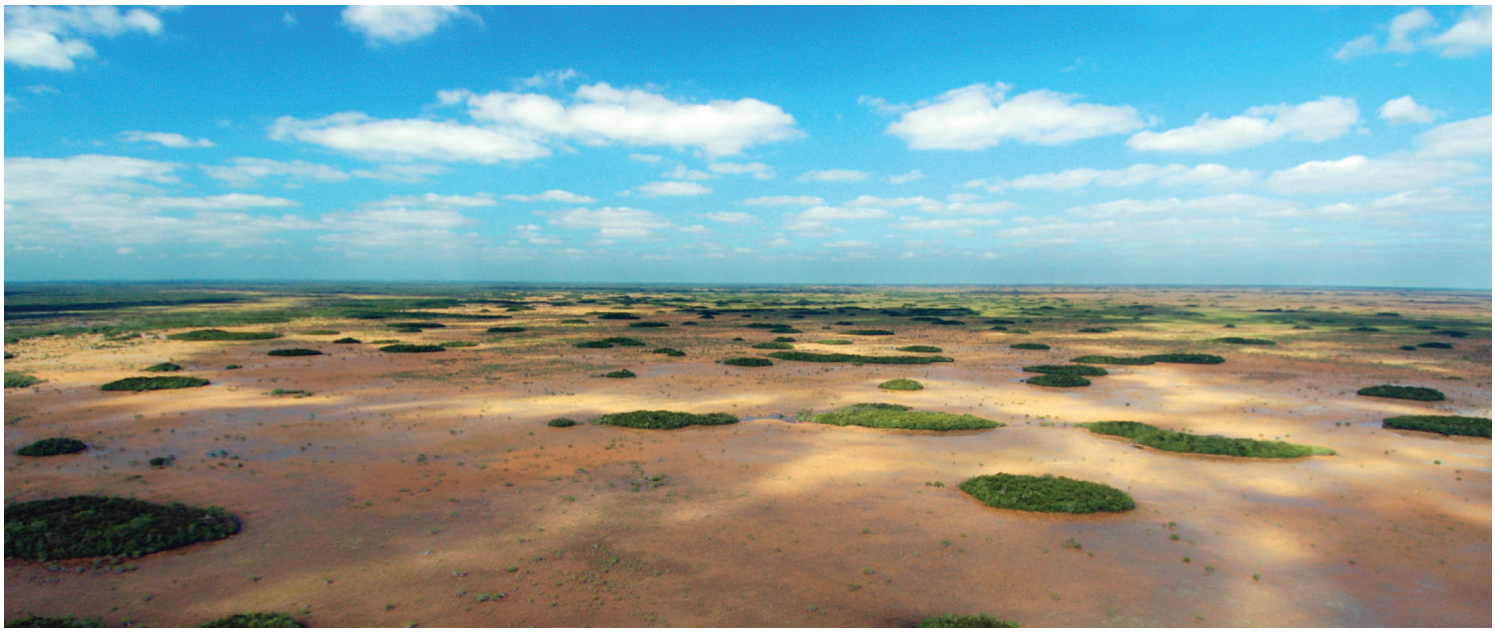
Comprehensive Everglades Restoration Plan

National Park Service
U.S. Department of the Interior

South Florida Natural Resources Center
Everglades National Park



In December 2000, the Comprehensive Everglades Restoration Plan (CERP) was signed into law. The result of a decade of collaboration by scientists, policy makers, and public stakeholders, the plan details a federal/state effort to restore the south Florida ecosystem while providing water for urban and agricultural uses. The U.S. Department of the Interior plays an important advisory role in the CERP decision-making process. This summary provides an overview of the CERP as it affects Everglades and Biscayne National Parks.

The Greater Everglades ecosystem historically encompassed 18,000 square miles from central Florida to the Florida Keys. Water flowed south into Lake Okeechobee which, during the rainy season, filled up and spilled over its banks. The flood water then made its way across a variety of habitat types – including sawgrass plains, open-water sloughs, rocky glades, and marl prairies – and finally into the Gulf of Mexico and Florida and Biscayne Bays. This vast Everglades ecosystem contained a unique assemblage of wildlife and habitats found nowhere else on earth.

As early as the late 1800s, northerners, lured by the region's fertile soils and sunny weather, began moving to south Florida. Portions of the Everglades were drained to provide additional dry land for this new population. But drainage contributed to devastating dry-season droughts because wetlands no longer provided storage for excess wet-season water. A deadly hurricane in 1928 worsened the situation. These events, and back-to-back hurricanes in 1947, led to public outcries for flood protection and water supply, and the U.S. Army Corps of Engineers responded by installing a massive network of canals, levees, and water conservation areas that blocked sheet-flow to urban areas and provided water for dry-season use.

