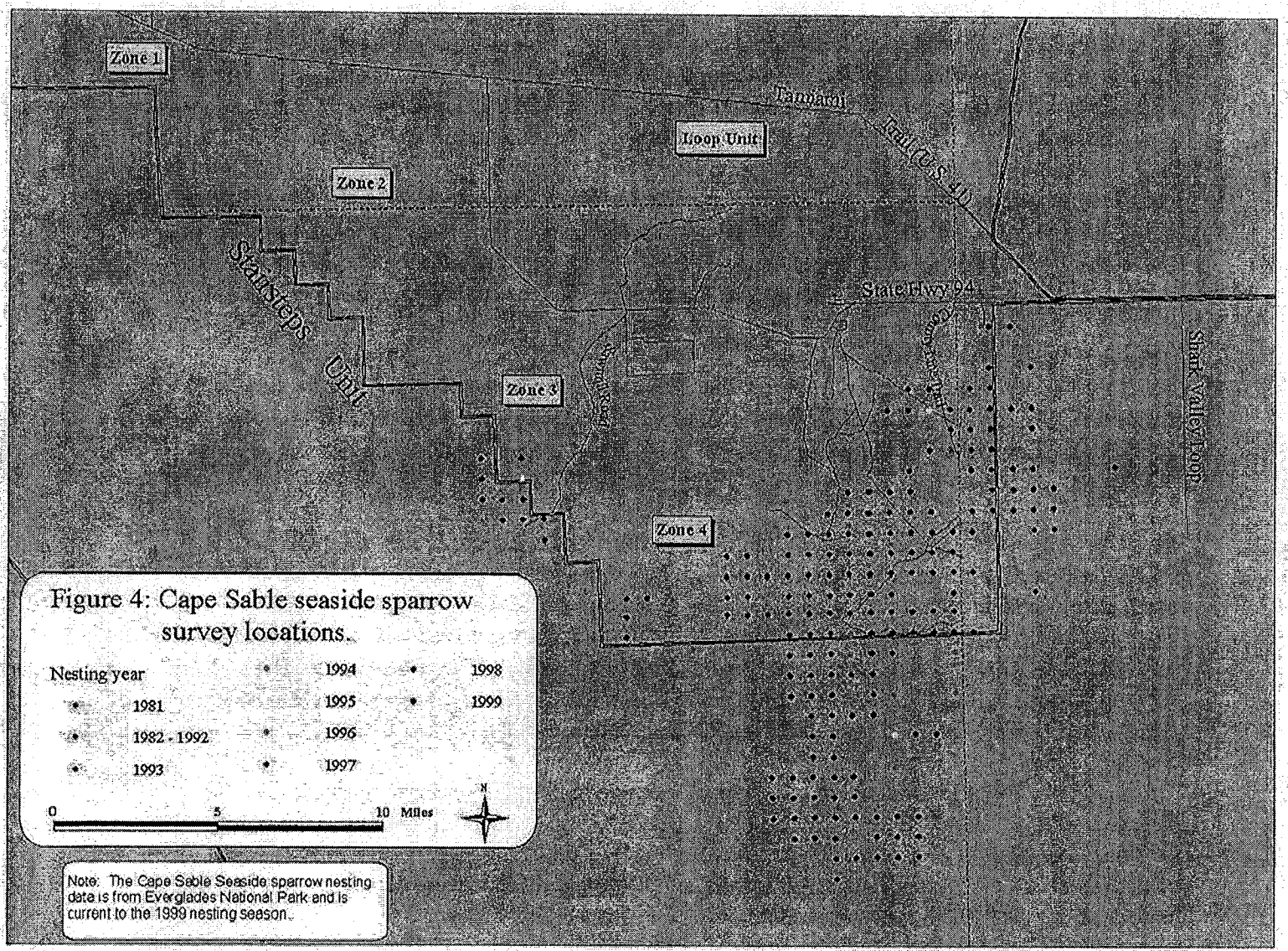


Figure 4: Cape Sable seaside sparrow survey locations.

Note: The Cape Sable Seaside sparrow nesting data is from Everglades National Park and is current to the 1999 nesting season.

Wood stork

Historically, South Florida supported greater than 70 percent of the total nesting effort in the southeast U.S. In 1996, nesting effort in South Florida improved from the previous three years, most likely in response to improved foraging conditions as a result of a rapid dry-down following three high water years. In Everglades National Park, BICY, Corkscew National Sanctuary, and Florida Panther National Wildlife Refuge, there were a total of approximately 1,600 nesting pairs. Numbers of nesting storks in the action area have declined since 1996, averaging about 142 nesting pairs (Ogden, personal communication 1998).

Nesting in BICY has been rare, however, 45 colonies were identified in 1996 (Jansen and Brooks 1996). Sporadic nesting has been documented since that time.

Bald eagle

In the action area, bald eagle use varies, perhaps in relation to available nesting habitat. Three active nest sites are present in BICY. Bald eagles in Florida have increased since 1973, when population monitoring began. Over 1,000 active territories are present state-wide. Implementation of the *Habitat Management Guidelines for the Bald Eagle in the Southeast Region* (Service 1987b) has been instrumental in providing protection for nesting sites for this species. The bald eagle was proposed for delisting in July of 1999. A final rule on the delisting has not been published.

Red-cockaded woodpecker

Use of the action area by the red-cockaded woodpecker also varies. There are 53 clusters (44 active, and 9 inactive) located within the boundaries of BICY (Figure 5). Currently, no red-cockaded woodpeckers are found on Florida Panther National Wildlife Refuge or the addition lands. Approximately 729,000 acres of habitat for red-cockaded woodpeckers is present on BICY.

Red-cockaded woodpeckers are also found sporadically throughout Collier County. The distribution of red-cockaded woodpeckers follows the distribution of available, suitable habitat throughout south Florida. Clusters have been located in Lee, Charlotte, and Glades Counties; but are absent from Hendry and Sarasota Counties. Extensive logging in south Florida in the late 1800s and early 1900s resulted in loss of habitat for this species. Many areas are now recovering and trees are approaching a suitable age to provide cavity excavation opportunities for red-cockaded woodpeckers. Logging does not occur at BICY nor are there any plans to implement such a program.

Residential and commercial developments as well as conversion of native forested communities to agriculture has continued to affect the distribution and abundance of available habitat for red-cockaded woodpeckers.

Snail kite

Snail kite use of the action area fluctuates greatly, with low use during drought years, such as 1991, and high use in wet years, such as 1994. Although sharp declines have occurred in the

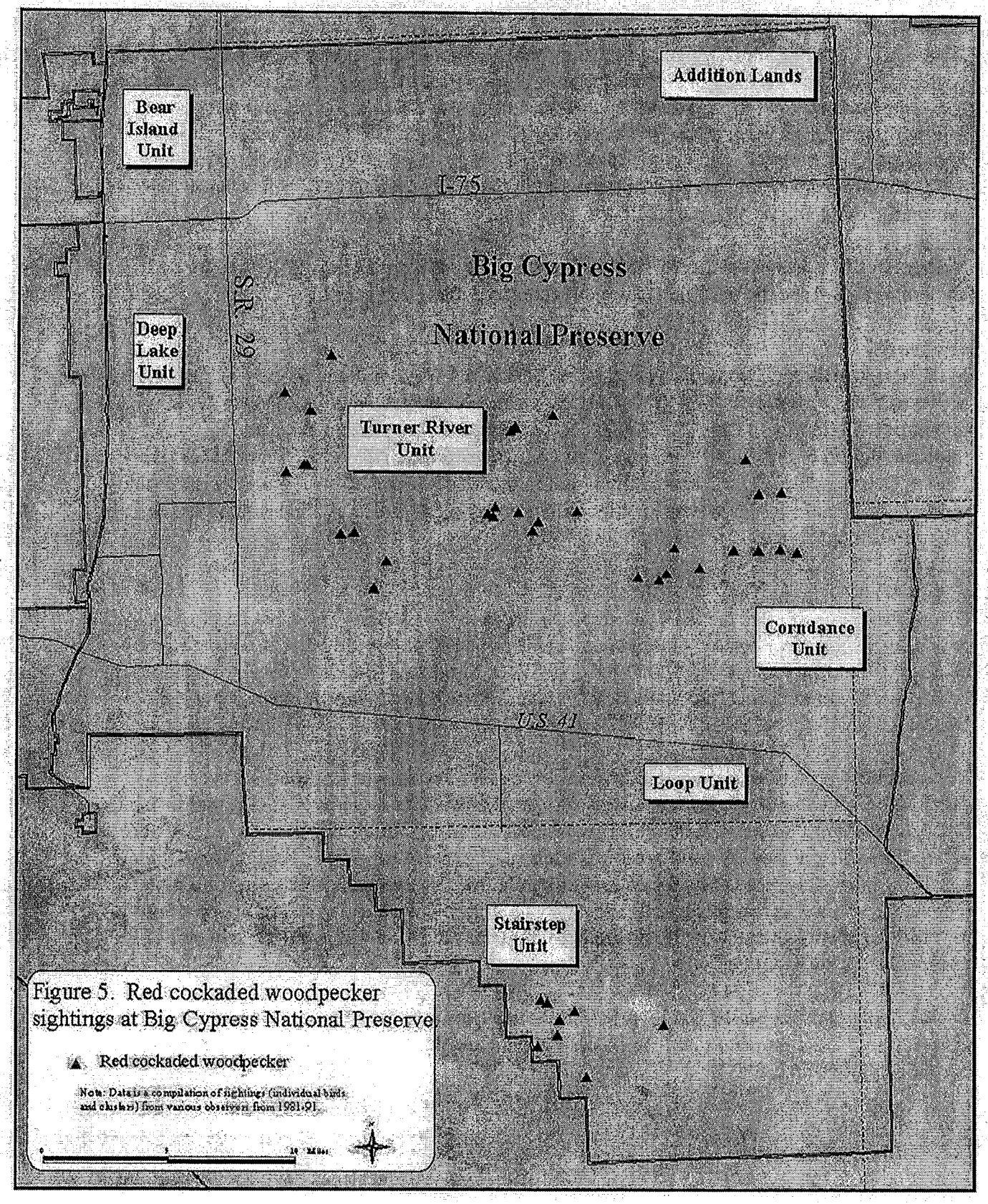


Figure 5. Red cockaded woodpecker sightings at Big Cypress National Preserve

counts since 1969 (for example, 1981, 1985, 1987), it is unknown whether decreases in snail kite numbers in the annual count are due to mortality, dispersal (into areas not counted), decreased productivity, or a combination of these factors. Despite these problems in interpreting the annual counts, the data since 1969 have indicated a generally increasing trend (Bennetts *et al.* 1994). The annual counts since 1995 confirm a continued increasing trend, however, the degree of this apparent increase in the snail kite's population needs to be confirmed with alternative methods of estimating population size.

