



30 June 2022

CECW-ZB

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

SUBJECT: Central and Southern Florida, Indian River Lagoon, Florida, Validation Report

1. Purpose. To provide for your review and concurrence on the Central and Southern Florida, Indian River Lagoon, Florida Validation Report. The report presents a revised cost estimate and updated analysis of the authorized project to support the authorization of a new project cost. The report documents the need to increase the authorized project cost from \$1,365,000,000, (FY07 price levels) to a project first cost of \$5,001,372,000 (FY22 price levels).

2. Authorized Project. Section 1001(14) of the Water Resources Development Act (WRDA) of 2007, Public Law 110-114, authorized the Central and Southern Florida, Indian River Lagoon, Florida Project (IRL-S Project) to be carried out in accordance with section 601 of the WRDA of 2000 [the Comprehensive Everglades Restoration Plan]. The IRL-S Project consists of features and/or operational modifications that, working together, would restore a more natural volume and location of freshwater deliveries; store more water on land; reduce excessive nutrient loads contributing to muck formation, plankton blooms and fish kills; restore natural water storage functions to terrestrial wetlands in the watershed; and restore water quality and more natural estuarine bottom communities. The project features are reservoirs (C-44, C-23/24, and C-25), Stormwater Treatment Areas (STAs) (35,000 acre-feet of storage), natural storage and treatment areas and north fork floodplain restoration, diversion (C-23/C-44 interconnect canal), and muck removal and artificial habitat.

3. Post-Authorization Change. The project is being constructed in two phases, and construction was initiated for Phase I. Construction of the C-44 STA and C-44 Reservoir is complete. The construction contract for the C-23/24 STA has been awarded. The C-23/24 North and South Reservoirs are currently under design. Construction has not been initiated for Phase II features, which include the C-25 Reservoir and STA features, natural storage and water quality areas, floodplain restoration, muck removal, and artificial habitat. The increases in cost are primarily due to the following factors:

- a. Change of location and redesign of components in the 2004 original design;
- b. Major changes to the dam and levee safety program (ER 1110-2-1156) to reduce life safety risk with a risk-informed approach;

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c. Increases in material costs, escalation based on construction schedule changes, increases in labor rates and equipment costs, and differences in percentages of applied markups.

4. Project Justification. The primary ecological objectives of the IRL-S Project are to reestablish a natural pattern of freshwater flows to the Saint Lucie Estuary (SLE) and Indian River Lagoon (IRL), improve the water quality in the SLE and IRL, improve habitat for estuarine biota, increase the spatial extent and functional quality of watershed wetlands and native upland and wetland habitats, and increase diversity and abundance of native plant and animal species, including threatened and endangered species.

a. Continued implementation of IRL-S Project components will lead to improved estuarine health and the recovery of the functions of the St. Lucie River, SLE, and the southern IRL ecosystem. Restoration will result in a healthier, more productive aquatic ecosystem within Martin and St. Lucie Counties and would be vital to maintaining the ecological integrity and associated economic activity throughout the project area.

b. Although the features of the project have not changed significantly since originally formulated in 2004, based on the current understanding of Everglades restoration science, the project, when fully implemented, is expected to provide greater benefits than were originally described in the 2004 PIR/EIS. This expectation is based on present knowledge of ecological responses to improved distribution, timing, volume, and quality of freshwater releases to the SLE and IRL. This expectation is also based upon the increased frequency of harmful algal blooms, loss of seagrass coverage and associated reduction in fish and wildlife assemblages with the estuarine complex since 2004. In addition, in light of future climate change which may bring changes in rainfall or increased storm events, restoration of the SLE and southern IRL ecosystem is even more imperative now for future resiliency. Natural storage and treatment areas are considered habitat-based climate change adaptation measures as they increase the spatial extent of the existing network of conservation lands and establish high quality habitat corridors to enhance connectivity between protected areas. These benefits were not described within the 2004 PIR/EIS.

c. An updated benefit-cost analysis used in plan selection is to be completed during Fiscal Year 2023 to confirm the recommended plan. To achieve that requirement, the Jacksonville District is directed to provide a scope of work, resourcing plan and schedule, including involvement by non-federal interests, to perform the update by August 2022. The update should focus on the total and remaining benefits/costs as well as other categories including Regional Economic Development and Other Social Effects.

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5. Environmental Compliance. There have been design changes to the project features and environmental analysis in the 2004 EIS was supplemented with Environmental Assessments (EAs) completed in 2007 and 2021. The project is consistent with the Record of Decision signed in 2006 and subsequent NEPA documents conducted for the IRL-S Project components to include the 2007 C-44 Reservoir and STA Supplemental EA and the 2021 C-23/C-24 Reservoir and STA Supplemental EA.

6. Recommendation. I recommend the enclosed validation report be transmitted to Congress as a basis for increasing the authorized project cost of the Central and Southern Florida, Indian River Lagoon, Florida Project to \$5,001,372,000 (FY22 price levels).



ALVIN B. LEE
Director of Civil Works