While the effort succeeded in providing flood control and water supply, the water management system and a rapidly increasing human population caused major environmental problems. Sixty-eight plant and animal species became threatened or endangered; the number of breeding wading birds dropped by 90%; recreationally important fish species began to decline; and seagrasses in Florida Bay died. This ecological disaster was first recognized in the 1950s. Environmentalists have fought for Everglades restoration ever since.

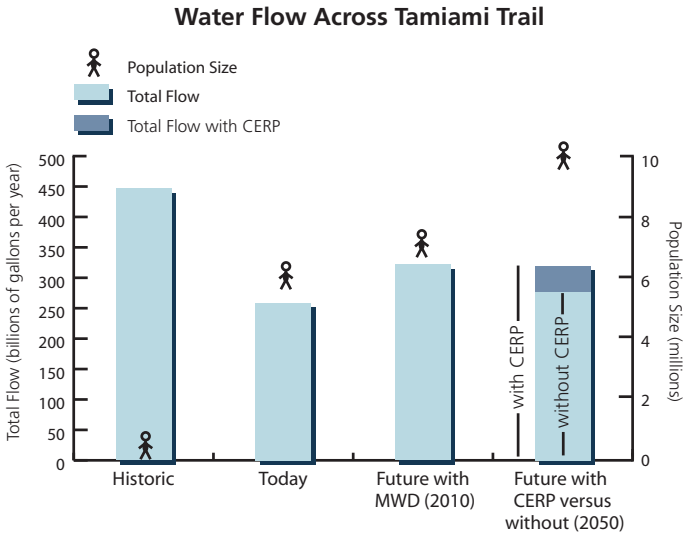
In 1999, the U.S. Army Corps of Engineers submitted a proposal to the Congress to restore south Florida's natural ecosystem, while maintaining urban and agricultural water supply and flood control. The Congress approved the Comprehensive Everglades Restoration Plan (CERP), a $10.5 billion project that is expected to take 30+ years to complete. The CERP approach is to use the best available science to restore the "right quantity, quality, timing, and distribution" of freshwater to the natural system.

CERP development included running computer simulations to predict the ecological benefits of multiple restoration alternatives. These alternatives included proposals for new water management features, such as water storage areas, and new rules for operating these features. An important difference among the alternatives was the amount of water dedicated for various purposes. For example, one alternative – not selected because of the potential to flood urban areas – provided substantially more water to Everglades and Biscayne National Parks than the alternative that was finally chosen.

Historically, over 450 billion gallons of water per year flowed southward into Everglades National Park (ENP) across what is now the Tamiami Trail (see figure). Today, only 260 billion gallons of water flow along this path. As the primary source of water for

Tree islands located west of Taylor Slough
photo by William Perry, ENP

ENP, this drastic reduction has contributed to a deterioration of the park's ecosystems. The Modified Water Deliveries (MWD) Project, a restoration project that precedes the CERP, aims to restore these ecosystems by increasing water flow across the trail to about 325 billion gallons per year by 2010. Yet, water demands from an ever-



increasing south Florida urban population are expected to compete for this water. The CERP projects are intended to provide additional water to meet human needs, thereby lessening the reliance on water dedicated to the park. Scientists hope that, by modifying the CERP, even more water can be allocated to the natural system in the future.

Of the 68 project components that comprise the CERP, four are of particular importance to the national park units in south Florida: Decomparmentalization, ENP Seepage Management, Biscayne Bay Coastal Wetlands, and the C-111 Spreader Canal.

Decompartmentalization

The Water Conservation Area 3 Decompartmentalization and Sheetflow Enhancement Project is the most important of the CERP projects for ENP. This project will restore natural sheetflow and ecological connectivity by removing levees and filling canals in Water Conservation Area 3 upstream of ENP.