In BICY, Zone 4 of the Stairsteps Unit is of particular importance. Nesting and foraging occur there to varying degrees.

Factors affecting species environment within the action area

Factors that affect the species environment within the action area include but are not limited to highway, urban, agriculture, resource extraction, recreation, and land management (prescribed fire, water) projects. These activities often result in habitat loss, habitat fragmentation, and habitat degradation.

Individual management actions not related to the ORV Plan will be addressed in subsequent consultations. Management actions related to the ORV Plan may or may not be addressed through this consultation. The placement of designated trails and the implementation of restoration projects may require further consultation once more specific details are developed for the activity. NPS will continue to coordinate these activities with the Service to ensure consultation, if necessary, is completed for these activities.

EFFECTS OF THE ACTION

This analysis was conducted for all species identified in the July 8, 2000, letter from NPS requesting consultation on the proposed action.

Factors to be considered

The factors identified below would apply to the analysis for all listed species discussed in this biological opinion. ORV use on the addition lands will be addressed in an addendum to the *General Management Plan and Final Environmental Impact Statement: Big Cypress National Preserve, Florida. Volume 1* (NPS 1991).

The duration of the effects of the proposed action would be long-term. The change to and reduction in extent of designated trails is proposed to take effect between year 1 and year 5. New area closures would begin in year 1. These actions would continue until changes in the management of BICY were deemed warranted.

The proposed action is located in part of a contiguous system of south Florida public lands that includes Fakahatchee Strand State Preserve, Florida Panther National Wildlife Refuge, Picayune Strand State Forest, and Everglades National Park.

Human activity currently occurs year-round at BICY. ORV use is greatest during the hunting season. Late summer usually sees the smallest number of visitor days each year. High water and high temperatures at this time of the year undoubtedly contribute to the low level of visitation during this time. During years of extreme high water, human activity is greatly reduced to non-existent in some portions of BICY.

Florida panther

The disturbance intensity, or amount of panther habitat affected by the proposed action, at the population level is approximately 581,617 acres, an additional 147,249 acres is found in the BICY addition lands. ORV use on the addition lands will be addressed in an addendum to the *General Management Plan and Final Environmental Impact Statement: Big Cypress National Preserve, Florida. Volume 1* (NPS 1991). Not all of the 581,617 acres is habitat for the panther, however, a large portion of BICY is used by this species. In total, BICY, excluding the addition lands encompasses approximately 23 percent of an estimated 2.2 million acres occupied by the panther (Land *et al.* 1999). The disturbance severity, or effect of the project as a function of the rate of recovery, is negligible. Multiple actions of lesser, equal, or greater disturbance intensity and severity in the vicinity of the proposed action, and throughout the action area, may result in adverse effects to the panther population.

BICY and surrounding lands, including the site of the proposed action, are located on the rapidly developing urban fringe of Collier County about 25 miles from the geographic center of the panther population.

A total of 30 panthers currently use portions of BICY (Figure 6). This includes 4 adult males, 16 adult females, 3 subadult males, 5 subadult females, and 2 unknown sex. Of these 19 have been radio-instrumented. In total, the panthers that have a portion or all of their home range on BICY represents approximately 38 percent of the known population. Telemetry data represent the annual range and movements of radio-collared panthers and not that of uncollared panthers which may have been, or could be, present in the vicinity of the proposed action. Telemetry data are gathered three times per week, or on 43 percent of the days during which the animal may be wearing a functional radio-collar. Telemetry data are collected between sunrise and mid-day and primarily reflect a panther's choice of day rest sites, or maternal den sites. Mating and denning behavior, aggressive encounters between males, movements and home range shifts, dispersal, survival, recruitment, displacements and replacements of individuals, and other social and ecological interactions are interpreted from telemetry data and field investigations (Land *et al.* 1999).

The Bear Island Unit is of great importance to panthers. It has the highest proportion of preferred panther habitat within the original BICY boundaries. Its location north of I-75

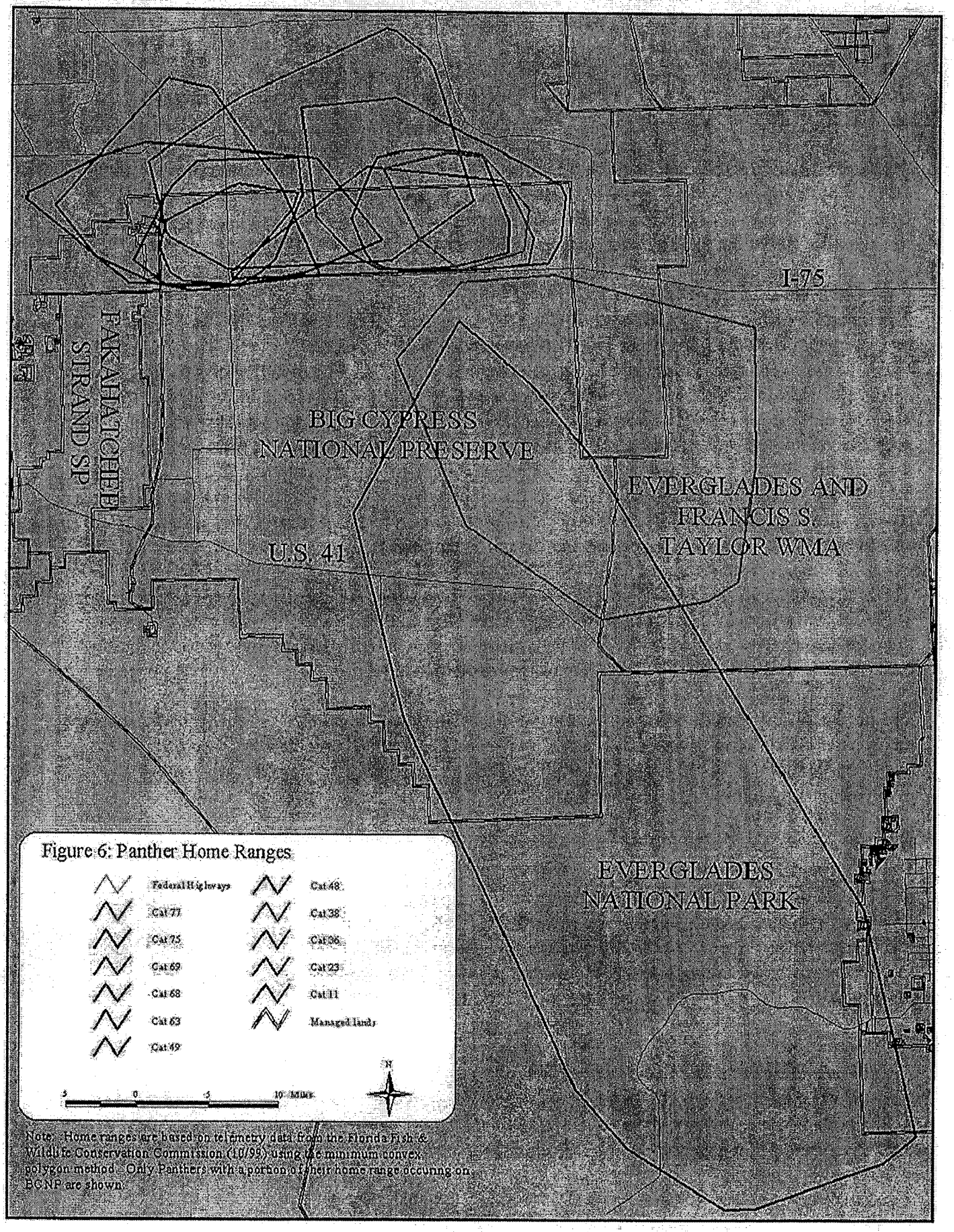


Figure 6: Panther Home Ranges

Note: Home ranges are based on telemetry data from the Florida Fish & Wildlife Conservation Commission (10/99) using the minimum convex polygon method. Only Panthers with a portion of their home range occuring on BCNP are shown.

provides additional prey resources and upland plant communities not available in the southern portion of BICY.

The proposed action will reduce the amount of designated trails in Bear Island by approximately 40 percent to approximately 55 miles. Sixteen miles of these trails are above-grade roads constructed prior to establishment of BICY. The effect of the proposed action will be to reduce the extent of trails that panthers may move away from during periods of high use.

Cape Sable seaside sparrow
The disturbance intensity, or amount of Cape Sable seaside sparrow habitat affected by the proposed action, at the population level is approximately 40,000 acres in the Stairsteps Unit of BICY or approximately 25 percent of the total habitat available. The disturbance severity, or effect of the project as a function of the rate of recovery, is negligible since the area used by majority of western subpopulation A that occurs on BICY will be closed to airboat use. In addition, one of the most important factors affecting Cape Sable seaside sparrows is related to water levels. Water levels and delivery in the Stairsteps Unit have no relation to the ORV Plan and will not be considered further. BICY is developing hydrologic criteria for closure of other areas of potential habitat. This hydrologic closure criteria will avoid impact such as soil subsidence in these areas, and address the issue of water levels.

The Stairsteps Unit, Zone 4 in particular, is the most important area of the preserve for the Cape Sable seaside sparrow. Sparrows were found in the Ochopee Prairie, but have not been located there since the early to mid 1980s. The lack of occurrence is likely due to hydrologic changes in the area that have reduced the suitability of the habitat for nesting.

The proposed action will reduce airboat use in the vicinity of Cape Sable seaside sparrow nesting areas. Researchers and private landowners may access the closed area in Zone 4 on occasion, however, the volume of airboat traffic will be, in essence, eliminated from the majority of available nesting habitat.

