

## RECORD OF DECISION

### Comprehensive Everglades Restoration Program Picayune Strand Restoration (Formerly Southern Golden Gate Estates Ecosystem Restoration)

#### DECISION

The Final Integrated Project Implementation Report and Environmental Impact Statement (PIR) for the Picayune Strand Restoration Project (PSRP) located in Collier County, Florida, addresses the restoration opportunities for 59,000 acres of severely degraded wetlands. Based upon the PIR/EIS, views of other Federal, State, and local agencies, Native American Tribes, non-governmental organizations, the general public, and the review by my staff, I find the plan recommended by the District Engineer, Jacksonville District, U.S. Army Corps of Engineers, as modified, to be technically feasible, environmentally justified, cost effective, in accordance with environmental statutes, and in the Public interest. The recommendation is to implement the plan identified as Alternative 3D, as modified during the Washington level review of the project. The revised final plan described below, continues to be the National Ecosystem Restoration Plan and best meets the overall Picayune Strand planning objectives (restoration of severely degraded wetlands) and reasonably maximizes ecosystem outputs while being cost effective.

The recommended plan consists of a set of features that, working together, will reestablish pre-drainage freshwater flows to the estuaries; restore natural overland sheetflow and flow ways; bring back native plant communities; restore habitat for fish and wildlife, including listed species; and restore ecological connectivity between adjacent public lands. Features of this recommended plan include the following:

**Canal Plugs.** Canal plugs will be placed south of the pump stations in the Miller, Faka Union, Merritt Canals, and in the entire length of the Prairie Canal. The plugs will prevent the canals from transporting water, promote overland sheetflow, and reinstate the use of historic flow ways. The canal plugs will allow water to seep into the surface aquifer where it will be held so that it can drain slowly to the estuaries.

**Spreader Channels and Pump Stations.** Spreader channels and pump stations will be constructed on the Miller, Faka Union, and Merritt Canals. Spreader channels will have dikes on their north side, which will prevent water from flowing back into the developed area known as Northern Golden Gate Estates (NGGE) and promote overland sheetflow by redirecting the water from the pumps southward perpendicular to the plugged canals. The capacities of the pumps will be designed to be large enough so that the spreader channels and other construction features will not reduce the existing drainage of NGGE that is presently provided by the Picayune Strand canals.

**Roads and Fill Ditches.** Most of the roads in Picayune Strand are elevated 6 inches to a few feet higher than the surrounding ground. Degrading these roads will allow

sheetflow to take place across the landscape. Of the 279 miles of roads, 260 miles would be degraded to the same elevation of the surrounding ground. Approximately 227 miles of these degraded roads would be abandoned and revegetated. The non-asphalt materials from the degraded roads will be used to construct the canal plugs. Asphalt will be disposed of or recycled in accordance with State regulations. The Florida Division of Forestry will use the remaining roads for ongoing land management actions. Some of the roads will be available for public access.

**Flood Protection Levees.** A total of five levee systems will be constructed around nearby private lands to prevent these areas from being flooded as a result of the plan. Levees will be constructed around the 6L agricultural area located at the western edge of the restored area, three around the Port of the Islands developments located at the southern end of the restored area, and one around a residential area in northern Belle Meade at the northwest edge of the restored area. Culverts will be placed in each of the levee systems to allow for interior drainage. A small pump station will also be constructed for interior drainage at the northern Belle Meade levee.

**U.S. 41 Culverts.** Nine culverts will be placed under U.S. 41 to allow sheetflow from the project to continue flowing southward to the estuaries of the Ten Thousand Islands Region.

**Monitoring.** Pre-construction baseline monitoring of hydrology, vegetation, fish and wildlife, threatened and endangered species, oyster reefs, fish communities, and water quality will take place. These resources will also be monitored during construction, after completion of construction for a limited period of time, and as provided for in the Comprehensive Everglades Restoration Plan system-wide Monitoring Plan. Monitoring will determine whether the benefits of the project are being achieved and support the adaptive management process.

## **ALTERNATIVES CONSIDERED DURING THE STUDY**

An interagency, multidisciplinary Project Delivery Team (PDT) participated in formulating, evaluating, and refining a total of twenty-two alternatives plus the No Action alternative. This wide array of plans considered many combinations of pump station sizes and locations, adjustable weirs, various locations for canal plugs, widening canals, and doing nothing to some canals. All but three, plus the No Action alternative, were removed from further consideration during three rounds of screening prior to the final detailed comparison. Screening criteria required an alternative provide more than 50 percent restoration to pre-drainage habitat conditions, eliminate point source freshwater discharges from the Faka Union Canal, maintain the present level of service for drainage in NGGE, and meet overall cost effectiveness goals. Alternatives retained for final analysis include the NEPA required No Action Alternative plus Alternatives 3D, 6 and 12. The result of the PDT investigation was the identification of Alternative 3D as the recommended plan. The remaining alternatives, briefly described below, failed to meet project objectives and/or cost benefits analysis.

