CENTRAL AND SOUTHERN FLORIDA PROJECT

COMPREHENSIVE EVERGLADES

RESTORATION PLAN

COMPREHENSIVE EVERGLADES
RESTORATION PLAN

PROJECT MANAGEMENT PLAN

Biscayne Bay and Southeastern Everglades Ecosystem Restoration

U.S. Army Corps of Engineers
Jacksonville District

South Florida Water
Management District

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Project Management Plan Approvals

14 SEP 2020

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LIST OF ACRONYMS

NOTE: Formatting and editing, including verifying this list is comprehensive, is still to be completed.

ASR..... Aquifer Storage and Recovery

ATR..... Agency Technical Review

BBCW..... Biscayne Bay Coastal Wetlands

BBSEER..... Biscayne Bay and Southeastern Everglades Ecosystem Restoration

BMP..... Best Management Practice

BNP ..... Biscayne National Park

C&SF..... Central and Southern Florida

CERP ..... Comprehensive Everglades Restoration Plan

CESAJ ..... U.S. Army Engineer District, Jacksonville

CWA ..... Clean Water Act

EAA ..... Everglades Agricultural Area

EIS ..... Environmental Impact Statement

ENP ..... Everglades National Park

EPA ..... U.S. Environmental Protection Agency

FAS..... Floridan Aquifer System

FDACS ..... Florida Department of Agriculture and Consumer Services

FDEP ..... Florida Department of Environmental Protection

FFWCC..... Florida Fish and Wildlife Conservation Commission

FP&L ..... Florida Power and Light

H&H ..... Hydrology and Hydraulics

HTRW ..... Hazardous, Toxic, and Radioactive Waste

IEPR ..... Independent External Peer Review

IPR..... In-Progress Review

LERRD ..... Lands, Easements, Rights-of-way, Relocations, and Disposal

MPMP..... Master Program Management Plan

NEPA ..... National Environmental Policy Act

NOAA ..... U.S. National Oceanic and Atmospheric Administration

NPS ..... U.S. National Park Service

P&G..... Principles and Guidelines

PAL ..... Planning Aid Letter

PPA ..... Project Partnership Agreement

PDT..... Project Delivery Team

PE ..... Project Engineer

PIR ..... Project Implementation Report

PM ..... Project Manager

PMe ..... Performance Measure

PMP ..... Project Management Plan

RECOVER ..... Restoration, Coordination, and Verification

Restudy ..... C&SF Project Comprehensive Review Study

RFP..... Request for Proposal

SCE..... Spreader Canal East

SCW..... Spreader Canal West

SFWMD ..... South Florida Water Management District

TRB..... Technical Review Board

TSP ..... Technical Review Board

USACE ..... U.S. Army Corps of Engineers

USDA-NRCS..... U.S. Department of Agriculture-Natural Resources Conservation Service

USFWS ..... U.S. Fish and Wildlife Service

USGS..... U.S. Geological Service

WCA ..... Water Conservation Area

WQ..... Water Quality

WRDA..... Water Resources Development Act

WRRDA..... Water Resources Reform and Development Act

About this Project Management Plan:

This Project Management Plan (PMP) provides a summary of tasks required to complete the Integrated Project Implementation Report and Environmental Impact Statement (PIR/EIS). It includes general study scope, schedule, and cost information, which will be updated over the course of the PIR/EIS development. The scope and scale of tasks were developed based on decisions to be made during the study and the Project Delivery Team's (PDT) use of available management and decision-making tools.

The PMP will be revised when required, but not less frequently than yearly, to reflect any changes to tasks and level of efforts needed for successful completion of the study. Detailed schedule and cost information is available in Primavera Project Management system. It is projected that as the study progresses, PMP updates will include a list of completed tasks and description of any additional tasks required to complete the PIR/EIS analysis and report. The U.S. Army Corps of Engineers' (USACE) and South Florida Water Management District's (SFWMD) acceptance of the task descriptions, time, and cost estimates constitutes agreement of the efforts required, while understanding that more details or additional tasks may have to be provided for future tasks and milestones as the study progresses.

1. PROJECT INFORMATION

1.1. Introduction

The Biscayne Bay and Southeastern Everglades Restoration (BBSEER) Project is part of the Comprehensive Everglades Restoration Plan (CERP). The purpose of the CERP is to modify structural and operational components of the Central and Southern Florida Project (C&SF) to achieve restoration of the Everglades and the south Florida ecosystem, while providing for other water-related needs such as urban and agricultural water supply and flood protection. The 68 components identified in the CERP will work together to benefit the ecological structure and function of the south Florida ecosystem by improving and/or restoring the quantity, quality, timing and distribution of water in the natural system.