Wood stork
The disturbance intensity, or amount of wood stork habitat affected by implementation of this plan should be reduced or remain unchanged. Wood stork nesting in BICY is sporadic and related to hydrologic conditions in the action area. NPS plans to use the *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (Service undated) to ensure that setbacks for ORV trails from colony sites are consistent with the recommendations in the referenced document.

Bald eagle
Disturbance intensity and duration should remain unchanged with respect to bald eagle nest sites. NPS is implementing the recommendations in the *Habitat Management Guidelines for the Bald Eagle in the Southeast Region* (Service 1987a) and plans to route ORV trails no closer than 1,500 feet from known nest locations. Minimization of effects to nesting adult bald eagles is the

primary focus of eagle management activities. The implementation of the proposed action should maintain or improve conditions for nesting bald eagles at BICY

Red-cockaded woodpecker
The disturbance intensity should remain unchanged for the red-cockaded woodpecker. ORV trails near active clusters will be designed to either avoid the cluster, or be placed at least 200 feet from the aggregate of cavity trees that comprise the cluster site. This setback is consistent with recommendations found in Henry (1989).

Snail kite
The disturbance intensity for this species should be reduced through additional closures presented in the proposed action. Information on appropriate set-back distances from nesting sites is available and will be used to determine the placement of designated trails in sensitive areas (Rodgers 1991). Additional research has been conducted specific to airboats to determine recommended set-back distances to colonial waterbirds; this information should be published and available soon. Revisions to trail placement may be considered upon review of the recommendations contained in the follow-up study.

Analyses for effects of the action

Florida panther
The proposed action will: (1) continue to allow a reduced amount of trails to alter panther movements during the hunting season in the Bear Island Unit; (2) continue to allow human use of areas important to the Florida panther; and (3) reduce the fragmentation of habitat that supports panther prey by restoring heavily impacted or sensitive vegetative communities.

The continuation of ORV activities in areas occupied by panthers, particularly Bear Island, will result in a continuation of the avoidance behavior observed by Janis and Clark (1999). The reduction in the extent of designated trails could reduce the extent of trail avoidance observed. In addition, continued use of BICY by ORV users and other visitors would maintain the risk of human/panther interaction at existing levels. The reduction in the extent of designated trails and the implementation of designated trails could reduce ORV use by the general public should they believe designated trails to be too restrictive. The limit of permit issuance to 2,000 permits ensures that levels of permitted ORV users does not increase.

Restoration activities included in the plan should increase the amount and quality of habitat for both panther and prey species. This increase could contribute to population recovery by providing additional, higher quality prey items. The change in the extent of designated trails in Bear Island could provide additional buffer in popular denning areas.

Cape Sable seaside sparrow
The proposed action will: (1) reduce human use of Zone 4 of the Stairsteps Unit; (2) ensure that airboats do not operate in potential habitat during periods of low water; and (3) provide additional security for nesting Cape Sable seaside sparrows.

The closure of portions of Zone 4 is a positive conservation program that should further the purpose of the ESA by eliminating recreational use of the area by airboaters. While there is no evidence to suggest airboat activity has been detrimental to Cape Sable seaside sparrow habitat, closure of the area will reduce the possibility of airboat use exacerbating the impacts from unplanned or inappropriate water deliveries outside the control of NPS.

The closure of portions of Zone 4 will ensure that probability of human interaction with breeding Cape Sable seaside sparrows is low. Researchers will have to access the area both inside and outside the nesting season to conduct investigations on the sparrow and its habitat.

The hydrologic triggers developed by NPS will ensure that airboats do not operate at times when low water levels create the likelihood of soil subsidence or erosion from wave action associated with airboat use. This measure is also a positive conservation effort to promote recover of the Cape Sable seaside sparrow.

Wood stork
The proposed action will: (1) continue to provide buffers around colony sites should nesting occur and (2) promote the development of additional prey resources through restoration efforts.

Utilization of the *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (Service undated) will ensure that nesting storks are protected from human disturbance. Restoration activities undertaken as a result of implementation of this plan should increase the amount and quality of habitat for fish species important to the wood stork. As chicks approach fledging, their food intake increases making nearby foraging habitat more important to the adult storks.

Bald eagle
The proposed action will: (1) continue to provide buffers around bald eagle nesting sites and (2) promote the development of additional prey resources through restoration efforts.

The proposed action should continue to provide bald eagles with adequate protection of their nest sites in BICY. No change is anticipated from the current management to the proposed action. Restoration activities should improve the quality of habitat for prey species, thus providing a slight benefit to the bald eagle.

Red-cockaded woodpecker
The proposed action will: (1) continue to provide buffers around clusters and (2) promote the development of additional foraging resources through restoration efforts.

Buffers around clusters should provide adequate protection from disturbance by ORV's. There have been no documented detrimental effects of ORV use on this species. Avon Park Air Force Range has approximately 29 active clusters and is regularly used for military training and bombing practice. Buffers exist around the clusters and reproductive success is equal to that in other areas. While the available information indicates that red-cockaded woodpeckers are not

affected by human disturbance and ORV use, the implementation of buffers around clusters is a positive conservation program designed to assist in recovery of this species.

Snail kite
The proposed action will: (1) continue to allow airboat use in areas used by snail kites and (2) promote the development of additional prey resources through restoration efforts.

Airboat use will continue to occur in some areas used by snail kites. Snail kites appear to be more tolerant of this activity than most colonial nesters. The closure of portions of Zone 4 and all of Zone 1 in the Stairsteps Unit should increase the amount of undisturbed habitat for this species. This action would also be considered a positive conservation program that will promote recovery. Restoration efforts should improve hydrology and sheet flow in some areas, possibly improving water quality and habitat for apple snails (*Pomacea paludosus*), the snail kites' primary food source.

Species response to the proposed action

Florida panther
The panther will continue to move away from designated trails in Bear Island, and possibly elsewhere as a result of the proposed action. This could alter normal breeding, feeding, and sheltering behavior.

Adverse effects to the panther will be minimized by reducing the extent of designated trails in Bear Island, providing opportunities for recovery-oriented research and management activities on BICY, and improvements in habitat quality through restoration efforts.

Cape Sable seaside sparrow
The breeding areas for the Cape Sable seaside sparrow will be further buffered by the closure of a portion of Zone 4 in the proposed action. It is anticipated that this closure would be benign or beneficial to the Cape Sable. Opportunities for recovery-oriented research and management activities should improve habitat conditions for this species. NPS cannot control water deliveries, therefore, adverse conditions resulting from water levels cannot be minimized or ameliorated.

Wood stork
The proposed action includes set-backs from wood stork colonies. This should provide benefit to wood storks when hydrologic conditions are appropriate for nesting in BICY. Restoration activities that improve habitat for wood stork prey species should improve foraging opportunities for this species in the long-term.

Bald eagle
It is anticipated that the proposed action would be benign or beneficial to the bald eagle. BICY currently protects nesting sites, therefore, any benefits from the proposed action would come from habitat quality improvements. Since eagles nest in the Stairsteps Unit, it is possible that

the proposed closures could further minimize the risk of human interactions with nesting eagles. Designated trails will ensure that ORV users do not approach nests during the nesting season.

Red-cockaded woodpecker
Since there is little evidence to suggest that ORV's have adverse effects on red-cockaded woodpeckers, the proposed action should be benign or beneficial to this species. Restoration activities should provide additional, higher quality foraging habitat over the long-term for this species. Ensuring designated trails are set back from active clusters will assure long-term impacts from ORV use, such as soil compaction resulting in tree death, will not occur.

Snail kite
Snail kites will, likely, continue to use BICY in the manner they use it now. Proposed closures in the Stairsteps Unit could provide additional benefit to this species through improvements in habitat quality. It is the Service's opinion that the proposed action would be benign or beneficial to this species.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA. Cumulative effects considered in this section affect all the listed species identified in the ORV Plan. The extent to which these cumulative effects impact each species may vary. Anticipated future actions in the action area that will degrade, fragment, or directly eliminate habitat include:

1. Population Growth. The human population of Florida has doubled every 20 years since 1830 and has now reached 13 million, with over 50 percent residing in south Florida. Florida's population, fourth largest in the United States, is expected to reach 17.8 million (127 persons per km^2) by 2010 (Floyd 1997). The population of south Florida exceeded one million (130 persons per km^2) in 1950, three million (391 persons per km^2) in 1970, and six million (780 persons per km^2) in 1990. The population growth rate of south Florida has exceeded the statewide average since 1960. South Florida's population is projected to reach 8.2 million (1,070 persons per km^2) by 2010 (Floyd 1997). One example illustrating the connection between human population growth, habitat loss, fragmentation, and degradation can be seen in a 5,986 square mile area of southwest Florida, *i.e.*, Charlotte, Collier, Glades, Hendry, Lee and Sarasota Counties. Between 1975 and 1993, the amount of urban land and transitional land cleared and prepared for development increased from 641 square miles or 11 percent to 1,372 square miles or 23 percent (SWFRPC 1995).

2. Land Clearing. Clearing or timbering of upland habitat for grazing, vegetable crop production (primarily tomatoes, peppers, squash, watermelon), citrus production, and nurseries is common in the action area. These uses require only a Notice of Clearing or

clearing permit from Collier County and may be exempt from stringent wetland regulation or only require a surface water management or water use permit from the SFWMD. Lands on, and adjacent, to the site of the proposed action include uplands that have been cleared for agricultural uses. Panther activity is lower on agricultural lands than native lands however agricultural lands can, and may need to, be restored to a native condition to achieve panther recovery goals. Conversion of agricultural lands to urban uses precludes this opportunity.

3. SFWMD Permits. The SFWMD is responsible for permitting the construction, alteration, operation, maintenance, removal and abandonment of surface water management systems within its jurisdictional boundaries (SFWMD 1996). The SFWMD has issued 382 surface water management permits or ground water use permits covering 384,000 hectares (948,480 acres) or 64 percent of the Immokalee Rise Physiographic Region (Mazzotti *et al.* 1992), *i.e.*, approximately 64 percent of the occupied panther range in private ownership.

4. Subsequent intensification of uses on lands where initial habitat clearing occurred under agricultural uses. Most single-family home construction and some low-density "ranchette" style subdivisions do not trigger rezoning thresholds or more intensive local development regulation instituted under local growth management provisions. Other than local building permits, no additional permits from, or notification to, State or Federal permitting agencies is required.

