

RECORD OF DECISION

C-44 RESERVOIR AND STORMWATER TREATMENT AREA COMPONENT OF THE CENTRAL AND SOUTHERN FLORIDA PROJECT COMPREHENSIVE EVERGLADES RESTORATION PLAN INDIAN RIVER LAGOON SOUTH PROJECT

DECISION

The Final Integrated Project Implementation Report (PIR) and Environmental Impact Statement (EIS) for the federal Comprehensive Everglades Restoration Plan (CERP) Indian River Lagoon South (IRLS) Project located in Martin, St. Lucie, and Okeechobee Counties, Florida, addresses the restoration opportunities for the IRLS area. A Record of Decision (ROD) to implement the CERP IRLS plan identified as Alternative 6, as modified during the Washington level review of the project was signed by John Paul Woodley Jr., Assistant Secretary of the Army (Civil Works) on January 25, 2006.

The State of Florida has developed a plan called "Acceler8" for the purpose of accelerating design and construction of a number of critical restoration projects consistent with the Comprehensive Everglades Restoration Plan (CERP) and concurrent with the development of a PIR but prior to one or more of the following: Administration approval, congressional committee resolution, congressional authorization, or federal construction funding. The South Florida Water Management District (SFWMD) is the lead agency responsible for implementing this plan.

The SFWMD submitted a Department of the Army permit application to the implement a component of the CERP IRLS Project, the C-44 Reservoir and Stormwater Treatment Area (C-44 RSTA).

Based upon the Integrated PIR/EIS; views of other Federal, State, and local agencies, Native American Tribes, non-governmental organizations, the general public; review by staff of the permit application, I find the SFWMD's proposed action plan to be technically feasible, environmentally justified, in accordance with environmental statutes, and not contrary to the public interest. The recommendation is to implement a component of the federal plan identified as Alternative 6, as modified during the Washington level review of the project.

The SFWMD proposes to construct the C-44 RSTA Project prior to implementation of the federal IRLS CERP project. The SFWMD's proposed action consists of a set of features that will capture, attenuate, and partially treat watershed runoff from the C-44 Basin. Features of the proposed action include the following:

Reservoir/Reservoir Embankment – The 3,400 acre reservoir has a normal full storage level of 15 feet (EL 41 feet NAVD88), provides approximately 50,600 acre-feet of storage capacity, and contains approximately 50,000 linear feet of embankment.

Stormwater Treatment Area (STA)/ STA Embankments – The project includes six (6) individual cells [Cell 1 (995 acres); Cell 2 (1275 acres); Cell 3 (465 acres); Cell 4 (1280 acres); Cell 5(1280 acres); Cell 6 (995 acres)] encompassing approximately 6,300 acres with 170,000 linear feet of embankments and maintaining a targeted average depth of 1.5 feet.

Intake Canal - The intake canal is approximately 20,000 linear feet in length with a 60 foot bottom width for a majority of its extent (11 foot bottom width from Citrus Boulevard to the C-44 Canal) at an elevation of 3 feet NAVD88. Design conveyance capacity for the Intake Canal is approximately 1,300 cubic feet per second (cfs). Canal side slopes under the Citrus Boulevard Bridge will be comprised of a vertical sheet pile wall system. This sheet pile wall system will extend along the west side of the canal to the C-44 Canal.

Inflow Pump Station - An 1,100 cfs pump station to provide water from the C-44 Canal to the C-44 Reservoir via the Intake Canal will be comprised of four (4) electric 275 cfs pumps.

Reservoir Discharge Structure - The discharge structure is comprised of three (3) six foot by six foot (6' x 6') slide gates to convey a maximum of 1,100 cfs (600 cfs under normal operations) through two (2) seven foot by seven foot (7' x 7') box culverts (with operable slide gates) to the Northern Distribution Canal. The structure also includes a service spillway capable of conveying 810 cfs for emergency discharges associated with probable maximum precipitation (PMP) events.

Western Reservoir Perimeter Canal (WRPC) – This section of the perimeter canal is 35,000 linear feet paralleling most of the northern, western, and southern extent of the reservoir embankment. The WRPC maintains a bottom width of 5 feet for a majority of the canal with a transition from 5 feet to 25 feet along the south side of the reservoir. The canal bottom is constant at EL 12.0 feet NAVD88 for the majority of the canal. The WRPC will be used to transmit surface runoff, seepage flow, and anticipated future flows from the C-23 Canal.

