THE CENTRAL & SOUTHERN FLORIDA PROJECT (C&SF) **MODIFIED WATER DELIVERIES TO EVERGLADÈS NÁTIONAL PARK AN INCREMENTAL APPROACH TO RESTORATION**

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INTRODUCTION

This poster provides an account of the journey and lessons learned from 2015 to 2017 to implement incrementally, a combined operating system for the southern portion of the multi-purpose Central & Southern Florida water management system. As increments of system features are built and water management plans are adjusted, incremental field tests are conducted to ensure flood risk management and species management remain intact.

Background: The Central and Southern Florida (C&SF) Project was authorized to function as a multipurpose water management system. The Congressionally-authorized purposes of the C&SF Project include flood control, agricultural irrigation, municipal and industrial water supply, preservation of fish and wildlife, water supply to Everglades National Park (ENP), preservation of ENP, prevention of saltwater intrusion, drainage and water control, groundwater recharge, recreation, and navigation.

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To improve hydrologic conditions in ENP, the southern portion of the C&SF Project was subsequently altered through the authorization of two projects: 1) Modified Water Deliveries (MWD) Project designed to provide a system of water deliveries to ENP across the full width of the historic Shark River Slough flow-way, and 2) C-111 South Dade Project designed to control seepage out of ENP and reduce damaging freshwater discharges to Manatee Bay/Barnes Sound while maintaining flood protection to agricultural lands east of C-111 Canal.

The MWD Increment 1 Field Test is the first increment in a series of sequential efforts that will result in a comprehensive integrated water control plan, referred to as the Combined Operating Plan (COP), for the operation of the water management infrastructure associated with the MWD and C-111 South Dade Projects. This incremental approach to the development of COP will 1) allow interim benefits towards restoration of the natural systems, 2) reduce uncertainty of operating the components of the MWD and C-111 South Dade Projects, and 3) provide information to complete COP efficiently. The increments include conducting field tests for existing structures, developing operating criteria for existing and planned structures, and ultimately updating water management operations for this area of the C&SF Project.

The U.S. Army Corps of Engineers (Corps) implemented the MWD Increment 1 Field Test in October 2015. Monitoring data, as well as an intervening 2016 Temporary Emergency Deviation, indicated that additional modifications to operations were necessary to meet the multiple C&SF Project purposes.





- The L-29 Borrow Canal at the southern end of WCA 3 allows water to flow into Everglades National Park through a series of culverts under Tamiami Trail, as well as under a 1-mile bridge.

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FEBRUARY 2017 TO PRESENT

INCREMENT 1.1 AND 1.2 FIELD TESTS

Incorporating Lessons Learned from the MWD Increment 1 Field Test, the Temporary Emergency Deviation and the 2016 ERTP **Biological Opinion**

MWD Increment 1 Field Test operations were modified to ensure flood mitigation within the 8.5 Square Mile Area; to allow continued construction of MWD and C-111 Project features; and to achieve the needed capacity to deliver restoration flows to NESRS in ENP. This updated strategy seeks to increase flow to NESRS while providing operational flexibility needed to:

- Maintain operating limits in the L-29 Canal that do not cause adverse impacts to the remaining private ownership along the L-29 Canal (pending future real estate acquisition/improvements and flowage easements along Tamiami Trail)
- Allow project construction for the deepening of the C-358 Canal, installation of pump station S-357N, and continued construction of the C-111 South Dade Project features
- Maintain authorized flood risk management for the 8.5 Square Mile Area
- Maintain pre-existing flood risk management along the L-31N and C-111 Canals
- Provide supplemental flows to Taylor Slough to help facilitate the recovery of Florida Bay from the 2015 extreme hyper-salinity event

Increment 1.1 of the operational strategy will maintain the L-29 Canal operating constraint of 7.5 feet, NGVD.

Increment 1.2 will increase the L-29 Canal operating constraint up to 7.8 feet, NGVD.



MWD increment 1, Temporary Emergency Deviation **Recovery Periods: NESRS and 8.5 Square Mile Area**

FUTURE INCREMENTAL TESTS – POST INCREMENT 1, 1.1, AND 1.2

During 2016 El Niño

Information and operational criteria identified from Increment 1 and Increment 1.1 and 1.2 will continue to be used to develop an expanded set of operations and monitoring criteria for a subsequent operational field test (Increment 2) that will raise the maximum operating limit in the L-29 Canal level up to a maximum of 8.5 feet, NGVD, as outlined in the 1992 MWD GDM and Final EIS (USACE 1992). Operational changes based on Increment 2 are planned to be incorporated into the 2012 Water Control Plan prior to implementing the third increment which is development of the COP. The COP will incorporate constructed features of the MWD and C-111 South Dade Projects into the 2012 Water Control Plan.

Increment 3, development of the COP, will be informed by Increment 1, Increment 1.1 and 1.2 and Increment 2. The incremental approach to the development of the COP will: (1) allow interim benefits towards restoration of the natural systems; (2) reduce uncertainty of operating the components of the MWD and C-111 South Dade Projects; and (3) provide information to complete the COP efficiently. The 2016 ERTP BO acknowledges the above planning efforts by the Corps to increase flows into NESRS under the MWD Project and requires the Corps to proceed as scheduled, and as allowable by law, for completing NEPA analysis on Increment 1 Plus (*i.e.* Increment 1.2) prior to March 1, 2017, Increment 2 prior to March 1 2018, and COP in 2019.

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