The Biscayne Bay Coastal Wetlands (BBCW1) project was authorized in 2014 and implements portions of two CERP components. The C-111 Spreader Canal West (SCW) project was also authorized in 2014 and implements a portion of one CERP component. Both studies recommended limited plans because larger comprehensive plans required inputs from other CERP components in other parts of the system that had not been completed or had other unresolved uncertainties.

BBSEER is pursuing the second phases of BBCW Alternative O and C-111 SCW. BBSEER will take advantage of an increased understanding of regional water availability resulting from additional CERP projects under construction, water resources project by other agencies, and knowledge gained on restoration requirements and ongoing monitoring. BBSEER focuses on ecosystem restoration of nearshore conditions in Biscayne Bay, Card Sound, Barnes Sound, and the Model Lands, Southern Glades, and other wetlands adjacent to these water bodies. The study will evaluate changes to Long Sound, Little Blackwater Sound, and Joe Bay. A future study tentatively called Southern Everglades will focus on restoration of Florida Bay. BBSEER intends to avoid adverse impacts to Taylor Slough and Florida Bay, such as taking water.

Similar to other CERP studies, and like the Central Everglades Planning Project, where multiple CERP components are combined into one planning effort and Project Implementation Report, the BBSEER will include more than one CERP Component. BBSEER is starting with the six CERP components below. This list will be subjected to screening and analysis during the study:

- Biscayne Bay Coastal Wetlands (OPE)
- Biscayne Bay Coastal Canals (FFF)
- C-111N Canal Project (WW)
- South Miami Dade County Reuse (BBB)
- West Miami Dade Reuse (HHH)
- North Lake Belt (XX)

