

Broward County Water Preserve Areas: An Essential Component of Everglades Restoration

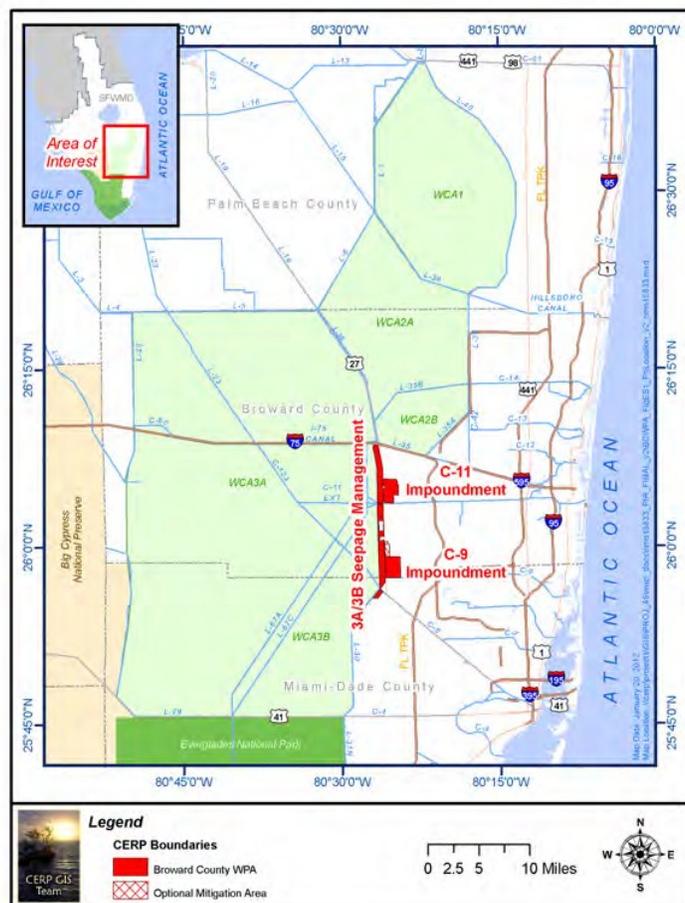
The concept of Water Preserve Areas (WPAs) was first recommended in an Audubon Report on Water Supply Preserves in 1993. This report suggested the establishment of a buffer zone between the remaining Everglades and developed areas to the east that would control water that otherwise seeps through groundwater to tide, treat urban runoff, provide habitat connectivity, and serve as a recreational area. As a result of this report, a position paper from the Everglades Coalition and subsequent studies, a number of projects developed to achieve these goals were made part of the Comprehensive Everglades Restoration Plan (CERP).

The Broward County WPAs project specifically focuses on components in Broward County that increase the spatial extent of wetlands while creating a buffer between development in the westernmost portions of Broward County and natural areas. This buffer will help ensure the sustainability of remaining natural areas for fish and wildlife and keep the land in conservation in the face of regional development pressures.

The South Florida Water Management District estimates that more than one trillion gallons of freshwater per year are directed through canals to coastal bays and estuaries. The creation of WPAs provides a place where fresh surface water that is usually diverted out to sea can be stored for use in times of water shortages. This allows water to be moved into the preserves, aiding in the restoration of bird and fish populations in the Everglades ecosystem, while also replenishing drinking water supplies for South Florida. **The project will enhance the habitat of a variety of endangered species, including Everglade Snail Kites, Wood Storks, and West Indian Manatees.**

Many benefits are associated with the Broward County WPAs project including:

- ◆ Reducing drainage of the Everglades;
- ◆ Reestablishing natural hydropatterns within existing natural areas;
- ◆ Providing water storage;
- ◆ Increasing the spatial extent of wetlands;
- ◆ Providing a buffer between the Everglades and the increasingly urbanized lower east coast area; and
- ◆ Providing aquifer recharge and surface water storage capacity to enhance regional water supplies for the lower east coast urban areas.



Broward County Water Preserve Areas Project
Source: Broward County Water Preserve Areas Project

Components of the Broward County WPA Restoration Project:

The Broward County WPA project combines three of the ten projects that were initially identified as part of CERP:

Water Conservation Areas 3A and 3B Levee Seepage Management

The Water Conservation Area (WCA) 3A/3B Levee Seepage Management system will create a 4,353-acre wetland area and help keep water within the natural system and prevent it from seeping out to urban areas around western Broward County. This seepage occurs because of a highly transmissive aquifer, flood control efforts, and water management needs and contributes to the decline of ecosystem functions while posing flood risks to urban areas. These effects are amplified during dry periods when water is withdrawn from the natural system for water supply and protection against saltwater intrusion into drinking water aquifers. Holding the water in this way provides high quality wetland habitat and serves as one of the few CERP project components to expand the spatial extent of wetlands while making additional water available for deliveries into Everglades National Park.

C-11 Impoundment

The C-11 Impoundment is a reservoir component that will direct runoff from the western C-11 drainage basin into a storage area instead of pumping untreated runoff via the S-9 pump station into WCA 3A, where this water can have serious ecological impacts.



Photo by Victoria Johnston showing discharges of nutrient-laden stormwater from the S-9 pump station. The Broward County WPAs will reduce these discharges.

C-9 Impoundment

The C-9 Impoundment is a second reservoir component that includes canals, levees, water control structures and an impoundment located in the western C-9 Basin in Broward County. This component will hold water from the western C-9 drainage basin and diverted water from the western C-11 basin while helping to reduce water losses through seepage.

Photo by Larry Frogge
The Broward WPA project will improve conditions in critical habitat for the endangered Everglade Snail Kite.

