

Chapter III: Alternatives

Introduction

In October 2003, the U.S. Court of Appeals for the Ninth Circuit found that the *Merced Wild and Scenic River Comprehensive Management Plan* (Merced River Plan) (NPS 2000h), adopted by Yosemite National Park in 2000, was deficient in two areas: (1) it did not fully address the issue of user capacities in accordance with the Wild and Scenic Rivers Act; and (2) it did not draw the corridor boundary in the El Portal Administrative Site to account for the location of the river's Outstandingly Remarkable Values. Other elements of the Merced River Plan (e.g., the River Protection Overlay, management zoning, Outstandingly Remarkable Values, river classifications, and river boundaries outside of El Portal) had been challenged and upheld in an earlier phase of litigation. The National Park Service considers those remaining elements of the Merced River Plan to be appropriate tools that can be used with the elements proposed in this Revised Merced River Plan/SEIS (e.g., revised User Capacity Program and revised El Portal boundary) to further the mandates of the Wild and Scenic Rivers Act. Together, they form a comprehensive framework for managing the Merced Wild and Scenic River.



SPECIFIC MEASURABLE LIMITS

The action alternatives present three approaches to enhance the existing user capacity measures currently at work in the Merced River corridor. Namely, the VERP framework would work in concert with existing user capacity management tools, including wilderness trailhead quotas. (NPS photo)

Following the direction of the Ninth Circuit Court of Appeals, each action alternative consists of a user capacity component and an El Portal boundary component. The three action alternatives described in this chapter present a range of methods and approaches for developing and implementing a user capacity management program. Their distinct components would be added to the existing user capacity framework (including the VERP program) outlined in Chapter II. Each of these alternatives establishes what the Ninth Circuit Court of Appeals calls “specific measurable limits on use” in the river corridor. As described in Chapter I, the purpose of this planning effort is to develop a user capacity management program that protects and enhances the Merced River’s Outstandingly Remarkable Values in accordance with the Wild and Scenic Rivers Act. At the same time, the program must allow for a spectrum of appropriate recreation opportunities that is consistent with the National Park Service’s mission of resource protection. The user capacity component of each action alternative includes:

- Implementation of Yosemite’s Visitor Experience and Resource Protection (VERP) program (as outlined in Chapter II) with specific measurable standards and indicators.
- Other specific measurable limits on use within the Merced River corridor.
- These components work in concert with existing user capacity management tools presented in Chapter II, including the Wilderness Trailhead Quota System.

This chapter also presents a range of options for defining a river corridor boundary in the El Portal Administrative Site that would protect and enhance the Outstandingly Remarkable Values identified for that segment of the Merced River. Consequently, each El Portal river corridor boundary option also includes a revised management zoning configuration within this river segment.

In keeping with the Ninth Circuit Court of Appeals’ direction, the El Portal boundary component of each action alternative was developed based on the location of Outstandingly Remarkable Values within the El Portal Administrative Site. A range of boundary configurations was developed to protect and enhance the river’s Outstandingly Remarkable Values within the El Portal segment. These boundaries were drawn based on the type and location of various Outstandingly Remarkable Values, and are consistent with the legal requirement of no more than 320 acres per linear river mile prescribed by the Wild and Scenic Rivers Act. The boundary alternatives for the El Portal segment of the river range from those based on 320 acres per linear mile of the river which is equal to a quarter-mile boundary (similar to all other segments of the river corridor) to more narrow boundaries drawn to encompass only identified locations of Outstandingly Remarkable Values. The action alternatives also present a range of management zoning configurations within the revised boundary in El Portal.

Relationship between the User Capacity and El Portal Boundary Elements

The National Park Service considered development of separate alternatives for user capacity and the El Portal boundary. However, since each El Portal alternative includes different lands and management zoning prescriptions, separating the components of the alternatives would have resulted in a more lengthy and complicated analysis. This would also result in requiring multiple user capacity alternatives to be analyzed for each boundary/zoning alternative and vice versa. It was determined that the analysis could be simplified by combining the alternatives. The pairing of user capacity and El Portal boundary alternatives was accomplished by combining more flexible user capacity components with more flexible El Portal boundary components, and more

restrictive user capacity components with more restrictive El Portal boundary components. This allowed the National Park Service to evaluate a range of options for both components without overly complicating the analysis. In this Final Revised Merced River Plan/SEIS, some boundary and management zone changes have been proposed in the preferred alternative for El Portal in response to public comment. The impact of these changes has been identified in the analysis of the El Portal segment in Chapter V.

Organization of this Chapter

This chapter presents detailed descriptions of each of the alternatives considered to address the two deficiencies noted by the Ninth Circuit Court of Appeals' October 2003 opinion. The information presented in this chapter is organized as follows:

- Elements common to all alternatives
- Descriptions of each of the alternatives, beginning with the No Action Alternative
- Alternatives considered but dismissed from further analysis
- A table comparing and summarizing the environmental consequences of all the alternatives
- Discussion of the environmentally preferable alternative

The description of each action alternative is organized as follows: (1) the management approach to user capacity for the alternative; (2) a description of the proposed boundary for the El Portal segment; and (3) a map displaying the proposed boundary for the El Portal segment.



EL PORTAL

The El Portal Administrative Site consists of 1,139 acres of land managed by the National Park Service. Like the segments of the river corridor upstream in Yosemite, El Portal's Outstandingly Remarkable Values will be protected and enhanced. (NPS photo)

Elements Common to All Alternatives

Merced River Plan Management Elements

Except as noted in the requirements established by the Ninth Circuit Court of Appeals, the management elements adopted in the Merced River Plan Record of Decision (as revised in November 2000), will continue to be applied to management decisions within the river corridor. The Merced River Plan management elements were discussed in Chapter I and include (1) the river boundaries within Yosemite National Park; (2) classifications of all river segments; (3) Outstandingly Remarkable Values in all segments; (4) management zoning within Yosemite National Park; (5) the River Protection Overlay in all segments; (6) the Section 7 determination process in all segments; and (7) application of the VERP framework in all segments. Although the National Park Service adopted VERP as its primary user capacity management tool in the 2000 Merced River Plan, no specific indicators and standards were identified in that plan. Therefore, the No Action Alternative in this document does not include a specific VERP program as outlined in Chapter II.

The Court directed the National Park Service to revise the Merced River Plan to address user capacity for the river corridor. This document evaluates action alternatives that would implement the VERP framework identified in the Merced River Plan through the adoption of specific indicators and standards. The alternatives also include other limits on use that would be added to the existing user capacity program for the Merced River corridor.

Within the El Portal Administrative Site outside Yosemite National Park, this document evaluates alternative boundaries for the El Portal segment of the river. In developing this document, the National Park Service reaffirmed the Outstandingly Remarkable Values for the segment, completed additional studies to more precisely locate specific El Portal segment Outstandingly Remarkable Values identified in the Merced River Plan, developed a range of boundary alternatives, and proposed management zoning for areas within the boundary alternatives.

Wilderness Management

The National Park Service manages the designated Wilderness areas within the corridor under the direction of the Wilderness Act of 1964. The Wilderness Act provides a high level of resource protection for those river segments within wilderness areas, which is generally a comparable or more restrictive level of protection than the Wild and Scenic Rivers Act.

The Wilderness Management Branch within the Division of Visitor Protection manages wilderness use in Yosemite National Park. The two primary tools used in wilderness management include the Wilderness Trailhead Quota System and the Wilderness Impact Monitoring System (WIMS). These tools were described further in Chapter II.

The Revised Merced River Plan/SEIS retains the existing Wilderness Trailhead Quota System and WIMS in all alternatives.



NEVADA FALL
Wilderness segments of the Merced River begin near the top of Nevada Fall. (NPS photo)

Private Land and Public Agency Easements

Private property within the Merced River corridor is not under the management control of the National Park Service. The user capacity program cannot, therefore, manage the use that occurs on private land within the river corridor. Similarly, although the National Park Service may draw the river boundary to include private property, the National Park Service is limited in its ability to protect those Outstandingly Remarkable Values located on private lands. However, it is the intent of the National Park Service to work cooperatively with private landowners within the corridor whenever possible to ensure that the Outstandingly Remarkable Values of the river segment are protected and enhanced. The graphics presented in the alternatives discussion show the general area of private lands in the river corridor but do not delineate precise parcel boundaries.

In addition to the private lands within the park boundaries, privately owned residences are located on National Park Service owned lands in El Portal and Wawona. The National Park Service issues special use permits to these homeowners for the purpose of maintaining their private residences. In the 2000 Merced River Plan/FEIS, these private residences in El Portal were outside of the Merced River corridor as presented in the No Action alternative. However, in the Revised Merced River Plan/SEIS, the privately owned residences located in the El Portal Administrative Site are now included within each of the proposed El Portal boundary alternatives. Therefore, in the future, privately owned residences on National Park Service land in El Portal would be subject to the elements of the 2000 Merced River Plan, as revised in this document. All action alternatives propose to zone these residential areas for administrative use. The use and maintenance of existing residences would remain subject to the terms of special use permits issued by the National Park Service.

The National Park Service shares jurisdiction with other local, state, and federal agencies regarding transportation and utility service within the Merced River corridor. The National Park Service works with the California Department of Transportation and the Federal Highway Administration on state highways that cross park lands, including Highway 140/El Portal Road, which crosses through both the El Portal Administrative Site and part of Yosemite Valley. The National Park Service also cooperates with Mariposa County regarding maintenance of roads within the residential area of the El Portal Administrative Site. Various utility providers also have easements through National Park Service lands to provide electric, telephone, Internet, and cable television service to residential areas located on National Park Service lands. This revised plan does not affect any existing utility or road rights-of-way or maintenance agreements. Any expansions, relocations, or new utility or road corridors or agreements would be subject to the elements of the Merced River Plan, as revised in this document.

Administrative Uses

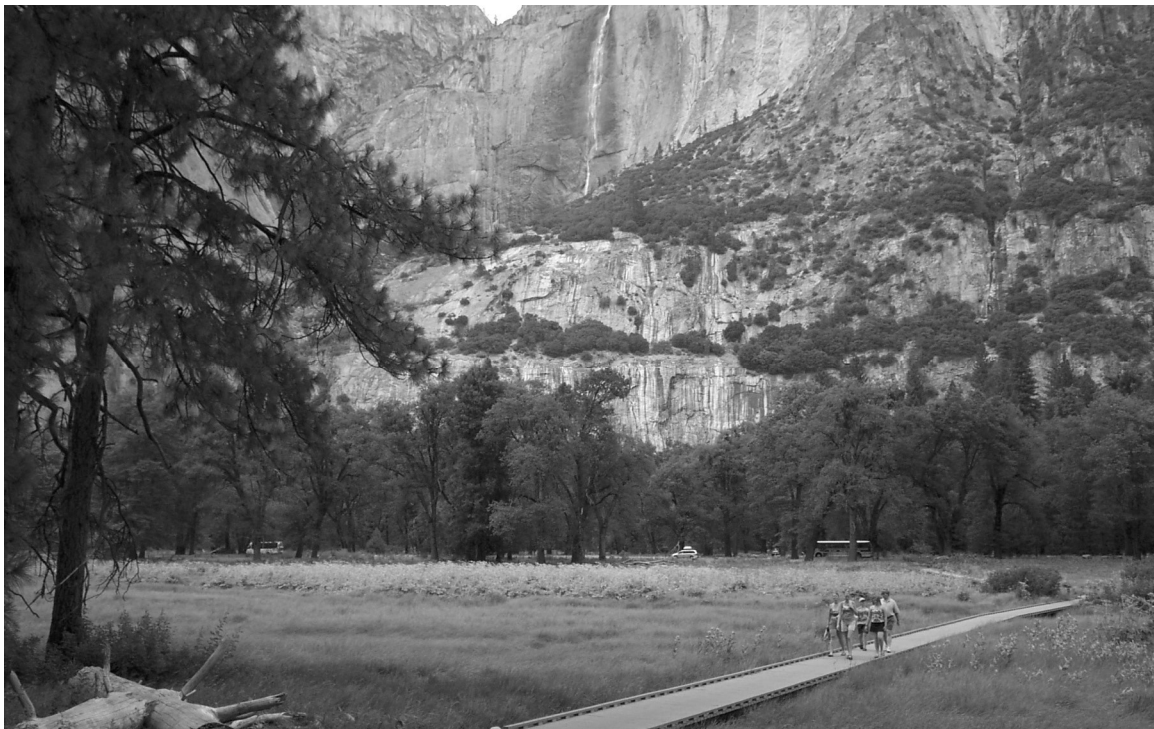
The user capacity alternatives evaluated in this document address visitor and employee use for areas within the Merced River corridor. The employee use component described in the alternatives includes employees who are housed within the corridor or who commute to a work station within the corridor. The user capacity program does not attempt to enumerate or control administrative activities that result in park employees temporarily traveling into or through the corridor for specific meetings or field work. These administrative activities comprise a very small portion of overall use of the river corridor, are subject to all of the other elements of the Merced River Plan, and are conducted in a manner which is protective of the Outstandingly Remarkable Values of the Merced River.

Traditional Uses by American Indian Tribes

The user capacity program does not restrict American Indians who are culturally associated with the lands in Yosemite National Park or the El Portal Administrative Site and who access park lands to gather traditional resources and conduct traditional cultural practices for the purpose of retaining their cultural heritage. These activities are guided by federal regulations, park policies, the other elements of the Merced River Plan, and agreements between the National Park Service and the tribes. A study of traditional uses in the park is currently underway and could result in additional revisions to existing agreements. Traditional uses comprise a very small portion of overall use of the corridor and are conducted in a manner that is protective of the Outstandingly Remarkable Values; therefore, these uses are not counted as part of the use limits identified in the user capacity program alternatives.

Mitigation Measures Common to All Construction Projects within the Corridor

The National Park Service places a strong emphasis on avoidance, minimization, and mitigation of impacts during development projects in the park. To help ensure that design and implementation of any future development projects protect natural, cultural, and social resources and the quality of the visitor experience, parkwide mitigation measures have been developed. Appendix B discusses mitigation measures that would occur prior to, during, and after construction of any proposed improvements within the river corridor.



PROTECTING AND ENHANCING

A meadow acts like a great sponge. Boardwalks, like this one in Cook's Meadow, provide trail access without inhibiting the water flow that is essential to health of wetlands and meadows. This is one way park managers can take action to protect and enhance Outstandingly Remarkable Values (NPS photo by MB Shenton).

Descriptions of the Alternatives

Alternative 1: No Action

Summary of the Alternative

The No Action Alternative represents a baseline for comparison with the other alternatives. It represents conditions as of October 2003 when the Ninth Circuit Court of Appeals found that the National Park Service needed to further address the El Portal boundary and user capacity for the Merced River corridor.

The management direction under Alternative 1 would continue to be based on the 1980 *General Management Plan* and other applicable park management plans and guidelines that address wilderness, fire management, vegetation management, resource management, geologic hazards, floodplains, and cultural resource management. Requirements of the Wild and Scenic Rivers Act, such as the protection and enhancement of Outstandingly Remarkable Values and compliance with Section 7 of the act for water resources projects, would continue to be followed.

Under this alternative, the elements of the Merced River Plan adopted in 2000 would continue to be applied and would govern management of the lands within the established river boundary. This alternative would include the elements of the National Park Service's existing user capacity program as described in Chapter II. However, it would not include implementation of specific VERP indicators and standards, since these had not been developed at the time of the Court's ruling in 2003. The El Portal Boundary component of the No Action Alternative would consist of the narrow boundary for the El Portal segment adopted in the 2000 Merced River Plan.

Decisions regarding the potential construction, renovation, repair, and removal of facilities in the corridor would be subject to a uniform and comprehensive set of criteria, considerations, and management zoning prescriptions as described in the Merced River Plan.

User Capacity Program

The following constitute the User Capacity Program methods proposed under Alternative 1. Each component was described in detail in Chapter II under "Yosemite's User Capacity Management Program."

- 1) Limits on Environmental and Experiential Conditions**
- 2) Limits on Numbers of People**
- 3) Limits on Facilities**
- 4) Limits on Specific Activities**
- 5) Continuation of Existing User Capacity Management Programs without Full VERP Implementation (as described in Chapter II)**

Concept: The National Park Service would continue to use a variety of measures to manage visitor use, including limits based on environmental and experiential conditions (i.e., Wilderness Impacts Monitoring System), limits on the number of people (Wilderness Trailhead Quota System, group size limits on trails), limits on facilities (overnight accommodations, day use parking, utility capacities), limits on specific activities listed in the Superintendent's Compendium, and other measures that address visitor use and protection of the Outstandingly Remarkable Values.

User capacity for the river corridor under this alternative would be managed through the use of existing methods, such as management of facility and utility capacities, use of the Wilderness Trailhead Quota System, limits on party size for humans and stock in the Wilderness areas, use of access restrictions when required, and restrictions on other specific activities (such as rafting, fishing, or boating). An overview of the user capacity program for this alternative and existing limits are presented in tables III-1 and III-2 respectively. Under this alternative, park managers would not directly limit total visitor levels within the river corridor. However, visitor use and use levels would be controlled through the provision of infrastructure and the specific use restrictions.

Because the VERP program was not ready for full implementation when the 2000 Merced River Plan was adopted or when the Court issued its decision in October 2003, the user capacity program for this baseline alternative does not include a VERP element. Since the Merced River Plan's 2000 Record of Decision (NPS 2000d), the National Park Service has begun implementation of the VERP framework and is in the process of pilot-testing indicators and standards and gathering baseline data. Therefore, the absence of the VERP program in this No Action Alternative is only assumed for the purposes of providing a basis for comparison.

Relationship of Alternative 1 to the General Management Plan

The *General Management Plan* identified maximum daily visitor limits for major developed areas of the park, based on the future facility levels envisioned for these areas. When the *General Management Plan* was completed in 1980, future visitor limits or visitor capacity goals were well below the actual capacities. (In other words, in 1980 there were more facilities than the *General Management Plan* projected for the future.) To reach these goals, the *General Management Plan* called for a reduction and reallocation of visitor facilities. Since 1980, the National Park Service has based all subsequent planning efforts—including the *Yosemite Valley Plan*—on these visitor capacity goals.

The National Park Service has initiated several recent planning efforts intended to move toward the goals of the *General Management Plan*, and to fulfill the requirements of the Wild and Scenic Rivers Act, which include protecting and enhancing Outstandingly Remarkable Values and natural river processes. These supplemental planning efforts approved facility changes, primarily to reduce development in sensitive areas in Yosemite Valley, to relocate facilities outside of sensitive areas in Yosemite Valley, and to restore sensitive habitats, such as meadows and heavily used portions of the banks of the Merced River. These plans have enabled the park to achieve portions of the greater vision established in the *General Management Plan*. Other planning efforts cannot be initiated until the Merced River Plan is completed. As a result, the visitor capacity goals presented in the *General Management Plan* have not yet been fully achieved.

Under Alternative 1, park managers would use *General Management Plan* visitor capacity goals and facility levels as guidance in all planning and management efforts. However, it is anticipated that visitor use of the park could increase over time under this alternative. This increase could primarily result from additional day use visitation, as this alternative does not include a VERP program that would provide a comprehensive framework for regulating visitor use levels. Therefore, visitor use levels in Alternative 1 could exceed visitor use levels identified in the *General Management Plan*, particularly in areas such as Yosemite Valley. Based on an average facility and vehicle occupancy rate, it is projected that use levels could equal or exceed the average visitor use of 21,229 visitors per day in Yosemite Valley.

**Table III-1
Existing User Capacity Management Program Overview**

LIMITS ON NUMBERS OF PEOPLE

Wilderness Trailhead Quota System

- Provides daily limits on overnight visitors in wilderness

Superintendent's Compendium

- Overnight Group Size – Wilderness On Trail 15
- Overnight Group Size – Wilderness Off Trail..... 8
- Day Use Group Size – Wilderness On Trail 35
- Day Use Group Size – Wilderness Off Trail 8
- Stock Use Limit On Trail 25
- Bicycle Group Size – On Road or Paved Trail..... 30
- Vehicle Access Limits in Yosemite Valley based on traffic/parking conditions
- Vehicle Access Limits in Wawona based on parking capacity

General Management Plan Visitor Capacity Goals (per 24-hour period)^a

- Yosemite Valley 18,241
- Cascades/Arch Rock..... 360
- El Portal 765
- Wawona..... 3,331

LIMITS ON FACILITIES

- Existing overnight capacities
- Existing parking capacities
- Existing utility system capacities

LIMITS ON SPECIFIC ACTIVITIES

Superintendent's Compendium

- Nonmotorized watercraft allowed between Stoneman Bridge and Sentinel Beach
- Nonmotorized watercraft limited to between the hours of 10 a.m. and 6 p.m.
- Nonmotorized watercraft prohibited when river gauge at Sentinel Bridge is 6.5 feet or higher and the combined air and water temperature is less than 100°F
- Fishing prohibited at designated swimming beaches and from road bridges
- Catch limits apply to fishing from Happy Isles Footbridge downstream to Foresta Road Bridge
- Bicycling prohibited except on paved trails or roads
- Stock use prohibited off trail
- Commercial bus use allowed through provisions of Special Use Permit

LIMITS ON ENVIRONMENTAL AND EXPERIENTIAL CONDITIONS

Wilderness Impacts Monitoring System^b

- Inventory and monitoring studies focused on impacts to backcountry campsites and trails.

Visitor Experience and Resource Protection

- Although the 2000 Merced River Plan adopted the VERP framework for user capacity management, the final steps in the VERP process were not completed, such as the development of specific indicators and standards. The desired conditions were identified through the management zoning adopted in the 2000 Merced River Plan.

OTHER RELATED USER CAPACITY METHODS

Management Zoning

- Wilderness Zones
- Diverse Visitor Experience Zones
- Developed Zones
- River Protection Overlay

Governing Mandates

- Wild and Scenic Rivers Act
- Secretarial Guidelines for Wild & Scenic Rivers
- Wilderness Act
- National Parks and Recreation Act
- 16 USC Section 1a-7 (General management plans must contain visitor carrying capacity)
- 36 CFR (Use Management, and Protection of Resources)
- NPS Management Policies 2001 (Chapter 8, Use of Parks)

^a Although the *General Management Plan* identified visitor capacities for developed areas, it called for management of these capacities through limits and management of facility capacity, not through entrance station limits.

^b The Wilderness Impacts Monitoring System began implementation in the 1970s.

Table III-2
Alternative 1: Existing Use Levels

Segment Name	Estimated Daily Visitor Capacity	
ENTIRE CORRIDOR		
Corridorwide	<ul style="list-style-type: none">▪ Average annual park visitation level since 1980 = 3.39 million▪ Current existing total for overall employee housing within the corridor (does not address existing employee housing deficiencies) = 1,683 beds▪ Average daily employee commuters into river corridor = 606 people	
MAIN STEM		
Wilderness	Existing Trailhead Quota	1,280
Yosemite Valley	Day visitors:	14,944
	Overnight visitors:	6,285
	Segment maximum total:	21,229
Gorge	Day visitors:	2,446
	Overnight visitors:	0
	Segment maximum total:	2,446
El Portal	Day visitors:	1,083
	Overnight visitors:	0
	Segment maximum total:	1,083
SOUTH FORK		
Wilderness	Existing Trailhead Quota	1,280
Wawona (includes below Wawona and impoundment)	Day visitors:	2,391
	Overnight visitors:	644
	Segment maximum total:	3,035

NOTE: Detailed information about the assumptions and calculations used to develop these numbers are provided in Appendix C.