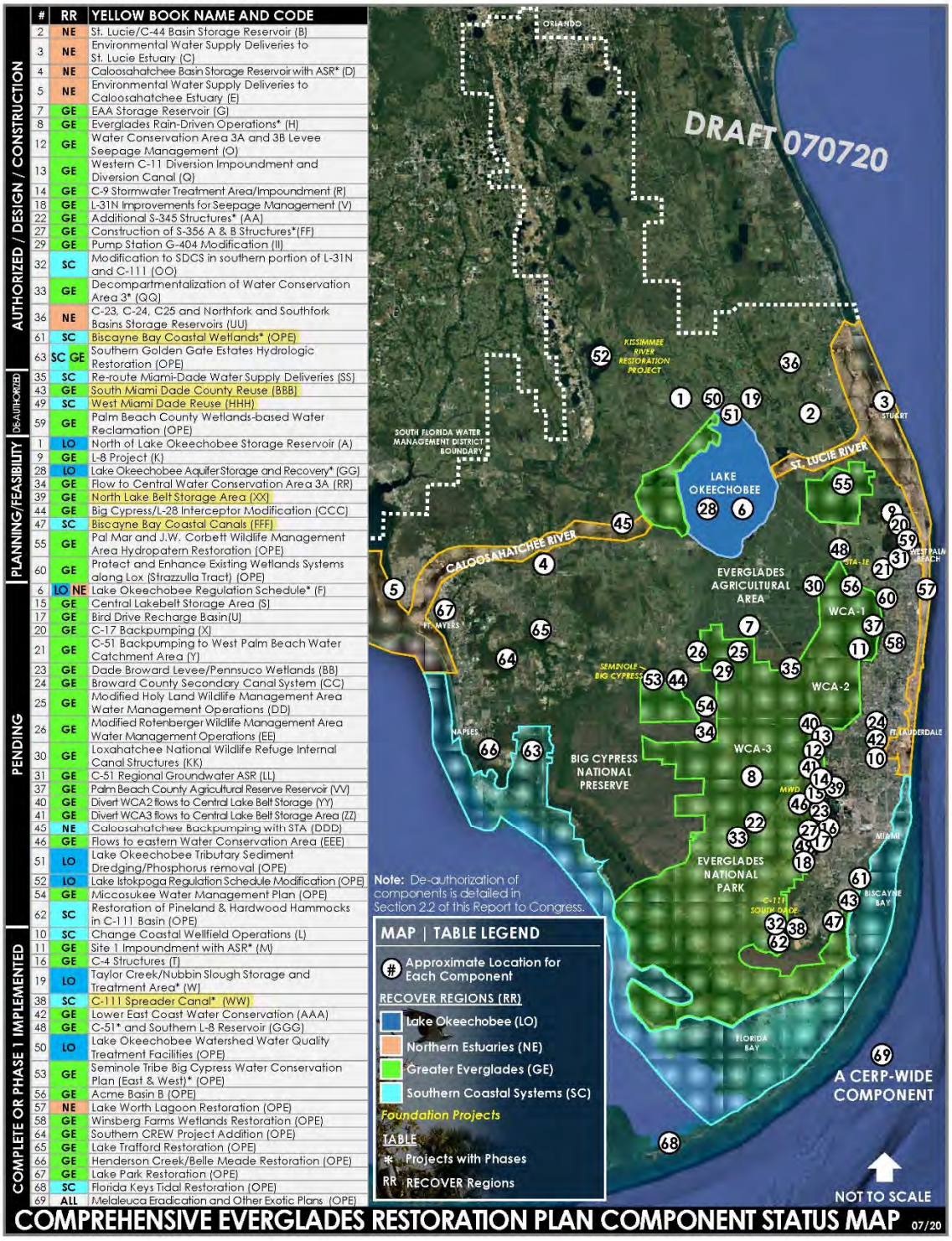

Figure 1. CERP Component Status

This project management plan will guide the BBSEER study.

1.2. Background

Currently, multiple canals designed to provide flood risk management and protect water supplies transect the study area. The drainage system currently in place has transformed Biscayne Bay's natural estuarine conditions driven by diffuse freshwater flows to a declining ecosystem driven by controlled freshwater pulses that have unnatural input locations to the Bay, and that provide water at unnatural times, in unnatural volumes, and with unnatural distributions. Historically, Biscayne Bay received fresh water from overland flow passing through the coastal ridge and wetlands, and from extensive groundwater seepage. These natural freshwater inputs produced a distinctive salinity gradient that supported the diverse habitats of the Bay. The drainage canals disrupted interconnected physical and chemical natural processes such as hydrology, salinity patterns, and nutrient inputs. The existing canals impact freshwater flows to the Biscayne Bay estuary by lowering the region's water table and reducing water storage in contributing basins; decreasing groundwater inflow to Biscayne Bay; and eliminating or altering natural tributaries. Drainage has permitted agricultural and suburban development in areas that were once vital wetlands and increased the flow of pollutants/nutrients to Biscayne Bay. Development of watershed lands and the commensurate control of water levels have contributed to the altered timing and duration of freshwater flows to Biscayne Bay.

As a consequence of past and current water management practices, land development, and sea level rise, freshwater wetlands in the project area have been reduced in areal extent, altered, and degraded. Currently, much of the Model lands, Southern Glades, and South Dade Wetlands are drained. Water elevations are generally held close to or below land surface and diverted by drainage structures toward other basins and canals. The current operation of the systems has resulted in an inland migration of saline conditions in both the groundwater and surface waters such that the expansion of moderate to high salinity zones has diminished the spatial extent of freshwater wetland habitats, and has contributed to landward expansion of saltwater and mangrove wetlands, including low-productivity, sparsely vegetated dwarf mangroves, communities typical of the hypersaline "white zone." Some wetlands have been impacted by invasive exotic vegetation as a result of physical disturbance and/or hydrologic isolation.

1.2.1. Biscayne Bay Coastal Wetlands (Components FFF and OPE)

The Biscayne Bay Coastal Wetlands (BBCW) Project is part of the Comprehensive Everglades Restoration Plan (CERP), the U.S. Army Corps of Engineers' (USACE) largest ecosystem restoration program, conducted in partnership with the South Florida Water Management District (SFWMD).

Biscayne Bay, a shallow estuarine lagoon extending nearly the entire length of Miami-Dade County in southeastern Florida, is home to over 500 species of fish and other marine organisms. A large area of the south-central portion of Biscayne Bay is contained within Biscayne National Park (BNP), the largest marine park in the national park system. The longest stretch of mangrove forest remaining on Florida's eastern seaboard occurs within Biscayne Bay. Extensive areas of seagrasses in Biscayne Bay serve as an important food source for the endangered Florida manatee

and as a nursery for many ecologically and commercially important estuarine and marine species, such as shrimp, crabs, lobster, and sponges.

In the CERP, the BBCW features were known as "South Biscayne Bay and Coastal Wetlands Enhancement Components". The purpose of the BBCW components FFF and OPE in CERP is to rehydrate coastal wetlands and reduce abrupt unnatural freshwater flows into and zones of high salinity within Biscayne Bay and BNP that are physiologically stressful to fish and benthic invertebrates in the bay near canal outlets. The BBCW project will help restore wetland and nearshore estuarine habitats by diverting coastal structure flows into freshwater and saltwater wetlands instead of directly to Biscayne Bay and BNP.

