



# NOAA FISHERIES SERVICE

NOAA Fisheries Service provides stewardship of living marine resources through science-based conservation and management and the promotion of healthy marine ecosystems



PHOTO: Mangrove and open water habitat of the St. Lucie River in the path and corridor of the Indian Street Bridge Project in Palm City, Martin County, Florida.



## WETLAND MITIGATION CASE STUDY

Southeast Region - Habitat Conservation Division

*The primary goal of the Habitat Conservation Division is to protect, restore, and promote stewardship of estuarine and marine fishery habitats to ensure they are healthy and self-sustaining, which is vital to support living marine resources, human use, and resilient coastal communities.*

### INDIAN STREET BRIDGE, Palm City, Florida

The Indian Street Bridge project, located in Palm City, Florida, spans the South Fork of the St. Lucie River. This project demonstrates how temporary, indirect, and direct impacts to aquatic resources can be calculated and mitigated.

NOAA Fisheries Service first learned of the project in 1999 when the Florida Department of Transportation (FDOT) provided an Advanced Notification package announcing the proposed bridge project. The Habitat Conservation Division (HCD) provided FDOT with technical assistance regarding potential impacts to essential fish habitat (EFH) and other aquatic habitats. NOAA Fisheries Service, through the HCD, remained involved and commented on several occasions throughout the regulatory permitting process until May 6, 2010, when the EFH consultation was completed. (See sidebar second page.)

**Direct Impacts:** Impacts which are caused by the action and occur at the same time and place.

**Indirect Impacts:** Impacts which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.

**Temporary Impacts:** Direct or indirect impacts where lost or reduced ecological services or functions are expected to return in total or in part over time.

As designed, the project would impact 26.86 acres of EFH and other (non-EFH) federally regulated wetlands. EFH that would be impacted includes 25.46 acres of mangroves, tidal freshwater wetlands, and open waters. The remaining 1.40 acres of non-EFH wetland impacts would be to freshwater wetlands. Direct impacts would result from clearing mangroves and shading seagrasses beneath the bridge structure. Temporary impacts would result from construction of a work trestle. Indirect impacts were estimated to occur within a 250-foot buffer surrounding the bridge and would be due to noise, dust, and vibration.

Compensatory mitigation is needed for the unavoidable impacts to tidal freshwater wetlands (also referred to as bay swamp) and mangrove; the South Atlantic Fishery Management Council designated these habitats as

## Essential Fish Habitat Consultation And Wetland Permitting

One of the principal authorities for protecting and conserving marine fishery habitats are the essential fish habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). The 1996 amendments to the Magnuson-Stevens Act required federal agencies that authorize, fund, or undertake projects that may adversely affect EFH to consult with NOAA Fisheries Service.

Through consultation, NOAA Fisheries Service, through the Habitat Conservation Division (HCD), provides recommendations to federal agencies to avoid, minimize, mitigate, or otherwise offset the effects of their actions on EFH. The review, advisory, and consultative services provided by the HCD to effect conservation and enhancement of fishery habitats largely use existing laws in addition to the Magnuson-Stevens Act, including the Fish and Wildlife Coordination Act (FWCA), Clean Water Act (CWA), the National Environmental Policy Act (NEPA), Federal Power Act (FPA), Coral Reef Conservation Act (CRCA), and others.

In 1972, Section 404 of the Clean Water Act established a program to regulate the discharge of dredged or fill material into waters of the United States. The program is jointly administered by the U.S. Army Corps of Engineers and the Environmental Protection Agency. The fundamental rationale of the program is that no discharge of dredged or fill material should be permitted if there is a practicable alternative that would be less damaging to aquatic resources or if significant degradation would occur to the nation's waters. Permit evaluation follows a sequential process that encourages avoidance of impacts, followed by minimizing impacts and, finally, requiring mitigation for unavoidable impacts to the aquatic environment. This sequence is described in the guidelines at Section 404(b)(1) of the Clean Water Act.

EFH for shrimp and early life stages of certain species of snapper and grouper. FDOT is treating the temporary impacts to these habitats as if they were permanent impacts due to the length of the expected time for recovery and FDOT's uncertainty about its ability to protect these areas from future construction activities. Mitigation is not needed for the impacts to open water because the shading from the temporary and new bridge is not expected to impair the ecological services this habitat provides to fishery resources.

FDOT proposed mitigation at three different locations to offset the unavoidable impacts to wetlands. FDOT used the estuarine version of the Wetlands Rapid Assessment Procedure (E-WRAP) to assess the impacts to mangrove and tidal freshwater wetlands and to determine required mitigation amounts. The WRAP is a rating index developed to assist regulatory evaluation through an accurate, consistent, and rapid method to be used within the limited timeframes of the regulatory process. E-WRAP was used because the authorization from the U.S. Army Corps of Engineers for the mitigation banks being used require use of E-WRAP to compute and track each bank's mitigation credits.

E-WRAP demonstrated that 5.64 credits are needed to offset the impacts to mangroves and tidal freshwater wetlands. Two mitigation banks would be used to provide these credits. The Hutchinson Island/Florida Oceanographic Society (FOS) site provides the functional lift needed to offset impacts to the tidal freshwater wetlands and a portion of the mangrove wetlands. However, only 3.99 credits are available from this bank. The remaining credits needed to offset the impacts to EFH are to be provided by Bear Point Mitigation Bank (BPMP) on Hutchinson Island. Credits from BPMB would be used specifically to offset the impacts to mangrove wetlands. Due to the excessive distance of this mitigation bank from the impact site, mitigation scores were adjusted using the Mitigation Proximity Factor Worksheet to increase the credits needed from 1.65 to 3.20 credits.

Translating E-WRAP credits into acres should be done cautiously and reflects case-specific detail, however mitigation for the impacts to mangroves and tidal freshwater wetlands equates to approximately 51.55 acres (23.42 acres at BPMB and 28.13 at FOS).

The final comment letter [[available here](#)] from NOAA Fisheries Service to the U.S. Army Corps of Engineers closing the EFH consultation provides additional detail on this project and how the types of impacts were determined.

FOR MORE INFORMATION:

- <http://sero.nmfs.noaa.gov/hcd/hcd.htm>