

## The Southern Everglades and Florida Bay Spoonbill Response Indicates Restoration is Possible

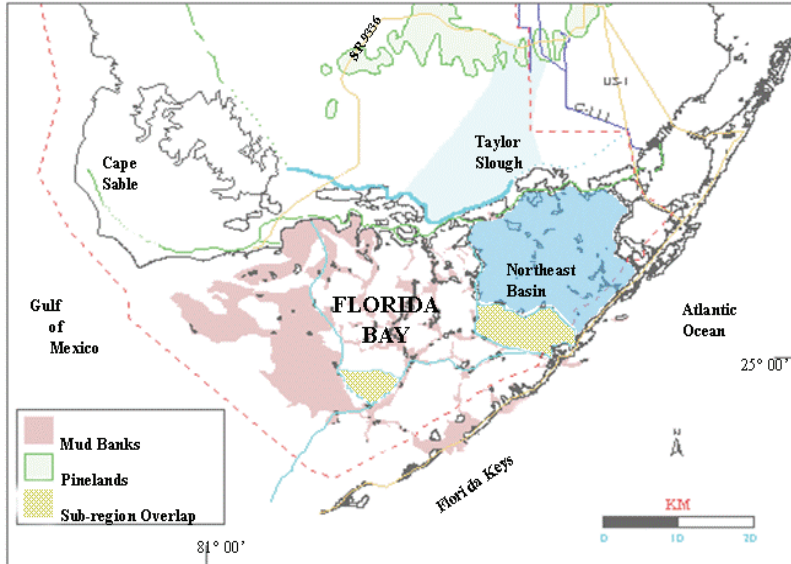


Figure 1. Historical sheetflow through the southern Everglades entered Florida Bay through Taylor Slough.

**Florida Bay**—and the plants and wildlife that are indicators of its ecological health—are extremely sensitive to salinity levels and fluctuations in freshwater flows from the Everglades. New data analysis from Audubon scientists reveals that nesting roseate spoonbills have responded to changes in water management practices and favorable rainfall patterns, illustrating that restoration of wildlife abundances in the Everglades is still possible.

Historically, water pulsed south from Lake Okechobee through wetlands, sawgrass sloughs, and tree islands, and fed the southern estuaries. Water management beginning in the 1920's to drain wetlands has seriously altered—and continues to threaten—

Florida Bay. The health of Florida Bay is critical to the region's economy and quality of life and immediate steps are needed to restore the freshwater sheetflow and allow ecological recovery to begin.

### Restoration is Possible

Recent overall spoonbill nesting trends in Florida Bay have declined to their lowest level since the 1960s (Figure 2), raising concerns that some populations, particularly in the Northeast Basin (Figure 1), may be heading for extirpation from Everglades National Park. Despite the trend of overall spoonbill population decline in Florida Bay, recent data analysis by Audubon scientists reveals that spoonbills have exhibited a positive response to water management changes in the lower C-111 canal system. During the 2005-06 spoonbill nesting season, Audubon scientists began consulting with the South Florida Water Management District before any operational changes were made in the lower C-111 canal system. This allowed for on-the-ground wetland conditions to be taken

into account, if possible, before water stages at certain structures were raised or lowered. As a result of these consultations and very favorable weather conditions, water stages in the wetlands the past few years have more normally mimicked the natural dry-down that coincides with wading bird nesting by avoiding unnecessary out-of-season releases from the C-111 canal. Considering wetland conditions before releasing water through canals helped generate the type of positive ecosystem response possible from restoring more natural conditions in the Everglades. Audubon science has established the roseate spoonbill as a key indicator species for the health of the southern Everglades and Florida Bay.

## Roseate Spoonbills Tell the Story of Florida Bay



Audubon scientists determined through analysis of canal operations and spoonbill nesting efforts that spoonbill colonies in the Northeast Basin of Florida Bay are directly affected by the existence and management of the C-111 canal system because of the close proximity of their foraging grounds to the canal. The C-111 canal system, with operation beginning in 1968 and further expanded by the South Dade Conveyance System in 1983, effectively captures water that should be entering Florida Bay through Taylor Slough and diverts it towards the deep C-111 canal.