Western Reservoir Perimeter Canal Spillway – This structure is a fifty (50) foot wide spillway which discharges to the C-44 Intake Canal (C-400) with a crest elevation of 18 feet NAVD88 and an 1,100 cfs capacity.

Western Reservoir Perimeter Canal Low Level Outlet Structure – This structure allows for low level drawdown of the WRPC to the C-44 Intake Canal through a five foot by five foot (5' x 5') gated box culvert.

Eastern Reservoir Perimeter Canal (ERPC) - The ERPC is approximately 15,000 linear feet and runs parallel to the eastern embankment of the reservoir. The canal maintains a bottom width of 5 feet at an elevation of 12 feet NAVD88. The ERPC is designed to convey runoff and seepage.

Northern Distribution Canal - This canal conveys flows from the reservoir to STA Cells 1, 2, 3 and the Southern Distribution Canal. The canal maintains a bottom width of 10 feet, a bottom elevation of 18.5 feet NAVD88, and a normal operating elevation of 28-29 feet NAVD88 with a design conveyance capacity of 1,100 cfs.

Northern Distribution Canal Service Spillway – This structure is located at the terminus of the Northern Distribution Canal and is designed to convey 1,100 cfs to the Eastern Collection/Discharge Canal during emergencies or PMP events.

Southern Distribution Canal - This canal joins the Northern Distribution Canal at the confluence of STA Cells 1-4 (east of the FP&L power lines) and conveys flows from the reservoir to STA Cells 4, 5 and 6. The canal maintains a bottom width of 10 feet, a bottom elevation of 18.5 feet NAVD88, and a normal operating level of 28-29 feet NAVD88 with design conveyance capacity of 1,100 cfs.

Interior Works - Structures located within the C-44 RSTA Project will serve to convey water internally between the reservoir, STA Cells, and the multiple canal systems:

STA Cell Inflow Structures - The STA includes 20 gated inlet structures at the upstream end of each STA Cell consisting of 60” diameter reinforced concrete pipes with operable slide gates. These structures serve to convey water into the STA Cells from both the Northern and Southern Distribution Canals.

STA Cell Outflow Structures - The STA includes twenty (20) forty foot (40’) wide manually adjustable weirs (consisting of two (2) twenty foot (20’) weir plates with a nominal crest elevation of 26.75 feet NAVD88 at the downstream end of each STA cell. The crest elevation is adjustable by installing or removing weir plates. Flows from these structures are discharged to the Eastern and Western STA Collection Canals through a 60” diameter reinforced corrugated pipe (RCP). Outlet structures are designed for a combined discharge rate of 600 cfs under normal operational conditions and a combined maximum total discharge rate of 1,100 cfs.

Low Level Gated Outflow Structures - Located at the downstream end of each STA Cell, these 60” diameter reinforced concrete pipes with manually-operated slide gates exist to evacuate water from the STA Cells below the level of the weir plates and are not intended for normal operations.

Eastern Collection Canal - This canal conveys discharges from STA Cells 1, 3, 4, 5, and 6 to the project outlet. Canal bottom widths range between of 8 feet to 40 feet with bottom elevations ranging between 12 feet and 14 feet NAVD88.

Western Collection Canal - This canal conveys discharges from STA Cell 2 to the project outlet. Canal bottom widths range between of 5 feet to 40 feet with bottom elevations ranging between 12 feet and 16 feet NAVD88.

Discharge Canal Spillway - This spillway is located at the terminus of the Collection Canals and consists of a 120 foot wide broad-crested weir with a crest elevation of 19 feet NAVD88. The spillway is designed for a normal operational flow of 600 cfs as well as peak flow of 1,880 cfs generated during PMP events.

Discharge Canal Low Level Outlet Structure - This structure consists of a manually-operated six foot by six foot (6' x 6') gated structure that can allow for the drawdown of the entire canal system within the C-44 RSTA Project.