The SFWMD and the USACE, with input from other federal, state and local agencies, completed the Biscayne Bay Coastal Wetlands Phase I PIR/EIS in 2012, and on June 10, 2014, Congress authorized the project in the Water Resources Reform and Development Act (WRRDA) of 2014. The PIR/EIS identified Alternative O as the preferred alternative. Due to limited available freshwater within the regional water management system at the time of BBCW1 formulation and the cost effectiveness analysis, Alternative O was split into two phases, BBCW1 and the second phase, all of which is part of this study. The BBCW1 PIR/EIS determined the overall project would be planned and recommended through two PIRs. Alternative O, Phase 1 was identified as the Selected Plan of the first PIR and is the authorized BBCW1 project. Features of the authorized BBCW1 project are shown in **Figure 2**.

BBCW1 is an important first step toward meeting BBSEER's study objectives by providing substantial improvement in the much-needed restoration of the Biscayne Bay nearshore and saltwater wetlands. The authorized BBCW1 project encompasses a footprint of approximately 3,761 acres and includes features in three of the project's four sub-components (hydrologically distinct regions of the study area): (1) Deering Estate, (2) Cutler Wetlands, and (3) L-31 East Flow Way. The study considered a fourth region, the Model Lands Basin, but did not include features in this region. The authorized project includes: at Deering Estate, a 500-foot extension of C-100A Spur Canal, delivery of fresh water to Cutler Creek via a 100 cubic feet per second (cfs) pump station (S-700), 500 linear feet (lf) of 60" pipe, and a spreader structure to rehydrate a freshwater wetland; at Cutler Wetlands, a 400-cfs pump station (S-701), 7,000 linear feet of conveyance canal, 13,160 linear feet of spreader canal, associated culverts, and inflow/outflow structures; and, at L-31 East Flow Way, 5 pump stations (40-100 cfs), an inverted siphon, a series of culverts, a seepage collection ditch, and a spreader canal. Recreational opportunities are also provided within the project footprint. Construction of many of the BBCW1 project features are already complete and providing benefits, and the remaining project features are scheduled for design and construction in the near future.