Under the No Action Alternative no features would be constructed and no operational changes would be initiated on the canals. The PDT determined that under this scenario inland and estuarine habitat conditions would continue to deteriorate. This alternative was dropped because it did not meet project objectives.

Under Alternative 6, which is the low technology plan, Prairie Canal would be plugged along its entire length, and the other three canals would be plugged only in the southern one-third of SGGE. As more intensive modeling took place it became evident to the PDT that habitat increases were less than expected and that this plan would not provide the present level of service for drainage in NGGE. Although the construction costs of Alt 6 are lower than Alt 3D, implementation of this plan would require acquisition of real estate interests in NGGE that make it politically and economically unfeasible.

Under Alternative 12, the entire length of the Prairie Canal would be plugged. The Faka Union canal would receive a 2000 cfs pump station, a spreader channel, and canal plugs starting immediately south of the spreader. The Merritt Canal would receive an 800 cfs pump station, a spreader channel, and canal plugs starting immediately south of the spreader. Miller Canal would receive a set of Obermeyer Weirs and a small 100 cfs pump station. To provide a measure of habitat restoration along the canal, the weirs would remain in an upright position during the dry season and a normal wet season. However, during large events the weirs could be laid flat in the canal to provide conveyance for storm waters. Alt 12 was eliminated because overall costs were almost equal to Alt 3D while inland and estuarine habitat benefits were less.

## **MEANS TO AVOID OR MINIMIZE ADVERSE EFFECTS**

In its current condition the proposed restoration area provides low quality habitat for a number of federally threatened or endangered species and state listed species. The U.S. Fish and Wildlife Service (Service), Florida Fish and Wildlife Conservation Commission (FWC), and other scientists have participated in the design and selection of the recommended plan. It is believed that all practicable means to avoid or minimize adverse environmental effects have been incorporated into the Recommended Plan. Preconstruction monitoring surveys will be used to further avert impacts during the detailed design phase. Monitoring will continue throughout the construction phase, during a portion of the operational phase, and as needed for threatened and endangered species.

With preparation and review of a detailed Biological Assessment, the Corps and the Service have completed Section 7 consultation for the planning (feasibility phase) of the project; however, consultation will continue during the preconstruction engineering and design phase. The Corps has determined that the recommended alternative, Alternative 3D, may affect, but is not likely to adversely affect, the red-cockaded woodpecker, bald eagle, Everglade snail kite, eastern indigo snake, American crocodile, and West Indian manatee critical habitat. The proposed project would have no effect on Everglade snail kite critical habitat and American crocodile critical habitat. By letter

dated October 20, 2004, the Service has concurred with these determinations. Corps and Service biologists have agreed that there is currently insufficient information to determine project effects on wood stork, West Indian manatee, and Florida panther. Ongoing studies and surveys are providing additional biological information about the wood stork, West Indian manatee, and Florida panther. As new information becomes available during the preconstruction engineering and design phase, the Corps anticipates making determinations of effect, and obtaining concurrence from the Service, for the three threatened and endangered species. Throughout all phases of the project, the Corps and the Service will continue collaboration to ensure conservation of listed species and species habitat.


A Ten Year Management Plan for the project area is being developed by the Florida Division of Forestry (DOF) and will be reviewed and tracked by a PDT sub-team to assure it is compatible with project objectives and that project benefits are achieved.

The initial cultural resource survey documented a range of archeological and historical sites; several of these sites are potentially eligible for the National Register of Historic Places (NRHP). Two additional surveys have been completed. The Corps is consulting with the Florida SHPO, Native Americans, and other interested parties. The modeling output is not detailed enough to determine if there will be unanticipated adverse effects to historic properties eligible for the NHRP. A monitoring plan is being designed by the USACE and SFWMD, working cooperatively in coordination with the SHPO to monitor water levels.

## SUMMARY

Technical environmental, and economic criteria used in the formulation of alternative plans were those specified in the Water Resources Council's *Principles and Guidelines*. All applicable laws, executive orders, regulations, and local plans were considered in evaluating the alternatives. Based on review of these evaluations, I find that any adverse affects of the recommended action, described in the Final Integrated Project Implementation Report and Environmental Impact Statement have been avoided and/or minimized to the extent practicable, and am confident that the recommended plan, as modified, best meets the overall Federal objectives. The recommended action is consistent with all applicable laws, regulations, national policy, and administrative directives. The total public interest will be best served by implementing the recommended plan as described in the Final Integrated PIR and EIS, as modified herein. This Record of Decision completes the National Environmental Policy Act process.

13 April 2007  
Date

  
John Paul Woodley, Jr.  
Assistant Secretary of the Army  
(Civil Works)