Relationship of Alternative 1 to the Outstandingly Remarkable Values

As discussed previously, the National Park Service has implemented a number of user capacity tools in Yosemite for years. Current park policies and existing use levels are considered to be protective of the Outstandingly Remarkable Values. Although many park resources, particularly in Yosemite Valley, have been affected by increased use and development since the establishment of the park in the late 1800s, the majority of impacts to park resources occurred prior the designation of the river as Wild and Scenic in 1987. Since then, park managers have actively taken measures to reduce resource impacts and to protect and enhance natural and cultural resources and visitor experience throughout the park and in the river corridor.

Work continues on a daily basis to improve conditions in the park—specifically in the Merced River corridor. Over the last 10 years, restoration efforts have begun to restore natural processes in Yosemite Valley. For example, meadow vegetation once trampled in a web of informal trails is now able to thrive due to the construction of boardwalks, which allow users to enjoy the meadow while protecting its sensitive wetlands. Riverbank areas denuded by concentrated use at Devil's Elbow and near Eagle Creek are now being restored to natural conditions. The number of facilities in the floodplain has been reduced. Impediments to water flows in meadows have been removed and some of the structures that restricted the free flow of the Merced River are now gone, such as the Cascades Diversion Dam. These actions (and other park restoration efforts that continue today) have been successful in ensuring the protection and enhancement of the Merced River's Outstandingly Remarkable Values.

The Wilderness Trailhead Quota System and the Wilderness Impacts Monitoring System (WIMS), provide additional protection of Outstandingly Remarkable Values in wilderness segments through limitations in the number of people entering the wilderness and dispersion of use, as well as limits on specific activities as described in table III-1. Likewise, the Superintendent's Compendium provides protection of Outstandingly Remarkable Values in scenic and recreational segments through limits on specific activities such as restrictions in certain areas on climbing during nesting seasons, and restrictions on fishing in the Valley and El Portal segments. Existing overnight lodging and camping, day-visitor parking and utility system capacities provide protection of Outstandingly Remarkable Values through their placement in specific designated areas as described under Merced River Plan management zoning.

Taken together, the user capacity measures and specific measurable limits summarized in table III-1 and discussed further in Chapter II comprise the existing user capacity program for the Merced River corridor under Alternative 1. Although each of these methods furthers the protection and enhancement of Outstandingly Remarkable Values, this alternative lacks a comprehensive VERP program.



RESTORING FREE FLOW

Protecting and enhancing the river's free-flowing condition is an over-arching goal of the Merced River Plan. The Cascades Diversion Dam (shown here before and after) was removed in 2004. (NPS photos)

El Portal Boundary

The El Portal boundary for the No Action Alternative is the boundary that was described in the selected alternative of the Merced River Plan/FEIS. This boundary is described as the 100-year floodplain or the River Protection Overlay, whichever is greater, along with adjacent wetlands. The total acreage included within the El Portal segment boundary under this alternative is 193 acres. The zoning for this alternative includes primarily Park Operations and Administration (3C) zoning within existing developed areas and Day Use (2C) zoning primarily within undeveloped areas adjacent to the river. Of the 193 acres within the boundary, 137 acres are zoned Day Use (2C) and 56 acres are zoned for Park Operations and Administration (3C). The El Portal boundary and management zoning for the No Action Alternative are shown in figure III-1.

This alternative takes into consideration the legislative intent for the El Portal Administrative Site and the goal in the *General Management Plan* of moving park administrative facilities out of Yosemite Valley to the El Portal Administrative Site. Regardless of the zoning category, site design for this area would recognize the fact that the Outstandingly Remarkable Values in the El Portal segment must be protected, whether they are inside or outside of the corridor boundary. The National Park Service has committed to preparing a Concept Plan for the El Portal area when this Revised Merced River Plan/SEIS is complete. The El Portal Concept Plan will address the potential development of facilities in El Portal given park administrative needs and the need to protect and enhance the Outstandingly Remarkable Values associated with the river.

The Outstandingly Remarkable Values identified within the El Portal segment of the river corridor include: scientific, geologic process/conditions, recreation, biological, cultural, hydrologic processes. The scientific Outstandingly Remarkable Values are not directly affected by the boundary and management zoning prescriptions under Alternative 1, nor would they be enhanced by information gained through the VERP program, as a comprehensive monitoring program of indicators and standards is not a component of this alternative. Both the geologic process/conditions and the hydrologic processes Outstandingly Remarkable Values are not sensitive to the boundary and management zones prescriptions proposed in Alternative 1. The recreation Outstandingly Remarkable Values within the El Portal segment are protected under Alternative 1, as the location of these Outstandingly Remarkable Values are found within the River Protection Overlay, which is zoned Day Use (2C). Additional data gathered as part of this planning effort determined that Outstandingly Remarkable Values existed outside of the narrow boundary established in the 2000 Merced River Plan. Therefore, only portions of both the biological and cultural Outstandingly Remarkable Values are protected under Alternative 1 through Day Use (2C) and Park Operations and Administration (3C) zoning.

Figure III-1
Alternative 1: El Portal Boundary

Alternative 2: VERP program with Interim Limits (Preferred)

Summary of the Alternative

Alternative 2—the National Park Service’s preferred alternative—takes the VERP framework provided in the 2000 Merced River Plan and implements a VERP program with specific indicators and standards, along with a commitment to take management action as needed to keep conditions within the established standards. The VERP program is described as an action common to all action alternatives in Chapter II. The standards, which are set at levels designed to protect and enhance the Outstandingly Remarkable Values, would provide a quantifiable and documented trigger for when action must be taken. If monitoring were to determine that conditions were approaching or exceeding a given standard, action would be taken to return conditions to the established standard. The documentation of these standards and the open public reporting process on the progress of the VERP program would provide public accountability on actions taken to protect and enhance river values.

In response to the direction of the Ninth Circuit Court of Appeals, Alternative 2 also proposes interim facility limits. These limits would remain in place until the VERP program is documented to be providing an effective management program and protecting the Outstandingly Remarkable Values. Finally, other existing methods and restrictions on visitor use described under the No Action Alternative (such as the Wilderness Trailhead Quota System and the limits established in the Superintendent’s Compendium) would continue to be implemented under this alternative.

Alternative 2 proposes a quarter-mile river corridor boundary in the El Portal Administrative Site.

User Capacity Program

The following constitute the User Capacity Program methods proposed under Alternative 2. Each component is described in detail in the sections that follow.

1) Limits Based on Environmental and Experiential Conditions through VERP

2) Interim Limits on Facilities

3) Interim Limits on Specific Activities: Numbers of buses

4) Continuation of Existing User Capacity Methods

Concept: The National Park Service would implement a VERP program that would result in direct action informed by monitoring and based on meeting the measurable quantifiable, standards for the desired conditions. Until the VERP program is fully operational, interim limits on facilities and select specific activities would be put in place to ensure protection of the river’s Outstandingly Remarkable Values. These interim limits on facilities would constrain the level of park facilities and require the National Park Service to manage specific limits on use accordingly.

For Wild segments of the Merced Wild and Scenic River, which comprise 51 of the 81 total miles within the river corridor, Alternative 2 would continue the implementation of the Wilderness Trailhead Quota System that has been in place since the 1970s. Other existing wilderness management programs (such as WIMS, camping restrictions, and group size restrictions on trails) would continue to be applied as documented in the Superintendent’s Compendium and the *Yosemite Wilderness Management Plan* (NPS 1989b). The VERP program in this alternative would also be used to monitor and maintain resource and visitor experience conditions in Wild river segments.

For the Recreational and Scenic segments, which make up 30 miles of the 81 total miles of the river corridor, Alternative 2 would implement the VERP program and set interim limits on visitor use through specific facility and activity limitations. The interim limits would remain in place for approximately 5 years while the park continues to field test and improve VERP indicators and standards. It is expected that sufficient documentation would be compiled through the VERP program to support an effective river management program that ensures the protection and enhancement of Outstandingly Remarkable Values during the approximate 5 year interim period. At the end of the 5 year interim period, the National Park Service would evaluate the VERP program's effectiveness in providing park managers with the information needed to manage visitor use in a manner that protects and enhances the river's Outstandingly Remarkable Values. At that time, the park would also present a report to the public addressing whether the VERP program has provided the required guidance on visitor use levels and whether facility limits should be continued, modified, or eliminated. If the VERP program is providing sufficient data, interim limits would most likely be eliminated. However, if the VERP program is not providing sufficient data, interim limits would continue until VERP is functioning as intended. Revisions to the interim limits could be considered and any revisions considered would have to be protective of Outstandingly Remarkable Values. If changes proposed at this time would result in substantially different environmental consequences than were identified in this document, an appropriate level of NEPA compliance would be completed.

In addition to the VERP program and the interim facility limits, Alternative 2 would also include the other existing user capacity measures described in Chapter II and listed in table III-1. These existing measures address types and levels of use in all segments of the river corridor. Table III-3 provides an overview of the user capacity management program under Alternative 2.

1) Limits Based on Environmental and Experiential Conditions through VERP

The following sections describe Yosemite National Park's VERP program, which would consist of (1) establishing desired conditions (defined through management zoning), (2) establishing specific indicators with measurable standards based on desired conditions, (3) establishing a monitoring program, and (4) a commitment to taking effective management actions when conditions do not meet adopted standards. A detailed explanation of the VERP program was provided in Chapter II. The VERP program is a form of adaptive management, in that it is an iterative process that continues to monitor, evaluate, and adapt, resulting in actions while continually being revised and improved based on the knowledge gained through implementation.

Desired Conditions and Management Zones. As discussed in Chapter II, the VERP program relies on the concept of desired conditions. Desired conditions are defined in management zone prescriptions (summarized in Chapter II), which identify how different areas in the river corridor would be managed. The 2000 Merced River Plan established the current management zones in the Merced River corridor to protect and enhance the Outstandingly Remarkable Values and the free-flowing condition of the Merced River. A set of desired resource conditions, desired visitor experience opportunities, and types and levels of appropriate uses are prescribed for each management zone. Indicators and standards (described in Chapter II) were developed to provide information on whether those desired resource conditions and visitor experience opportunities were being met.

Table III-3
Alternative 2: User Capacity Management Program Overview

LIMITS ON NUMBERS OF PEOPLE

Wilderness Trailhead Quota System

Superintendent's Compendium

- Overnight Group Size – Wilderness On Trail 15
- Overnight Group Size – Wilderness Off Trail..... 8
- Day Use Group Size – Wilderness On Trail 35
- Day Use Group Size – Wilderness Off Trail 8
- Stock Use Limit On Trail 25
- Bicycle Group Size – On Road or Paved Trail..... 30
- Vehicle Access Limits in Yosemite Valley based on traffic/parking conditions
- Vehicle Access Limits in Wawona based on parking capacity

LIMITS ON FACILITIES

- Existing utility system capacities
- New facility capacities for each non-wilderness segment (**SEE TABLE III-4 ON NEXT PAGE**)

LIMITS ON SPECIFIC ACTIVITIES

Superintendent's Compendium

- Nonmotorized watercraft allowed between Stoneman Bridge and Sentinel Beach
- Nonmotorized watercraft limited to between the hours of 10 a.m. and 6 p.m.
- Nonmotorized watercraft prohibited when river gauge at Sentinel Bridge is 6.5 feet or higher and the combined air and water temperature is less than 100°F
- Fishing Prohibited at designated swimming beaches and from road bridges
- Catch limits apply to fishing from Happy Isles footbridge downstream to Foresta Road bridge
- Bicycling prohibited except on paved trails or roads
- Stock use prohibited off trail
- Commercial bus use allowed through provisions of Special Use Permit

New total daily bus limit = 92 buses in Yosemite Valley; 28 buses in Wawona

LIMITS ON ENVIRONMENTAL AND EXPERIENTIAL CONDITIONS

Wilderness Impacts Monitoring System

Visitor Experience and Resource Protection

- Desired Conditions/Management Zones
- Specific indicators and standards
- Monitoring
- Enforcement of standards through management actions
- Reporting to the public

OTHER RELATED USER CAPACITY METHODS

Governing Mandates

- Wild and Scenic Rivers Act
- Secretarial Guidelines for Wild & Scenic Rivers
- Wilderness Act
- National Parks and Recreation Act
- 16 USC Section 1a-7 (General management plans must contain visitor carrying capacity)
- 36 CFR (Use Management, and Protection of Resources)
- NPS Management Policies 2001 (Chapter 8, Use of Parks)

Management Zoning

- Wilderness Zones
- Diverse Visitor Experience Zones
- Developed Zones
- River Protection Overlay

Table III-4
Alternative 2: Interim Limits on Facilities and Specific Activities

Segment Name	Interim Limits
ENTIRE CORRIDOR	
Corridorwide	Interim Limit: 1,969 employee beds
MAIN STEM	
Wilderness	Limited to existing facilities
Yosemite Valley	Day-visitor parking limited to existing level Interim Limit: 2,197 spaces
	Commercial/noncommercial buses limited/managed to existing parking Interim Limit: 38 bus parking spaces used to manage 92 buses
	Overnight lodging accommodations limited to existing level Interim Limit: 1,262 units ^a
	Camping accommodations may increase Interim Limit: 638 sites
Gorge	Day-visitor parking limited to existing levels Interim Limit: 244 spaces
	Commercial/noncommercial buses limited/managed to existing parking Interim Limit: 2 spaces
El Portal	Day-visitor parking limited to existing level Interim Limit: 360 spaces
SOUTH FORK	
Wilderness	Limited to existing facilities.
Wawona (includes below Wawona and impoundment)	Day-visitor parking limited to existing level Interim Limit: 213 spaces
	Commercial/Noncommercial buses limited/managed to existing parking Interim Limit: 14 bus parking spaces used to manage 28 buses
	Overnight lodging accommodations limited to existing level Interim Limit: 104 units
	Camping accommodations limited to existing level Interim Limit: 99 sites

^a Although there will be some transition period between use of newly constructed sites and sites being taken out of the inventory, at no time will the total number of rooms being occupied exceed 1,262 units.

NOTE: Detailed information about the assumptions and calculations used to develop these numbers are provided in Appendix C.

Measurable Indicators and Standards. Chapter II explains the process used to establish indicators and standards. Table II-5 presents the specific indicators and standards for each management zone within the Merced River corridor. These numeric standards are based on protection and enhancement of the Outstandingly Remarkable Values, and will provide park managers with the information needed to manage visitor use appropriately. The Outstandingly Remarkable Values that are related to each indicator are listed on the table. The scientific Outstandingly Remarkable Values are further enhanced to each of the indicators and standards as the data gathered during the VERP process will be available to scientists interested in studying the river and its environment, and will help guide management direction in the river corridor. These indicators and standards constitute specific measurable limits as required by the Ninth Circuit Court of Appeals.

The National Park Service has begun field testing eleven indicators and standards. As park managers gain knowledge from field-testing, the indicators and standards may be further refined. This iterative learning and refining process is a strength of the VERP program, in that the program can be adapted and improved as knowledge grows. The National Park Service will inform the public of progress (including proposed revisions to indicators and standards) through regular updates, as described below.

Monitoring. Monitoring is a key element in the VERP framework. Chapter II explains the importance of monitoring and its role in VERP. The National Park Service initiated VERP monitoring in 2004, based on the indicators that were listed in the *User Capacity Management Program for the Merced Wild and Scenic River Corridor* (NPS 2004a). As previously described in Chapter II, VERP is an iterative process that is refined as new information is gathered. Based on preliminary data gathered in 2004, some of the indicators first presented in 2004 were eliminated or revised, resulting in the proposed suite of indicators listed in table II-5. The field methods used in 2004 are documented in the 2004 VERP Field Guide available for review at www.nps.gov/yose/planning/ucmp.htm. The field methods will be updated and refined based on the knowledge gained during the 2004 field season and the new indicators proposed in table II-5.

Establishing Limits through Management Actions. After information is gathered through on-the-ground monitoring, it may be necessary to take action to protect and enhance Outstandingly Remarkable Values. Chapter II describes the range of potential management actions that could be used to address visitor use and the conditions of the Outstandingly Remarkable Values.

Under Alternative 2, park managers would be required to take responsive action whenever conditions are not within the established standards. As noted in Chapter II, the appropriate management action would be determined based on an analysis of the situation and determination of what measures would most effectively address the impacts. In the event where conditions are deteriorating but are not below standards (referred to as *yellow light conditions* in Chapter II), park managers may decide to take actions, such as increased education or temporary restrictions, which are considered to be less intensive management actions. In the event that standards have been exceeded (referred to as *red light conditions* in Chapter II), park managers may be more likely to implement more intensive or restrictive measures to address the condition and ensure protection of the Outstandingly Remarkable Values.

Park managers would inform the public of proposed management actions designed to address conditions identified through VERP monitoring. Federal regulations require that any proposed management action that has the potential to have a significant effect on the environment must comply with NEPA. All proposed management actions will be reviewed for appropriate NEPA compliance, and if needed, additional NEPA compliance studies would be completed prior to implementation of the management action. Some of the potential management actions are expected to be allowable as categorical exclusions under NEPA and National Park Service NEPA guidelines (e.g., closing a portion of a riverbank or a meadow temporarily). Information on management actions found to require only a categorical exclusion will be provided in the VERP annual report. Information on management actions requiring a NEPA environmental assessment or environmental impact statement would be made available to the public in accordance with the National Park Service's NEPA requirements.

Reporting to the Public. The National Park Service is committed to maintaining the transparency of the VERP program, in order to provide for greater accountability and opportunities for public involvement. The first public meeting on VERP was held in October 2004 and a second meeting was held in April 2005. The results from the first year of VERP monitoring are available for public review at www.nps.gov/yose/planning/ucmp.htm.

Under Alternative 2, the park would adopt specific interim limits on facilities for each non-wilderness segment of the river. Facilities identified in the limits include overnight accommodations, day use parking, bus parking, and corridorwide employee housing (table III-4).

The interim limits would last for approximately 5 years, while the VERP indicators and standards continue to be field tested and improved. The National Park Service would evaluate the VERP program's effectiveness in providing management with the information needed to manage visitor use in a manner that protects and enhances the Outstandingly Remarkable Values. Based on this evaluation, park managers would present a report to the public addressing whether the VERP program has provided the required guidance on visitor use levels and whether facility limits should be continued, modified or eliminated. If the VERP program is providing sufficient data on visitor use to guide the protection of Outstandingly Remarkable Values, interim limits would most likely be eliminated. If, however, the VERP program is not providing sufficient data, the National Park Service would continue interim limits until VERP is functioning as intended. In this situation, interim limits would not be eliminated; however, the National Park Service could consider revisions to the interim limits (e.g., adding new limits, revising limits). Revisions to the interim limits would be required to protect Outstandingly Remarkable Values until VERP was fully functioning. If changes proposed at this time would result in substantially different environmental consequences than were identified in this document, an appropriate level of NEPA compliance would be completed.

2) Interim Limits on Facilities

"... the NPS is [not] precluded from using VERP to fulfill the user capacities requirement [of the Wild and Scenic Rivers Act (WSRA)]. However, the WSRA does require that VERP be implemented through the adoption of quantitative measures sufficient to ensure its effectiveness as a current measure of user capacities. If the NPS is correct in projecting that it will need five years to fully implement the VERP, it may be able to comply with the user capacity mandate in the interim by implementing preliminary or temporary limits of some kind."

—Ninth Circuit Court of Appeals opinion, October 2003

Alternative 2 responds directly to the direction of the October 2003 ruling from the Ninth Circuit Court of Appeals. Under this alternative, the park would adopt specific interim limits on facilities for each non-wilderness segment of the river. (Wilderness segments are covered under existing specific use limits through the Wilderness Trailhead Quota System.) The interim facility limits would apply to overnight accommodations, day use parking, bus parking, and corridorwide employee housing. The interim limits on facilities included within this alternative are summarized in table III-4.

Limits on facilities were chosen as the interim use limits in Alternative 2 because managing use according to facility capacities is considered one of the best tools park managers have to address some of the most immediate concerns in the park and to protect the river's Outstandingly Remarkable Values. Some of these concerns include traffic congestion, overflow parking onto sensitive vegetation, long waits at visitor services, and lack of parking. The interim facility limits would restrict any changes to the current facility footprint and would require the National Park Service to manage use accordingly. The interim limits on facilities under Alternative 2 would affect both visitors and employees.

Limits on facilities in the Valley segment include limits on campground and lodging accommodations, and limits on day-visitor vehicle parking and bus parking. Each of these limits is specific and measurable and will directly relate to the number of people allowed in the Valley segment.

Campground Capacity. Limits on campground facilities in Yosemite Valley include an allowable increase of 163 sites for an interim limit of 638 sites¹. This level of campground facilities would be well below the number of campsites that existed in the Valley prior to the Merced River's Wild and Scenic designation. Campground facilities in Wawona would be limited to existing facilities of 99 sites. Campground facilities would be monitored using the campground reservation system and daily campsite occupancy registers. For Wilderness segments, no new campgrounds or trails would be allowed during this interim period.

Lodging Capacity. Limits on overnight lodging facilities in the Valley would be limited to their existing levels of 1,262 units² and 104 units in Wawona. Overnight lodging would be monitored using the lodging reservation system.

Day-Visitor Parking Capacity. Limits on day-visitor parking for the Valley would be limited to the existing capacity of 2,197³ spaces. Day-visitor parking in the Gorge and El Portal segments would also be limited during the interim to existing parking capacities of 244 spaces and 360 spaces respectively. Similarly, day use parking in the Wawona area would be limited to existing parking capacity of 213 spaces. The adoption and enforcement of the interim limits on parking facilities for Yosemite Valley would likely result in the need to implement restricted access policies several times each year during the peak season to maintain visitation within this limit. Under these policies, park managers may temporarily redirect vehicles away from Yosemite Valley when traffic congestion reaches pre-determined levels. Traffic would be allowed to enter the Valley when congestion has decreased. Day-visitor parking would be monitored during peak season by traffic management staff located throughout the developed areas. Additional information from in-ground traffic counters would also be used to monitor Yosemite Valley traffic.

Bus Parking Capacity. Limits on bus parking in the Valley would be limited to the existing capacity of 38 parking spaces the east Valley. This limit does not apply to in-Valley shuttle buses which serve to reduce traffic congestion and do not add visitors to the Valley. Bus parking in Wawona would be limited to the existing capacity of 14. Bus use is allowed under the provision of Special Use Permits. Parking would be monitored by traffic management staff, in coordination with entrance station personnel who record information on each bus entering the park.

Employee Housing Capacity. Employee housing would be limited to housing for 1,969 employee bed spaces within the corridor. (Employees are managed at the corridor level to allow flexibility in reassigning employees among various duty stations.) Employee housing facilities would be monitored by National Park Service and concessioner housing management staff.

¹ Management zoning is used to classify areas and prescribe future desired resource conditions, visitor activities and facilities; such as campsites. The management zoning adopted in the Merced River Plan was developed to protect and enhance the Outstandingly Remarkable Values and the desired conditions for those management zones place emphasis on integrating protection and enhancement of natural and cultural resource with diversity of recreation Outstandingly Remarkable Values within the river corridor. Thus, placement of additional campsites in the Valley is consistent with the approved management zones and associated desired conditions.