Main Access Road - This 24 foot wide paved road is approximately 4 miles long and will be constructed from Citrus Boulevard to the reservoir. Swales, ditches, dry detention areas, and associated culverts/structures are included for water quality treatment and conveyance.

Northern Interior Drainage Canal - This conveyance canal is located along the west side of STA Cell 3 to provide drainage for the Florida Power & Light (FPL) easement area. Culverts will be constructed in locations where the canal crosses access roads. Discharge from this canal is into the Southern Interior Drainage Canal.

Southern Interior Drainage Canal - This conveyance canal is located along the west side of STA Cells 4, 5 and 6 to provide drainage for the FPL easement area. Culverts will be constructed in locations where the canal crosses access roads. This canal connects to the ditches/dry detention areas located in the vicinity of the Main Access Road which discharge to the intake canal.

Eastern Drainage Canal - Improvements will be made to the east/west C-133A Canal immediately north of Cell 4, the C-132 Canal north of the Bar B Ranch property, and the C-133 Canal along the east side of the Bar B Ranch property in order to maintain drainage service for the Bar-B Ranch property and properties to the north. The C-133 canal improvements will extend to the C-44 Canal and will include relocation of the access road for Bar-B-Ranch.

Eastern Drainage Canal Spillways – Two spillways will be located within Easement 1 within the Eastern Drainage Canal, south of the Citrus Boulevard Box Culvert and prior to the C-44 Canal. The upper spillway is a 34 foot wide broad-crested weir with a crest elevation at 17.0 feet NAVD88. The spillway is designed for a normal operational flow of approximately 500 cfs. The lower spillway is a 34 foot wide broad-crested weir with a crest elevation at 12.0 feet NAVD88. These spillways are the discharge point for the off-site areas located north of the C-44 RSTA Project.

Citrus Boulevard Bridge and Roadway Improvements – Improvement include a new bridge spanning the Intake Canal (40' wide and 80' in length), roadway bridge approaches, turn lanes for main access road, treatment areas, stabilized shoulders, paving and striping upgrades. Upon completion, this bridge and roadway improvements will be owned and maintained by Martin County. Construction of temporary roadways and drainage facilities on the north side of Citrus Boulevard will occur to maintain vehicular use during construction of the bridge.

Citrus Boulevard Box Culvert - Two 10'x 6' box culverts will be constructed under Citrus Boulevard at the East Drainage Canal within Easement 1. Construction of temporary roadways and drainage facilities on the north side of Citrus Boulevard will occur to maintain vehicular use during construction of the box culverts.

Communications Tower – A 300-foot tall microwave communications tower with 20-foot antenna for C-44 RSTA Project communications with SFWMD District headquarters in West Palm Beach will be constructed.

Recreation Components – Recreational activities are generally passive except for some motor boating, fishing and hunting. The project includes construction and maintenance of a parking facility and boat ramp located at the south east corner of the reservoir. Other recreational features include dry vault toilet(s), information kiosks/shade shelter and kayak launches, and boarding pier(s). Reservoir and STA embankments will provide pedestrian and biking access. Additionally, shade shelter, benches, and other minimalist features may be constructed along STA embankments.

FPL Power Line Relocation, Abandonment, Temporary, and Permanent Power Installation – As a result of the project, relocation, removal, installation, and abandonment of several FPL lines and poles as well as installation of buried conduits and related facilities for permanent power to the C-44 RSTA Project site are necessary.

ALTERNATIVES CONSIDERED DURING THE STUDY

An interagency, multidisciplinary Project Delivery Team (PDT) participated in formulating, evaluating, and refining alternatives which resulted in the Recommended Plan. In addition to the No Action Alternative, five other alternatives were carried through the final plan and evaluation and selection process. These alternatives are described in the January 25, 2006, ROD for the federal CERP IRLS and include alternatives for the C-44 RSTA component.

The siting criteria used to rank the alternatives for reservoirs and STAs included land use/land cover, proximity to primary canal/canal network, soil suitability, potential contributing watershed, storage capacity (area of parcel), hydrologic network distance from estuary, and average land elevation. The siting process performed in the PIR identified ten (10) different sites along the C-44 Canal for the potential locations of the C-44 Reservoir, C-44 STA East, and C-44 STA West components. The alternative analysis evaluated various combinations of these components that included three (3) different reservoir storage volumes on four (4) different

acreages at three (3) different locations as well as four (4) different treatment acreages for the STAs at five (5) different locations.