5. Mining. Eighty-five percent of 17,500 acres zoned and approved, as of December 1992, for commercial excavation in eastern Lee County is Priority 2 panther habitat. Similar figures are not available for Collier County, but commercial excavation is permitted as a conditional use in the rural agriculture district (Land Development Code 2.2.2.3.1). Small mines proposed on previously cleared land with no wetlands are a harbinger of future urban development in the rural agriculture district.

6. Golf Courses. Lee County Commissioners approved a county growth plan amendment in June 1999 that would allow golf course development on 22,000 acres of Priority 2 panther habitat in the CREW ecological unit. In Collier County golf course development is permitted in the rural agriculture district (Land Development Code 2.2.2.2.2.10). Growth management critics see this as a loophole that permits urban development outside the designated urban boundary. Three of twenty golf courses constructed in Collier County since 1995 are located in the rural agriculture district; Bonita Bay East, 36 holes, 1,000 acres; Forest Glen, 18 holes, 640 acres; and Twin Eagles, 36 holes, 1,115 acres. As the number of vacant tracts 300 acres or larger within the urban boundary diminishes the likelihood of golf course development on rural lands inhabited by the panther increases. A strong local and regional housing market and low land prices favor development in the rural agriculture district. Land already converted to agricultural uses, and with minimal or no wetlands, is a prime candidate for development.

7. State and County Road Projects. New roads and road extensions create development opportunities. Road improvements, from dirt to pavement and from 2-lanes to 4-lanes, may increase the potential profit and, therefore, the likelihood of roadside development. A 33-meter (108-foot) and 100-meter (328-foot) cleared right-of-way would consume, respectively, 1.9 and 5.7 percent of each section of land through which it passes (Ruediger 1998). Highways stimulate more land development than is generally recognized. Change occurs as far away as 3.2 km on either side of the highway. Thus, for each kilometer a highway is extended, 644 hectares (1,590 acres) are opened to new development (Wolf 1981). Concurrent with road and land development, motor vehicle registrations have increased 374, 267, and 371 percent in Collier, Hendry, and Lee Counties, respectively, between 1974 and 1992 (SWFRPC 1995). Proposed road projects of concern include the proposed improvement of Miller Boulevard Extension and Sabal Palm Road from dirt to pavement in the Belle Meade Ecological Unit and the proposed extension of County Road 951 from its terminus at Immokalee Road in Collier County to Corkscrew Road in Lee County. State Road 80 in Hendry County will eventually require the addition of two lanes to handle increased cross-state traffic. Increased development along an improved State Road 80 could restrict panther dispersal into central Florida.

8. An increase in disturbances related to increased human presence and development in the action area. Noise, lighting, pollution, pet and human disturbance may contribute to behavioral changes, such as habitat avoidance, for the panther in the action area.

CONCLUSION

The disturbance intensity, or amount of panther habitat affected by the proposed action, at the population level is approximately 581,617 acres; an additional 147,249 acres is found in the BICY addition lands. ORV use on the addition lands will be addressed in an addendum to the *General Management Plan and Final Environmental Impact Statement: Big Cypress National Preserve, Florida. Volume 1* (NPS 1991). Not all of the 581,617 acres is habitat for the panther, however, a large portion of BICY is used by this species. In total, BICY, excluding the addition lands encompasses approximately 23 percent of an estimated 2.2 million acres occupied by the panther (Land *et al.* 1999). The disturbance severity, or effect of the project as a function of the rate of recovery, is negligible. Multiple actions of lesser, equal, or greater disturbance intensity and severity in the vicinity of the proposed action, and throughout the action area, may result in adverse effects to the panther population.

After reviewing the current status of the panther, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, it is the Service's biological opinion that the implementation of the *Recreational Off-Road Vehicle Management Plan/Supplemental Environmental Impact Statement* (NPS 2000) is not likely to jeopardize the Florida panther. No critical habitat has been designated for this species, therefore, none will be affected.

INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and Federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by NPS for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If NPS (1) fails to assume and implement the terms and conditions or (2) fails to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protection coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, NPS must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR 402.14(i)(3)].

Amount or extent of take anticipated

The Service anticipates panthers could be taken by implementation of the proposed action. Incidental take is not a substitute for reasonable and prudent measures as a means of minimizing the impacts of incidental take. The incidental take is expected to be in the form of harassment.

The Service anticipates incidental take of Florida panthers will be difficult to detect for the following reasons: losses may be masked by seasonal fluctuations in numbers or movements; the panthers large home range and use of its habitat make incidental take difficult to quantify; data collection on radio-instrumented panthers provides limited knowledge on actual daily movement patterns. However, the following level of take for the panther may be anticipated as movement away from designated trails for a period of at least 3 years.

Effect of take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the panther.

Reasonable and prudent measure

The Service believes the NPS has incorporated many of the reasonable and prudent measures necessary and appropriate to minimize impacts of incidental take of panthers into the design of the proposed action. The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize the impact of incidental take to the Florida panther.

1. NPS will reduce the extent of trails in BICY.

2. Appropriate levels of use compatible with the Florida panther need to be determined for all areas of BICY.

Terms and conditions

In order to be exempt from the prohibitions of section 9 of the ESA, NPS must comply with the following terms and conditions, which implement the reasonable and prudent measure described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

1. NPS will reduce the extent of trails in Bear Island and employ designated trails in the balance of BICY. This will minimize the spatial extent of ORV use in BICY.

2. NPS will study the level of ORV use in Bear Island to determine the level that is acceptable and compatible with panther use of this management unit.

3. NPS will continue panther monitoring and initiate a study similar to the Janis and Clark study concurrent with the ORV carrying capacity and level of use study. This will provide data on panther behavior associated with known levels of human activity.

4. NPS will provide the Service with copies of studies performed on panther use and related ORV investigations.

5. NPS will implement studies described in Table 3 of the proposed action to preserve panthers and determine the ORV carrying capacity for management units within BICY.

6. Upon locating a dead, injured, or sick panther specimen, initial notification must be made to the nearest Service Law Enforcement Office (Mr. Vance M. Eaddy; Fish and Wildlife Service; 9549 Koger Blvd., Suite 111; St. Petersburg, Florida 33702; 727-570-5398). Secondary notification should be made to the Florida Fish and Wildlife Conservation Commission. Care should be taken in handling sick or injured specimens to ensure effective treatment and care, or in the handling of dead specimens to preserve biological material in the best possible state for later analysis as to the cause of death. In conjunction with the care of sick or injured panthers or preservation of biological materials from a dead animal, the finder has the responsibility to carry out instructions

provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. Entry into the Stairsteps Unit will be coordinated with the Superintendent's Office. The Superintendent's Office may then decide if further coordination or consultation with the Service is necessary.

2. Studies pertinent to listed species or habitat restoration should be initiated and completed as soon as possible.

3. Coordination with the Service should continue. Since restoration activities may further the recovery of several listed species in BICY, coordination with the Service may ensure the maximum benefit of proposed activities associated with the proposed action to these species.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects of benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the proposed action. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or

extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have questions regarding this biological opinion, please contact Jane Tutton at (561) 562-3909 extension 235.

Sincerely,

James J. Slack
Project Leader
South Florida Field Office

cc:
Service, Ecological Services-Naples
Service, Florida Panther National Wildlife Refuge
Service, Ecological Services-Atlanta, GA
Service,Florida State Supervisor-Vero Beach
EPA, Atlanta, Georgia
NPS, Ochopee, FL (Susan Kaynor, Deborah Jansen, Ron Clark)
NPS, Denver, Colorado (Pat Kenney)
FWC, Tallahassee, FL
FWC, Punta Gorda, FL (Jim Beever)
FWC, Naples, FL (Darrell Land)

LITERATURE CITED

Ackerman, B.B. 1982. Cougar predation and ecological energetics in southern Utah. M.S. Thesis, Utah State University, Logan, Utah *in* F.G. Van Dyke, R.H. Brocke, H.G. Shaw, B.B. Ackerman, T.P. Hemker, F.G. Lindzey. 1986. Reactions of mountain lions to logging and human activity. J. Wildlife Management 50(1):95-102.

Bangs, O. 1899. The Florida Puma. Proceedings of the Biological Society of Washington. 13:15-17.

Barone, M.A., M.E. Roelke, J. Howard, J.L. Brown, A.E. Anderson, and D.E. Wildt. 1994. Reproductive characteristics of male Florida panthers: comparative studies from Florida, Texas, Colorado, Latin America, and North American zoos. Journal of Mammalogy 75(1):150-172.

Barr, M.C., P.P. Calle, M.E. Roelke, and F.W. Scott. 1989. Feline immunodeficiency virus infection in nondomestic felids. Journal of Zoo and Wildlife Medicine 20 (3):265-272.

Belden, R.C. 1977. If you see a panther. Florida Wildlife. September-October 1977.

Belden, R.C. 1986. "Florida Panther Recovery Plan Implementation - A 1983 Progress Report", pp. 159-172 in S.D. Miller and D.D. Everett (eds.), Cats of the world: Biology, Conservation and Management, Proceedings of the Second International Cat Symposium. Caesare Kleberg Wildlife Reserarch Institute. Kingsville, Texas.

Belden, R.C. 1988. "The Florida Panther" in Audubon Wildlife Report. 1988/1989. National Audubon Society, New York, NY: 515-532.

Belden, R.C., W.B. Frankenberger, R.T. McBride, and S.T. Schwikert. 1988. Panther habitat use in southern Florida. Journal of Wildlife Management 52(4):660-663.

Belden, R.C., and B.W. Hagedorn. 1993. Feasibility of translocating panthers into northeast Florida. Journal of Wildlife Management 57(2):338-397.

Belden, R.C., and J.W. McCown. 1996. Florida panther reintroduction feasibility study. Final report, July 1, 1992 to June 30, 1995. Study Number 7507, Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Cory, C.B. 1896. Hunting and fishing in Florida. Estes and Lauriat. Boston, Massachusetts.

Dees, C.S., J.D. Clark and F. T. van Manen. 1999. Florida panther habitat use in response to prescribed fire at Florida Panther National Wildlife Refuge and Big Cypress National Preserve. Final Report. University of Tennessee, Knoxville, Tennessee.