² Although there may be a short-term overlap in new lodging units being brought online prior to existing units being removed from inventory, the concessioner would be restricted to occupying a maximum of 1,262 units per night.

³ The parking capacity of existing parking areas varies depending on whether park staff is managing visitor parking (directed parking), which occurs on peak days, or whether visitors are parking themselves (self-directed parking). The parking capacity was based an inventory of directed parking spaces used on peak visitor days. Additional information on the assumptions and data used in the tables is included in Appendix C.

3) Interim Limits on Specific Activities: Number of Buses

Under Alternative 2, a limit on specific activities includes an interim limit on the number of buses allowed in the Valley and Wawona segments of the river corridor. The number of buses allowed in the Valley segment would be limited to 92 buses per day which is what the Valley has accommodated during peak periods in the past. Buses would be limited to 28 per day in Wawona. Limits on buses would be monitored through information collected by entrance stations each bus enters the park, and by traffic management staff who are responsible for directing parking and staging of buses.

4) Continuation of Existing User Capacity Methods

The National Park Service would continue to use a variety of measures to manage visitor use, including limits on the number of people (Wilderness Trailhead Quota System, group size limits on trails), limits on facilities (overnight accommodations, day use parking, utility capacities), limits on specific activities listed in the Superintendent's Compendium, limits based on environmental and experiential conditions (i.e., Wilderness Impacts Monitoring System), and other measures that address visitor use and protection of the Outstandingly Remarkable Values as described in detail in Chapter II.

Relationship of Alternative 2 to the General Management Plan Visitor Capacities

The Yosemite National Park *General Management Plan* was adopted in 1980. In that era, visitor carrying capacity for national park plans was based on the capacity of facilities and infrastructure. Changes to existing facilities and infrastructure were recommended to fulfill and support management objectives. In this method, facility capacity defined the visitor carrying capacity.

In the Yosemite 1980 *General Management Plan*, the total visitor capacity “goals” it established were well below the actual level of facilities. That is, the existing facility capacities were greater than the capacities deemed optimum by the plan. Thus the *General Management Plan* called, not only for a reduction in facility capacity, but relocation of many existing facilities out of Yosemite Valley. These goals to remove and relocate facilities have guided all park planning efforts subsequent to the *General Management Plan*, including this plan. (For a comparison of facility capacities, see tables III-5 and III-6).

In the 1990s, national scientific and scholarly research, and National Park Service policy discussions, resulted in the adoption a new methodology for determining visitor carrying capacity. This methodology—the VERP framework—is described in *Management Policies 2001* and in new Park Planning Program Standards signed in August 2004 (NPS 2004dd).

While the land use management zones and general management direction of the 1980 *General Management Plan* still largely meet the 2004 Park Planning Program Standards, the 1980 approach to visitor carrying capacities does not. In order to meet the new policy standards, Yosemite National Park will amend that element of the *General Management Plan* by translating the former carrying capacity approach to the more responsive VERP process through each new planning effort undertaken. The visitor carrying capacity approach proposed herein for the Revised Merced River Plan/SEIS would therefore amend the subject corridor portion of the *General Management Plan* with regard to carrying capacity.

**Table III-5
Comparison of General Management Plan Visitor Use and Employee Housing Levels (1980) with Existing Conditions (2004) and Proposed Capacity Levels with Full Implementation of the General Management Plan**

Segment Name	Existing GMP Capacity Levels in 1980	Current Capacity Levels (estimated daily visitor capacity)	Proposed Capacity Levels with Full Implementation of GMP
MAIN STEM			
Wilderness	No visitor or employee levels listed	Existing Trailhead Quota	No visitor or employee levels listed
Yosemite Valley	Day visitors: 17,340 Overnight visitors: 9,066 Segment Total: 26,406	Day visitors: 14,944 Overnight visitors: 6,285 Segment Total: 21,229	Day visitors: 10,530 Overnight visitors: 7,711 Segment Total: 18,241
Gorge	Day visitors: 360 Overnight visitors: 0 Segment Total: 360	Day visitors: 2,446 Overnight visitors: 0 Segment Total: 2,446	Day visitors: 360 Overnight visitors: 0 Segment Total: 360
El Portal	Day visitors: 540 Overnight visitors: 0 Segment Total: 540	Day visitors: 1,083 Overnight visitors: 0 Segment Total: 1,083	Day visitors: 765 Overnight visitors: 0 Segment Total: 765
SOUTH FORK			
Wilderness	No visitor or employee levels listed	No visitor or employee levels listed	No visitor or employee levels listed
Wawona (includes impoundment below Wawona)	Day visitors: 1,689 Overnight visitors: 644 Segment Total: 2,333	Day visitors: 2,391 Overnight visitors: 644 Segment Total: 3,035	Day visitors: 1,689 Overnight visitors: 1,622 Segment Total: 3,311
ENTIRE CORRIDOR (All Segments)			
Employees/residents	Existing GMP level: 1,880	Existing Level: 1,683	Proposed GMP Level: 1,790

NOTE: Detailed information about the assumptions and calculations used to develop these numbers are provided in tables C-1 and C-3 (Appendix C).

Table III-6
Comparison of Number of General Management Plan Facilities (1980) with Interim Facility Limits, and General Management Plan Facilities Proposed Facilities

Segment Name	Number of Existing Facilities in 1980 (GMP) ^a	Interim Facility Limits ^b	Proposed Numbers of Facilities (GMP) ^c
MAIN STEM			
Wilderness	High Sierra Camp Tent Cabins: 56	High Sierra Camp Tent Cabins: 56	High Sierra Camp Tent Cabins: 56
Yosemite Valley	Vehicle Parking Spaces: 2,513 Lodging Units: 1,528 Campsites: 872	Vehicle Parking Spaces: 2,197 Lodging Units: 1,262 Campsites: 638	Vehicle Parking Spaces: 1,271 Lodging Units: 1,250 Campsites: 756
Gorge ^d	Vehicle Parking Spaces: 20 Lodging Units: 0 Campsites: 0	Vehicle Parking Spaces: 244 Lodging Units: 0 Campsites: 0	Vehicle Parking Spaces: 20 Lodging Units: 0 Campsites: 0
El Portal	Vehicle Parking Spaces: 20 Lodging Units: 0 Campsites: 0	Vehicle Parking Spaces: 360 Lodging Units: 0 Campsites: 0	Vehicle Parking Spaces: 170 Lodging Units: 0 Campsites: 0
SOUTH FORK			
Wilderness	No Facility levels listed	No Facility levels listed	No Facility levels listed
Wawona (includes impoundment below Wawona)	Vehicle Parking Spaces: 125 Lodging Units: 63 Campsites: 101	Vehicle Parking Spaces: 213 Lodging Units: 104 Campsites: 99	Vehicle Parking Spaces: 125 Lodging Units: 145 Campsites: 301

NOTE:

a Existing parking and lodging capacities can be found on page 1 of the 1980 *General Management Plan*, and existing camping capacities can be found in table A-6 (page 230) of that same document.

b See table C-2 (Appendix C) for source information.

c Proposed parking and lodging capacities can be found on page 1 of the 1980 *General Management Plan*, and proposed camping capacities can be found in table A-6 (page 230) of that same document.

d Discrepancies between the *General Management Plan* Existing, Interim Facility Limits, and GMP Proposed numbers of parking spaces in the Gorge segment is not a result of a change in facilities. The numbers for existing parking spaces in the *General Management Plan*, as well as proposed parking spaces, calculated only those at the Arch Rock Entrance Station and at the intersection of Highway 140 and the El Portal Road. Numbers of existing (2004) parking spaces for the Gorge segment were calculated by including all spaces (in turnouts, wide shoulders, etc).

In the future, overall visitation could increase or decrease under Alternative 2 as compared with *General Management Plan* levels. The overall level of park visitation, including the types and levels of use, would be informed by the results of monitoring as a component of the VERP program, which is designed to ensure visitor levels do not degrade Outstandingly Remarkable Values.

Relationship of Alternative 2 to Protection and Enhancement of the Outstandingly Remarkable Values

Under Alternative 2, park managers would implement the VERP program and would establish interim limits on facilities and specific activities. These measures would be added to the existing user capacity management measures discussed in Chapter II. Current park policies and existing use levels are considered to be protective of the Outstandingly Remarkable Values, as discussed under Alternative 1.

The addition of the interim limits on facilities and specific activities and the implementation of a VERP program with detailed standards and indicators will provide park managers with on-the-ground information on the condition of Outstandingly Remarkable Values. Thus, managers will make more informed decisions to further protect and enhance the Outstandingly Remarkable Values and natural river processes. The interim facility limits established in Alternative 2 would remain in place for approximately 5 years, while the VERP program is being refined. As described previously in the VERP discussion, while some aspects of the VERP program may take several cycles of field testing, some aspects could be operational within a short time. The interim limits would not be eliminated, unless park managers were confident that the VERP program was providing sound guidance on appropriate types and levels of visitor use and adequate protection of the Outstandingly Remarkable Values within the river corridor. If changes proposed at this time would result in substantially different environmental consequences than were identified in this document, an appropriate level of NEPA compliance would be completed. Since VERP serves as a type of report card on the condition of various Outstandingly Remarkable Values, the National Park Service has committed to providing the public with regular updates on the status of the VERP user capacity component.

In the long-term, the use of existing user capacity methods and the VERP program will allow the park to protect and enhance the Outstandingly Remarkable Values of the Merced River.

El Portal Boundary

The Ninth Circuit Court of Appeals directed the National Park Service to reassess the river boundary in El Portal based on the location of Outstandingly Remarkable Values. As a result of public comments received on the Draft Revised Merced River Plan/SEIS, Alternative 2 expands the corridor boundary to a quarter-mile on each side of the river. The boundary encompasses a total of 853 acres, which is equal to the maximum allowable acreage of 320 acres per linear mile of river under the Wild and Scenic Rivers Act. This boundary would include portions of the El Portal Administrative Site that do not contain Outstandingly Remarkable Values, however, the extent of this boundary would be the same as all other river segments within Yosemite National Park. As specified in the 2000 Merced River Plan, the National Park Service will protect Outstandingly Remarkable Values wherever they exist, regardless of the corridor boundary. Future development could occur within the boundaries, provided that it would not adversely

affect Outstandingly Remarkable Values. The El Portal boundary and management zoning for Alternative 2 are shown in figure III-2.

The proposed management zoning for the El Portal segment consists of Park Operations and Administration (3C) zoning for most areas north of the river and for existing developed areas south of the river (Murchison structures, Trailer Village/Abbieville). Areas north of the river that are not considered to be suitable for high density visitor use have been zoned for Day Use (2C). The majority of the Sand Pit south of the river would be protected and zoned Day Use (2C), except for an access route to the Murchison structures. The area south of the river and east of the Highway 140 bridge would be zoned Open Space (2A). Alternative 2 provides for park administrative uses on 411 acres of the 853 acres within the corridor. Day-use facilities and uses would be allowed on 192 acres in 2C areas. The 250 acres zoned Open Space (2A) would be managed as a relatively undisturbed natural area with only incidental or casual use. It should be noted that not all areas zoned for development would be developed. In addition, any development proposed would also have to be consistent with all of the management elements, criteria and considerations adopted in the 2000 Merced River Plan.

The Outstandingly Remarkable Values identified within the El Portal segment of the river corridor include: scientific, geologic process/conditions, recreation, biological, cultural, hydrologic processes. The scientific Outstandingly Remarkable Values, though not directly affected by the boundary and management zoning prescriptions under Alternative 2, would be enhanced by information gained through the VERP program, as a comprehensive monitoring program of indicators and standards is a component of this alternative. As mentioned in Alternative 1, both the geologic process/conditions and the hydrologic processes Outstandingly Remarkable Values are not sensitive to the boundary and management zones prescriptions proposed in Alternative 2. The recreation Outstandingly Remarkable Values within the El Portal segment are protected under Alternative 2, as the location of these Outstandingly Remarkable Values are primarily found within the River Protection Overlay and contains both Open Space (2A) and Day Use (2C) zoning. The extent of the biological Outstandingly Remarkable Values found within a quarter-mile of the river corridor are protected under Alternative 2 through Open Space (2A), Day Use (2C), and Park Operations and Administration (3C) zoning. Similarly, the extent of cultural Outstandingly Remarkable Values within a quarter-mile of the river corridor are protected primarily through Open Space (2A) and Park Operations and Administration (3C) zoning, and most notably through Day Use (2C) zoning.

The proposed management zoning scheme fulfills the legislative intent of the Wild and Scenic Rivers Act. A subsidiary consideration is the legislative intent for the El Portal Administrative Site, which was transferred to the National Park Service to be used for operational purposes and to allow for the relocation of many park administrative and support facilities from Yosemite Valley to El Portal. Outstandingly Remarkable Values would be protected and enhanced during site planning and development within all management zones. Protection of the Outstandingly Remarkable Values would be further evaluated and documented in the El Portal Concept Plan, which will be initiated following completion of this Revised Merced River Plan/SEIS. The El Portal Concept Plan would re-evaluate the development proposed in the *Yosemite Valley Plan* for El Portal, in light of the revised river corridor boundary and management zoning in the El Portal area.

Figure III-2
Alternative 2: El Portal Boundary

Alternative 3: VERP program with Segment Limits

Summary of the Alternative

Alternative 3 would consist of additional limits on the number of people within the river corridor, a new facility limit on employee housing within the river corridor, and implementation of the VERP program (as presented in Chapter II) to manage visitor use and protect the Merced River's Outstandingly Remarkable Values. The additional limits on people would be expressed as a daily visitor limit for each segment of the Merced Wild and Scenic River, a daily limit on day use hikers on the trail to Half Dome, an annual visitor limit for the entire river corridor, a daily limit on employees commuting into the corridor, and a facility limit on employee housing within the corridor. These measures would be added to the existing user capacity management program as described under Alternative 1. Alternative 3 would amend the visitor capacity goals established in the *General Management Plan* by adopting new daily segment limits. The measures included within this alternative are summarized in table III-7.

Alternative 3 proposes a quarter-mile river corridor boundary for the El Portal segment of the river.

User Capacity Program

The following constitute the User Capacity Program methods proposed under Alternative 3. Each component is described in detail in the sections that follow.

- 1) Limits Based on Environmental and Experiential Conditions through VERP**
- 2) Limits on Numbers of People by Segment (Segment Limits)**
- 3) Limits on Numbers of People by Corridor (Corridor Limits)**
- 4) Limits on Numbers of People on Trail to Half Dome**
- 5) Limits on Facilities**
- 6) Continuation of Existing User Capacity Methods**

Concept. Under Alternative 3, the National Park Service would implement the VERP program, which would result in directed management actions designed to protect and enhance the Merced River's Outstandingly Remarkable Values. This alternative would also implement multiple new limits on visitor numbers, employees, and day hikers in wilderness. These limits would be managed independently of the VERP program. The daily segment limits were developed based on current facility capacities for each segment. Facility limits on employee housing would limit employees within the corridor.

Alternative 3 would manage user capacity in the Merced River corridor in part by limiting the number of river users (visitors and employees) in each segment of the river corridor and in the corridor as a whole. Under Alternative 3, park managers would establish a maximum daily visitor limit for each segment of the river corridor, a maximum daily limit for day hikers entering the wilderness to reach Half Dome, daily limits on employees commuting into the river corridor, and an annual visitation limit of 5.32 million visitors per year for the river corridor. In addition, Alternative 3 would establish a facility limit on employee housing within the corridor.

Table III-7
Alternative 3: User Capacity Management Program Overview

LIMITS ON NUMBERS OF PEOPLE

Wilderness Trailhead Quota System

Superintendent's Compendium

- Overnight Group Size – Wilderness On Trail 15
- Overnight Group Size – Wilderness Off Trail..... 8
- Day Use Group Size – Wilderness On Trail 35
- Day Use Group Size – Wilderness Off Trail 8
- Stock Use Limit On Trail 25
- Bicycle Group Size – On Road or Paved Trail..... 30
- Vehicle access limits in Yosemite Valley based on traffic/parking conditions
- Vehicle access limits in Wawona based on parking capacity

Additional Daily Limits on People by Segment

- Yosemite Valley: Day visitors – 16,680; Overnight visitors – 7,699; Segment maximum total: 24,379
- Gorge: Day visitors – 2,958; Overnight visitors – 0; Segment maximum total: 2,958
- El Portal: Day visitors – 1,144; Overnight visitors – 0; Segment maximum total: 1,144
- Wawona: Day visitors – 2,839; Overnight visitors – 897; Segment maximum total: 3,736

Additional Daily Limit on Day Hikers to Half Dome = 800 visitors

Additional Annual Corridorwide Visitation Limit = 5.32 million visitors

LIMITS ON FACILITIES

- Existing overnight capacities
- Existing parking capacities
- Existing utility system capacities

LIMITS ON SPECIFIC ACTIVITIES

Superintendent's Compendium

- Nonmotorized watercraft allowed between Stoneman Bridge and Sentinel Beach
- Nonmotorized watercraft limited to between the hours of 10 a.m. and 6 p.m.
- Nonmotorized watercraft prohibited when river gauge at Sentinel Bridge is 6.5 feet or higher and the combined air and water temperature is less than 100°F
- Fishing prohibited at designated swimming beaches and from road bridges
- Catch limits apply to fishing from Happy Isles footbridge downstream to Foresta Road bridge
- Bicycling prohibited except on paved trails or roads
- Stock use prohibited off trail
- Commercial bus use allowed through provisions of Special Use Permits

LIMITS ON ENVIRONMENTAL AND EXPERIENTIAL CONDITIONS

Wilderness Impacts Monitoring System

Visitor Experience and Resource Protection

- Desired conditions/management zones
- Specific indicators and standards
- Monitoring
- Enforcement of standards through management actions
- Reporting to the public

OTHER RELATED USER CAPACITY METHODS

Governing Mandates

- Wild and Scenic Rivers Act
- Secretarial Guidelines for Wild & Scenic Rivers
- Wilderness Act
- National Parks and Recreation Act
- 16 USC Section 1a-7 (General management plans must contain visitor carrying capacity)
- 36 CFR (Use Management, and Protection of Resources)
- NPS Management Policies (Chapter 8, Use of Parks)

Management Zoning

- Wilderness Zones
- Diverse Visitor Experience Zones
- Developed Zones
- River Protection Overlay

If information gained through the VERP program led to additional restrictions on specific uses or visitor levels in certain areas, the maximum number of visitors could possibly be reduced to below the specified daily segment and annual corridorwide visitation limit. Likewise, if the VERP program provided park managers with information that Outstandingly Remarkable Values were being enhanced and protected through management actions, the maximum number of visitors could be increased above the specified daily segment and annual corridorwide visitation limit. If park managers proposed to raise or lower the segment and/or annual corridorwide visitation limit in the future, the proposal would have to be protective of Outstandingly Remarkable Values and undergo the appropriate level of NEPA review and public involvement prior to any changes in daily segment or annual corridorwide visitation limit becoming effective. Additional NEPA analysis would be required if the environmental effects of the increased or decreased limits could be substantially different from those documented in this Revised Merced River Plan/SEIS. The limits established for the river corridor and for each segment of the corridor for Alternative 3 are listed in table III-8.

Table III-8 Alternative 3: Segment and Corridorwide Limits		
Segment Name	Segment Limits (maximum people per day in peak period)	
Entire Corridor	<ul style="list-style-type: none">• Annual Corridorwide Visitation Limit of 5.32 million visitors• Overall employee housing = 1,969 beds• Average daily employee commuters into river corridor = 606 people	
MAIN STEM		
Wilderness	Existing Trailhead Quota	1,280
	Day use limit to Half Dome	800
Yosemite Valley	Day visitors	16,680
	Overnight visitors	7,699
	Segment maximum total	24,379
Gorge	Day visitors	2,958
	Overnight visitors	0
	Segment maximum total	2,958
El Portal	Day visitors	1,144
	Overnight visitors	0
	Segment maximum total	1,144
SOUTH FORK		
Wilderness	Existing Trailhead Quota	1,280
Wawona (includes below Wawona and the impoundment)	Day visitors	2,839
	Overnight visitors	897
	Segment maximum total	3,736

NOTE: Detailed information about the assumptions and calculations used to develop these numbers are provided in Appendix C.



NATURAL PROCESSES

Regular flooding of the Merced River is an important natural process. A warm spring storm in 2005 caused the river to spill over its banks and saturate nearby meadows. (Photo by David Riggle)

1) Limits Based on Environmental and Experiential Conditions through VERP

Alternative 3 would include full implementation of the Yosemite National Park's VERP program, as described in Chapter II.

2) Limits on Numbers of People by Segment

The daily segment limits would represent the maximum number of visitors that would be allowed in a particular river segment on any single day. These segment limits would amend and replace the visitor capacity goals adopted in the *General Management Plan*. The segment limits proposed in this alternative are based on maximum potential use of existing lodging and campground facilities, average day use associated with personal vehicles, and maximum potential use of commercial buses. The use limit on the trail to Half Dome is based on the estimated maximum existing day use.

The limits established for each segment of the river corridor and corridorwide for Alternative 3 are listed in table III-8 and described below.

Wilderness (Main Stem) Segment Limits. The daily limit for all Wilderness segments is set at the existing overnight trailhead quota system limits. Existing wilderness trailhead quotas limit the maximum daily entries into Yosemite National Park Wilderness to 1,280 people per day for overnight visitors. Since the Merced River corridor represents a very small portion of the total Yosemite Wilderness, the actual number of daily visitors in Wilderness segments of the river

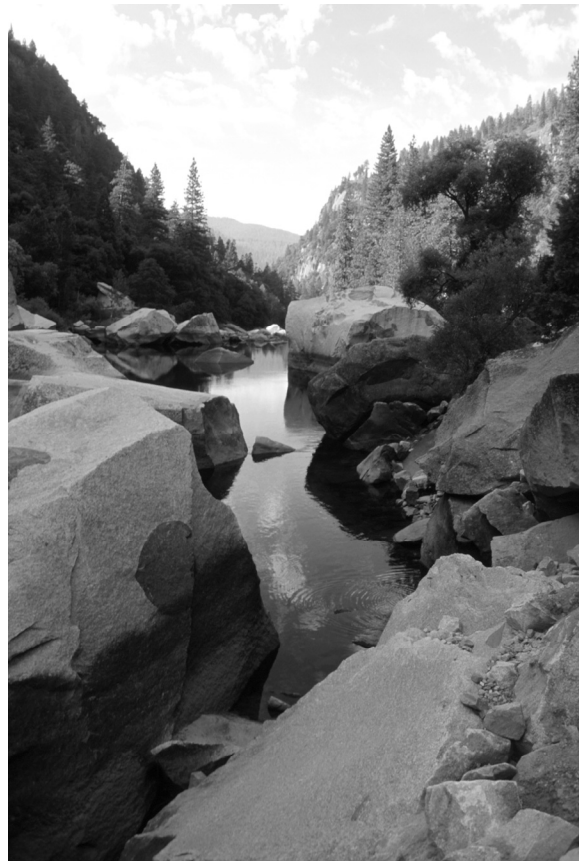
corridor would likely be much lower. Monitoring of visitor use in the wilderness occurs through the wilderness permit system and through wilderness ranger patrols.