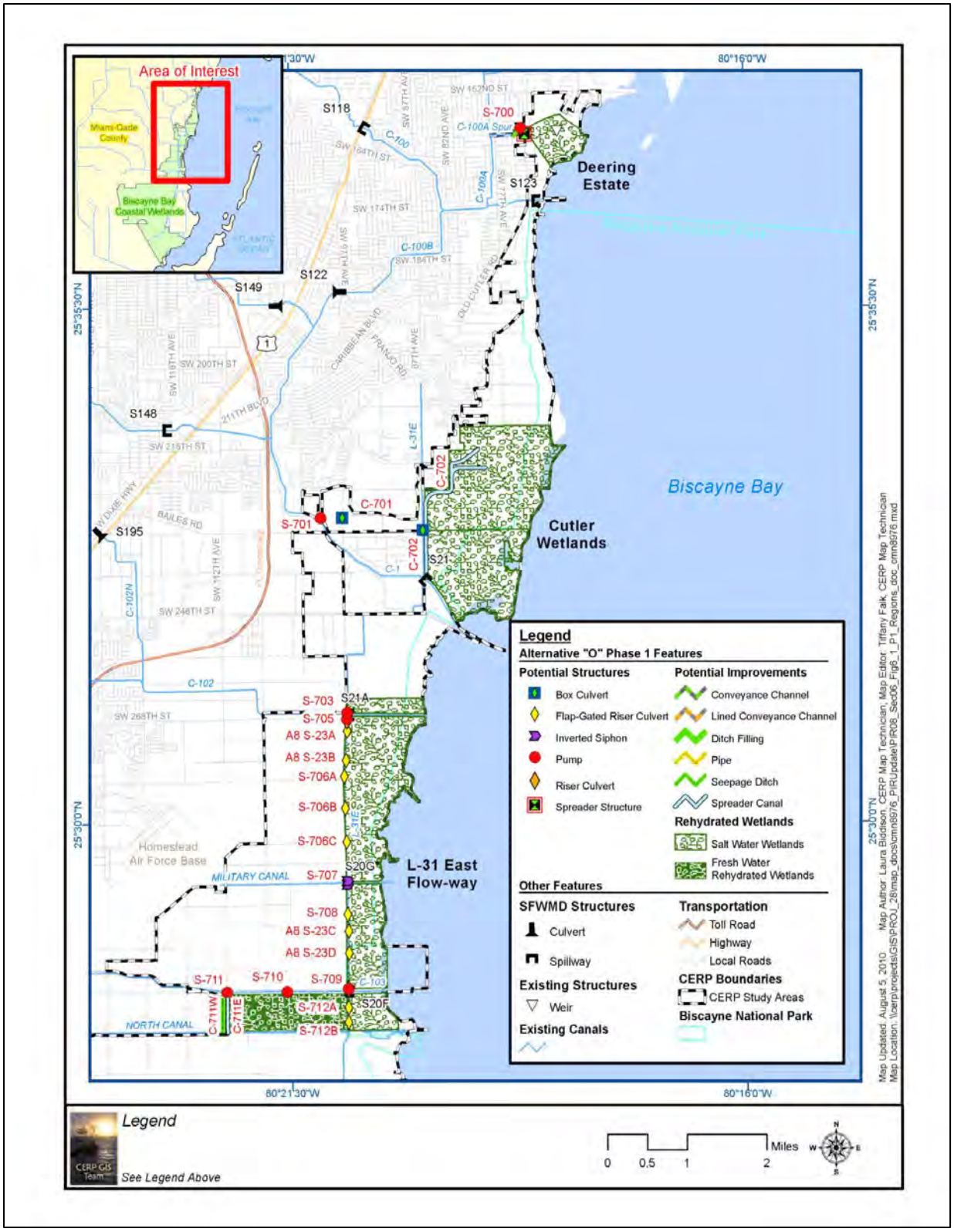

Figure 2. BBCW1 Project Features.

1.2.2. C-111 N Spreader Canal (WW)

The C-111 N Spreader Canal project is a component of the CERP. The purpose of C-111 N Spreader Canal is to improve water deliveries to enhance the connectivity and sheetflow in the Model Lands and Southern Glades areas, reduce wet season flows to C-111 and decrease potential flood risk in the lower south Miami Dade County area (USACE and SFWMD 2011).

The C-111 N Spreader Canal (WW) is one of the initially authorized components authorized in CERP under WRDA 2000. Past dredging of the C-111 Canal redirected water flows to the east, reducing flow through Taylor Slough to eastern Florida Bay impacting fisheries and ecology. The component aimed to reduce water loss through the canal system and restore flows.

A portion of the C-111 N Spreader Canal component was included in the C-111 Spreader Canal Western Project (C-111 SCW), includes a 590-acre Frog Pond detention area with a 225 cfs pump station, an extension of the Aerojet Canal to a 225 cfs pump station, and plugs in the C-110 and L-31E canals. Together these features create a mound of groundwater to the south and west, which reduces groundwater seepage out of ENP. Preventing seepage will improve the quantity, timing and distribution of water delivered to Florida Bay via Taylor Slough. Hydroperiods and hydropatterns within wetlands of the Southern Glades and Model Lands will be improved by construction of a new water control structure in the lower C-111 Canal, incremental operational changes at existing structure S-18C, changes in operations at the existing S-20 structure, construction of a plug at existing structure S-20A, and installation of ten earthen plugs in the C-110 Canal. This will also support historical vegetation patterns.

The SFWMD and the USACE, with input from other federal, state and local agencies, completed the C-111 SCW study in 2012, and the project received congressional authorization in the Water Resources Reform and Development Act (WRRDA) of 2014. The SFWMD completed construction of the project. During late 2017 and 2018, the SFWMD completed further modifications to the C-111 SCW project which included increasing the pumping capacity at S-199 and S-200 by installing an additional 75 cfs electric pump in each of the existing vacant bays (1 per pump station), and connecting the C-200 Header Channel to the L-31W Canal (via the G-737 culvert). Both of these modifications were intended to increase the quantity of fresh water delivered to Florida Bay via Taylor Slough.