Duever, M.J., J.E. Carlson, J.F. Meeder, L.C. Duever, L.H. Gunderson, L.A. Riopelle, T.R. Alexander, R.F. Myers, and D.P. Spangler. 1979. Resource inventory and analysis of the Big Cypress National Preserve. Final Report to the National Park Service, University of Florida, Gainesville, and National Audubon Society Ecosystem Research Unit, Naples, Florida. 2 volumes.

Dunbar, M.R. 1993. Florida panther biomedical investigation. Annual Performance Report, July 1, 1992-June 30, 1993. Study No. 7506. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Floyd, S.S., Editor. 1997. Florida Statistical Abstract. Bureau of Economic and Business Research, Warrington College of Business Administration, University of Florida, Gainesville, Florida.

Forrester, D.J., J.A. Conti, and R.C. Belden. 1985. Parasites of the florida panther (Felis concolor coryi). Proceedings Helminthological Society, Washington, D.C. 52(1):95-97

Hall, E.R. 1981. The mammals of North America Volume II. The Ronald Press Company; New York, New York.

Halls, Lowell K., ed. 1984. White-tailed deer, ecology and management. The Wildlife Management Institute; Washington, D.C.

Harlow, R.F. 1959. An evaluation of white-tailed deer habitat in Florida. Florida Game and Fresh Water Fish Commission. Tech. Bull. 5:1-64.

Harris, L.D. 1985. The fragmented forest. University of Chicago Press; Chicago, Illinois.

Henry, V.G. 1989. Guidelines for the preparation of biological assessments and evaluations for the red-cockaded woodpecker. U.S. Fish and Wildlife Service. Atlanta, Georgia.

Janis, M.W. and J.D. Clark. 1999. The effects of public use on the behavior of Florida panthers at Big Cypress National Preserve. University of Tennessee, Knoxville, Tennessee.

Jordan, D.B. 1997. Telephone communication. January 9, 1997.

Kautz, R.S. 1993. Trends in Florida wildlife habitat 1936-1987. Florida Scientist 56(1):7-24.

Kautz, R.S. 1994. Historical Trends Within the Range of the Florida Panther *in* Proceedings of the Florida Panther Conference, Dennis B. Jordan, Editor. Florida Panther Interagency Committee, November 1-3, 1994.

Land, E.D. 1994. Response of the wild Florida panther population to removals for captive breeding. Final Report, Study Number 7571. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Land, E.D. and S.K. Taylor. 1998. Florida panther genetic restoration and management. Annual report, Study Number 7508. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Land, E.D., M. Lotz, D. Shindle, and S.K. Taylor. 1999. Florida panther genetic restoration and management. Annual report, Study Number 7508. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida.

Lasley, M.F.W. 1978. Genetics of livestock improvement. Third ed. Prentice-Hall, Englewood Cliffs, New Jersey.

Logan, T.J., A.C. Eller, Jr., R. Morrell, D. Ruffner, and J. Sewell. 1993. Florida panther habitat preservation plan - south Florida population. Prepared for the Florida Panther Interagency Committee.

Lotz, M.A., E.D. Land, and K.G. Johnson. 1996. Evaluation of State Road 29 wildlife crossings. Final Report, Study No. 7853. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Maehr, D.S. 1989. Florida panther road mortality prevention. Final Performance Report, Study No. 7502. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Maehr, D.S. 1990a. Florida panther movements, social organization, and habitat utilization. Final Performance Report, Study No. 7502. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Maehr, D.S. 1990b. The Florida panther and private lands. Conservation Biology 4 (2):167-170.

Maehr, D.S. 1992a. Florida panther. *In* Rare and Endangered Biota of Florida. Volume I: Mammals. S. R. Humphrey, (ed.). University Press of Florida, Gainesville, Florida.

Maehr, D.S. 1992b. Florida panther distribution and conservation strategy. Final Report, Study No. 7572. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Maehr, D.S. 1993. Response to the wild Florida panther population to removals for captive breeding. Final Report, Study No. 7571. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Maehr, D.S. 1997. The comparative ecology of bobcat, black bear, and Florida panther in south Florida. Bulletin of the Florida Museum of Natural History. University of Florida, Gainesville, Florida.

Maehr, D.S. 1998. University of Kentucky. Letter dated August 25, 1998.

Maehr, D.S., J.C. Roof, E.D. Land, and J.W. McCown. 1989a. First reproduction of a panther (*Felis concolor coryi*) in Southwest Florida. U.S.A. Mammalia 25:37-38.

Maehr, D.S., E.D. Land, J.C. Roof, and J.W. McCown. 1989b. Early maternal behavior in the Florida panther (*Felis concolor coryi*). Am. Midl. Nat. 122:34-43.

Maehr, D.S., R.C. Belden, E.D. Land, and L. Wilkins. 1990a. Food habits of panthers in southwest Florida. Journal of Wildlife Management 54:420-423.

Maehr, D.S., E.D. Land, J.C. Roof, and J.W. McCown. 1990b. Day beds, natal dens, and activity of Florida panthers. Proceedings of the Annual Conference of Southeast Fish and Wildlife Agencies 44:000-000.

Maehr, D.S., E.D. Land, and J.C. Roof. 1991a. Social ecology of Florida panthers. National Geographic Research & Exploration 7 (4):414-431.

Maehr, D.S., E.D. Land, and M.E. Roelke. 1991b. Mortality patterns of panthers in southwest Florida. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies 45:201-207.

Maehr, D.S. and Cox, J.A. Oct. 1995. Landscape Features and Panthers in Florida. Conservation Biology 9(5):1008-1019.

Maehr, D.S., R.C. Lacey, E.D. Lande, O.L. Bass, and T.S. Hoctor. 1999. A reassessment of Florida panther population viability analysis and recovery efforts from multiple perspectives. Paper presented at Population Viability Analysis: Assessing Models for Recovering Endangered Species. University of California, Berkeley and The Wildlife Society. San Diego, California. March 15-16, 1999.

Mazzotti, F.J., L.A. Brandt, L.G. Pearlstine, W.M. Kitchens, T.A. Obreza, F.C. Depkin, N.E. Morris, and C.E. Arnold. 1992. An evaluation of the regional effects of new citrus development on the ecological integrity of wildlife resources in southwest Florida. Final report. South Florida Water Management District; West Palm Beach, Florida.

National Park Service. 2000. Final Off-Road Vehicle Management Plan Supplemental Environmental Impact Statement. Big Cypress National Preserve, Ochopee, Florida.

O'Brien, S.J., M.E. Roelke, L. Marker, A. Newman, C.A. Winkler, D. Meltzer, L. Colly, J.F. Evermann, M. Bush, and D.E. Wildt. 1985. Genetic basis for species vulnerability in the cheetah. Science 227:1428-1434.

Rails, K., and J. Ballou. 1982. Effects of inbreeding on infant mortality in captive primates. International Journal of Primatology 3:491-505.

Roelke, M.E. 1990. Florida panther biomedical investigations. Final Performance Report, July 1, 1986 - June 30, 1990. Study No. 7506. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Rodgers, J.A., Jr. 1991. Minimum buffer zone requirements to protect nesting bird colonies from human disturbance. Final Report July 1, 1989 - June 30, 1991. Study No. 7511. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Roelke, M.E. 1991. Florida panther biomedical investigation. Annual Performance Report, July 1, 1990-June 30, 1991. Study No. 7506. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Roelke, M.E. and C.M. Glass. 1992. Florida panther biomedical investigation. Annual Performance Report, Endangered Species, Project E-1 11-E-7 7506. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Roelke, M.E., J.S. Martenson, and S.J. O'Brien. 1993. The consequences of demographic reduction and genetic depletion in the endangered Florida panther. Current Biology 3:340-350.

Ruediger, B. 1998. Rare carnivores and highways moving into the 21 st century. Pages 10-16 in Evink, G.L., P. Garrett, and J. Berry, eds. Proceedings of the international conference on wildlife ecology and transportation. FL-ER-69-98, Florida Department of Transportation, Tallahassee, Florida.

Schemnitz, S.D. 1972. Distribution and abundance of alligator, bear, deer, and panther in the Everglades Region of Florida. Report to the Florida Game and Fresh Water Fish Commission, Ft. Lauderdale, Florida in fulfillment of contract No. 14-16-0004-308.

Seal, U.S., R.C. Lacy, and Workshop Participants. 1989. Florida panther viability analysis and species survival plan. Report to the U.S. Fish and Wildlife Service, by the Conservation Breeding Specialist Group, Species Survival Commission, IUCN; Apple Valley, Minnesota.

Seal, U.S., R.C. Lacy, and Workshop Participants. 1992. Genetic management strategies and population viability of the Florid panther. Report to the U.S. Fish and Wildlife Service, by the Conservation Breeding Specialist Group, Species Survival Commission, IUCN; Apple Valley, Minnesota.

Seal, U.S. and Workshop Participants. 1994. A plan for genetic restoration and management of the Florida panther (*Felis concolor coryi*). Report to the Florida Game and Fresh Water Fish Commission, by the Conservation Breeding Specialist Group, Species Survival Commission, IUCN; Apple Valley, Minnesota.

Service (U.S. Fish and Wildlife Service). 1967. Endangered and threatened wildlife. *Federal Register* Vol. 32: 4001. March 11, 1967.

Service (U.S. Fish and Wildlife Service). 1987a. Florida Panther (*Felis concolor coryi*) recovery plan. Prepared by the Florida panther interagency committee for the U. S. Fish and Wildlife Service; Atlanta, Georgia.

Service (U.S. Fish and Wildlife Service). 1987b. Habitat management guidelines for the bald eagle in the southeast region. U. S. Fish and Wildlife Service; Atlanta, Georgia.

Service (U.S. Fish and Wildlife Service). 1994b. Final Environmental Assessment - Genetic restoration of the Florida panther. Atlanta, Georgia.

Service (U.S. Fish and Wildlife Service). 1995. Second revision Florida panther recovery plan; Atlanta, Georgia.

Service (U.S. Fish and Wildlife Service). 1999. Multi-species recovery plan for south Florida. U.S. Fish and Wildlife Service, Vero Beach, Florida.

Service (U.S. Fish and Wildlife Service. Undated. Habitat management guidelines for the wood stork in the southeast region. U. S. Fish and Wildlife Service; Atlanta, Georgia.

South Florida Water Management District (SFWMD). 1996. Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District. West Palm Beach, Florida.