Yosemite Valley Segment Limits. The segment limit for Yosemite Valley would include both the east and west Valley, from just west of Pohono Bridge in the west to Nevada Fall in the east. The daily segment limit for the Valley would represent the maximum number of users allowed per day, including day visitors, overnight visitors, and employees and their families. The limit for the Valley segment would be set at 24,379. This limit was calculated based on the existing visitor infrastructure used at an average capacity for day-visitor parking, maximum commercial and transit bus use, and maximum capacity for overnight visitors. Monitoring of segment limits in the Valley would be focused on traffic volumes and entrance station statistics. The number of vehicles entering the east Valley could be tracked using existing traffic counters, and visitor numbers could be estimated using data on the average number of visitors per vehicle. Similarly, monitoring could use entrance station data, assuming that approximately 80% of park entrants each day visit Yosemite Valley (BRW 1999). Overnight use would be monitored using reservation information from lodging and campground facilities.

Gorge Segment Limits. The limit for the Gorge segment was derived based on the amount of existing available parking. Since the Merced River gorge is fairly inaccessible except along El Portal Road, it is assumed that the parking capacity dictates the user capacity for this segment. The adopted day-visitor limit for the Gorge segment would be 2,958. Monitoring of the user levels in this segment would be based on periodic surveys of filled parking spaces, particularly during peak use periods.

El Portal Segment Limits. The El Portal segment limit was derived from the existing parking for day visitors within the segment and the estimated maximum commercial rafting customers using the Red Bud launch site at the far west end of the El Portal Administrative Site. Based on these numbers, the segment limit for El Portal would be 1,144. Visitor use levels within El Portal would be monitored through periodic surveys of filled parking spaces, particularly during peak use periods.

Wilderness (South Fork) Segment Limits. Wilderness areas within Yosemite National Park are managed through the Wilderness Management Program, and overnight visitor use is managed through the Wilderness Trailhead Quota System. As previously described for the main stem Wilderness segment, overnight visitors are limited to a total of 1,280 per day. Visitor levels within wilderness areas are expected to be low because the South Fork Merced River corridor is a very small portion of the greater Yosemite National Park Wilderness and is



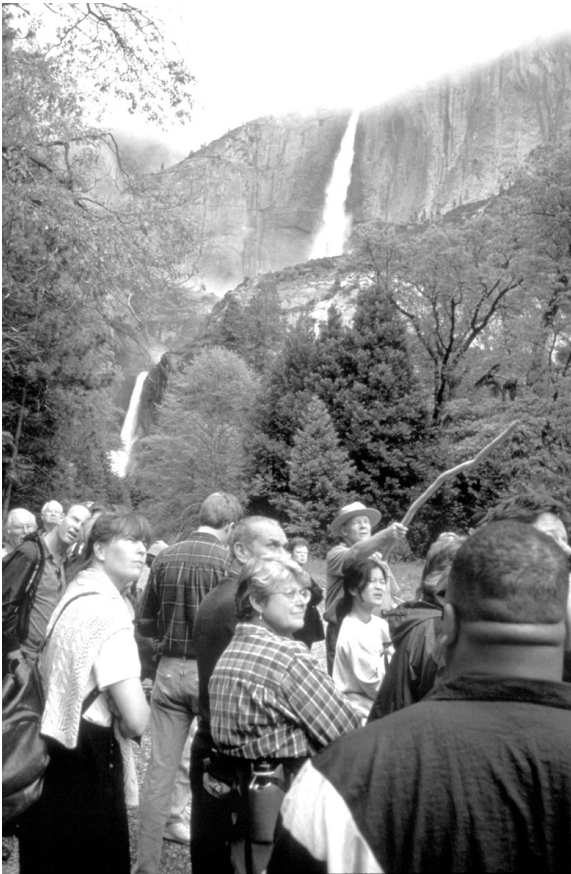
Steamboat Bay in the Gorge segment, between Yosemite Valley and El Portal on the main stem of the Merced River. (NPS photo)

relatively inaccessible. No day-use limit was established for this segment, as the Wilderness segment along the South Fork has no concentrated areas of day use.

Wawona Segments Limits. The limit for these segments was derived from the existing visitor facility infrastructure within Wawona. This limit was calculated based on the existing visitor infrastructure used at an average capacity for day-visitor parking and at maximum capacity for overnight visitors. The limit for Wawona also includes an allowance for day visitors who can access the corridor from adjacent private accommodations and who would not be using day-visitor parking. Thus, the segment limit for Wawona would be set at 3,736. Visitor levels would be monitored based on periodic surveys of filled parking spaces, particularly during peak use periods and information on overnight accommodation reservations.

Management Actions Associated with Segment Limits

Although the river corridor boundaries adopted in the 2000 Merced River Plan do not match the developed area boundaries identified in the *General Management Plan*, capacities for developed areas were adopted as being appropriate for managing use within the Merced River corridor. Segment limits adopted under Alternative 3 are based on facility capacities within these developed areas, and assigned to segments of the Merced River corridor. These limits would most effectively



LEARNING OPPORTUNITIES

Ranger-led interpretive programs not only orient visitors to the park, they also instill a sense of stewardship and engage visitors in helping to protect valuable park resources. (NPS photo)

manage visitor use levels for the larger developed areas in Yosemite Valley, El Portal, and Wawona. The location of visitor and employee facilities and the dispersed nature of recreational activity within these developed areas result in continual movement of visitors and employees into and out of the river corridor throughout the day. Thus, it is not practical to manage visitor levels strictly within the river segments, separately from the larger developed areas.

In the event that visitor levels exceed the daily segment limit, park managers would take management actions to limit or redirect visitor use within these areas. In some segments, such as El Portal or the Gorge, this could include reducing available parking to limit visitor access to these areas. Other management actions could include construction of additional facilities similar to entrance stations to control access into each segment, or institution of a parkwide or corridorwide day use reservation system, or entrance station closures during peak periods when daily limits were met.

3) Limits on Numbers of People by Corridor

Annual Corridorwide Visitation Limit. To ensure that visitor use levels do not reach the maximum daily segment limits (described previously) on most days during the year—resulting in what the National Park Service would consider an unacceptable number of annual visitors—Alternative 3 would establish an annual corridorwide visitation limit of 5.32 million⁴ visitors for the river corridor.

Although the daily limits would tend to limit use during peak seasons, some growth in visitor use could occur during non-peak seasons under the annual visitation limit. In the event that use levels are nearing the annual visitation limit proposed under this alternative and park managers have determined that the Outstandingly Remarkable Values cannot sustain current or increased use based on information gained through the VERP program, the annual visitation limit could be lowered. The appropriate level of NEPA compliance and public review would be undertaken if park managers proposed changes in the annual visitation limit. Annual visitation would be monitored through entrance station visitation statistics that are available at the end of each month. Park managers would compare current monthly visitation data to historical visitation data to identify visitation trends for the current year and project year end visitation numbers. Depending on the visitation trend for the current year, park managers would take appropriate management actions to ensure that annual visitation would not exceed the proposed annual visitation limit.

Commuter Limits. The daily limit on employees commuting into the corridor of 606 is based on an estimate of current nonresident employee levels in the developed areas. The overall number of employee commuters would be controlled through park and concessioner housing, employment and management policies, and through increasing the level of participation in regional transit ridership. Commuter levels would be monitored by park and concessioner housing and employee managers.

4) Limits on Numbers of People on Trail to Half Dome

Although most wilderness areas receive little day use, the trail to Half Dome is extremely popular with day hikers. To ease levels of crowding, Alternative 3 proposes a maximum daily limit for day-use hikers traveling to Half Dome. This limit would be set at the estimated existing maximum daily use level of 800. This day-use limit would be monitored through ranger patrol reports in the short term and a day-use permit system in the long term.



ENHANCING THE EXPERIENCE

The trail to the top of Half Dome is popular with day hikers. To ease crowding, Alternative 3 would implement a limit on the number of hikers on the trail to Half Dome. (Photos by Robert Wurgler)

⁴ The limit of 5.32 million annual visitors in this alternative is based on 700,000 visitors to the park during the months of June, July and August (700,000 visitors was based on the annual park attendance for August in 1996 and 1997 as these numbers reflect historic peak monthly attendance since 1980, see Table IV-16); 210,000 visitors in January, February, and December; 280,000 visitors in March and November; 350,000 visitors in April; 560,000 visitors in May; 630,000 visitors in September; and 490,000 visitors in October. This annual corridorwide visitation limit provides for peak attendance levels for June, July, and August, and allows for growth in park attendance during the remaining months of the year.

5) Limits on Facilities

The proposed facility limit on employee housing would be based on employee housing targets established in the *General Management Plan*. The *General Management Plan* called for a total of 1,790 employee beds in the developed areas of the park. Alternative 3 would adopt a facility limit of 1,969, which allows for up to 10% more than identified in the *General Management Plan*. This limit would allow for an increase in employee housing from current levels to address existing housing deficiencies. Employee housing and nonresident employee numbers would be controlled through park housing and employment policies and would be monitored by park managers.

6) Continuation of Existing User Capacity Methods

The National Park Service would continue to use a variety of measures to manage visitor use, including limits on the number of people (Wilderness Trailhead Quota System, group size limits on trails), limits on facilities (overnight accommodations, day use parking, utility capacities), limits on specific activities listed in the Superintendent's Compendium, limits based on environmental and experiential conditions (i.e., Wilderness Impacts Monitoring System), and other measures that address visitor use and protection of the Outstandingly Remarkable Values as described in detail in Chapter II.

Relationship of Alternative 3 to the General Management Plan Visitor Capacities

When the *General Management Plan* was developed in 1980, the estimated visitor capacity of Yosemite Valley was 26,406 per day. As shown in table III-5, the *General Management Plan* called for these visitation levels to be reduced to 18,241 per day through relocation of facilities from Yosemite Valley. Implementation of segment limits and a corridorwide annual cap as shown in table III-8 would amend the visitor capacity goals of the *General Management Plan* by increasing the day visitation level to 24,379 and by placing an annual visitation limit of 5.32 million visitors. In addition, Alternative 3 increases employee housing levels above *General Management Plan* proposed levels by 10%. Adoption of this alternative would amend the long-term visitor capacity goals adopted in the *General Management Plan*.

In addition, the VERP program has the ability to reduce or increase visitation levels from the proposed daily segment and annual corridorwide limits. If data collected as a result of monitoring show that the conditions of Outstandingly Remarkable Values and the visitor experience are exceeding or are well within set standards, appropriate management actions (which could include reduced or increased visitation levels) could be taken change visitation levels from the limits proposed in Alternative 3.

Relationship of Alternative 3 to Protection and Enhancement of the Outstandingly Remarkable Values

Research on visitor use impacts on resources indicates that there is no direct correlation between use levels and the intensity of impacts on resources (Graefe 1990, Marion 2000). It is also widely held that controlling visitor numbers alone is not enough to adequately protect and enhance river resources and values (Marion 1998, Cole et al. 2005). Therefore, Alternative 3 would implement a VERP program as described in Chapter II in conjunction with the proposed daily segment and annual corridorwide visitation limit. As described previously, the VERP program would provide park managers with on-the-ground information on the conditions of Outstandingly Remarkable Values and how they meet the established standards, and would direct actions needed to achieve adopted standards.

Implementation of daily segment and annual corridorwide visitation limit would work in concert with the VERP program to protect and enhance Outstandingly Remarkable Values. Together these methods would provide park managers with the long-term ability to manage visitation within the river corridor. By limiting visitation through segment and corridorwide limits, river values, such as the recreation Outstandingly Remarkable Values, would be protected and enhanced through park managers' ability to provide for a diversity of recreational activities. Desired conditions would be further maintained through management zone prescriptions (e.g., low encounter rates versus highly concentrated use areas). Daily segment and annual corridorwide visitation limits could be reduced or increased through implementation of management actions under the VERP program. The appropriate level of NEPA compliance and public review would be undertaken if park managers proposed changes in the annual visitation limit. However, any changes to use levels must be protective of the Outstandingly Remarkable Values.



RESTORATION PROGRAM

Addressing the impacts of visitor use is nothing new in Yosemite. Since 1980, the park has developed an extensive restoration program. These photos show the former picnic area at Devil's Elbow near El Capitan. The picnic area was relocated and the riverbank was restored to native willows and grasses. (NPS photos)

El Portal Boundary

The Ninth Circuit Court of Appeals directed the National Park Service to reassess the river boundary in El Portal based on the location of Outstandingly Remarkable Values. Alternative 3 draws a quarter-mile on each side of the river, a total of 853 acres which is equal to the maximum allowable acreage of 320 acres per linear mile of river under the Wild and Scenic Rivers Act. This boundary would include portions of the El Portal Administrative Site that do not contain Outstandingly Remarkable Values, however, the extent of this boundary would be the same as all other river segments within Yosemite National Park. The El Portal boundary and management zoning for Alternative 3 are shown in figure III-3.

The zoning proposal for the El Portal segment would consist of Park Operations and Administration (3C) zoning for areas north of the river, and for existing developed areas south of the river (Murchison structures, Trailer Village/Abbieville). Some specific areas of known cultural value north of the river would be protected and zoned for Day Use (2C). South of the river, the majority of the Sand Pit would be zoned Day Use (2C), except for an access route to the Murchison structure area. East of the Highway 140 bridge, undeveloped areas south of the river would be protected through Discovery (2B) zoning. Alternative 3 provides for park administrative uses (3C zoning) on 399 acres of the 853 acres within the corridor. Day-use facilities and uses (2C zoning) would be allowed on 131 acres, and 323 acres would be zoned Discovery (2B) for low-intensity use. It should be noted that not all areas zoned for development would be developed. In addition, any development proposed would also have to be consistent with all management elements and criteria and considerations adopted in the Merced River Plan.

The Outstandingly Remarkable Values identified within the El Portal segment of the river corridor include: scientific, geologic process/conditions, recreation, biological, cultural, hydrologic processes. The scientific Outstandingly Remarkable Values, though not directly affected by the boundary and management zoning prescriptions under Alternative 3, would be enhanced by information gained through the VERP program, as a comprehensive monitoring program of indicators and standards is a component of this alternative. As mentioned in Alternative 1, both the geologic process/conditions and the hydrologic processes Outstandingly Remarkable Values are not sensitive to the boundary and management zones prescriptions proposed in Alternative 3. The recreation Outstandingly Remarkable Values within the El Portal segment are protected under Alternative 3, as the location of these Outstandingly Remarkable Values are found within the River Protection Overlay and contain both Discovery (2B) and Day Use (2C) zoning. The extent of the biological and cultural Outstandingly Remarkable Values found within a quarter-mile of the river corridor are protected under Alternative 3 through Discovery (2B), Day Use (2C), and Park Operations and Administration (3C) zoning.

As described under Alternative 2, the proposed management zoning scheme in Alternative 3 fulfills the legislative intent of the Wild and Scenic Rivers Act. A subsidiary consideration is the legislative intent for the El Portal Administrative Site, which was transferred to the National Park Service to be used for operational purposes and to allow for the relocation of many park administrative and support facilities from Yosemite Valley to El Portal. Outstandingly Remarkable Values would be protected and enhanced during site planning and development within all management zones. Protection of the Outstandingly Remarkable Values would be further evaluated and documented in the El Portal Concept Plan, which will be initiated following completion of this Revised Merced River Plan/SEIS.

Figure III-3
Alternative 3: El Portal Boundary

Alternative 4: VERP program with Management Zone Limits

Summary of the Alternative

Alternative 4 would establish maximum use levels within each management zone. This limit would be calculated based on capacity factors for the average number of people per unit area. Alternative 4 would also include a maximum annual visitor limit of 3.27 million for the Merced River corridor, and implementation of the VERP program. These methods would be added to the park's existing user capacity measures as described under Alternative 1. The user capacity methods included within this alternative are summarized in table III-9.

In the El Portal segment, Alternative 4 proposes a river corridor boundary that closely follows the location of known Outstandingly Remarkable Values within the El Portal Administrative Site.



ONGOING MONITORING

Since the 1970s, the Wilderness Management Program has monitored conditions and restored areas where impacts occur. Here, a backcountry crew removes a campfire ring to discourage others from camping too close to the river. (NPS photos)

Before removal



After removal



Table III-9
Alternative 4: User Capacity Management Program Overview

LIMITS ON NUMBERS OF PEOPLE

Wilderness Trailhead Quota System

Superintendent's Compendium

- Overnight Group Size – Wilderness On Trail 15
- Overnight Group Size – Wilderness Off Trail..... 8
- Day Use Group Size – Wilderness On Trail 35
- Day Use Group Size – Wilderness Off Trail 8
- Stock Use Limit On Trail 25
- Bicycle Group Size – On Road or Trail..... 30
- Vehicle access limits in Yosemite Valley based on traffic/parking conditions
- Vehicle access limits in Wawona based on parking capacity

Additional Daily Limits on People at One Time by Management Zone

- 1A – Trailhead Quota System
- 1B – Trailhead Quota System
- 1C – Trailhead Quota System
- 1D – Trailhead Quota System
- 2A – 0.83 to 2.5 PAOT per acre^a
- 2A+ – 0.01 PAOT per acre
- 2B – 0.83 to 2.5 PAOT per acre
- 2C – 5 to 10 PAOT per acre
- 2D – 20 to 100 PPV^b
- 3A – 15 to 20 PAOT per acre
- 3B – 40 to 50 PAOT per acre
- 3C – 25 to 50 PAOT per acre

Additional Annual Corridorwide Visitation Limit = 3.27 million visitors

LIMITS ON FACILITIES

- Existing overnight capacities
- Existing parking capacities
- Existing utility system capacities

LIMITS ON SPECIFIC ACTIVITIES

Superintendent's Compendium

- Nonmotorized watercraft allowed between Stoneman Bridge and Sentinel Beach
- Nonmotorized watercraft limited to between the hours of 10 a.m. and 6 p.m.
- Nonmotorized watercraft prohibited when river gauge at Sentinel Bridge is 6.5 feet or higher and the combined air and water temperature is less than 100°F
- Fishing prohibited at designated swimming beaches and from road bridges
- Catch limits apply to fishing from Happy Isles Footbridge downstream to Foresta Road Bridge
- Bicycling prohibited except on paved trails or roads
- Stock use prohibited off trail
- Commercial bus use allowed under provisions of Special Use Permit

LIMITS ON ENVIRONMENTAL AND EXPERIENTIAL CONDITIONS

Wilderness Impacts Monitoring System

Visitor Experience and Resource Protection

- Desired conditions/management zones
- Specific indicators and standards
- Monitoring
- Enforcement of standards through management actions
- Reporting to the public

OTHER RELATED USER CAPACITY METHODS

Governing Mandates

- Wild and Scenic Rivers Act
- Secretarial Guidelines for Wild & Scenic Rivers
- Wilderness Act
- National Parks and Recreation Act
- 16 USC Section 1a-7 (General management plans must contain visitor carrying capacity)
- 36 CFR (Use Management, and Protection of Resources)
- NPS Management Policies (Chapter 8, Use of Parks)

Management Zoning

- Wilderness Zones
- Diverse Visitor Experience Zones
- Developed Zones
- River Protection Overlay

a PAOT is a People At One Time is a social density factor modeled after the Bureau of Reclamation's *Water Recreation Opportunity Spectrum Guidebook's* the spectrum of recreational setting classifications, comparable to Merced River Plan management zoning.

b PPV is People Per View modeled after the *Carrying Capacity Research for Yosemite Valley: Phase I Study* done in 1999 on the Yosemite Fall and Vernal Fall trails Attraction (2D) zones).

User Capacity Program

The following constitute the user capacity program methods proposed under Alternative 4. Each component is described in the sections that follow.

- 1) Limits Based on Environmental and Experiential Conditions through VERP**
- 2) Limits on Numbers of People by Management Zone (Management Zone Limits)**
- 3) Limits on Numbers of People by Corridor (Corridor Limits)**
- 4) Continuation of Existing User Capacity Methods**

Concept. Under Alternative 4, park managers would implement the VERP program, which would result in additional directed management actions designed to protect and enhance the Outstandingly Remarkable Values. This alternative would also establish a maximum limit on the number of people (visitors and employees) in any given management zone at one time and an annual visitation limit for the corridor. The management zone limits would be based on a number of variables, including existing facilities and desired condition prescriptions as reflected by management zoning. Unlike other alternatives, the management zone limits would be focused on the number of people in various areas rather than the capacity of facilities in the area. These limits would be monitored and managed independently of the VERP program.

Alternative 4 would manage user capacity in the Merced River corridor in part by limiting the number of river users (visitors and employees) in each non-wilderness management zone of the river corridor and in the corridor as a whole (visitor use limits in wilderness areas would continue to be managed through the Wilderness Trailhead Quota System). Park managers would establish a maximum management zone limit that would be expressed as the number of people allowed at one time within a zone. These proposed management zone limits would be adopted as a range to reflect the different levels of use allowed within each zoning classification. In addition, this alternative proposes an annual visitation limit of 3.27 million visitors per year for the river corridor.

If information gained through the VERP program led to additional restrictions on specific uses or visitor levels in certain areas, the number of visitors could possibly be reduced to below the specified management zone and annual corridorwide visitation limits. In this case, visitor levels could be managed to levels below the high range of the management zone limits. Likewise, if the VERP program provided park managers with information that Outstandingly Remarkable Values were being enhanced and protected through management actions, park managers could propose increasing the management zone limits and/or the annual visitation limit. If park managers proposed to raise or lower the management zone and/or annual corridorwide visitation limits in the future, the proposal would have to be protective of Outstandingly Remarkable Values and undergo the appropriate level of NEPA review and public involvement prior to any changes in management zone or annual corridorwide visitation limit becoming effective. Additional NEPA analysis would be required if the environmental effects of the increased or decreased limits could be substantially different from those documented in this Revised Merced River Plan/SEIS. The limits established for the river corridor and for each management zone for Alternative 4 are listed in table III-10.

1) Limits based on Environmental and Experiential Conditions through VERP

Alternative 4 would include implementation of the Yosemite National Park's VERP program as described in Chapter II.

2) Limits on Numbers of People by Management Zone

Under Alternative 4, the National Park Service would manage use levels within the Merced River corridor by limiting the number of users (park visitors and employees) allowed within each management zone at any one time. Management zone limits proposed in this alternative would be managed through a capacity factor for each zone as expressed in terms of People At One Time⁵ or People Per View—an average number of people at one time within a given unit area. This calculation would vary based on the variety of considerations, including the desired conditions for the area as defined by the management zoning, specific resource conditions in the area, and existing facility capacities. Management zone limits presented as a range reflect the differences between various areas in the corridor, even within each management zone.

For example, the capacity factors proposed for Camping (3A) zones are based on existing facility capacities. The total number of people allowed per campsite (i.e., six for an individual site), multiplied by the total number of campsites in the Valley and Wawona segments (these are the only segments containing 3A zoning) of the river corridor to determine the total number of people that could be present in those zones at any given time. The total number of acres contained within the 3A management zones (as defined in the Merced River Plan) in both the Valley and Wawona segments was divided by the total number of people within those zones. These calculations form the basis of the range in social densities expressed in table III-10.

Social density factors proposed for Open Space (2A) and Discovery (2B) management zones are primarily based on desired and specific resource conditions. For example, Happy Isles Fen in east Yosemite Valley is zoned 2A, as is the area south of the river in the Merced River gorge. Since the Happy Isles Fen is located in Yosemite Valley and has a boardwalk providing access to it along with interpretive exhibits designed to provide an educational opportunity for visitors, this area would be managed at the high end of the capacity range for zone 2A. The area south of the river in the Gorge segment has little access and no developed visitor facilities. This area would be managed at the low end of the capacity range for zone 2A.

