



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

CECW-ZB (1105)

23-Mar-2026

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

SUBJECT: Central and Southern Florida, Canal 111 (C-111) South Dade Project, Miami-Dade County, Florida, Section 902 Post Authorization Change Report for the Replacement of Current Pump Stations S-332B and S-332C

1. Purpose. To provide for your review and concurrence the enclosed Central and Southern Florida, Canal 111 (C-111) South Dade Project, Miami-Dade County, Florida, Section 902 Post Authorization Change Report for the Replacement of Current Pump Stations S-332B and S-332C. The report presents a revised cost estimate and updated analysis of the authorized project to support the authorization of the new project cost. The report documents the need to increase the authorized project first cost from \$133,473,000 at October 2020 price levels to \$954,561,000 at October 2025 price levels. The recommended changes necessitating the increase to the cost limit imposed by section 902 of the Water Resources Development Act of 1986, as amended (33 U.S.C. §§ 2280), are within the existing authority of the project.

2. Authorized Project. The project was authorized by Section 203 of the Flood Control Act of 1962 (Public Law 87-874) as a modification to the Central and Southern Florida (C&SFCSS) Project, authorized by Section 203 of the Flood Control Act of 1948 (Public Law 80-858), as amended. The project was further modified by Section 316 of the Water Resources Development Act (WRDA) of 1996 (Public Law 104-303), Section 4013 of the Water Resources Reform and Development Act of 2014 (Public Law 113-121), and Section 401(7) of WRDA 2020 (Public Law 116-260).

3. The primary objectives of the project are to restore natural hydrologic conditions of the ecosystem in Taylor Slough and eastern Panhandle of Everglades National Park (ENP) while maintaining the authorized level of flood risk management for the agricultural areas in the C-111 Basin. Although construction of permanent pump stations was authorized in 1996, the current project S-332B and S-332C pump stations were designed and constructed between 2000 and 2003 as interim facilities to quickly address the Cape Sable Seaside Sparrow (CSSS) 1999 Jeopardy Biological Opinion (BO) issued by the U.S. Fish and Wildlife Service (USFWS). These pump stations are experiencing major deficiencies and are vulnerable to high velocity hurricanes. In April 2014, the Assistant Secretary of the Army for Civil Works (ASA(CW)) directed the U.S. Army Corps of Engineers (USACE), Jacksonville District to proceed with a post authorization change report (PACR) to evaluate the need to replace the pump stations, possible alternative measures, cost sharing and depreciation payments, in-kind contributions, and the overall schedule. The decision to replace current pump stations

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S-332B and S-332C is documented in the "Central and Southern Florida Project, Canal 111 (C-111) South Dade Project Replacement of Current Pump Stations S-332B and S-332C, Final Integrated General Re-Evaluation Report and Environmental Assessment," dated June 2020. On 15 September 2020, the 2020 General Re-Evaluation Report and Environmental Assessment was formally submitted to the ASA(CW) with a Report of the Director of Civil Works (Director's Report). Section 401(7) of WRDA 2020, approved modifications to the C&SF Project, Canal C111 (C-111) South Dade Project in accordance with the Director's Report. This authorization was limited to modifications including replacement of pump stations and appurtenant related features. This 902 PACR is limited to the 2020 authorized modifications. Replacement of the current S-332B and S-332C pump stations will maintain a hydraulic ridge along the North Detention Area (NDA) and South Detention Area (SDA) flow ways, which reduces ground water seepage, improves hydro-periods and -patterns, and ensures retention of crucial water resources within approximately 730,000 acres of the ENP ecosystem. Operational considerations for the Combined Operational Plan, of which the C-111 SD Project is a component, may preliminarily be considered with high sea level change projections potentially impacting water control structures to the east. Additionally, the replacement pumps will maintain flood protection in the C-111 basin by reducing risk of pump failure that could result in elevated freshwater discharge into nearby areas like Barnes Sound and Manatee Bay and potentially extend flooding durations in agricultural areas.

4. Post-Authorization Change. The Project currently has features in design and operation and maintenance (O&M) phases. Features under design are the S-332B and S-332C replacement pump stations. Features that have been completed and are under O&M phase include the S-332D pump station, C-111 spoil mound removal, Taylor Slough bridge, S-332B and S-332C interim pump stations and detention areas, S-332B western detention area and weir, S-332D engine replacement, partial connector between the two detention areas, tie-back levee from L-31W to portion of the SDA, S-332D high head cell and weir, S-331 command and control facility, final SDA configuration, S-332DX1, NDA and related features, Richmond Drive crossing, internal flow way berms, modification of S-327 high head cell weir and decommission/removal of obsolete structures, and L-31W canal modifications. The cost increases are primarily due to several factors in the current design phase, as follows:

- a. \$359 million due to pump station design changes because of design refinements in line with new guidelines, and changes in pump mix configuration;
- b. \$75 million due to increased discharge channel length and increased embankment cross sections that occurred during the detailed design process;
- c. \$70 million due to changes in planning, engineering, and design associated with increased construction costs;

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4. Project Justification. The primary objectives of the project are to restore natural hydrologic conditions in over 730,000 acres of the ecosystem in Taylor Slough and eastern Panhandle of ENP while maintaining the authorized level of flood risk management for the agricultural areas in the C-111 Basin, an important objective for the C&SF Project.

a. Although construction of permanent pump stations was authorized in 1996, the current C-111 SD Project S-332B and S-332C pump stations were designed and constructed between 2000 and 2003 as interim facilities to quickly address the C5SS 1999 Jeopardy BO issued by the USFWS. These pump stations are experiencing major deficiencies and are vulnerable to high velocity hurricanes.

b. The current existing S-332B and S-332C pump stations are showing signs of stress, require extensive repairs, and are not reliable. The pumps have exhibited problems in the current structures, such as vibration issues and strong vortices and swirls induced by imbalanced approaching inflows at pump intake.

c. Additionally, the current pump stations and equipment are not housed in storm hardened structures, making them vulnerable to prevailing weather (e.g., rain, wind, and solar) and high velocity hurricane events. If a severe weather event were to occur, catastrophic damage may cause pump station failure and diminish or halt the ecosystem restoration and flood risk management benefits that the project currently provides to meet federal objectives.

d. While never formally estimated using a potential failure mode analysis, the annual probability of pump station failure is assumed to increase each year due to gradual loss of structural integrity (corrosion, fatigue, etc.). Unlike mechanical or electrical system repairs, structural repairs can be complicated and expensive, potentially making them unjustified due to the temporary nature of the features. Additionally, annual O&M costs are expected to increase as the current S-332B and S-332C pump stations continue to deteriorate. Replacement of the pump stations would provide the dual benefit of reducing the average annual operating costs and reducing the annual probability of pump station failure.

5. Environmental Compliance. There have been no major changes to the analysis of the project's environmental effects. The USACE, Jacksonville District reports that the project Pump Stations S-332B and S-332C Replacement is currently in compliance with the National Environmental Policy Act and other environmental laws.

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6. Recommendation. I report that the project remains engineeringly feasible, environmentally acceptable, and justified based on the benefits provided. I recommend the enclosed PACR be transmitted to Congress as a basis for increasing the authorized project cost of the Central and Southern Florida, Canal C111 (C-111) South Dade Project-Pump Stations S-332B and S-332C Replacement to \$954,561,000 (October 2025 price levels).



JASON E. KELLY

Major General, USA

Deputy Commanding General

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