Southwest Florida Regional Planning Council (SWFRPC). 1995. Strategic Regional Policy Plan of the Southwest Florida Regional Planning Council. North Fort Myers, Florida.

Smith, G. 1970. Mystery cat. Florida Wildlife 24 (3):4-6.

Taylor, Sharon. 1997. Florida panther biomedical investigations. Annual report, Study Number 7506. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Terborgh, J. 1988. The big things that run the world - a sequel to E. O. Wilson. Conservation Biology 2:402-403.

Tinsley, J.B. 1970. The Florida panther. Great Outdoors Publishing Company; St. Petersburg, Florida.

Townsend, D. 1991. An economic overview of the agricultural expansion in southwest Florida. Unpublished report on file at South Florida Field Office, U.S. Fish and Wildlife Service, Vero Beach, Florida.

U.S. Department of the Interior [DOI]. 1969. Environmental impact statement of the Big Cypress Swamp jetport. Washington, D.C.

Van Dyke, F.G. 1983. A western study of cougar track surveys and environmental disturbances affecting cougars related to the status of the eastern cougar *Felis concolor couguar.* Ph.D. Thesis, State University, New York, Syracuse *in* F.G. Van Dyke, R.H. Brocke, H.G. Shaw, B.B. Ackerman, T.P. Hemker, F.G. Lindzey. 1986. Reactions of mountain lions to logging and human activity. J. Wildlife Management 50(1):95-102.

Van Dyke, F.G., R.H. Brocke, H.G. Shaw, B.B. Ackerman, T.P. Hemker, F.G. Lindzey. 1986. Reactions of mountain lions to logging and human activity. J. Wildlife Management 50(1):95-102.

Wildt, D.E., E.J. Baas, P.K. Chakraborty, T.L. Wolfle, and A.P. Stewart. 1982. Influence of inbreeding on reproductive performance, ejaculate quality and testicular volume in the dog. Theriogenolocy 17:445-452.

Williams, M. 1990. Americans & their forests, a historical geography. Cambridge University Press; New York, New York.

Wolf, P. 1981. Land in America: its value, use and control. Pantheon Books; New York.

Young, S.P. and E.A. Goldman. 1946. The Puma - Mysterious American Cat. Dover Publications, Inc.. New York, New York.

GLOSSARY

Access points: Designated areas that may be hardened or improved where ORVs have access to designated ORV trails from established roads.

Adaptive management: A management strategy that relies on feedback from implementation of activities and new information to make continuous improvements.

Addition Lands: Approximately 147,000 acres of adjacent lands added to the preserve in 1988 by PL 100-301.

Backcountry: Primitive, undeveloped portions of the preserve.

Community (also biotic community): Includes all of the biological populations of an area; a level of organization in the study of ecology.

Decibel (dB): A unit for measuring the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20.

Federally-listed species: Species listed by federal agencies as endangered, threatened, or otherwise categorized as of concern.

Frogging: Hunting and collecting of frogs.

Frontcountry: Areas of the preserve within and adjacent to established roads.

Habitat: The place where an organism lives.

Management unit: Land divisions within the preserve to facilitate management of land use and preservation.

Mashing: The matting of vegetation by airboats during frogging activities.

Precautionary principle: A principle of conservation biology that states if the effects of an action are unknown, management actions should be protective of the biological system.

Protected species: Species protected by any local, state, or federal statutes or regulations.

Rutting: The creation of sunken tracts or grooves by the passage of ORVs.

Sustainability: Managing natural systems in a manner that leaves them unimpaired.

BIBLIOGRAPHY

Beardsley, G.

1995 Affidavit of Gary Beardsley to the U.S. District Court for the Middle District of Florida, Fort Myers Division. The Florida Biodiversity Project, *et al.*, Plaintiffs, v. Kennedy, *et al.*, Defendants, Case No. 95-50-CIV-FTM-24D.

Bennetts, R.E., M.W. Collopy, and S.R. Beissinger

1988 *Nesting Ecology of Snail Kites in Water Conservation Area 3A*. Gainesville FL: Department of Wildlife and Range Science, University of Florida, Gainesville Florida Cooperative Fish and Wildlife Research Unit. Technical Report No. 31.

Council on Environmental Quality, Executive Office of the President

1978 "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act." *Code of Federal Regulations* Title 40, Parts 1500-1508. Washington, D.C.

Curnett, J.L. and S.L. Pimm

1993 *Status and Ecology of the Cape Sable Seaside Sparrow.* Vero Beach, FL: Unpublished report prepared for the U.S. Fish and Wildlife Service and National Park Service.

Curnutt, J.L., A.L. Mayer, T.M. Brooks, L. Manne, O.L. Bass, D.M. Fleming, and S.L. Pimm

1998 "Population dynamics of the endangered Cape Sable seaside-sparrow." *Animal Conservation* 1:11-21.

Dreitz, V.J., J.A. Duberstein, D.L. DeAngelis, and W.M. Kitchens

1999 *Breeding Activity of Snail Kites in the "Stairsteps Unit" of Everglades National Park and Big Cypress National Preserve.* USGS Annual Report to Big Cypress.

Duever, M.J., J.E. Carlson, and L.A. Riopelle

1981 *Off Road Vehicles and Their Impacts in the Big Cypress National Preserve.* U.S. Department of the Interior, National Park Service, Big Cypress National Preserve. T-614. National Audubon Society, Ecosystem Research Unit.

Duever, M.J., J.E. Carlson, J.F. Meeder, L.C. Duever, L.H. Gunderson, L. Riopelle, T.R. Alexander, R.L. Myers, and D.P. Spangler

1986a *The Big Cypress National Preserve.* U.S. Department of the Interior, National Park Service, Big Cypress National Preserve. No. 8. National Audubon Society.

Duever, M.J., L.A. Riopelle, and J.M. McCollom

1986b *Long Term Recovery of Experimental Off-Road Vehicle Impacts and Abandoned Old Trails in the Big Cypress National Preserve.* U.S. Department of the Interior, National Park Service, Big Cypress National Preserve. SFRC-86/09. National Audubon Society, Ecosystem Research Unit.

Everglades Jetport Advisory Board

1970 *Alternative Uses of Big Cypress Swamp.* Unpublished report quoted in *The Big Cypress National Preserve.* M.J. Duever, J.E. Carlson, J.F. Meeder, L.C. Duever, L.H. Gunderson, L. Riopelle, T.R. Alexander, R.L. Myers, and D.P. Spangler (Duever *et al.* 1986a).

Farrell, T., A. Kendra, J. Roggenbuck, T. Hall, and J. Marion

1998 *Off-road Vehicle Riders in Big Cypress National Preserve: Results from a Survey of Permit Holders. Draft Research Report.* Blacksburg, VA: Virginia Polytechnic Institute and State University, Department of Forestry.

Florida Fish and Wildlife Conservation Commission

1980-1999 *Annual Eagle Survey Report.* Tallahassee FL.

1997 *Florida's Endangered Species, Threatened Species and Species of Special Concern.* Tallahassee FL.

Hendry, V.G.

1989 *Guidelines for Preparation of Biological Assessments and Evaluations for Red-cockaded Woodpecker.* Atlanta, GA: U.S. Fish and Wildlife Service.

Hull, R.B.

1998 *Big Cypress National Preserve Off-Road Vehicle Recreation and its Benefits: Final Research Report.* Blacksburg, VA: Virginia Polytechnic Institute and State University, Department of Forestry.

Janis, M.W. and J.D. Clark.

1999 *Final Report to the Big Cypress National Preserve, National Park Service: The Effects of Recreational Deer and Hog Hunting on the Behavior of Florida Panthers.* A thesis presented for the Master of Science Degree. Knoxville, TN: The University of Tennessee.

Jansen, D.K.

1986 *Final Report: Study E-1-10m, Part of the Florida Endangered Wildlife Panther Research and Recovery Plan.* Tallahassee, FL: Florida Game and Fresh Water Fish Commission.

1996 "The Effects of High Water on White-tailed Deer Survival and Reproduction in Southeastern Big Cypress National Preserve." In *Ecological Assessment of the 1994-1995 High Water Conditions in the Southern Everglades: Proceedings of the Conference*, edited by T. V. Armentano, 67-69. Miami, FL.

Jansen, D.K. and J.J. Brooks

1996. *Big Cypress National Preserve in 1996: Late Season Wading Bird Nesting Report for South Florida*. West Palm Beach, FL: South Florida Water Management District.

Land, E.D.

1991 *Big Cypress Deer/Panther Relationships: Deer Mortality*. Tallahassee FL: Florida Game and Fresh Water Fish Commission. Final Report. Study No. 7509/Federal No. E-1-11 II-E-5b.

Logan, T.J., A.C. Eller, Jr., R. Morrell, D. Ruffner, and J. Sewell

1993 *Florida Panther Habitat Preservation Plan – South Florida Population*. Prepared for the Florida Panther Interagency Committee

McBride, R.

2000 *Current Panther Distribution and Habitat Use: A Review of Field Notes, Fall 1999 - Winter 2000.* Report to the Florida Panther Subteam of MERIT. U.S. Fish and Wildlife Service.

Meehan, M.

1999 *Big Cypress National Preserve Visitor Study*. Moscow, ID: University of Idaho, Cooperative Park Studies Unit, Report 109, Visitor Services Project.

National Park Service, U.S. Department of the Interior

1988 *Management Policies*. Washington, D.C.

1990 *I-75 Recreational Access Plan: Environmental Assessment*. Ochopee FL: Big Cypress National Preserve.

1991 *General Management Plan and Final Environmental Impact Statement: Big Cypress National Preserve, Florida. Volume 1*. Ochopee, FL: Big Cypress National Preserve.

1992 *Record of Decision: General Management Plan and Final Environmental Impact Statement, Big Cypress National Preserve, Florida.* Ochopee, FL: Big Cypress National Preserve.

1993 *National Park Service Floodplain Management Guideline*. Special Directive 93-4. Fort Collins CO: Water Resources Division.

1996 *Water Resources Management Plan: Big Cypress National Preserve*, by W. J. Schneider, D.P. Weeks, and D.L. Sharrow. Ochopee, FL: Big Cypress National Preserve.

1997a *Strategic Plan: 1997 – 2002 and Annual Performance Plan Fiscal 1998, Big Cypress National Preserve.* Ochopee, FL: Big Cypress National Preserve.