No specific data on visitor use by management zone are available. The management zone limits would be set at a level that approximates the estimated existing use levels. The capacity factors were calculated as a people-at-one-time (PAOT) limits, and would be based on the total number of people at one time estimated for the entire management zone, divided by the total acreage of the management zone. However, people-per-view (PPV) capacities at attraction zones were based on research conducted at those areas in 1999. Under this alternative, park staff would continue to refine these management zone limits based on information received through the VERP program. Management zone limits are currently proposed based on the larger management zones areas described in the 2000 Merced River Plan. However, future research would likely result in subdividing these management zone areas into smaller subzones, with refined management zone limits.

The limits established for each management zone are listed in table III-10 and are described in the following pages.

⁵ PAOT is a People At One Time is a social density factor modeled after the Bureau of Reclamation's *Water Recreation Opportunity Spectrum Guidebook's* the spectrum of recreational setting classifications, comparable to Merced River Plan management zoning.

Table III-10
Alternative 4: Management Zone and Corridorwide Limits

Entire Corridor		Annual Corridorwide Visitation Limit of 3.27 million visitors	
Zone	Zone Description	Management Zone Limit	Potential Management Actions
WILDERNESS ZONES			
1A	Untrailed	Trailhead quota system	Reduce existing trailhead quotas. Increase enforcement.
1B	Trailed Travel	Trailhead quota system	Reduce existing trailhead quotas. Increase enforcement.
1C	Heavy Use Trail	Trailhead quota system	Reduce existing trailhead quotas. Increase enforcement. Require day use permits for hikers through Little Yosemite Valley.
1D	Designated Overnight	Trailhead quota system	Reduce existing trailhead quotas. Increase enforcement. Limit capacity at Merced Lake Sierra High Camp. Reduce or restrict stock use levels.
DIVERSE VISITOR EXPERIENCE ZONES			
2A	Open Space	0.83 to 2.5 PAOT per acre	Limit number of visitors allowed. Require permits for use of these areas. Reduce access by removing parking or trails.
2A+	Open Space – Undeveloped	0.01 PAOT per acre	Limit number of visitors allowed. Require permits for use of these areas. Reduce access by removing parking or trails.
2B	Discovery	0.83 to 2.5 PAOT per acre	Limit number of visitors allowed. Reduce access by removing parking, shuttle access, or trails. Require permits for use of these areas.
2C	Day Use Area	5 to 10 PAOT per acre	Limit number of visitors allowed. Require permits or reservations for use of these areas. Reduce access by removing parking or trails.
2D	Attraction Area	20 to 100 PPV	Limit number of visitors allowed. Require permits or reservations for use of these areas. Reduce access by removing parking or trails.
DEVELOPED ZONES			
3A	Camping	15 to 20 PAOT per acre	Reduce number of people per campsite. Reduce number of campsites.
3B	Visitor Base and Lodging	40 to 50 PAOT per acre	Reduce number of people per room. Reduce number of rooms available.
3C	Park Operations and Administration	25 to 50 PAOT per acre	Reduce employees stationed in zone. Reduce employees residing in zone.

NOTE: Detailed information about the assumptions and calculations used to develop these numbers are provided in Appendix C.

Wilderness Zones

Zone 1A through 1D Limits. These areas would continue to be managed under the existing Wilderness Trailhead Quota System, as described in Chapter II.

Diverse Visitor Experience Zones

Zone 2A, Open Space Limits. Areas zoned 2A are relatively undisturbed natural areas with only incidental or casual use. The 2A zone calls for limited trails and interpretive facilities and a generally low level of facility development. The capacity factor for this zone ranges from 0.83 to 2.5 people at one time per acre. This limit was derived from estimated current use levels in open space areas of the corridor.

Zone 2A+, Undeveloped Open Space Limits. This management zone calls for areas zoned 2A+ to be primarily free from signs of human presence and have low use levels. These areas are managed as de facto wilderness. The capacity factor developed for these zones would be 0.01 person per acre at any one time. This limit was derived based on estimated current use levels of undeveloped open space areas within the river corridor.



THE UPPER MAIN STEM

Under Alternative 4, wilderness segments of the Merced River would continue to be managed through the Wilderness Trailhead Quota System. (NPS photo)

Zone 2B, Discovery Limits. The management zoning for areas zoned 2B calls for relatively quiet natural areas where visitor encounters are low to moderate. The zone description notes that during peak periods, concentrated use and frequent visitor encounters can occur on trails in this area. The capacity factor developed for this zone would be 0.083 to 2.5 people per acre at any one time. This limit was derived based on estimated current use of Discovery zones near developed areas.

Zone 2C, Day Use Limits. Areas zoned 2C include many of the most popular park destinations, where visitors spend substantial amounts of time. Visitors can expect moderate to high numbers of encounters with other users and crowding on peak days in these areas. The areas zoned 2C provide facilities to meet high-to-moderate use while protecting Outstandingly Remarkable Values. In Day Use zones, the capacity factor would range from 5 to 10 people per acre at any one time. This limit was derived based on estimated current use in popular day use areas.

Zone 2D, Attraction Limits. This management zone is applied to areas in the Merced River corridor that attract large, concentrated numbers of visitors, such as the viewing area for Bridalveil Fall or Tunnel View. These areas are typically highly developed, with trails, restrooms, and other facilities appropriate for intensive use areas. The limit for these zones would be 20 to 100 people per view, based on research conducted in 1999 at various attraction areas (Manning et al. 1999a, b).

Developed Zones

Zone 3A, Camping Limits. The management zoning for areas zoned 3A calls for opportunities for both vehicle-access and walk-in camping. Camping areas are developed with restrooms, picnic tables, and other support facilities designed to accommodate their relatively heavy use. Capacity factors for these areas would range from 15 to 20 people at one time per acre, depending upon the design of the campground. Some campgrounds are designed for higher densities of campsites, while others are designed for campsites that are spaced farther apart, providing differing types of camping experiences. This limit was based on existing campground capacities in the river corridor.

Zone 3B, Visitor Base and Lodging Limits. Management zone 3B covers overnight lodging areas and other visitor support facilities. These areas are designated for a relatively intense level of development and use. Capacity factors for these zones would range from 40 to 50 people at one time per acre averaged over the entire zone. This limit was based on existing lodging facility capacities within the river corridor.

Zone 3C, Park Operations and Administration Limits. Areas zoned 3C cover a wide variety of locations used for park operations and administration, ranging from utility plants and maintenance areas to office and other administration facilities. Most of these areas have been previously developed and have limited visitor use. Capacity factors in these zones would range from 25 to 50 people at one time per acre, and were based on existing facilities and estimated use levels within the river corridor.

Monitoring and Management Actions Associated with Management Zone Limits

The management zones adopted in the Merced River Plan match the developed area boundaries evaluated in the *General Management Plan*, and the capacities for these developed areas formed the basis for the range of assigned management zone limits within Developed zones; Camping (3A), Visitor Base and Lodging (3B), and Park Operations and Administration (3C) proposed under Alternative 4. It was determined that these ranges of management zone limits would most effectively manage visitor use levels in within the Developed Zones in Yosemite Valley, El Portal, and Wawona. The location of visitor and employee facilities and the dispersed nature of recreational activity within these developed areas, result in continual movement of visitors and employees into and out of management zones throughout the day. Thus, it is not practical to manage visitor levels within Developed zones separately from the larger extent of developed areas. For example, the assigned management zone limits for Visitor Base and Lodging (3B) was determined by calculating the total facility capacity of lodging (e.g., Curry Village or Yosemite Lodge), even though portions lie outside of the Merced River corridor boundary, divided by the total number of acres within those management zones.

Because management zone limits assigned to Diverse Visitor Experience zones are based on different types of capacity factors that are not directly tied to facility capacities, the National Park Service would develop monitoring programs to adequately reflect the types of use in each zone. The ability to monitor and manage use would require more controlled user access to these management zones. This could include construction of fencing or control points in order to achieve real-time control of use for different management zones. Therefore, a monitoring and sampling program would be established to determine use levels in the various management zones. Most monitoring would focus on peak season use, which typically occurs between June and August.

In the event that visitor levels exceed the management zone limits, park managers would take management actions to limit or redirect visitor use within these areas. For example, in some management zones, park managers could attempt to restrict user access by reducing available parking. Other potential management actions could include construction of additional facilities similar to entrance stations to control access into specific high-use zones, or institution of a day use reservation system for large areas or for specific high-use or attraction areas. Park managers could also institute temporary closures of popular areas (viewing areas, beaches) during peak periods when monitoring showed that limits were being exceeded. The appropriate level of NEPA compliance and public review would be undertaken if park managers proposed changes to either management zone or the annual visitation limit.

3) Limits on Numbers of People by Corridor

Annual Corridorwide Visitation Limit. Alternative 4 would establish a maximum annual visitor limit of 3.27 million visitors for the river corridor. This figure is based on the overall level of visitation when the Merced River was designated Wild and Scenic in 1987. As discussed under Alternative 3, this annual visitor limit would be set at a level that would ensure that visitation levels would be less than the maximum daily management zone limit on most days during the year. In the event that use levels were nearing the annual visitation limit proposed under this alternative (as discussed in Alternative 3) and park managers determined that the Outstandingly Remarkable Values could not sustain current or increased use based on information gained through the VERP program, the annual visitation limit could be lowered. The appropriate level of NEPA compliance and public review would be undertaken if park managers proposed changes in the annual visitation limit. Additional NEPA analysis would be required if the environmental effects of the increased or decreased limits were substantially different from those documented in this Revised Merced River Plan/SEIS. Annual visitation would be monitored through entrance station visitation statistics that are available at the end of each month. Park managers would compare current monthly visitation data to historical visitation data to identify visitation trends for the current year and project year end visitation numbers. Depending upon the visitation trend for the current year, park managers would take appropriate management actions to ensure that annual visitation would not exceed the proposed annual visitation limit.

4) Continuation of Existing User Capacity Methods

The National Park Service would continue to use a variety of measures to manage visitor use, including limits on the number of people (Wilderness Trailhead Quota System, group size limits on trails), limits on facilities (overnight accommodations, day use parking, utility capacities), limits on specific activities listed in the Superintendent's Compendium, limits based on environmental and experiential conditions (i.e., Wilderness Impacts Monitoring System), and other measures that address visitor use and protection of the Outstandingly Remarkable Values as described in detail in Chapter II.

Relationship of Alternative 4 to the General Management Plan Visitor Capacities

Adoption of the management zone limits and the annual corridorwide visitation limit would not amend the long-term visitor capacity goals adopted in the *General Management Plan*.

Management zone limits would continue to provide the park with a management strategy to regulate the dispersion of use across management zones, once the visitor capacity goals of the *General Management Plan* have been reached. Park managers would continue to use the visitor capacity goals from the *General Management Plan* for all facility planning purposes and would continue to manage with the intent of reaching those goals.



DIRECTING USE

Interpretive signs like these do more than direct use away from areas experiencing heavy impacts. They also provide educational messages and help promote an understanding of natural river processes. (NPS photo)

In addition, the VERP program has the ability to reduce or increase visitation levels from the proposed management zone and annual limits. If data collected as a result of monitoring show that the conditions of Outstandingly Remarkable Values and the visitor experience are exceeding or are well within set standards, management actions which could be taken to reduced or increase visitation levels, from the limits proposed in Alternative 4. Park managers would continue to use the visitor capacity goals from the *General Management Plan* for all facility planning purposes and would continue working towards those goals.

Relationship of Alternative 4 to the Protection and Enhancement of Outstandingly Remarkable Values

Research on visitor use impacts on resources indicates that there is no direct correlation between use levels and the intensity of impacts on resources (Graefe

1990, Marion 2000). It is also widely held that controlling visitor numbers alone is not enough to adequately protect and enhance river resources and values (Marion 1998, Cole et al. 2005).

Therefore, Alternative 4 would implement a VERP program as described in Chapter II in conjunction with the proposed management zone and annual corridorwide visitation limit. As described previously, the VERP program would provide park managers with information on existing conditions and how they meet the established standards, and would direct actions needed to achieve adopted standards.

Implementation of management zone limits based on facility and non-facility based capacity factors would be protective of Outstandingly Remarkable Values because these limits are based on existing capacities and the desired conditions within management zones, which have been determined to be protective of Outstandingly Remarkable Values as discussed in Alternative 2. Management zone and annual corridorwide visitation limit could be reduced or increase through implementation of management actions under the VERP program based on the condition of Outstandingly Remarkable Values.

El Portal Boundary

The Ninth Circuit Court of Appeals directed the National Park Service to reassess the river boundary in El Portal based on the location of Outstandingly Remarkable Values. Under Alternative 4, the boundary closely delineates the location of Outstandingly Remarkable Values that were identified during this planning process would result in a total of 813 acres within the El Portal segment. This boundary only includes areas within the El Portal Administrative Site that contain Outstandingly Remarkable Values. The El Portal boundary and zoning for Alternative 4 is shown in figure III-4.

The management zoning proposed under Alternative 4 would protect and enhance the Outstandingly Remarkable Values by including more restrictive zoning for much of the area south of the river. The area north of the river and east of Crane Creek would be zoned Discovery (2B), except for existing developed areas at Railroad Flat, Rancheria Flat, and Old El Portal. These existing developed areas and the Middle Road area would be zoned for Park Operations and Administration (3C). South of the river, a portion of the Trailer Village/Abbieville area would be zoned Park Operations and Administration (3C), the area to the west and south of Abbieville would be zoned Discovery (2B), and the area to the east of the levee would be zoned Open Space (2A). The 2A Open Space zoning protects Outstandingly Remarkable Values by calling for very low levels of use and strict limitations on facilities within this zone. This zoning proposal is the most restrictive of development opportunities for park administrative facilities. Under this zoning proposal, Alternative 4 provides for 132 acres for Park Operations and Administration (3C), 277 acres of Discovery (2B), and 404 acres of Open Space (2A).

The Outstandingly Remarkable Values identified within the El Portal segment of the river corridor include: scientific, geologic process/conditions, recreation, biological, cultural, hydrologic processes. The scientific Outstandingly Remarkable Values, though not directly affected by the boundary and management zoning prescriptions under Alternative 2, would be enhanced by information gained through the VERP program, as a comprehensive monitoring program of indicators and standards is a component of this alternative. As mentioned in Alternative 1, both the geologic process/conditions and the hydrologic processes Outstandingly Remarkable Values are not sensitive to the boundary and management zones prescriptions proposed in Alternative 4. The recreation Outstandingly Remarkable Values within the El Portal segment are protected under Alternative 4, as the location of these Outstandingly Remarkable Values are found within the River Protection Overlay and contain both Open Space (2A) and Discovery (2B) zoning. The full extent of the biological and cultural Outstandingly Remarkable Values found within the El Portal Administrative Site would be protected under Alternative 4 through Open Space (2A), Discovery (2B), and Park Operations and Administration (3C) zoning.

As described under Alternatives 2 and 3, the boundary and zoning proposed in Alternative 4 fulfills the legislative intent of the Wild and Scenic Rivers Act. A subsidiary consideration is the legislative intent for the El Portal Administrative Site, which was transferred to the National Park Service to be used for operational purposes and to allow for the relocation of many park administrative and support facilities from Yosemite Valley to El Portal. Outstandingly Remarkable Values would be protected and enhanced during site planning and development within all management zones. Protection of the Outstandingly Remarkable Values would be further evaluated and documented in the El Portal Concept Plan, which will be initiated following completion of this Revised Merced River Plan/SEIS.

Figure III-4
Alternative 4: El Portal Boundary

Alternatives Considered but Dismissed from Further Analysis

The mission of the National Park Service is stated in the Organic Act of 1916, which established the agency. The act mandates a mission of preservation of park resources for the enjoyment and benefit of present and future generations.⁶ Foremost in this mission is the preservation of the natural and cultural features and systems that contribute to a park's significance—that is, its reason for being set aside as a national park. To enjoy these resources, the public must also have the opportunity to experience them firsthand. Similarly, under the Wild and Scenic Rivers Act, park managers are tasked with protection of all of the Outstandingly Remarkable Values associated with the river, which include natural, cultural, and recreation values. Thus, to fulfill its mission, the National Park Service must provide both for long-term preservation and for the diversity of recreational use that can be accommodated while protecting Outstandingly Remarkable Values and other park resources.

In dealing with user capacity issues and the impacts of visitor use on the park's natural and cultural resources, alternatives were considered that (1) incorporated only specific visitor number limits, (2) incorporated VERP with interim facility limits but no visitor number limits, and (3) used specific visitor number limits with VERP. The alternatives described below were dismissed from further consideration for one or more of the following reasons:

- Their inability to meet the purpose of and need for the project
- Lack of a direct connection to the protection and enhancement of the Outstandingly Remarkable Values
- Having more adverse environmental and visitor use impacts than other alternatives being considered
- Practical infeasibility

In assessing river corridor boundaries in El Portal, many alternatives were considered, including variations on the alternatives carried forward for analysis. The following El Portal boundary alternatives were dismissed from further consideration due to their being duplicative of other alternatives carried forward or their inability to meet the maximum acreage requirements identified in the Wild and Scenic Rivers Act.

User Capacity

Corridorwide Daily Limit, with or without VERP

The goal of this alternative would be to set a specific daily visitor limit for the river's entire 81-mile corridor within National Park Service jurisdiction. Although a number could theoretically be identified for the entire corridor by adding up the limits for each segment by using the 1980 *General Management Plan* visitor capacity goals, this number would not be relevant to the protection and enhancement of the river's Outstandingly Remarkable Values. Various segments of the river corridor are suitable for different intensities of visitor use, based on the facilities available, the resources present within the segment, the sensitivity of the resources to visitor-

⁶ The National Park Service 1916 Organic Act refers to the purpose of national parks as “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 a manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

related impacts, and other factors. Without some type of monitoring of the resource and visitor experience conditions, park managers would not have the best information on whether the level of visitor use was adversely impacting the Outstandingly Remarkable Values (Hof and Lime 1997). An aggregate figure would also mask problems at hot spots and would not provide managers with useful guidance for addressing use-related problems. The use of a corridorwide limit, when combined with a VERP program, would still not provide the management benefits associated with limits by segment. Instead, corridorwide annual limits have been analyzed in combination with other more area-specific visitor limits.

A corridorwide limit without VERP was rejected prior to full analysis in this SEIS because it would not meet the purpose and need of providing a user capacity system that allows for effective protection and enhancement of the Outstandingly Remarkable Values. A corridorwide daily limit with VERP was not carried forward because there are other similar alternatives that achieve the same effect with more environmental benefits.

Limits by Segment, without VERP

The goal of this alternative would be to set a specific visitor limit for each segment of the Merced River corridor. A number could be identified for each segment using the 1980 *General Management Plan* visitor capacities, or by other means. As discussed above, the establishment of this number without any evidence of the relationship of visitor numbers and resource impacts would not provide for the protection and enhancement of the resources. Without some type of monitoring of the Outstandingly Remarkable Value, resource, and visitor experience conditions, park managers would not be able to understand whether the level of visitor use was adversely impacting the Outstandingly Remarkable Values. In addition, segment limits alone would not provide park managers with information to allow for appropriate actions that could address visitor impacts while allowing for continued visitor use. The use of limits by segment, when combined with a VERP program, is a valid alternative and is addressed in Alternative 3.

This alternative was rejected prior to full analysis in this SEIS because it does not meet the purpose and need of providing a user capacity system that effectively protects and enhances the Outstandingly Remarkable Values, and because there are other similar alternatives that achieve the same effect with more environmental benefits.

Limits by Management Zone, without VERP

The goal of this alternative would be to set a specific visitor limit for each management zone of the Merced River corridor. Limits similar to those presented in Alternative 4 would be applied to management zones. As discussed earlier, the establishment of a limit without any evidence of the relationship of visitor numbers and resource impacts would not provide for the protection and enhancement of the resources. Without some type of monitoring of the Outstandingly Remarkable Value, resource, and visitor experience conditions, park managers would not be able to understand whether the level of visitor use was adversely affecting the Outstandingly Remarkable Values. In addition, management zone limits alone would not provide park managers with information to allow for appropriate actions that could address visitor impacts while allowing for continued visitor use. The use of limits by management zone, when combined with a VERP program, is a valid alternative and is addressed in Alternative 4.

This alternative was rejected prior to full analysis in this SEIS because it would not meet the purpose and need of providing a user capacity system that effectively protects and enhances the

Outstandingly Remarkable Values, and because there are other similar alternatives that achieve the same effect with more environmental benefits.

Other User Capacity Processes

Other alternatives considered included the use of other non-VERP user capacity management processes, such as the process for Visitor Impact Management System (VIMS), Limits of Acceptable Change (LAC), and the Management Process for Visitor Activities (VAMP). Park staff investigated other methods and convened a panel of national experts on user capacity to determine whether any other methods would provide a more effective framework for addressing user capacity in Yosemite National Park. Research on LAC-type methods and input from user capacity experts (McCool and Cole 1997) indicated that all LAC-type methods for analyzing user capacity are based on the same basic process used in VERP and that there would be no discernable differences to be evaluated by using these different LAC-type methodologies (Hof and Lime 1997, Nilson and Taylor 1997). It was determined through examination by the planning team that VERP best fits the mission of the National Park Service and the distinct user capacity needs of Yosemite National Park.

This alternative was rejected prior to full analysis in this SEIS because there are other alternatives that are equally effective and that would result in similar environmental effects.

Recreation Opportunity Spectrum

This alternative would provide for the use of the Recreation Opportunity Spectrum (ROS) as the primary user capacity management tool in the Merced River corridor. ROS was developed in the late 1970s by the U.S. Forest Service in dealing with increasing demands for recreation and the need to provide for a variety of recreation opportunities on national forest lands (USFS no date). ROS provides a system of designating areas based on the factors that comprise the “recreation opportunity.” ROS has been incorporated into many LAC-type user capacity management methods as a way of classifying areas and identifying the desired resource, social, and managerial conditions for each area. The National Park Service’s preferred user capacity management process (VERP) relies on management zoning (as opposed to ROS classifications) to provide for the classification of areas by the management vision for the area, the desired resource conditions, and the density or intensity of developed facilities and visitor use for each area. Therefore, this alternative would require either an overlay of ROS classifications over the Merced River Plan’s management zoning classifications or a replacement of that management zoning with the ROS classification system. The National Park Service reviewed the use of the ROS framework for classifications during the development of VERP and determined that the ROS classifications were not diverse enough to reflect the variety of experience opportunities in national park settings (Hof and Lime 1997). Since use of the ROS classifications would more appropriately be compared to the Merced River Plan’s management zoning classifications and not the VERP process, this alternative was not carried forward.

This alternative was rejected prior to full analysis in this SEIS because it would not meet the purpose and need and there are other feasible alternatives that provide more environmental benefits.