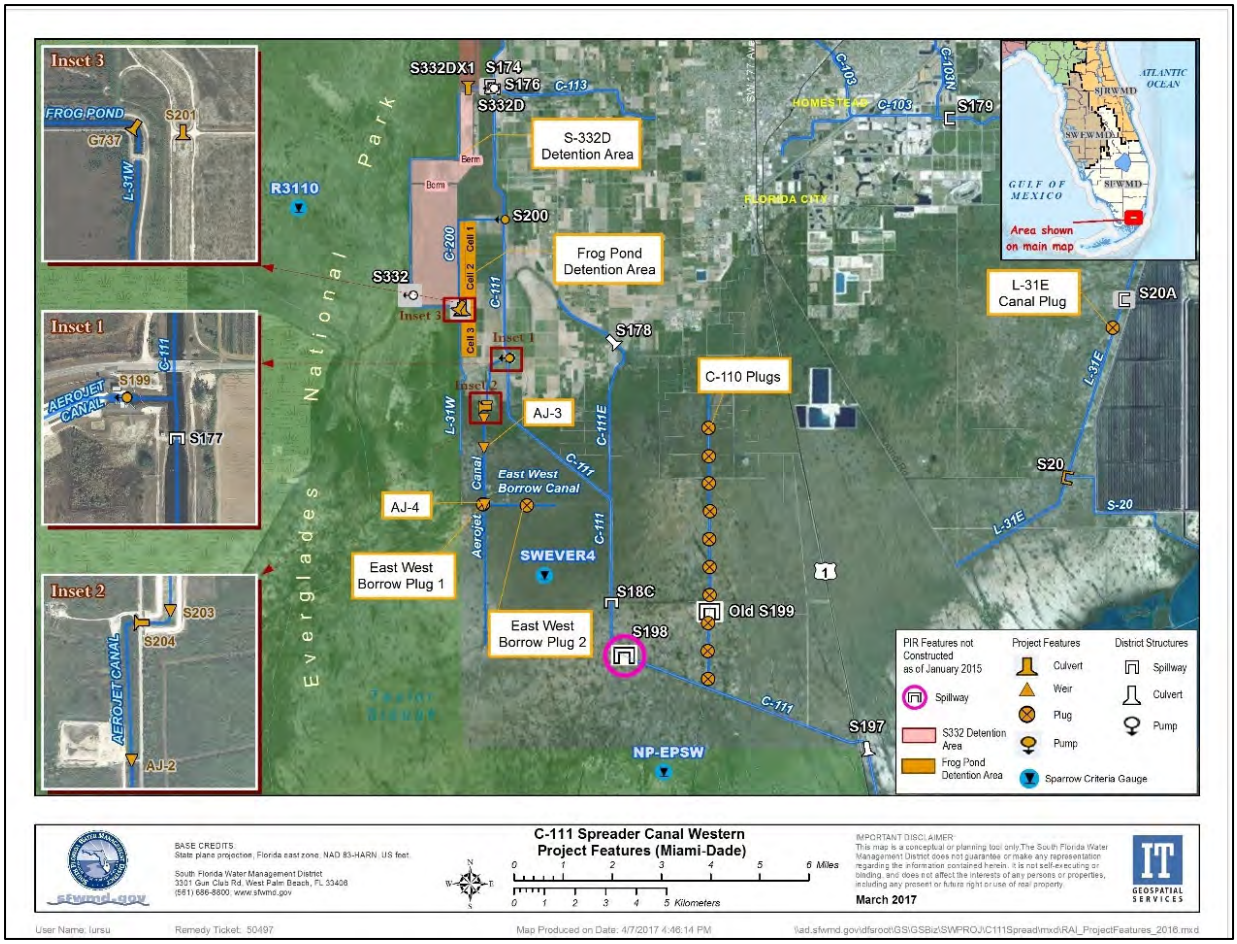

Figure 3. C111SCW Project Features.

1.3. Authority

On December 11, 2000, the Water Resources Development Act of 2000 (WRDA, 2000) was signed into law (Public Law No. 106-541 of the 106th Congress). Title VI, Section 601 of the Act provides for and guides modifications to the C&SF project and describes authorizations specific to the CERP. Section 601(b)(A) "Comprehensive Everglades Restoration Plan Approval" provides authority for CERP:

> (b) Comprehensive Everglades Restoration Plan Approval – (A) IN GENERAL. —Except as modified by this section, the Plan is approved as a framework for modifications and operational changes to the C&SF project that are needed to restore, preserve, and protect the South Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection. The Plan shall be implemented to ensure the protection of water quality in, the reduction of the loss of fresh water from, and the improvement of the environment of the South Florida ecosystem and to achieve and maintain the benefits to the natural system and human environment described in the Plan, and required pursuant to this section, for as long as the project is authorized.

Section 601(d) "Authorization of Future Projects" provides the authority for the preparation of the Project Implementation Report:

> (1) IN GENERAL- Except for a project authorized by subsection (b) or (c), any project included in the Plan shall require a specific authorization by Congress.
>
> (2) SUBMISSION OF REPORT- Before seeking congressional authorization for a project under paragraph (1), the Secretary shall submit to Congress—
>
> (A) a description of the project; and
>
> (B) a project implementation report for the project prepared in accordance with subsections (f) and (h).