1997b *VERP: The Visitor Experience and Resource Protection (VERP) Framework. A Handbook for Planners and Managers.* Denver, CO: Denver Service Center.

1998a *Director's Order #77-1: Wetland Protection.* Denver CO: Water Resources Division.

1998b *Procedural Manual #77-1: Wetland Protection.* Denver CO: Water Resources Division.

1999 *Draft Directors Order 12: Conservation Planning and Environmental Impact Analysis*. Washington, D.C.

National Research Council

1992 *Restoration of Aquatic Ecosystems*. Washington, D.C.: National Academy of Sciences.

Pernas, A.J.

1999 Personal communication from A.J. Pernas, resource management specialist. Ochopee, FL: Big Cypress National Preserve.

Pernas, A.J., D. Weeks, and C. Bates

1995 "Dye trace field study – Ochopee Prairie." Unpublished data from the Ochopee Prairie Monitoring Program on file at Big Cypress National Preserve, Ochopee, FL.

Rodgers, J.A. Jr., H.W. Kale II, and H.T. Smith

1996 *Rare and Endangered Biota of Florida, Volume V: Birds.* Gainesville, FL: University Press of Florida.

Sargent, R.A. and R.F. Labisky

1995 "Home range of male white-tailed deer in hunted and non-hunted populations." *Proceedings of the Annual Conference of the Southeast Association of Fish and Wildlife Agencies* 49:389-398.

Smidt, M. and C.R. Blinn

1995 *Logging for the 21st Century: Protecting the Forest Environment.* Minnesota Extension Service, University of Minnesota. FO-6518-GO. Available on Internet from www.mes.umn.edu/Documents/D/D/DD6518.html.

Sobczak, R.V. and A.J. Pernas

2000 "Increased Off-Road Vehicle Impacts as a Result of Longer Flooding Duration in Big Cypress National Preserve." Draft NPS short paper. Ochopee, FL: Big Cypress National Preserve.

Sykes, P.W., Jr.

1987 "Some Aspects of the Breeding Biology of the Snail Kite in Florida." *Florida Field Naturalist* 15:57-70.

U.S. Army Corps of Engineers

1999 *Central and Southern Florida Project Comprehensive Review Study: Final Integrated Feasibility Report and Programmatic Environmental Impact Statement.* Jacksonville, FL: Jacksonville District and South Florida Water Management District.

U.S. Fish and Wildlife Service, U.S. Department of the Interior

1983 *Cape Sable Seaside Sparrow Recovery Plan.* Atlanta GA: Southeast Region.

1987 *Habitat Management Guideline For the Bald Eagle in the Southeast Region.* Atlanta, GA: Southeast Region.

1991 "Biological opinion of the U.S. Fish and Wildlife Service regarding the Big Cypress General Management Plan." In Appendix I of *General Management Plan and Final Environmental Impact Statement: Big Cypress National Preserve, Florida. Volume 1.*

1996 *Florida Manatee Recovery Plan.* Atlanta, GA: Florida Manatee Recovery Team.

1999a *Endangered and Threatened Wildlife and Plants: 50 CFR 17.11 and 17.2.* Washington, D.C.

1999b Endangered Species Program. Species Accounts from Endangered and Threatened Species of the Southeastern United States (The Red Book) Region 4. Available on Internet from http://www.fws.gov/r9endspp.

1999c *South Florida Multi-Species Recovery Plan.* Atlanta, GA: Southeast Region.

U.S. House of Representatives.

1973 House Report 502. 93rd Congress, Washington, D.C., Library of Congress.

U.S. Senate

1974 Senate Report 1128. 93rd Congress, Washington, D.C., Library of Congress.

1976 Senate Report 528. 95th Congress, Washington, D.C., Library of Congress.

Welch, R. and M. Madden

1998 *Off-Road Vehicle Trail Database for Big Cypress National Preserve. Final Research Report.* Athens, GA: The University of Georgia, Center for Remote Sensing and Mapping Science.

Welch. R., M. Madden, and R.F. Doren

1999 "Mapping the Everglades." *Photogrammetric Engineering and Remote Sensing* 65(2):166-170

Yamataki, H.

1994 "Agency Position Statement: Condition of Soils in ORV Use Areas at Big Cypress National Preserve." Letter to P. Kenney, Big Cypress National Preserve. Fort Myers, FL: USDA Soil Conservation Service, 2 pp.

INDEX

access point(s), vi, vii, 15, 19, 31, 32, 32, 33, 36, 36, 37, 38, 38, 43, 44, 47, 48, 50, 50, 51, 53, 54, 64, 66, 67, 70, 76, 78, 121, 143, 144, 144, 147, 175, 176, 177, 591

adaptive management, vii, 4, 7, 10, 15, 27, 28, 29, 33, 38, 41, 43, 44, 45, 46, 47, 52, 54, 57, 63, 64, 65, 124, 137, 172, 174, 176, 591

Addition Lands, v, 7, 124, 178, 180, 591

air quality, 22

airboat(s), v, vii, viii, 4, 19, 34, 38, 44, 45, 46, 48, 52, 54, 62, 69, 70, 73, 76, 77, 78, 80, 86, 98, 99, 102, 104, 107, 108, 109, 114, 118, 128, 133, 135, 138, 140, 146, 154, 169, 172, 173, 179, 529, 530, 530, 531, 532, 534, 535, 536, 591

alligator, American, 22, 100, 101, 120

all-terrain cycle(s) (ATCs), v, vii, 10, 29, 34, 36, 37, 38, 48, 53, 70, 72, 76, 108, 109, 112, 114, 119, 173, 175

archeology/archeological resources, 20, 31, 32, 33, 99, 133, 153

backcountry, 28, 36, 37, 38, 45, 46, 47, 48, 50, 64, 70, 77, 109, 112, 114, 118, 119, 120, 121, 144, 175, 591

Bear Island Unit, 34, 67, 69, 76, 103, 104, 139

campground(s), 21, 32, 36, 38, 119, 120, 121, 126, 143

camping, 20, 51, 112, 117, 120

Clean Water Act, 12, 13, 15, 43, 88

closure, vi, vii, vi, viii, 11, 28, 36, 42, 43, 44, 45, 56, 63, 64, 67, 70, 71, 73, 77, 80, 107, 119, 129, 142, 175, 177, 529, 530, 531, 532, 534, 537

Corn Dance Unit, 34, 50, 69, 76, 103

cost estimate, 65, 74

costs, vii, 47, 54, 66, 74, 78, 143, , 170, 174

criteria, 16, 22, 31, 32, 43, 45, 46, 52, 71, 157, 158, 163, 164, 166, 170, 174, 175, 176, 179, 529, 531, 534, 535, 536

cultural resource(s), 9, 10, 11, 17, 17, 18, 20, 23, 23, 28, 66, 155

cypress dome(s), 89, 97, 98

cypress strand(s), 20, 85, 88, 98, 102, 133

Deep Lake Unit, 34, 67, 70, 76, 77

deer, white-tailed, 20, 22, 140, 179, 594, 595

eagle, bald, 20, 31, 33, 45, 46, 80, 101, 102, 136

enabling legislation, v, 3, 10, 15, 17, 22, 29, 529

endangered species, vii, 7, 13, 14, 14, 15, 17, 20, 20, 22, 31, 32, 33, 44, 44, 45, 46, 47, 48, 62, 64, 69, 71, 100, 101, 102, 103, 104, 107, 126, 136, 146, 147, 147, 164, 165, 166, 173, 531, 591, 592, 593, 595, 596

Endangered Species Act, 7, 13, 14, 15, 44, 47, 48, 62, 69, 165, 166

enforcement, 3, 12, 40, 42, 53, 54, 65, 66, 78, 169, 169, 174, 177

environmental impact statement, i, iii, v, xv, xvi, 3, 153, 180, 594, 596

environmental justice, 23, 166

Environmental Protection Agency (EPA), v, 3, 12, 13, 15, 88, 152, 153, 159

Everglades National Park, 17, 88, 153, 154, 155, 592

executive order(s) (E.O.), 3, 9, 11, 11, 12, 13, 16, 19, 20, 23, 67, 73, 166

fees, 47, 74, 173, 174

hog, feral, 20, 22, 80, 107, 119, 139, 140, 140, 179

fishing, 108, 109, 117, 119, 120

Florida National Scenic Trail, 33, 69, 120, 121, 154, 167

four-wheel-drive vehicle(s), (4 x 4), 34, 48, 72, 108, 109, 114, 172

frogging, 117, 591

general management plan, iii, v, vi, vii, viii, 3, 4, 7, 9, 13, 14, 15, 17, 19, 20, 23, 36, 47, 67, 69, 71, 75, 90, 97, 98, 100, 107, 110, 119, 124, 132, 140, 147, 162, 163, 164, 165, 167, 168, 174, 175, 176, 594, 596

geographic information system (GIS), 28, 29, 32, 33, 34, 42, 155, 163, 166, 176, 178, 179

ground pressure, 60

groundwater, 85

hammocks, hardwood, 20, 89, 99, 133, 134, 531

hiker(s), hiking, 21, 32, 47, 120, 121, 167, 180

hunter(s), 20, 81, 108, 110, 119, 120, 121, 143

hunting, 10, 20, 20, 69, 70, 81, 81, 104, 104, 107, 108, 109, 110, 114, 117, 119, 119, 120, 139, 140, 143, 143, 170, 170, 179, 530, 531, 534, 536, 593

hydrology, v, 4, 10, 39, 40, 41, 43, 45, 46, 58, 62, 64, 73, 77, 85, 86, 97, 102, 126, 128, 129, 133, 136, 137, 138, 155, 164, 171, 529, 532, 534, 536