El Portal Boundary

El Portal Boundary including the Entire El Portal Administrative Site

This alternative would draw the river corridor boundary to include the entire El Portal Administrative Site. Although this alternative was considered, it was determined that the acreage for the El Portal Administrative Site exceeded the maximum acreage allowed under the Wild and Scenic Rivers Act. The Wild and Scenic Rivers Act allows for up to 320 acres per linear mile of river to be included within the river corridor boundaries. The river segment length in El Portal is 3.9 linear miles, resulting in a potential maximum acreage of 1,248 acres to be included within the river corridor. However, the U.S. Forest Service manages the Merced River corridor on its lands adjacent to the El Portal Administrative Site. The U.S. Forest Service indicated that it may potentially incorporate additional U.S. Forest Service lands within a quarter-mile of the river adjacent to the El Portal Administrative Site into its river corridor boundary during the next revision of the U.S. Forest Service river management plan (NPS 2004h). Assuming that the Forest Service river corridor would incorporate approximately 343 acres of U.S. Forest Service land adjacent to the El Portal Administrative Site, this would leave approximately 861 acres as the maximum acreage that the National Park Service could include within its river corridor boundary in El Portal. Since the alternative that included the entire El Portal Administrative Site covered 1,139 acres, it exceeded the maximum acreage allowed under the Wild and Scenic Rivers Act, and it was not carried forward.

El Portal Boundary including Identified Outstandingly Remarkable Values North of the River and Quarter-Mile Boundary South of the River

This alternative would draw the river corridor boundary to include all Outstandingly Remarkable Values within the El Portal Administrative Site. This alternative would differ from Alternative 4 in that the southern boundary of the corridor would stop at a quarter-mile in this alternative. In Alternative 4, the river corridor boundary to the south of the river includes the entire area within the El Portal Administrative Site. Since there were other alternatives carried forward that were similar and provided for more environmental benefits, this alternative was not carried forward.

El Portal Boundary including the Entire El Portal Administrative Site North of the River and Maximum Allowable South of the River

This alternative would draw the river corridor boundary to include the entire El Portal Administrative Site on the north side of the river and as much of the areas south of the river as possible, up to the acreage limitation under the Wild and Scenic Rivers Act. Although this alternative was considered, it was determined that using the limited acreage available under the Wild and Scenic Rivers Act to include lands north of the river that did not include Outstandingly Remarkable Values would reduce the acreage available to protect the Outstandingly Remarkable Values south of the river. It was determined that this alternative was not as directly related to the Outstandingly Remarkable Values as other alternatives, and it was not carried forward.

Comparison of the Alternatives

This section compares the key features of each of the alternatives and summarizes potential impacts. Table III-11 compares the key features, and table III-12 summarizes potential impacts summarized from Chapter V, Environmental Consequences. The four alternatives presented in this document represent a reasonable range of options for the Revised Merced River Plan/SEIS. Under the No Action Alternative, existing user capacity management programs would remain in place and the El Portal river corridor boundary and management zoning would remain as presented in the Merced River Plan.

The National Park Service is addressing a complex issue (user capacity), in a park where there are very different uses occurring in different areas and very different environments being affected throughout the corridor. The alternatives for user capacity were designed to evaluate a number of proposed approaches to managing user capacity to account for the complexity of the issue in various areas of the park. Since different approaches were used, it is not possible to directly compare the alternatives with each other, as it would be if they all used the same user capacity method but looked at different levels of use.

Table III-11
Comparison of Alternatives and Key Assumptions

Specific Measurable Limit	Alternative 1 No Action (Existing Use Levels)	Alternative 2 VERP program with Interim Limits	Alternative 3 VERP program with Segment Limits	Alternative 4 VERP program with Management Zone Limits
COMPARISON OF USER CAPACITY METHODS				
Limits on Environmental/ Experiential Conditions	<p>Desired conditions for resources and visitor experience are defined through Merced River Plan Management Zoning</p> <p>No monitoring of specific VERP indicators and standards</p> <p>Wilderness Impacts Monitoring System (WIMS)</p>	<p>Desired conditions for resources and visitor experience are defined through Merced River Plan Management Zoning</p> <p>Specific VERP indicators and standards as described in Table III-5</p> <p>Wilderness Impacts Monitoring System (WIMS)</p>	<p>Desired conditions for resources and visitor experience are defined through Merced River Plan Management Zoning</p> <p>Specific VERP indicators and standards as described in Table III-5</p> <p>Wilderness Impacts Monitoring System (WIMS)</p>	<p>Desired conditions for resources and visitor experience are defined through Merced River Plan Management Zoning</p> <p>Specific VERP indicators and standards as described in Table III-5</p> <p>Wilderness Impacts Monitoring System (WIMS)</p>
Limits on Numbers of People	<p><i>General Management Plan</i> Visitor Capacity Goals</p> <p>Wilderness Trailhead Quota System</p> <ul style="list-style-type: none"> 1,280 limit on overnight visitors No limit on day visitors <p>Group size limits in wilderness = 35 on trail, 8 off trail</p> <p>Stock Use Limit = 25 head on existing trails</p> <p>Group size limits on bicyclist = 30, limited to paved trails and roads</p>	<p><i>Amends General Management Plan</i> Visitor Capacity Goals</p> <p>Wilderness Trailhead Quota System</p> <ul style="list-style-type: none"> 1,280 limit on overnight visitors No limit on day visitors <p>Group size limits in wilderness = 35 on trail, 8 off trail</p> <p>Stock Use Limit = 25 head on existing trails</p> <p>Group size limits on bicyclist = 30, limited to paved trails and roads</p>	<p><i>Amends General Management Plan</i> Visitor Capacity Goals</p> <p>Wilderness Trailhead Quota System</p> <ul style="list-style-type: none"> 1,280 limit on overnight visitors 800 limit on day visitors to Half Dome <p>Group size limits in wilderness = 35 on trail, 8 off trail</p> <p>Stock Use Limit = 25 head on existing trails</p> <p>Group size limits on bicyclist = 30, limited to paved trails and roads</p> <p>Maximum Daily Segment Limits:</p> <p>Yosemite Valley</p> <p>Day visitors = 16,680 Overnight visitors = 7,699 Segment total = 24,379</p> <p>Gorge</p> <p>Day visitors = 2,958 Overnight visitors = 0 Segment total = 2,958</p> <p>El Portal</p> <p>Day Visitors = 1,144 Overnight visitors = 0 Segment total = 1,144</p> <p>Wawona</p> <p>Day Visitors = 2,839 Overnight visitors = 897 Segment total = 3,736</p>	<p><i>General Management Plan</i> Visitor Capacity Goals</p> <p>Wilderness Trailhead Quota System</p> <ul style="list-style-type: none"> 1,280 limit on overnight visitors No limit on day visitors <p>Group size limits in wilderness = 35 on trail, 8 off trail</p> <p>Stock Use Limit = 25 head on existing trails</p> <p>Group size limits on bicyclist = 30, limited to paved trails and roads</p> <p>Range of People At One Time Management Zone Limits:</p> <p>Wilderness Zones</p> <p>1A – Trailhead Quota System 1B – Trailhead Quota System 1C – Trailhead Quota System 1D – Trailhead Quota System</p> <p>Diverse Visitor Experience Zones</p> <p>2A – 0.83 to 2.5 PAOT 2A+ – 0.01 PAOT per acre 2B – 0.83 to 2.5 PAOT 2C – 5 to 10 PAOT 2D – 20 to 100 PPV</p> <p>Developed Zones</p> <p>3A – 15 to 20 PAOT per acre 3B – 40 to 50 PAOT per acre 3C – 25 to 50 PAOT per acre</p>

Table III-11
Comparison of Alternatives and Key Assumptions

Specific Measurable Limit	Alternative 1 No Action (Existing Use Levels)	Alternative 2 VERP program with Interim Limits	Alternative 3 VERP program with Segment Limits	Alternative 4 VERP program with Management Zone Limits
COMPARISON OF USER CAPACITY METHODS (continued)				
Limits on Numbers of People (continued)	No Maximum Daily Segment Limits or Range of People At One Time Management Zone Limits No Annual Visitation Limit No Daily Limit on employee commuters	No Maximum Daily Segment Limits or Range of People At One Time Management Zone Limits No Annual Visitation Limit No Daily Limit on employee commuters	Annual visitation limit of 5.32 million visitors Daily Limit of 606 employee commuters	Annual visitation limit of 3.27 million visitors Daily Limit of 606 employee commuters
Limits on Facilities	Existing Day-visitor Parking Capacities Existing Lodging Capacities Existing Campsite Capacities Existing Utility System Capacities Existing Employee Housing = 1,683 corridorwide	Interim Facility Limits on Day-visitor Parking, Bus Parking, Lodging, and Campground Capacities: Yosemite Valley Day-visitor parking = 2,197 Bus Parking = 38 spaces Bus Limits = 92 buses per day Camping = 638 sites Lodging = 1,262 units Gorge Day-visitor parking = 244 Bus Parking = 2 spaces El Portal Day-visitor parking = 360 Wawona Day-visitor parking = 213 Bus Parking = 14 spaces Bus Quota = 28 buses per day Camping = 99 sites Lodging = 104 units Existing Utility System Capacities Interim Facility Limits on Employee Housing in the corridor = 1,969	Existing Day-visitor Parking Capacities Existing Lodging Capacities Existing Campsite Capacities Existing Utility System Capacities Corridorwide limit on Employee Housing = 1,969	Existing Day-visitor Parking Capacities Existing Lodging Capacities Existing Campsite Capacities Existing Utility System Capacities Existing Employee Housing = 1,683 corridorwide
Limits on Specific Activities	Continue to implement specific restrictions from Superintendent's Compendium (e.g., fishing regulations, rafting regulations, etc.) Commercial bus use provisions through Special Use Permits No limit on number of buses allowed in the Valley and Wawona	Continue to implement specific restrictions from Superintendent's Compendium (e.g., fishing regulations, rafting regulations, etc.) Commercial bus use provisions through Special Use Permits Interim Daily Limit on number of buses allowed in the Valley and Wawona	Continue to implement specific restrictions from Superintendent's Compendium (e.g., fishing regulations, rafting regulations, etc.) Commercial bus use provisions through Special Use Permits No limit on number of buses allowed in the Valley and Wawona	Continue to implement specific restrictions from Superintendent's Compendium (e.g., fishing regulations, rafting regulations, etc.) Commercial bus use provisions through Special Use Permits No limit on number of buses allowed in the Valley and Wawona

Table III-11
Comparison of Alternatives and Key Assumptions

COMPARISON OF EL PORTAL BOUNDARY ALTERNATIVES (Acres by Zone)				
Boundary	Alternative 1 Floodplain/RPO Extent	Alternative 2 (preferred) Quarter-mile	Alternative 3 Quarter-mile	Alternative 4 Extent of ORVs
Zone 2A Open Space	0 acres	250 acres	0 acres	404 acres
Zone 2A+ Undeveloped Open Space	0 acres	0 acres	0 acres	0 acres
Zone 2B Discovery	0 acres	0 acres	323 acres	277 acres
Zone 2C Day Use	137 acres	192 acres	131 acres	0 acres
Zone 3C Park Operations and Administration	56 acres	411 acres	399 acres	132 acres
Total Acreage	193 acres	853 acres	853 acres	813 acres

Note: This table is intended to provide an overview of the key assumptions for each alternative.

Table III-12
Summary of Environmental Consequences

Alternative 1 No Action	Alternative 2 VERP program with Interim Facility Limits	Alternative 3 VERP Program with Segment Limits	Alternative 4 VERP Program with Management Zone Limits
NATURAL RESOURCES			
GEOLOGY, GEOHAZARDS, AND SOILS			
<p>Potential impacts of Alternative 1 could be a local, long-term, negligible to minor, adverse impact on public safety from geohazards, including rockfall and seismic ground shaking, and local, short-term and long-term, negligible to minor, adverse impact on soil resources due to erosion, compaction, and soil removal.</p> <p>Rockfall and earthquake hazards under Alternative 1 and the cumulative projects would result in a local, long-term, minor, beneficial impact to public safety. The overall cumulative actions in combination with Alternative 1 would result in a net regional, long-term, minor, beneficial impact on soil resources.</p>	<p>In the long term, Alternative 2 would have a negligible, beneficial impact on public safety associated with seismic hazards due to somewhat reduced visitation in the future. Effects on soil resources, compared with Alternative 1, would be long term, minor, and beneficial.</p> <p>The cumulative projects, in combination with Alternative 2, would result in a net regional, long-term, minor, beneficial impact on soil resources.</p>	<p>In the long term, Alternative 3 would potentially have a minor beneficial impact on public safety associated with seismic hazards. The combined adverse and beneficial impacts to soil resources under Alternative 3, compared with Alternative 1, would be long term, minor, and beneficial.</p> <p>The cumulative projects in combination with Alternative 3 would result in a local, long-term, minor, beneficial impact to public safety. The cumulative projects, in combination with Alternative 3, would result in a net regional, long-term, minor, beneficial impact on soil resources.</p>	<p>Potential impacts of Alternative 4 could have a minor, beneficial impact on public safety associated with seismic hazards in the long term. The combined adverse and beneficial impacts to soil resources under Alternative 4 would be long term, minor, and beneficial.</p> <p>The cumulative projects, in combination with Alternative 3 would result in a local, long-term, minor, beneficial impact to public safety. The cumulative projects, in combination with Alternative 4, would result in a net regional, long-term, minor, beneficial impact on soil resources.</p>
HYDROLOGY, FLOODPLAINS, AND WATER QUALITY			
<p>Hydrologic processes, floodplain values, and water quality are not expected to degrade below current levels; therefore, potential impacts of Alternative 1 to the hydrologic processes ORV in the river corridor are expected to be negligible.</p> <p>Cumulative actions, in combination with Alternative 1, could have a net long-term, local, minor, beneficial effect to the hydrological processes ORVs of the Merced River corridor.</p>	<p>Overall, Alternative 2 would result in a long-term, minor, beneficial impact on hydrology, water quality, and hydrologic processes throughout the river corridor and a long-term, negligible, adverse effect on floodplains in the Valley and developed areas in Wawona and El Portal.</p> <p>Cumulative actions, in combination with Alternative 2, could have a long-term, minor, beneficial effect on hydrology, floodplains, and water quality in the Merced River corridor.</p>	<p>Overall, Alternative 3 would result in a long-term, minor, beneficial impact on hydrology, water quality, and hydrologic processes within the river corridor and a long-term, negligible, adverse effect on floodplains.</p> <p>Cumulative actions, in combination with Alternative 3, could have a long-term, minor, beneficial effect on hydrology, floodplains, and water quality in the Merced River corridor.</p>	<p>Overall, Alternative 4 would result in a long-term, minor, beneficial impact on hydrology, water quality, and hydrologic processes within the river corridor and a long-term, negligible, adverse effect on floodplains.</p> <p>Cumulative actions, in combination with Alternative 4, could have long-term, minor, beneficial effects on hydrology, floodplains, and water quality in the Merced River corridor.</p>

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Summary of Environmental Consequences

Alternative 1 No Action	Alternative 2 VERP program with Interim Facility Limits	Alternative 3 VERP Program with Segment Limits	Alternative 4 VERP Program with Management Zone Limits
WETLANDS			
<p>Under Alternative 1, the expected long-term increase in park use could increase visitor-related impacts, which could result in local, long-term, minor to moderate, adverse effects on wetland resources.</p> <p>Overall, cumulative actions, in combination with Alternative 1, could have a net local, long-term, negligible, beneficial effect on parkwide wetlands and the biological ORVs of the Merced River corridor.</p>	<p>Alternative 2 would provide short-term limits on park use and long-term full implementation of the VERP program, which combined with the larger river corridor boundary in El Portal would result in local, short- and long-term, minor to moderate and beneficial effects on wetlands compared to Alternative 1.</p> <p>Cumulative actions, in combination with Alternative 2, could have a net local, long-term, minor, beneficial effect on parkwide wetlands and the biological ORVs of the Merced River corridor.</p>	<p>Alternative 3 would have local, short- and long-term, minor to moderate, beneficial effects on wetlands due to the lower future visitor levels compared to Alternative 1 and the implementation of the VERP program.</p> <p>Overall, these cumulative actions, in combination with Alternative 3 could have a net local, long-term, minor, beneficial effect on parkwide wetlands and the biological ORVs of the Merced River corridor.</p>	<p>Alternative 4 would have local, short- and long-term, minor to moderate, beneficial effects on wetlands due to the lower future visitor levels compared to Alternative 1 and the implementation of the VERP program.</p> <p>Overall, these cumulative actions, in combination with Alternative 4, could have a net local, long-term, minor, beneficial effect on parkwide wetlands and the biological ORVs of the Merced River corridor.</p>
<p>Under Alternative 1, the estimated increase in park use and visitor-related impacts would result in local, long-term, minor to moderate, adverse effects on vegetation resources in the Merced River corridor.</p> <p>Cumulative actions, in combination with Alternative 1, could have a net local, long-term, negligible, beneficial effect on parkwide vegetation and the biological ORVs of the Merced River corridor.</p>	<p>The larger El Portal river corridor boundary and implementation of VERP would have local, short- and long-term, minor to moderate, beneficial effects on vegetation.</p> <p>Cumulative actions, in combination with Alternative 2, could have a net local, long-term, minor, beneficial effect on parkwide vegetation and the biological ORVs of the Merced River corridor.</p>	<p>Implementation of an annual maximum limit, segment limits, VERP monitoring and the El Portal boundary would likely result in long-term, beneficial effects on vegetation. Overall, Alternative 3 would have local, short- and long-term, minor to moderate, beneficial effects on vegetation.</p> <p>Cumulative actions, in combination with Alternative 3, could have a net local, long-term, minor, beneficial effect on parkwide vegetation and the biological ORVs of the Merced River corridor.</p>	<p>Implementation of an annual maximum limit, management zone limits, VERP monitoring and the wider EL Portal boundary would have a beneficial effect on vegetation compared to Alternative 1. Overall, Alternative 4 would have local, short- and long-term, minor to moderate, beneficial effects on vegetation and the biological ORVs.</p> <p>Overall, these cumulative actions, in combination with Alternative 4, could have a net local, long-term, minor, beneficial effect on parkwide vegetation and the biological ORVs of the Merced River corridor.</p>

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Summary of Environmental Consequences

Alternative 1 No Action	Alternative 2 VERP program with Interim Facility Limits	Alternative 3 VERP Program with Segment Limits	Alternative 4 VERP Program with Management Zone Limits
WILDLIFE			
<p>Alternative 1 would result in a local, long-term, minor to moderate, adverse impact on native wildlife within the river corridor.</p> <p>Overall, these cumulative actions, in combination with Alternative 1, could have a net local, long-term, minor, adverse effect on parkwide native wildlife and the biological ORVs of the Merced River corridor.</p>	<p>The implementation of VERP monitoring and the revised El Portal river corridor boundary would result in beneficial effects. Alternative 2 would result in a local, short- and long-term, minor to moderate, beneficial impact on native wildlife within the river corridor compared to Alternative 1.</p> <p>Overall, these cumulative actions, in combination with Alternative 2, could have a net local, short- and long-term, minor to moderate, beneficial effect on parkwide native wildlife and the biological ORVs of the Merced River corridor.</p>	<p>VERP monitoring, segment limits, an annual maximum limit, and the revised river corridor boundary at El Portal would result in a beneficial effect on wildlife resources.</p> <p>Alternative 3 would result in a local, short- and long-term, minor to moderate, beneficial impact on native wildlife within the river corridor compared to Alternative 1.</p> <p>Overall, these cumulative actions, in combination with Alternative 3, could have a net local, short- and long-term, minor to moderate, beneficial effect on parkwide native wildlife and the biological ORVs of the Merced River corridor.</p>	<p>VERP monitoring, an annual maximum limit on park visitation, and the revised river corridor boundary at El Portal with restrictive management zoning would result in beneficial effects on wildlife resources.</p> <p>Alternative 4 would result in a local, short- and long-term, minor to moderate, beneficial impact on native wildlife within the river corridor.</p> <p>Overall, these cumulative actions, in combination with Alternative 4, could have a net local, short- and long-term, minor to moderate, beneficial effect on parkwide native wildlife and the biological ORVs of the Merced River corridor.</p>
<p>Overall, Alternative 1 would result in a local, long-term, minor to moderate, adverse impact on rare, threatened, and endangered species within the river corridor.</p> <p>Cumulative actions in combination with Alternative 1 could have a net local, long-term, minor, adverse effect on parkwide rare, threatened, and endangered species and the biological ORVs of the Merced River corridor.</p>	<p>Alternative 2 would result in a local, short- and long-term, minor to moderate, beneficial impact on rare, threatened, and endangered species within the river corridor.</p> <p>Cumulative actions in combination with Alternative 2 could have a net local, short- and long-term, minor to moderate, beneficial effect on parkwide rare, threatened, and endangered species and the biological ORVs of the Merced River corridor.</p>	<p>Alternative 3 would result in a local, short- and long-term, minor to moderate, beneficial impact on rare, threatened, and endangered species within the river corridor.</p> <p>Cumulative actions in combination with Alternative 3, could have a net local, short- and long-term, minor to moderate, beneficial effect on parkwide rare, threatened, and endangered species and the biological ORVs of the Merced River corridor.</p>	<p>Alternative 4 would result in a local, short- and long-term, minor to moderate, beneficial impact on rare, threatened, and endangered species and the biological ORVs within the river corridor.</p> <p>Cumulative actions in combination with Alternative 4, could have a net local, short- and long-term, minor to moderate, beneficial effect on parkwide rare, threatened, and endangered species and the biological ORVs of the Merced River corridor.</p>

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Summary of Environmental Consequences

Alternative 1 No Action	Alternative 2 VERP program with Interim Facility Limits	Alternative 3 VERP Program with Segment Limits	Alternative 4 VERP Program with Management Zone Limits
AIR QUALITY			
<p>Under alternative 1, air quality in the corridor would continue to be influenced by local and regional pollution sources. Local emissions of ozone precursors would likely decrease resulting in a regional, long-term, minor beneficial effect. Local emissions of particulate matter could increase resulting in a local, long-term, minor adverse effect.</p> <p>The local, short-term, major, adverse effects on air quality due to construction activities would be due to the cumulative projects. Ozone conditions in the corridor would be determined by regional emissions trends under Alternative 1 and the long-term, regional effect would be beneficial, primarily due expected to the emissions reductions. The varying relative contributions of regional and local emissions sources of particulate matter making it speculative to conclude whether the combined effect of cumulative actions and the benefits of Alternative 2 (relative to Alternative 1) would be beneficial or adverse.</p>	<p>Overall, Alternative 2 would be expected to have a local, long-term, negligible, beneficial impact on air quality within the Merced River corridor compared to Alternative 1, due to the potential for lower visitor levels in the future.</p> <p>Alternative 2 could contribute to the cumulative number of construction sites. The effects on air quality could be local, short-term, minor, adverse effects on air quality. The local, long-term, negligible, beneficial impact on air quality within the Merced River corridor associated with Alternative 2 (compared to Alternative 1) would have little effect on overall ozone levels. The varying relative contributions of regional and local emissions sources of particulate matter making it speculative to conclude whether the combined effect of cumulative actions and the benefits of Alternative 2 (relative to Alternative 1) would be beneficial or adverse.</p>	<p>Overall, Alternative 3 would be expected to have a local, long-term, negligible, beneficial impact on air quality within the Merced River corridor compared to Alternative 1 due to the potential for lower visitor levels in the future and a lower potential for development in El Portal.</p> <p>Cumulative impact construction activities would have a local, short-term, minor, adverse effect on air quality. The local, long-term, negligible, beneficial impact on air quality within the Merced River corridor under Alternative 3 (relative to Alternative 1) would have little effect on overall ozone levels. The varying relative contributions of regional and local emissions sources of particulate matter make it speculative to conclude whether the combined effect of cumulative actions and the benefits of Alternative 3 (compared to Alternative 1) would be beneficial or adverse.</p>	<p>Overall, Alternative 4 is expected to have a local, long-term, negligible, beneficial impact on air quality within the Merced River corridor compared to Alternative 1, due to the potential for lower visitor levels in the future and a lower potential for development in El Portal.</p> <p>Cumulative impact construction activities would have a local, short-term, minor, adverse effect on air quality. The local, long-term, negligible, beneficial impact on air quality within the Merced River corridor associated with Alternative 4 (compared to Alternative 1) would have little effect on overall ozone levels. The varying relative contributions of regional and local emissions sources of particulate matter make it speculative to conclude whether the combined effect of cumulative actions and the benefits of Alternative 4 (compared to Alternative 1) would be beneficial or adverse.</p>