Spoonbills and other wading birds time their nesting to coincide with south Florida's defined wet and dry seasons, but the water management that is necessitated by the dredging and operation of canals has blurred the distinction between those seasons. For example, during the dry season when water levels in the wetlands should be drawing down and concentrating prey in smaller areas, pulse releases out of the C-111 canal disrupt this natural cycle and disperse prey across a wide area, making it more difficult or impossible for spoonbills to catch enough prey to meet the high energetic demands of their growing chicks. Restoration of the southern Everglades will reverse the damage of these alterations and begin Florida Bay on a trajectory towards better health.

### Audubon Recommendations

The Comprehensive Everglades Restoration Plan (CERP), enacted in large part because of the decline of Florida Bay, has a suite of projects intended to help reconnect and re-hydrate the Everglades ecosystem. Sufficient operation of the C-111 Spreader Canal projects will begin restoration in the southern end of the system, while completing the Mod Waters and Decomp projects, as well as other bridging efforts, will open up the system so that more freshwater can finally reach its intended destination: Florida Bay. The roseate spoonbills of Northeastern Florida Bay have indicated that the ecosystem can and will respond to improved habitat conditions. The time for restoration is now. Beginning restoration of the southern Everglades and Florida Bay requires the state and federal government sponsors of restoration, as well as all stakeholders, to work together towards the following steps:

- Implement and operate Western C-111 Spreader Canal project to achieve ecosystem benefits
- Begin planning for Eastern C-111 Spreader Canal project immediately
- Finish all components of the federal portion of the C-111 project
- Construct and operate Modified Water Deliveries project
- Construct additional Tamiami Trail bridging
- Build and operate Decompartmentalization (Decomp) Physical Model
- Expedite Decomp project to achieve ecosystem benefits as soon as possible

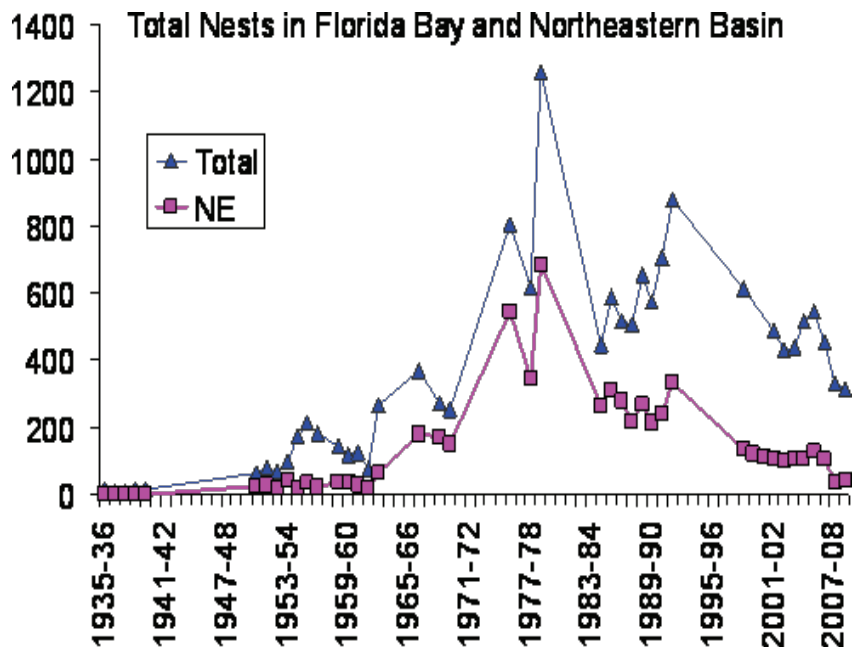


Figure 2. Roseate spoonbill nests in Florida Bay and the Northeastern (NE) Basin of the bay, which is particularly impacted by water management practices.