ENP Seepage Management

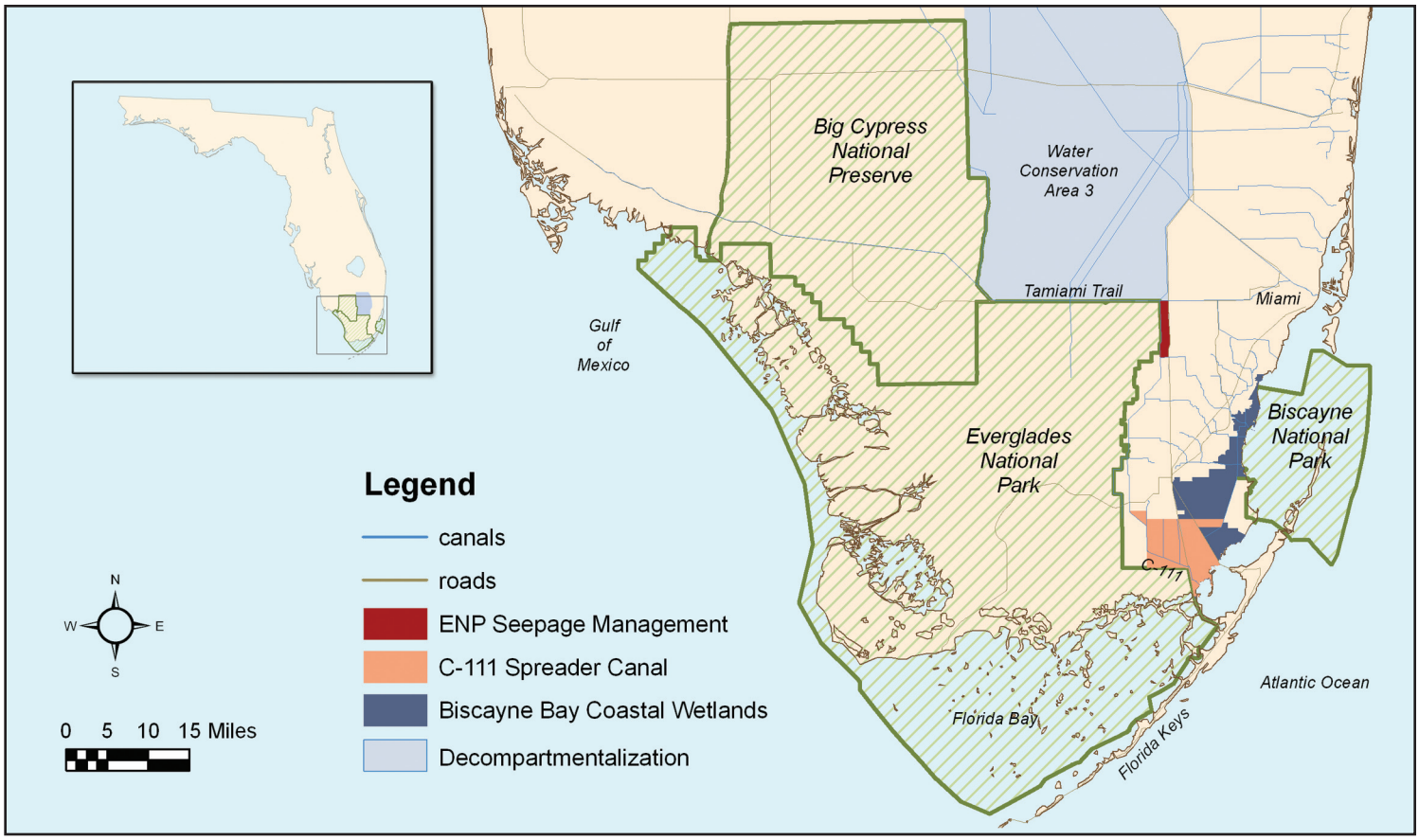
To provide flood protection, water levels are kept artificially low in canals throughout developed areas outside of ENP. As a result, a substantial amount of water continuously seeps from natural areas into adjacent developed areas. The ENP Seepage Management project aims to reduce the loss of water from the eastern side of park.

Biscayne Bay Coastal Wetlands

Historically, the natural landscape distributed flow from the Everglades evenly across the coastal marshes and into Biscayne Bay. The water management system reduced freshwater flows to the bay, causing salinity concentrations to exceed natural conditions. The goal of the Biscayne Bay Coastal Wetlands project is to improve the spatial distribution of freshwater into the bay.

C-111 Spreader Canal

The C-111 canal routes flood water from western Miami-Dade County to Florida Bay, bypassing the coastal wetlands region between Everglades and Biscayne National Parks. The freshwater outflows are concentrated in one portion of Florida Bay and disrupt natural salinity levels there. The CERP includes a project to fill the southern portion of the C-111 canal and replace it with an east-west spreader canal to restore natural overland flow in the coastal wetlands, which will improve conditions in Florida and Biscayne Bays.



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