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Summary of Environmental Consequences

Alternative 1 No Action	Alternative 2 VERP program with Interim Facility Limits	Alternative 3 VERP Program with Segment Limits	Alternative 4 VERP Program with Management Zone Limits
NOISE			
<p>Alternative 1 would not affect the acoustical environment in wilderness areas. Alternative 1 would accommodate a gradual increase in annual visitation, which could lead to a local, long-term, negligible to minor, adverse effect along the various roads that traverse the corridor in nonwilderness areas.</p> <p>Construction activities, overhead flights and traffic management activities would likely have varying degrees of impacts, ranging from local, short- and long-term, negligible to major, adverse cumulative effects on noise</p>	<p>The acoustical environment in wilderness areas would not be affected by Alternative 2. Overall, implementation of Alternative 2 would be expected to have a local, long-term, negligible, beneficial impact on ambient noise levels in nonwilderness areas within the Merced River corridor.</p> <p>Overall, Alternative 2 with cumulative projects would have a local, long-term, negligible to minor, beneficial impact on the ambient noise environment in the Merced River corridor relative to Alternative 1.</p>	<p>The acoustical environment in wilderness areas would not be affected by Alternative 3. Overall, implementation of Alternative 3 would be expected to have a local, long-term, negligible, beneficial impact on ambient noise levels in nonwilderness areas within the Merced River.</p> <p>Overall, these cumulative actions in combination with Alternative 3, with implementation of the VERP program with segment limits and its more restrictive development zoning in the El Portal area, would have a local, long-term, negligible to minor, beneficial impact on the ambient noise environment in the Merced River corridor relative to Alternative 1.</p>	<p>The acoustical environment in wilderness areas would not be affected by Alternative 4. Overall, implementation of Alternative 4 would be expected to have a local, long-term, negligible, beneficial impact on ambient noise levels in nonwilderness areas within the Merced River.</p> <p>Overall, Alternative 4 with implementation of the management zone quota and VERP program and its more restrictive development zoning in the El Portal area would have a local, long-term, negligible to minor, beneficial impact on the ambient noise environment in the Merced River corridor relative to Alternative 1.</p>
CULTURAL RESOURCES			
<p>Alternative 1 would likely result in a local, long-term, minor, adverse impact to archeological resources due to the increased likelihood of visitor-related damage and the increased likelihood of development outside of the El Portal river corridor boundary.</p> <p>The cumulative projects within and in the vicinity of Yosemite National Park would result in a long-term, moderate adverse impact on archeological resources. Overall, these cumulative actions in combination with Alternative 1 could have a net long-term, moderate, adverse impact on archeological resources within the Merced River corridor.</p>	<p>Overall, the implementation of the VERP program with interim limits under Alternative 2 would likely result in long-term, minor to moderate, beneficial impacts on archeological resources compared to Alternative 1.</p> <p>Overall, cumulative actions in combination with Alternative 2 could have a net long-term, moderate, adverse impact on archeological resources within the Merced River corridor.</p>	<p>Overall, implementation of Alternative 3, which would likely result in lower visitor numbers in the future compared to Alternative 1, would result in a minor, beneficial effect to archeological resources.</p> <p>Overall, cumulative actions in combination with Alternative 3 could have a net long-term, moderate, adverse impact on archeological resources within the Merced River corridor.</p>	<p>Under Alternative 4, there would be long-term, beneficial effects due to the likely reduction of visitor-related damage with potentially lower visitor numbers. More restrictive management zones in El Portal could have a long-term, moderate to major, beneficial, effect on archeological resources compared to Alternative 1.</p> <p>Overall, cumulative actions in combination with Alternative 4 could have a net long-term, moderate, adverse impact on archeological resources within the Merced River corridor.</p>

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Summary of Environmental Consequences

Alternative 1 No Action	Alternative 2 VERP program with Interim Facility Limits	Alternative 3 VERP Program with Segment Limits	Alternative 4 VERP Program with Management Zone Limits
TRADITIONAL CULTURAL RESOURCES			
<p>Alternative 1 could result in a local, long-term, minor, adverse impact to traditional cultural resources due to the increased likelihood of visitor-related damage to these resources and the increased likelihood of development outside of the El Portal river corridor boundary.</p> <p>Cumulative actions in combination with Alternative 1 could have a net long-term, minor, beneficial impact on traditional cultural resources within the Merced River corridor due to increased efforts in natural resource restoration. It could also result in a long-term, minor, adverse impact due to increased development, and visitor-related damage.</p>	<p>Alternative 2 could result in long-term, minor to moderate, beneficial impacts on traditional cultural resources compared to Alternative 1, due to an improved natural environment and reduced crowding and potentially long-term, minor adverse effects due to increased development.</p> <p>Cumulative actions in combination with Alternative 2 could have a net long-term, minor, beneficial impact on traditional cultural resources within the Merced River corridor due to increased efforts in natural resource restoration. It could also result in a long-term, minor, adverse impact due to increased development, and visitor-related damage.</p>	<p>Under Alternative 3, there would be moderate benefits to traditional cultural resources related to an improved natural environment and a minor, adverse effect due to a decrease in access for American Indians.</p> <p>Cumulative actions in combination with Alternative 3 could have a net long-term, minor, beneficial impact on traditional cultural resources within the Merced River corridor due to increased efforts in natural resource restoration. It could also result in a long-term, minor, adverse impact due to increased development, and visitor-related damage.</p>	<p>Alternative 4 could have moderate benefits to traditional cultural resources related to an improved natural environment. Management zones in El Portal that allow for lower levels of development would have a long-term, moderate to major, beneficial, effect on traditional cultural resources.</p> <p>Cumulative actions in combination with Alternative 4 could have a net long-term, minor, beneficial impact on traditional cultural resources within the Merced River corridor due to increased efforts in natural resource restoration. It could also result in a long-term, minor, adverse impact due to increased development, and visitor-related damage.</p>
HISTORIC SITES, STRUCTURES, AND LANDSCAPES			
<p>Alternative 1 is expected to result in a local, minor, adverse impact to some historic sites, structures, and landscapes in the long term, due to increased likelihood of visitor-related damage and the increased likelihood of development outside of the El Portal river boundary.</p> <p>Cumulative actions in combination with Alternative 1 could have a net long-term, moderate, adverse impact on historic sites, structures, and landscapes within the Merced River corridor.</p>	<p>Alternative 2 would result in long-term, minor to moderate, beneficial impacts on historic sites, structures, and landscapes due to a reduction of visitor-related damage compared to Alternative 1.</p> <p>Cumulative actions in combination with Alternative 2 could have a net long-term, moderate, adverse impact on historic sites, structures, and landscapes within the Merced River corridor.</p>	<p>Alternative 3 would result in long-term, minor to moderate, beneficial impacts on historic sites, structures, and landscapes due to a reduction of visitor-related damage and potentially long-term, minor, adverse effects related to increased development in some areas.</p> <p>Cumulative actions in combination with Alternative 3 could have a net long-term, moderate, adverse impact on historic sites, structures, and landscapes within the Merced River corridor.</p>	<p>Under Alternative 4 there would be moderate benefits to historic sites, structures, and landscapes, due to a potential reduction in visitor-related damage and long-term, moderate, beneficial effects due to more restrictive management zoning in El Portal.</p> <p>Cumulative actions in combination with Alternative 4 could have a net long-term, moderate, adverse impact on historic sites, structures, and landscapes within the Merced River corridor.</p>

Table III-12
Summary of Environmental Consequences

Alternative 1 No Action	Alternative 2 VERP program with Interim Facility Limits	Alternative 3 VERP Program with Segment Limits	Alternative 4 VERP Program with Management Zone Limits
VISITOR EXPERIENCE RECREATION			
<p>In the long term, Alternative 1 could result in local, long-term, minor to moderate, adverse effects on access to recreational activities, the quality of visitor experience, and recreation ORVs in the developed areas of the river corridor, primarily related to traffic congestion and access to parking.</p> <p>Alternative 1 and the cumulative projects would result in a local, long-term, negligible, beneficial cumulative impact on recreation, because an increase in visitor access and an expansion of recreational opportunities would be partially offset by the removal of specific recreational opportunities, and increased congestion.</p>	<p>Under Alternative 2, the impact of the interim facility limits on recreation would likely be local, short-term, negligible to minor, and beneficial. Management actions taken under VERP could result in beneficial effects associated with reduced crowding, but also adverse effects associated with decreased access.</p> <p>Alternative 2 and the cumulative projects would result in long-term negligible to minor beneficial and adverse effects on recreation. The improvements to the natural setting and reduced crowding would benefit recreation but would be partially offset by potential restrictions that could adversely affect recreation by reducing access.</p>	<p>Alternative 3, segment limits, maximum annual visitor limits, and VERP would result in local, long-term, beneficial effects associated with reduced congestion, but also local, long-term, adverse effects associated with decreased access.</p> <p>Alternative 3 and the cumulative projects would result in long-term beneficial and adverse effects on recreation. The duration and intensity of these adverse effects would depend upon the duration and extent of the restrictive measures, but the incorporation of segment limits would likely increase the adverse effects beyond those associated with VERP.</p>	<p>Implementation of management zone limits, an annual visitor limit, and VERP program may result in additional restrictions on visitor access and lower overall visitor levels in the long term. Overall, Alternative 4 would have a local, long-term, major, adverse effect on visitor experience compared to Alternative 1.</p> <p>Alternative 4 together with the cumulative projects would have long-term beneficial effects due to improvements to the natural setting and reduced crowding and long-term adverse effects due to the potential for management zone limits to result in additional restrictions. Overall, the cumulative effect would be expected to be local, long-term, major, and adverse.</p>
ORIENTATION AND INTERPRETATION			
<p>Continuation of current user capacity management policies would not be expected to affect access to or the diversity of interpretation and orientation programs offered throughout the corridor.</p> <p>Alternative 1 and the cumulative projects within and in the vicinity of Yosemite National Park would result in a local, long-term, minor, beneficial cumulative impact because the availability and diversity of interpretation and orientation programs and services in the corridor would increase.</p>	<p>Implementation of VERP under Alternative 2 could have local, long-term, minor, beneficial or adverse effects on the access to orientation and interpretive programs. Overall, the impact to these programs is expected to be negligible.</p> <p>Alternative 2 together with the cumulative projects would result in a long-term, minor, beneficial impact on interpretation and orientation services and programs.</p>	<p>Alternative 3 could have local, long-term, minor, adverse impacts on visitor experience if visitor limits and VERP management actions reduce visitor access to interpretation and orientation services; however, the impact could be local, long-term, negligible, and beneficial if management actions result in increased access to these programs.</p> <p>Alternative 3 together with cumulative projects would result in a long-term, negligible, adverse cumulative impact because interpretation and orientation services would increase through some of the cumulative projects, but Alternative 3 could result in management actions that reduce access to and availability of interpretation and orientation services.</p>	<p>Alternative 4 could have local, long-term, minor, adverse impacts on visitor experience if management actions reduce access to and interpretation and orientation services; however, the impact could be local, long-term, negligible, and beneficial if management actions result in increased access. The overall impact to these programs is expected to be negligible to minor, and adverse.</p> <p>Alternative 4 together with cumulative projects would result in a long-term, negligible, adverse impact because the interpretation and orientation services would increase through some of the cumulative projects, but Alternative 4 could result in management actions that reduce access to these services.</p>

Table III-12
Summary of Environmental Consequences

Alternative 1 No Action	Alternative 2 VERP program with Interim Facility Limits	Alternative 3 VERP Program with Segment Limits	Alternative 4 VERP Program with Management Zone Limits
VISITOR SERVICES			
Continuation of existing user capacity program policies within the Merced River corridor would not be expected to result in any effects on access to visitor services in the short term. If visitor services are held at existing levels in the future, increased demand for could result in local, long-term, minor, adverse effects on visitor experience related to the access to and the availability of visitor services in Yosemite Valley and Wawona. Alternative 1 and the cumulative projects would result in a long-term, minor to moderate, adverse impact on visitor services. This adverse impact would be partially offset by improving visitor services.	Interim facility limits and bus limits are expected to have a short-term, minor, beneficial effect on visitor services in Yosemite Valley. Actions taken under VERP would be expected to result in local, long-term, negligible to minor, adverse impacts on access to visitor services, if long- or short-term restrictions were implemented in some areas to address resource impacts. Cumulative actions in combination with Alternative 2 would result in a long-term, minor to moderate, adverse impact on visitor services. This adverse impact would be partially offset by improving visitor services.	Actions taken under Alternative 3 would be expected to result in local, long-term, minor to moderate, adverse impacts on access to visitor services. Implementation of daily segment limits and the maximum annual limit, would likely result in reduced visitor access to visitor services compared to Alternative 1. Cumulative actions in combination with Alternative 3 would result in a long-term, minor to moderate, adverse impact on visitor service. This adverse impact would be partially offset by improving visitor services.	Actions taken under Alternative 4 would be expected to result in a local, long-term, minor, adverse impact on access to visitor services due to future reduced visitor levels and increased controls associated with management of visitor use by management zone. Cumulative actions in combination with Alternative 4 would result in a long-term, minor to moderate, adverse impact on visitor services. This adverse impact would be partially offset by improving parking and traffic circulation.
WILDERNESS EXPERIENCE			
There would be no change to the wilderness experience under Alternative 1. Alternative 1 and the cumulative projects would result in a long-term, minor, beneficial cumulative impact to the wilderness experience.	Alternative 2 would likely result in a local, long-term, negligible, beneficial impact on the wilderness experience related to implementation of management actions to meet desired conditions. Cumulative actions in combination with Alternative 2 would result in a local, long-term, negligible to minor, beneficial impact to the wilderness experience.	The effects of Alternative 3, including adoption of daily segment limits, an annual maximum visitor limit, and a day use limit for Half Dome trail, along with the VERP program, would be expected to be local, long-term, moderate, and adverse compared to Alternative 1. Cumulative actions in combination with Alternative 3 would result in a local, long-term, negligible to minor, beneficial, impact to the wilderness experience.	VERP management actions under Alternative 4 could be expected to be beneficially effect the wilderness experience; however, management actions that reduce access could result in adverse effects. Overall, the impact is expected to be local, long-term, negligible, and beneficial. Cumulative actions in combination with Alternative 4 would result in a local, long-term, negligible to minor, beneficial impact to the wilderness experience.

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Summary of Environmental Consequences

Alternative 1 No Action	Alternative 2 VERP program with Interim Facility Limits	Alternative 3 VERP Program with Segment Limits	Alternative 4 VERP Program with Management Zone Limits
SOCIAL RESOURCES			
LAND USE			
Under Alternative 1, the proposed river corridor boundary and management zoning in El Portal could result in local, long-term, minor to moderate, adverse effects on land use due to the potential for increased development and a decrease in open space in the El Portal area. The effects of Alternative 1 and the cumulative projects would result in local, long-term, minor to moderate, adverse effects on land use within the river corridor.	Under Alternative 2, the proposed river corridor boundary and zoning in El Portal along with the VERP program would result in a local, long-term, minor, beneficial effect on land use compared to Alternative 1. The effects of Alternative 2 and the cumulative projects would result in local, long-term, minor, adverse cumulative effects on land use within the river corridor.	Under Alternative 3, implementation of segment limits, an annual limit, the VERP program, and the proposed river corridor boundary and zoning in El Portal would result in a local, long-term, minor, beneficial effect on land use as compared to Alternative 1. The cumulative effects of Alternative 3 and the cumulative projects would result in local, long-term, minor, adverse effects on land use within the river corridor.	Under Alternative 4, implementation of management zone limits, an annual limit, the proposed river corridor boundary and restrictive zoning in El Portal, and the VERP program would result in a local, long-term, negligible, adverse effect on land use as compared to Alternative 1. The cumulative effects of Alternative 4 and the cumulative projects would be local, long-term, minor to moderate, and adverse.
TRANSPORTATION			
Under Alternative 1, continuation of existing user capacity programs would be expected to result in local, short-term, negligible to minor, adverse effects on the transportation systems. The effects of Alternative 1 and the past cumulative projects would result in local, moderate to major benefits; Alternative 1 with current projects would result in long-term, minor beneficial effects; Alternative 1 with future projects would result in beneficial effects.	Interim facility limits and bus limits would likely result in local, short-term, negligible to minor effects on transportation. VERP would be expected to result in local, long-term, minor to moderate, beneficial effects on transportation within the river corridor, but the intensity of impacts would depend on the specific actions. When combined with Alternative 2, the cumulative effects on transportation would be local, long-term, minor to moderate, and beneficial.	Implementation of maximum daily segment limits, an annual visitor limit and VERP would be expected to result in local, long-term, minor to moderate, benefits on transportation, compared to Alternative 1. The cumulative effect of Alternative 3 and the other projects would also be expected to be local, long-term, minor to moderate, and beneficial.	Implementation of management zone limits and an annual visitor limit combined with VERP would be expected to result in local, long term, minor to moderate, beneficial effects on transportation. The intensity of the benefits would depend upon the specific measures implemented. The cumulative effect of Alternative 4 and the other projects would also be expected to be local, long term, minor to moderate, and beneficial.
SCENIC RESOURCES			
Alternative 1 would continue the application of existing management zoning and would have a local, long-term, minor, beneficial impact on scenic resources. In the El Portal segment, Alternative 1 would have a local, long-term, minor, adverse impact on scenic resources due to the potential for new development in El Portal. This adverse impact could be partially offset by the restoration of the Sand Pit. Cumulative actions in combination with Alternative 1 could have a net long-term, minor, adverse impact on scenic resources and the scenic ORVs within the Merced River corridor.	Under Alternative 2, improvements to the natural setting and reduced crowding and a wider corridor boundary are expected to provide local, long-term, moderate, beneficial impacts on scenic resources within the corridor compared to Alternative 1. Cumulative actions in combination with Alternative 2 could have a net long-term, minor, adverse impact on scenic resources and the scenic ORV within the Merced River corridor.	Improvements to the natural setting and reduced crowding and a wide corridor boundary under Alternative 3 would provide local, long-term, minor, beneficial impacts on scenic resources within the corridor compared to Alternative 1. Cumulative actions in combination with Alternative 3 could have a net long-term, minor, adverse impact on scenic resources and the scenic ORVs within the Merced River corridor.	Under Alternative 4, implementation of management zone limits and an annual visitor quota along with the VERP program would result in long-term, negligible, beneficial impacts on scenic resources compared to Alternative 1. Cumulative actions in combination with Alternative 4 could have a net long-term, minor, adverse impact on scenic resources and the scenic ORVs within the Merced River corridor.

Table III-12
Summary of Environmental Consequences

Alternative 1 No Action	Alternative 2 VERP program with Interim Facility Limits	Alternative 3 VERP Program with Segment Limits	Alternative 4 VERP Program with Management Zone Limits
SOCIOECONOMICS			
<p>Overall effects from Alternative 1 on the social environment are expected to be local, long term, minor to moderate, and adverse due to potential changes in housing levels and increased commutes over time.</p> <p>Alternative 1 and the cumulative projects would have a local, long-term, minor to moderate, cumulative, adverse effect on the social environments within the corridor due to increases in housing and population pressures in El Portal and Wawona. The impact intensity would depend on the extent to which the cumulative projects' recommendations are implemented.</p>	<p>Alternative 2 could result in management actions that restrict activities within the river corridor, or could result in decisions to relocate employee housing in certain areas. These actions could cause local, long-term, minor to moderate, adverse effects on the social environments in El Portal, and Wawona related to an increase in employee housing and increased commutes associated with employee relocations. The intensity of the adverse effect would depend on the level of housing relocations or reductions and the change in commute times, but would likely be minor to moderate. Economic impacts could be short- or long-term, beneficial or adverse, depending on the management action taken.</p> <p>Alternative 2 and the cumulative projects would have a local, long-term, minor to moderate, adverse cumulative effect on the social environments within the corridor due to increases in development within El Portal and Wawona and associated effects. The effects in El Portal would be expected to be lower as compared to Alternative 1, as the level of development would be lower. The impact intensity would depend upon the extent to which the cumulative projects' recommendations are implemented.</p>	<p>Corridorwide employee limits would result in local, long-term, minor to moderate, benefits on employees that remained housed in the Valley. It would result in local, long-term, moderate to major, adverse effects on employees relocated from the Valley and on the social environments of El Portal and Wawona due to increased populations. The intensity would depend on the level of employee housing developed. The boundary and management zoning in El Portal would likely result in less housing development, resulting in a local, long-term, minor to moderate, beneficial effect. Management actions that would reduce or relocate employee housing within the corridor could result in local, long-term, minor to moderate, adverse effects on the social environment through population changes and increased commutes for relocated employees. The intensity of the effects would depend on the amount and siting of relocated housing. Effects on recreation opportunities within the corridor communities would be negligible to minor.</p> <p>Alternative 3 and the cumulative projects would have a local, long-term, minor to moderate, cumulative, adverse effect on the social environments within the corridor. The cumulative effects associated with Alternative 3 would be partially offset, due to the reduced potential for development in El Portal.</p>	<p>Alternative 4 allows for some increase in employee housing in El Portal and Wawona. Reallocation of employee housing from Yosemite Valley to El Portal and Wawona could result in local, long-term, minor to moderate benefits on the social environment in Yosemite Valley but local, long-term, minor to moderate, adverse effects on the social environments in El Portal and Wawona. The proposed El Portal boundary and management zoning under Alternative 4 would offset this adverse effect somewhat as compared to Alternative 1. Implementation of VERP monitoring could result in local, long-term, minor to moderate, adverse effects on the social environment through population changes and increased commutes for relocated employees. The intensity of the effects would depend on the amount and siting of relocated housing. Effects on recreation opportunities within the corridor communities would be negligible to minor.</p> <p>Alternative 4 and the cumulative projects would have a local, long-term, minor to moderate, adverse cumulative effect on the social environments within the corridor. The adverse effects in El Portal would be reduced, as compared to Alternative 1, due to the more restrictive management zoning proposed under Alternative 4.</p>