Considering the watershed restoration goals, particularly increasing the spatial extent and quality of wetlands, of the IRLS Study, construction of reservoirs and STAs on wetlands or lands with significant habitat restoration potential would be inconsistent. Therefore, all alternatives included siting reservoirs and STAs on lands currently in citrus, sugar cane, sod, and row crops. All of the alternatives for the C-44 RSTA were equal with regard to environmental effects within the project footprint. Additionally, the preferred placement of the STA components is immediately adjacent to the reservoirs in order to provide treatment of captured flows.

The Recommended Plan, Alternative 6, proposed the co-location of the C-44 Reservoir, C-44 STA West and C-44 STA East on a site that was owned by a minimal number of land owners. The SFWMD's proposed C-44 RSTA Project implements these same three components on the same site identified in the Recommended Plan of the PIR. This alternative demonstrated by the Corps to be the most cost effective, is the least environmentally damaging practicable alternative.

MEANS TO AVOID OR MINIMIZE ADVERSE EFFECTS

All practicable means to avoid or minimize adverse environmental effects have been incorporated into the proposed action. Section 7 consultation for federally listed threatened and endangered species potentially affected by the project has been completed with conservation measures and terms and conditions for minimizing adverse effect. The project includes a Water Quality Monitoring Plan to ensure State water quality standards.

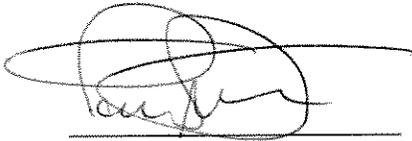
The project also includes ecological monitoring to demonstrate wetlands and other aquatic resources impacted by construction are offset by the project benefits. The performance of CERP will be assessed by the Restoration COordination and VERification (RECOVER) program through the Monitoring and Assessment Plan (MAP). As discussed in the January 25, 2006, ROD for the CERP IRLS, pre-construction baseline monitoring of hydrology, vegetation, fish and wildlife, threatened and endangered species, oyster reefs, fish communities, and water quality will take place under the RECOVER program. These resources will also be monitored during construction and after completion of construction for a limited period of time by RECOVER.

The Regulatory Division of the Jacksonville District (Corps) is using the Unified Mitigation Assessment Methodology (UMAM) to assess the function and value of aquatic resources within the project footprint that are adversely impacted by construction and the environmental lift to the south Florida ecosystem as a result of implementing the proposed action. The removal or destruction of ecologically valuable habitat and aquatic resources has been minimized by siting the reservoir and STA on existing citrus agricultural lands with a few scattered low ecological value wetlands. Monitoring of the environmental lift as a result of implementation of the SFWMD's proposed C-44 RSTA Project will be through RECOVER's

MAP. If RECOVER ceases to monitor any of the performance measures and restoration targets identified in the monitoring plan, it will be the responsibility of the SFWMD to fill the monitoring gaps with monitoring parameters acceptable to the Corps. Each year the Corps will receive from the SFWMD a report that evaluates the monitoring data to ensure a trend toward the restoration targets and projected UMAM goal scores as shown on the mitigation ledger. Annual evaluation will also allow for adaptive management or corrective actions if monitoring indicates adverse environmental responses. This monitoring, coupled with the monitoring of benefits to the south Florida ecosystem as a result of other SFWMD accelerated CERP projects, will be used to demonstrate that impacts to the wetlands and other aquatic resources as a result of project features are being offset by the benefits to the south Florida ecosystem.

SUMMARY

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 proposed action, which is a component of the IRLS, in the Final Integrated PIR/EIS, have been avoided and/or minimized to the extent practicable. The recommended action is consistent with all applicable laws, regulations, national policy, and administrative directives. The overall public interest will be best served by implementing the proposed action as described in the Final Integrated PIR/EIS and accompanying ROD. This Record of Decision completes the National Environmental Policy Act process for the SFWMD's regulatory action.



Paul L. Grosskruger
Colonel, U.S. Army
District Commander



5 Jan 07
Date