I-75, 104, 120, 132, 164, 594

invasive plants, 17, 19, 39, 40, 42, 56, 57, 62, 90, 103, 134, 178

Jetport, 37, 110, 121, 593

landowner(s), 29, 31, 34, 44, 47, 49, 50, 121, 144, 166, 177

Loop Road, 38, 114, 120, 121, 126, 177, 529

Loop Unit, 34, 70, 76, 99, 103, 112

manatee, 20, 31, 33, 80, 101, 107, 140, 164, 169

mandate(s), iii, vi, viii, 3, 7, 9, 9, 10, 14, 15, 16, 16, 27, 28, 28, 29, 62, 65, 67, 74, 147, 164, 165, 167, 167, 171, 176

mangrove, 20, 79, 99, 133, 178

marsh(es), 20, 33, 79, 80, 85, 90, 97, 97, 98, 98, 103, 114, 131, 132, 132, 136

Miccosukee, 11, 18, 20, 22, 152, 153, 162, 164, 177

mineral management, 23, 130, 138

monitoring, 28, 38, 39, 40, 41, 57, 70, 77, 128, 129, 132, 171, 595

monitoring program, 70, 77, 88, 171, 172

National Environmental Policy Act (NEPA), v, vi, 3, 7, 9, 15, 85, 100, 124, 157, 164, 592

noise, 12, 21, 52, 60, 61, 62, 72, 73, 81, 140, 143, 172, 173, 179

oil and gas, 7, 11, 36, 88, 126, 129, 129, 130, 131, 132, 135, 136, 138, 139, 141, 145

operator permit, 47, 49

Organic Act, v, 3, 9, 10, 28

ORV(s), iii, v, vi, vii, viii, 3, 4, 7, 10, 11, 12, 13, 15, 16, 19, 20, 21, 22, 27, 29, 31, 32, 33, 34, 36, 38, 40, 41, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 58, 59, 60, 67, 69, 70, 71, 73, 74, 75, 81, 86, 88, 89, 90, 97, 98, 99, 100, 104, 108, 109, 110, 112, 114, 117, 118, 119, 121, 124, 128, 129, 132, 133, 136, 137, 138, 139, 140, 142, 143, 144, 147, 151, 152, 164, 167, 168, 170, 173, 175, 180, 591

ORV permit(s), permitting, 4, 20, 31, 54, 74, 81, 109, 110, 112, 114, 118

ORV trail(s), 4, 32, 36, 44, 69, 86, 89, 90, 97, 98, 100, 112, 132

ORV use, vi, vii, viii, 3, 4, 7, 10, 11, 12, 15, 16, 19, 20, 21, 22, 31, 32, 36, 38, 40, 41, 43, 44, 45, 46, 50, 51, 54, 55, 58, 67, 73,

89, 97, 98, 99, 110, 124, 128, 129, 132, 133, 136, 137, 138, 139, 140, 142, 143, 167

ORV user(s), 20, 27, 31, 32, 36, 45, 47, 49, 51, 70, 118, 142, 143, 167, 168, 170, 175

Outstanding Florida Waters, 13, 88

panther, Florida, 14, 15, 20, 31, 36, 45, 46, 62, 69, 70, 80, 101, 104, 139, 140, 146, 147, 168, 179

permit(s), permitting, iii, vi, vii, viii, 3, 4, 11, 12, 13, 15, 28, 29, 31, 36, 37, 38, 43, 44, 46, 47, 48, 49, 50, 51, 53, 54, 57, 64, 65, 66, 67, 69, 71, 72, 74, 77, 78, 81, 110, 112, 114, 119, 127, 132, 142, 143, 144, 165, 167, 168, 173, 174, 175, 176, 177

pineland(s), 20, 31, 79, 80, 99, 100, 103, 134, 137, 178, 531

prairie(s), 20, 31, 33, 58, 63, 79, 80, 85, 90, 97, 98, 102, 107, 112, 114, 121, 128, 131, 132, 136, 529, 531, 532, 536

property(ies), 11, 21, 29, 31, 32, 34, 47, 50, 53, 54, 81, 121, 124, 144, 145, 166, 168, 175

property owner(s), 11, 21, 32, 47, 50, 81, 121, 144, 145, 166, 175

protected species, 20, 135, 168

public involvement, vi, 7, 48

reclamation, 56, 74, 172

record of decision, 3, 4, 7, 36, 47, 69, 71, 75, 165

recreation, recreational, iii, v, vi, 3, 4, 4, 7, 9, 10, 12, 15, 16, 17, 18, 20, 21, 22, 27, 28, 31, 32, 32, 34, 40, 42, 43, 47, 48, 49, 50, 51, 52, 60, 63, 64, 72, 75, 81, 109, 110, 118, 118, 119, 120, 124, 124, 143, 144, 146, 157, 158, 164, 167, 168, 169, 170, 176, 180,, 530, 545

red-cockaded woodpecker, 20, 31, 45, 80, 100, 103, 137, 138

research, vi, vii, 3, 11, 27, 28, 40, 41, 42, 43, 44, 45, 47, 50, 51, 52, 57, 58, 59, 64, 65, 66, 70, 73, 78, 109, 124, 163, 171, 173, 175, 177, 179

restoration, 3, 4, 10, 12, 13, 13, 14, 17, 19, 27, 28, 31, 31, 32, 32, 40, 41, 42, 51, 54, 55, 55, 55, 56, 56, 57, 57, 57, 58, 59, 62, 63, 63, 65, 66, 66, 70, 73, 74, 78, 79, 79, 80, 90, 109, 126, 126, 128, 128, 129, 129, 129, 130, 130, 130, 131, 131vii, 132, 132, 134, 134, 135, 136, 137, 137, 138, 138, 140, 143, 146, 147, 147, 162, 169, 1714, 171

rule(s)/regulation(s), iii, vi, 3, 7, 10, 11, 12, 13, 19, 48, 50, 51, 52, 53, 54, 63, 67, 71, 72, 73, 74, 85, 86, 107, 119, 125, 133, 137, 142, 144, 165, 167, 175, 534, 536, 591

sacred site(s), 17, 20, 31, 32, 33

safety, 11, 13, 18, 32, 43, 45, 46, 47, 48, 51, 52, 67, 71, 72, 130, 136, 175

schedule(s), 7, 41, 57, 63, 78, 166, 172, 173, 176

scoping, vi, 19, 22

Seminole, 11, 18, 20, 22, 152, 153, 154

settlement agreement, 3, 9, 15, 19

slough(s), 20, 44, 79, 85, 98, 102, 103, 135

snail kite, Everglade, 20, 31, 45, 80, 104, 138

snake, indigo, 22, 101, 169

soil(s), iii, vii, viii, 4, 4, 11, 11, 12, 17, 19, 19, 21, 31, 31, 32, 40, 40, 42, 52, 55, 56, 58, 58, 59, 60, 60, 61, 62, 62, 72, 73, 79, 88, 89, 89, 90, 90, 98, 98, 102, 107, 114, 124, 128, 130, 130, 131, 133, 146, 147, 175, 175, 530, 530, 536

sparrow, Cape Sable, seaside, 20, 31, 33, 34, 38, 44, 45, 46, 62, 80, 102, 135, 136, 147, 164

special use permit(s), 50

specification(s), 3, 28, 47, 48, 51, 52, 53, 60, 64, 67, 71, 72, 77, 166, 172, 173

Stairsteps Unit, 34, 37, 43, 44, 45, 46, 62, 67, 69, 71, 76, 80, 90, 98, 99, 102, 103, 104, 133, 135, 136, 138, 140, 164, 529, 535, 536, 592

street-legal, v, vii, 34, 36, 48, 72, 76, 108, 109, 114, 172

supplemental environmental impact statement, vi, xvi, 3, 15, 16, 19, 20, 22, 90, 100, 124, 151, 157, 158, 162, 163, 545

swamp(s), mixed hardwood, 20, 79, 98, 133

swamp buggy(ies), v, vii, 34, 38, 48, 108, 109, 114, 118, 119, 530

threatened species, vii, 11, 14, 17, 20, 31, 32, 33, 44, 45, 46, 71, 80, 100, 101, 107, 126, 136, 138, 146, 164, 173, 531, 591

tire(s), 4, 40, 52, 53, 60, 71, 72, 77, 86, 89, 90, 97, 98, 114, 172, 173, 178, 530

tracked vehicles, 53, 67

tread, 40, 53, 72

trigger, 43, 44, 45, 46, 64, 77, 128

turbidity, 19, 39, 40, 62, 79, 88, 129, 130, 146

Turner River Unit, 34, 69, 76

U.S. Fish and Wildlife Service (USFWS), v, vii, viii, 3, 14, 15, 20, 33, 34, 44, 46, 47, 62, 69, 71, 80, 101, 102, 107, 134, 135, 136, 137, 140, 152, 155, 159, 164, 165, 166, 168, 169, 173, 175, 592, 593, 594, 596

U.S. Highway 41, 32, 36, 37, 38, 104, 114, 120, 121, 126, 129, 130, 131, 132, 134, 135, 136, 138, 139, 140, 145

University of Georgia, 55, 60, 90, 112, 113, 156, 177, 597

vegetation, iii, vii, viii, 11, 12, 17, 19, 21, 31, 32, 39, 40, 41, 42, 53, 55, 57, 58, 59, 60, 62, 72, 73, 77, 79, 80, 81, 86, 88, 90, 97, 98, 99, 102, 104, 124, 133, 134, 135, 143, 144, 146, 147, 178, 531, 591

vehicle permit(s), 28, 46, 47, 48, 49, 50, 69, 77, 142, 144, 166

visitor(s), iii, vii, 9, 11, 12, 14, 18, 19, 21, 27, 31, 32, 38, 39, 40, 41, 42, 43, 44, 47, 52, 63, 72, 74, 81, 104, 108, 117, 118, 119, 120, 121, 124, 129, 136, 143, 144, 147, 151, 163, 167, 529, 532, 534, 536, 537

visitor experience, iii, 27, 31, 38, 39, 40, 42, 47, 52, 147

water flow(s), iii, 17, 19, 31, 43, 56, 57, 60, 79, 85, 86, 128, 129, 135, 146, 129, 171,

water quality, 12, 13, 17, 19, 40, 58, 62, 79, 88, 89, 107, 109, 129, 130, 137, 138, 146, 171

water resource(s), vii, viii, 12, 124

wetland(s), 12, 13, 16, 43, 57, 86, 89, 97, 98, 104, 130, 137, 138

wildlife, v, viii, 4, 9, 10, 11, 12, 17, 20, 21, 22, 29, 31, 32, 41, 44, 46, 51, 58, 60, 62, 73, 77, 89, 90, 98, 99, 100, 108, 112, 117, 119, 120, 124, 141, 143, 146, 178, 179, 531

wood stork, 20, 31, 45, 103, 136, 137, 169

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

NPS D-125-A, JULY 2000