Table III-12
Summary of Environmental Consequences

Alternative 1 No Action	Alternative 2 VERP program with Interim Facility Limits	Alternative 3 VERP Program with Segment Limits	Alternative 4 VERP Program with Management Zone Limits
VISITOR POPULATIONS			
<p>Alternative 1 is not expected to result in any substantive changes in visitor populations in the park. Long-term increases in visitor levels would likely result in increased use of restricted access policies during peak periods.</p> <p>Overall, Alternative 1 and the cumulative projects would result in a local, long-term, negligible to minor, adverse impact on visitor populations, due to the potential overall reduction in lodging and camping units in the park. This effect is offset somewhat by development of overnight accommodations outside the park.</p>	<p>Alternative 2 could result in local, short-term, minor to moderate, adverse effects on visitor populations or local, long-term, moderate to major, adverse effects on visitor populations, if restrictive management actions were implemented under VERP.</p> <p>Alternative 2 and the cumulative projects would result in a local, long-term, minor to major, adverse impact on visitor populations, depending on the management actions taken to ensure compliance with VERP standards.</p>	<p>Alternative 3 could result in local, long-term, minor to major, adverse effects on visitor populations resulting from visitor limits and potential management actions.</p> <p>Alternative 3 and the cumulative projects would result in a regional, long-term, minor to major, adverse cumulative impact on visitor populations due to the proposed visitor limits. Additional restrictions implemented under VERP, if needed, would increase the adverse effects.</p>	<p>Alternative 4 could result in local, long-term, minor to major, adverse effects resulting from restrictions on visitor populations related to management zone limits, maximum annual limits, and implementation of VERP.</p> <p>Alternative 4 and the cumulative projects would result in a regional, long-term, minor to major, adverse impact on visitor populations due to a possible overall reduction in lodging and camping units in the park and potential limits on visitor numbers.</p>
REGIONAL ECONOMY			
<p>Under Alternative 1, visitor populations and visitor spending would be expected to increase in the long-run, resulting in a regional, long-term, negligible to minor, benefit to the regional economy.</p> <p>Overall, Alternative 1 and the cumulative projects within and in the vicinity of Yosemite National Park would result in a cumulative, short-term, minor, beneficial impact on the regional economy due to construction spending and employment and a long-term, negligible to minor, beneficial impact on the regional economy due to increased overnight accommodations in the park and in local communities.</p>	<p>Implementation of interim facilities and bus limits under Alternative 2 would likely result in a local, short- and long-term, minor benefit to the regional economy. Management actions implemented under VERP could have regional, long-term, negligible to minor, benefits to regional, long-term, minor, adverse effects depending upon the measure implemented.</p> <p>Alternative 2 and the cumulative projects would result in a long-term, minor, adverse cumulative impact on the regional economy if VERP results in long-term reductions in visitor populations and visitor spending compared to Alternative 1. These effects would be offset to some degree by an increase in construction employment and spending, which would have a short-term, negligible to minor, beneficial effect on the regional economy.</p>	<p>Implementation of visitor limits under Alternative 3 would likely result in regional, long-term, minor, adverse effects on the regional economy. Management actions implemented under VERP could have regional, long-term, negligible to minor, benefits to regional, long-term, minor, adverse effects depending upon the measure implemented. The effect on the regional economy would likely be long-term, minor, and adverse compared to Alternative 1.</p> <p>Alternative 3 with cumulative projects would result in a long-term, minor, adverse impacts on the regional economy. These effects would be offset to some degree by an increase in construction employment and spending, which would have a short-term, negligible to minor, beneficial effect on the regional economy.</p>	<p>Implementation of management zone and annual visitor limits under Alternative 4 would likely result in regional, long-term, minor, adverse effects on the regional economy. Management actions implemented under VERP could have regional, long-term, negligible to minor benefits to regional, long-term, minor, adverse effects, depending on the measure implemented. The effect on the regional economy would likely be long-term, minor, and adverse compared to Alternative 1.</p> <p>Alternative 4 and the cumulative projects would result in a regional long-term, minor, adverse impact on the regional economy.</p>

Table III-12
Summary of Environmental Consequences

Alternative 1 No Action	Alternative 2 VERP program with Interim Facility Limits	Alternative 3 VERP Program with Segment Limits	Alternative 4 VERP Program with Management Zone Limits
CONCESSIONER			
<p>Under Alternative 1, accommodations and facilities in the park would be maintained at their current levels. Increases in future visitor populations would result in a local, long-term, negligible to minor, benefit to the concessioner.</p> <p>Overall, Alternative 1 and the cumulative projects would result in a long-term, minor to moderate, adverse impacts on the concessioner associated with locating new employee housing outside of the Valley and possible future restrictions in wilderness areas.</p>	<p>Under Alternative 2, interim facility limits that allow for additional camping would result in local, short-term, minor, beneficial effects. Management actions under VERP could result in local, long-term, adverse effects on concessioner operations if these actions reduce visitor populations in the future. The intensity of the effect would vary depending on the extent of the restrictions imposed. Management actions that increase visitor services could result in local, long-term, beneficial effects on concessioner operations.</p> <p>Alternative 2 and the cumulative projects would result in a long-term, minor to moderate, adverse impact on the concessioner associated with relocating employees and restricting visitor services. These effects might be offset by actions that increase visitor services within some areas of the Valley.</p>	<p>Under Alternative 3, visitor limits would result in lower visitor levels resulting in a local, long-term, minor to moderate, adverse effect. Management actions could result in restrictions that could have local, long-term, adverse effects on concessioner operations. The intensity of the effect would vary depending on the extent of the restrictions imposed. Management actions that increase visitor services could result in local, long-term, beneficial effects on concessioner operations.</p> <p>Alternative 3 and the cumulative projects would result in a long-term, minor to moderate, adverse impact on the concessioner associated with relocating employees and restricting visitor services. These effects might be offset by actions that increase visitor services within some areas of the Valley.</p>	<p>Under Alternative 4, management zone and annual visitor limits could result in lower visitor levels in the long term, compared to Alternative 1. Management actions taken to address VERP standards could result in restrictions that could have local, long-term, adverse effects on concessioner operations. The intensity of the effect would vary depending on the extent of the restrictions imposed. Management actions that increase visitor services could result in local, long-term, beneficial effects on concessioner operations.</p> <p>Alternative 4 and the cumulative projects would result in a long-term, minor to moderate, adverse impact on the concessioner. These adverse effects might be offset by actions that increase visitor services in some areas of the Valley.</p>

Table III-12
Summary of Environmental Consequences

Alternative 1 No Action	Alternative 2 VERP program with Interim Facility Limits	Alternative 3 VERP Program with Segment Limits	Alternative 4 VERP Program with Management Zone Limits
PARK OPERATIONS AND FACILITIES			
<p>Alternative 1 would likely result in local, short-term, minor to moderate, adverse effects on park operations during peak periods. Effects on park infrastructure and facilities would be negligible. The river corridor boundary and zoning in El Portal under Alternative 1 would result in a long-term, minor to moderate, beneficial impact to park operations, infrastructure, and facilities. Alternative 1 would result in an overall long-term, minor, beneficial impact with respect to energy consumption.</p> <p>Overall, these cumulative actions, combined with Alternative 1, could have a net long-term, beneficial cumulative effect on park operations and facilities.</p>	<p>Alternative 2 would be expected to have a local, long-term, minor impact on park operations and infrastructure compared to Alternative 1. In El Portal, the larger river corridor and associated management zoning would result in a long-term, minor, adverse impact to park operations, infrastructure and facilities compared to Alternative 1. Alternative 2 would not increase the amount of energy consumed in the river corridor segments associated with increased employee housing within the river corridor, resulting in an overall long-term, minor, adverse impact with respect to energy consumption.</p> <p>Overall, these cumulative actions in combination with Alternative 2 could have a net long-term, minor, beneficial effect on park operations in the Merced River corridor.</p>	<p>Alternative 3 would be expected to have a local, long-term, minor to major, impact on park operations and infrastructure compared to Alternative 1. In El Portal, the corridor boundary and management zoning would result in an overall local, long-term, minor to moderate, beneficial impact to facilities and infrastructure. Alternative 3 would not increase the amount of energy consumed in the river corridor segments associated with increased employee housing within the river corridor, resulting in an overall long-term, minor, adverse impact with respect to energy consumption.</p> <p>Overall, these cumulative actions, in combination with Alternative 3, could have a net long-term, minor, beneficial effect on park operations in the Merced River corridor.</p>	<p>Alternative 4 would be expected to have a local, long-term, minor to major, adverse impacts on park operations and infrastructure compared to Alternative 1. In El Portal, the corridor boundary and management zoning would result in a local, long-term, moderate, adverse impact to park infrastructure and facilities. Alternative 4 would result in a long-term, minor, beneficial impact to energy consumption, primarily due to improved fuel economy and the increased use of Alternative fuels.</p> <p>Overall, these cumulative actions, in combination with Alternative 4 could have a net long-term, minor, beneficial effect on park operations in the Merced River corridor.</p>

Environmentally Preferable Alternative

The Council on Environmental Quality (CEQ) regulations implementing NEPA and the National Park Service NEPA guidelines require that “the alternative or alternatives which were considered to be environmentally preferable” be identified (CEQ Regulations, Section 1505.2).

Environmentally preferable is defined as “the alternative that will promote the national environmental policy as expressed in NEPA’s Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources” (CEQ 1981).

Section 101 of NEPA states that:

“It is the continuing responsibility of the Federal Government to ... (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations; (2) assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings; (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences; (4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice; (5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life’s amenities; and (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.”

Alternative 2 is the environmentally preferable alternative for the Revised Merced River Plan/SEIS, based on its furtherance of the following national environmental policy goals:

Section 101 Requirement 1. *“Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.”*

Conformance: Alternative 2 would fulfill the responsibilities of the National Park Service as a trustee of the environment for succeeding generations by implementing a user capacity program that includes the use of the VERP framework to manage visitor use impacts on natural and cultural resources, visitor experience, and the Outstandingly Remarkable Values of the Merced River corridor. The VERP framework sets standards based on the management zone prescriptions for areas within the corridor. These management zone prescriptions define the desired resource conditions and were developed specifically to protect and enhance the Outstandingly Remarkable Values in the river corridor. The VERP program requires management to take the actions necessary to maintain the established standards. Use of VERP to manage visitor use and address visitor use impacts ensures protection of the Outstandingly Remarkable Values and fulfills the responsibilities of the National Park Service as a trustee of the environment. Alternative 1, which does not include VERP, could result in more reactive management to address impacts. It would not provide for the proactive monitoring of the wide variety of indicators proposed under the National Park Service’s VERP program or for clear triggers for management actions to maintain adopted standards. Therefore, Alternative 1 would not be expected to provide the environmental benefits associated with a VERP program. Alternatives 3 and 4 would implement VERP with additional limits on visitor use in various areas of the corridor. These

alternatives would provide for a similar level of environmental protection of resources, as compared to Alternative 2.

Adoption of the El Portal corridor boundaries proposed under Alternative 2 provides for a revised boundary which includes the Outstandingly Remarkable Values within a quarter-mile of the river within the El Portal Administrative Site. Adoption of this boundary with management zoning and the VERP program would ensure that any development that occurs within the corridor would be consistent with all the elements of the Merced River Plan, as revised by this document, and would protect the Outstandingly Remarkable Values on a segment-wide basis. Alternative 1 does not account for the location of Outstandingly Remarkable Values within the El Portal Administrative Site. Alternatives 3 provides for additional acreage to be included within the corridor boundary and for more restrictive zoning south of the river. Alternative 4 provides for slightly more acreage than Alternative 2 and more restrictive zoning in most areas of the proposed corridor. All three alternatives meet the requirements of the Wild and Scenic Rivers Act to protect and enhance the Outstandingly Remarkable Values and are consistent with the National Park Service responsibilities as a trustee of the environment.

Section 101 Requirement 2. *“Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.”*

Conformance: Under Alternative 2, the VERP indicators and standards would provide the National Park Service with timely information that the National Park Service would use to proactively manage visitor impacts to the aesthetic and cultural resources of the river corridor and to human health and safety. The VERP program requires management to take the actions necessary to maintain conditions within the corridor at the standards adopted. These standards are based on the protection of the Outstandingly Remarkable Values of the Merced Wild and Scenic River, which include scenic and cultural resources, in addition to other resources. Indicators and standards associated with traffic, water quality, and biology are directly related to maintenance of a safe, healthy, and productive environment. Alternative 1, which does not include VERP, could result in more reactive management to address impacts to scenic, cultural, biological, and other resources. It would not provide for monitoring of the wide variety of indicators proposed under the National Park Service’s VERP program or for clear triggers for management actions to maintain adopted standards. Therefore, Alternative 1 would not be expected to provide the environmental benefits associated with a VERP program. Alternatives 3 and 4 would implement VERP with additional limits on visitor use in various areas of the corridor. These alternatives would provide for a similar level of environmental protection of resources, as compared to Alternative 2. Alternative 4 could result in potential adverse aesthetic effects associated with the need for additional controls on access to various management zones if management zone limits were exceeded.

Adoption of the El Portal corridor boundaries proposed under Alternative 2 provides for a revised boundary which includes the Outstandingly Remarkable Values within a quarter-mile of the river within the El Portal Administrative Site. Adoption of this boundary with management zoning and a VERP program would ensure that any development that occurs within the corridor boundary would be consistent with all the elements of the Merced River Plan, as revised by this document, and would protect the Outstandingly Remarkable Values on a segment-wide basis. Alternative 1 does not account for the location of Outstandingly Remarkable Values within the El Portal Administrative Site. Alternatives 3 provides for additional acreage to be included within the

corridor boundary and for more restrictive zoning south of the river. Alternative 4 provides for slightly more acreage than Alternative 2 and more restrictive zoning in most areas of the proposed corridor. All of these alternatives meet the requirements to protect and enhance the Outstandingly Remarkable Values under the Wild and Scenic Rivers Act. Protection of the identified Outstandingly Remarkable Values in the El Portal area on a segment-wide basis is consistent with assuring safe, productive, and aesthetically and culturally pleasing surroundings.

Section 101 Requirement 3. *“Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.”*

Conformance: Alternative 2 would best meet the goal of attaining the widest range of beneficial uses of the environment by avoiding broad user restrictions where they are not necessary to protect natural and cultural resources or Outstandingly Remarkable Values. The VERP program provides park managers with more meaningful data regarding visitor impacts on the Outstandingly Remarkable Values and allows management to target management actions to best protect those values with the least adverse effect on recreational uses. Recreation use is considered a beneficial use. Thus, the VERP program provides the most environmental protection from degradation with the least restriction on other beneficial uses of the corridor, such as recreation. Alternative 1, which does not include VERP, would result in more reactive management, which could result in more restrictions on beneficial uses than would be necessary with prompt attention to visitor impacts. It would not provide for monitoring of the wide variety of indicators proposed under the National Park Service’s VERP program or for clear triggers for management actions to maintain adopted standards. Alternatives 3 and 4 would implement VERP framework with additional limits on visitor use in various areas of the corridor. These alternatives would provide for a similar level of environmental protection as Alternative 2, but would not result in the same range of beneficial uses, in that they could restrict visitor freedom more than Alternative 2 even if VERP standards are being met and the resources protected. Thus, Alternatives 3 and 4 do not allow for the widest range of beneficial uses, compared to Alternative 2.

Adoption of the El Portal corridor boundaries proposed under Alternative 2 provides for a revised boundary which includes the Outstandingly Remarkable Values within a quarter-mile of the river within the El Portal Administrative Site. Adoption of this boundary with management zoning and the VERP program would ensure that any development that occurs within the corridor would be consistent with all of the elements of the Merced River Plan, as revised by this document, and would protect the Outstandingly Remarkable Values on a segment-wide basis. This boundary also allows for beneficial use of those areas within the El Portal Administrative Site that do not contain Outstandingly Remarkable Values. Alternative 1 does not account for the location of Outstandingly Remarkable Values within the El Portal Administrative Site. Alternative 3 provides for additional acreage to be included within the corridor boundary and for more restrictive zoning south of the river. Alternative 4 provides for slightly more acreage than Alternative 2 and more restrictive zoning in most areas of the proposed corridor. All of these alternatives meet the requirements of the Wild and Scenic Rivers Act to protect and enhance the Outstandingly Remarkable Values. Alternative 2 best meets this particular NEPA criteria in allowing for the widest range of beneficial use of areas within the El Portal Administrative Site that do not contain Outstandingly Remarkable Values, while ensuring protection of the Outstandingly Remarkable Values.

Section 101 Requirement 4. *“Preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice.”*

Conformance: Alternative 2 would best meet the goal of preserving important cultural and natural resources, while allowing for diversity and individual choice (visitor freedom). The VERP program provides park managers with more meaningful data regarding visitor impacts on the Outstandingly Remarkable Values and allows management to target management actions to best protect those values with the least adverse effect on visitor choice and the diversity of recreational uses. Thus, implementation of the VERP program provides the most environmental protection from degradation with the least restriction on diversity and individual choice. Alternative 1, which does not include VERP, would result in more reactive management, which could result in more restrictions on visitor choice and diversity than would be necessary with prompt attention to visitor impacts. It would not provide for monitoring of the wide variety of indicators proposed under the National Park Service’s VERP program or for clear triggers for management actions to maintain adopted standards. Alternatives 3 and 4 would implement the VERP framework with additional limits on visitor use in various areas of the corridor. These alternatives would provide for a similar level of environmental protection as Alternative 2, but would result in less visitor freedom and choice than Alternative 2 even if VERP standards are being met and the resources protected.

Adoption of the El Portal corridor boundaries proposed under Alternative 2 would provide for a revised boundary includes the Outstandingly Remarkable Values within a quarter-mile of the river within the El Portal Administrative Site. Adoption of this boundary with management zoning and the VERP program would ensure that any development that occurs within the corridor would be consistent with all the elements of the Merced River Plan, as revised by this document, and would protect the Outstandingly Remarkable Values on a segment-wide basis. Alternative 1 does not account for the location of Outstandingly Remarkable Values within the El Portal Administrative Site. Alternatives 3 provides for additional acreage to be included within the corridor boundary and for more restrictive zoning south of the river. Alternative 4 provides for slightly more acreage than Alternative 2 and more restrictive zoning in most areas of the proposed corridor. This alternative could restrict use of the Red Bud area as a commercial raft launch site, reducing recreation access and visitor freedom as compared to the other alternatives. All of these alternatives meet the requirements of the Wild and Scenic Rivers Act to protect and enhance the Outstandingly Remarkable Values. Protection of the identified Outstandingly Remarkable Values in the El Portal area on a segment-wide basis would be consistent with preserving important cultural and natural resources and maintaining an environment which supports diversity and variety of individual choice.

Section 101 Requirement 5. *“Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life’s amenities.”*

Conformance: This goal is evaluated in the context of the Wild and Scenic Act which encourages use and enjoyment of protected rivers so long as Outstandingly Remarkable Values are not degraded. Alternative 2 would best meet this goal. As described previously, the VERP program provides park managers with timely and meaningful data regarding visitor impacts on the Outstandingly Remarkable Values and allows management to target management actions to best protect those values with the least adverse effect on the quality of visitor use in the park. Thus, the

VERP program provides the appropriate balance between resource protection and recreation use in a manner consistent with the Wild and Scenic Rivers Act. Alternative 1, which does not include VERP, would result in more reactive management, which could result in more restrictions on recreation and visitor uses, as opposed to balancing recreation uses with the appropriate level of management needed to protect the Outstandingly Remarkable Values. Alternatives 3 and 4 implement VERP with additional limits on visitor use in various areas of the corridor. These alternatives would provide for a similar level of environmental protection as Alternative 2, but would result in more restrictions on recreation opportunities and resource uses, even if VERP standards are being met and the resources protected. They therefore would not achieve the best balance between visitor uses and resource protection, as compared to Alternative 2.

Adoption of the El Portal corridor boundaries proposed under Alternative 2 provides for a revised boundary which includes the Outstandingly Remarkable Values within a quarter-mile of the river within the El Portal Administrative Site. Adoption of this boundary with management zoning and the VERP program would ensure that any development that occurs within the corridor would be consistent with all the elements of the Merced River Plan, as revised by this document, and would protect the Outstandingly Remarkable Values on a segment-wide basis. Protection of the identified Outstandingly Remarkable Values in the El Portal area on a segment-wide basis ensures appropriate levels of resource protection while also allowing for a wide sharing of life's amenities. Alternative 1 does not account for the location of Outstandingly Remarkable Values within the El Portal Administrative Site. Alternative 3 provides for additional acreage to be included within the corridor boundary and for more restrictive zoning south of the river. Alternative 4 provides for slightly more acreage than Alternative 2 and more restrictive zoning in most areas of the proposed corridor. This alternative could restrict use of the Red Bud area as a commercial raft launch site, reducing recreation access and visitor freedom as compared to the other alternatives. All of the alternatives meet the requirements to protect and enhance the Outstandingly Remarkable Values. Alternative 2 best achieves the intent of this criterion by providing for resource protection, while allowing for appropriate levels and types of uses with the context of protecting Outstandingly Remarkable Values and providing access to recreation opportunities.

Section 101 Requirement 6. *“Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.”*

Conformance: Alternative 2 would enhance the quality of renewable resources and approach maximum attainable recycling of depletable resources by using VERP data to target management actions needed to protect and enhance the quality of renewable resources within the river corridor, including biological and recreation resources. Alternative 1 would result in more reactive management to potential visitor use impacts than Alternative 2. Alternatives 3 and 4 would provide similar levels of resource protection (enhancing biological resources) as Alternative 2, but would not maximize the quality of renewable recreation resources to the extent that Alternative 2 would, even if VERP standards are being met and the resources protected.

Adoption of the El Portal corridor boundaries proposed under Alternative 2 provides for a revised boundary which includes the Outstandingly Remarkable Values within a quarter-mile of the river within the El Portal Administrative Site. Adoption of this boundary with management zoning and the VERP program would ensure that any development that occurs within the corridor would be consistent with all the elements of the Merced River Plan, as revised by this

document, and would protect the Outstandingly Remarkable Values on a segment-wide basis. Protection of the identified Outstandingly Remarkable Values in the El Portal area on a segment-wide basis is consistent with enhancing the quality of renewable resources. Alternative 1 does not account for the location of Outstandingly Remarkable Values within the El Portal Administrative Site. Alternative 3 provides for additional acreage to be included within the corridor boundary and for more restrictive zoning south of the river. Alternative 4 provides for slightly more acreage than Alternative 2 and more restrictive zoning in most areas of the proposed corridor. This alternative could restrict use of the Red Bud area as a commercial raft launch site, reducing the quality of recreation resources as compared to the other alternatives. All of these alternatives meet the requirements to protect and enhance the Outstandingly Remarkable Values. Alternative 2 best achieves the intent of this criterion by enhancing the quality of both biological and recreational resources.

This Revised Merced River Plan/SEIS evaluates alternatives that address user capacity in the river corridor and re-evaluate the corridor boundary in El Portal based on the location of the Outstandingly Remarkable Values. In weighing the benefits of the various alternatives, the user capacity element was given more weight in that the user capacity program will be applied to and affect protection and enhancement of the Outstandingly Remarkable Values throughout the entire 81 miles of the river corridor on National Park Service lands, while the El Portal component of the alternative will affect only the El Portal segment. Although the user capacity element of each alternative provides for similar levels of environmental protection, Alternative 2 meets the criteria above better by achieving resource protection goals while allowing for compatible beneficial uses and limiting unnecessary adverse effects on visitor diversity and choice. The El Portal boundary action alternatives all meet the requirements of the Wild and Scenic Rivers Act to protect and enhance the Outstandingly Remarkable Values of the Merced River. Although, other alternatives may provide for more resource protection through more extensive restrictions, Alternative 2 protects the Outstandingly Remarkable Values while allowing for appropriate use levels and types of beneficial uses in the context of protecting all of the river's Outstandingly Remarkable Values. Therefore, upon full consideration of the elements of Section 101 of NEPA, Alternative 2 represents the environmentally preferable alternative for the Revised Merced River Plan/SEIS.

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