CERP is being implemented as a 50 percent federal and 50 percent non-federal cost-shared program in which: 1) the cost-share balancing occurs at the programmatic level (i.e., individual projects are not required to be cost shared 50/50); 2) there is one Design Agreement covering planning and design for all CERP projects with the SFWMD; and 3) there is one umbrella Master Agreement for construction and operation and maintenance under which individual Project Partnership Agreements (PPA) are executed for each CERP project.

Congress authorized the BBCW1 project in Section 7002(5)6 of the Water Resources Reform and Development Act (WRRDA) of 2014 in accordance with the recommendations of the Chief of Engineers Report, dated May 2, 2012.

Congress authorized the C-111 SCW project in Section 7002(5)5 of the Water Resources Reform and Development Act (WRRDA) of 2014 in accordance with the recommendations of the Chief of Engineers Report, dated January 30, 2012.

1.3.1. State Authority

During the 1999 legislative session, Florida lawmakers drafted and approved Section 373.1501 of the Florida Statues providing a legislative finding that CERP is important for restoring the Everglades ecosystem and for sustaining the environment, economy, and social well-being of south Florida. The purpose of Section 373.1501 of the Florida Statutes is to authorize the State of Florida to facilitate and support CERP through an approval process concurrent with Federal governmental review and congressional authorization. Further, this section ensures that all project components are implemented through appropriate processes and are consistent with the policies and purposes of Chapter 373 of the Florida Statutes, specifically Section 373.026. Florida lawmakers amended Section 373.026 (8)(b) of the Florida Statutes which directs the Florida Department of Environmental Protection (FDEP) to collaborate with the SFWMD and to approve each project component, with or without amendments, within a specified period.

In the 2000 legislative session, the Florida Legislature created an act relating to Everglades and funding, amending Section 215.22 of the Florida Statutes and creating Section 373.470, which is cited as the "Everglades Restoration Investment Act." The purpose of this Act is to establish a full and equal partnership between the state and

the Federal governments for the implementation of CERP. This Act requires that approval of a PIR is in accordance with Section 373.026 of the Florida Statutes before the SFWMD and the USACE execute a Project Cooperation Agreement (PCA) (now called Project Partnership Agreement (PPA).

1.3.2. Applicable Policies and Guidance

SMART Planning and 2014 Water Resources Reform and Development Act (WRRDA) Guidance. In February and March 2012, Major General Michael Walsh, the U.S. Army Corps of Engineers Deputy Commanding General for Civil and Emergency Operations, issued two planning memoranda on a revised approach to planning studies that emphasized risk-based decision making and early vertical team engagement. These planning memoranda provide the basis for planning modernization efforts, which are a central component of the Civil Works Transformation concepts contained in the WRRDA 2014. The requirements of planning modernization under the Transformation initiative is to complete high quality feasibility studies within shorter timeframes (no more than three years), with lower costs (no more than $3 million), and with concurrent reviews by District, Division, and Headquarters.

December 2003 CERP Programmatic Regulations (33 Code of Federal Regulations Section Part 385). The Programmatic Regulations set guidance specific to CERP project requirements relative to the National Environmental Policy Act, Project Implementation Reports, RECOVER review, and Savings Clause analyses specific to reserving water for the natural system and maintaining water supply and flood control levels that existed in 2000.

30 July 2009 South Atlantic Division Guidance for CERP Land Valuation and Crediting Issues. Issued guidance that the national valuation and crediting policy contained in the Corps Real Estate Handbook (ER 405-1-12) will be used for plan formulation, cost estimation, and crediting, except as to lands acquired utilizing Federal funds under the 1996 Farm Bill or to which Section 601 (e)(3)(A) are applicable.

31 August 2009 Headquarters Implementation Guidance for WRDA 2007 Section 2039. Monitoring plans must contain ecosystem restoration success criteria and adaptive management plans must be developed for ecosystem restoration projects.

27 May 2010 South Atlantic Division Requirements for CERP Project Implementation Reports and Other Implementation Documents. Issued guidance specific to management of exotic or native nuisance vegetation; operational testing and monitoring period; project monitoring requirements; and Lands, Easements, and Real Estate requirement determinations, valuation and crediting. There are also several signed agreements between the USACE and SFWMD specific to CERP projects.

May 2000 CERP Design Agreement. The USACE and the SFWMD executed a CERP design partnership to identify and assign responsibility for the activities to be undertaken associated with the planning, engineering and design of CERP elements. In accordance with this agreement, the USACE and the SFWMD developed and approved the CERP Master Program Management Plan which provides direction and

guidance for cost sharing, construction and operations of the CERP projects including BBCW and the components of BBSEER.

13 August 2009 CERP Master Agreement. The design agreement was amended by the USACE and the SFWMD to reflect Section 601(e)(5) of the Water Resources Development Act of 2000 in regard to credits and to reference the Master Agreement to promote uniformity of terms, ease of administration, and efficiency in execution of CERP projects. This agreement sets forth the terms of participation in the construction, operation, maintenance, repair, replacement, and rehabilitation of projects under CERP. The Master Agreement criteria will apply to the BBSEER when the project is approved and a project partnership agreement is executed.

14 September 2011 ASA (CW) Memorandum for Deputy Commanding General for Civil and Emergency Operations, Subject: Comprehensive Everglades Restoration Plan (CERP) – Residual Agricultural Chemicals. If certain conditions are met, this policy allows residual agricultural chemicals to be addressed during the construction phase rather than required to be removed pre-construction. This may result in cost savings.

Engineer Regulation No 1100-2-8162 INCORPORATING SEA LEVEL CHANGE IN CIVIL WORKS PROGRAMS 2019.

2. PROJECT SCOPE

In compliance with applicable policies, the BBSEER project will restore wetland and nearshore estuarine habitats. The purpose of the project is to improve the quantity, quality, timing and distribution of freshwater to Biscayne Bay, including Card Sound and Barnes Sound and Biscayne National Park, to improve the natural coastal glades habitat in the Model Lands and Southern Glades, and to improve resiliency of these coastal habitats in response to sea level change. The final product will be an Integrated Project Implementation Report and NEPA document. The PIR will require authorization by Congress.

BBCW Phase I and C-111 SCW were the first step toward meeting restoration goals in the study area. By rehydrating coastal wetlands and restoring flows to Biscayne Bay, the BBCW Phase I Plan is integral to the health of the south Florida ecosystem. C-111 SCW also altered freshwater flows to the Model Lands by adding a permanent plug to L-31E and temporarily raising operating ranges at S-20. The BBSEER study is the next phase of the authorized projects.

2.1. Study Area

Study area boundaries were based first on the regions where benefits are expected to be produced – Biscayne Bay and Southeastern Everglades, and adjacent areas. The study area was further expanded to include locations for management measures, features; alternative plans will be evaluated for potential inclusion in the recommended plan. Specifically, the study area includes the locations of CERP components that the Yellow Book stated would provide direct and significant benefit to Biscayne Bay and the Southeastern Everglades (**Section 2.2**). Other management measures that may be needed are also anticipated to fall within the study area boundary.

The initial BBSEER study area includes southeastern Miami-Dade County. The study area is bounded by the C-9 Canal (Snapper Creek) on the north, the East Coast Protection Levee on the west, by Biscayne Bay to the south and east, including the nearshore areas of Biscayne National Park (BNP), and is bounded by Water Conservation Area 3B and Everglades National Park (ENP) to the south and west (See **Figures 5 and 6**). This study area is purposely large in scope to include remaining local CERP components and water sources that may contribute to achieving the project's goals and objectives for Biscayne Bay and nearby wetlands. These components will be considered and subject to screening criteria during the study.

The predominant natural features in the southern part of the study area include Biscayne Bay, Barnes Sound, Card Sound, the Southern Glades and the Model Lands. The Southern Glades and Model Lands consist of low-lying marl prairie, sawgrass wetlands, and mangroves. The Model Lands are located northwest of the L-31E and Southern Glades. Together, the Model Lands and Southern Glades areas form a habitat corridor, albeit transected by Card Sound Road and U.S. Highway 1, with Everglades National Park, Biscayne National Park, Crocodile Lakes National Wildlife Refuge, the Key Largo Hammock State Botanical Site and Dagny Johnson Key Largo

Hammock Botanical State Park, John Pennekamp State Park and the existing Florida Keys National Marine Sanctuary. The Pennsuco wetlands are a prominent natural feature in the northern part of the study area.

Within the study area, the C&SF system consists of a series of canals which provide drainage and water supply to urban, suburban, and rural lands. These canals include: L-31N and L-31E borrow canals, and (from north to south) C-9, C-8, C-7, C-6, C-3, C-2, C-1, C-100, C-102, C-103, C-110 and C-111), along with additional Miami Dade County canals, which send water to Biscayne Bay.

Major constructed features within the southern part of the study area include but are not limited to BBCW1, C-111 SCW, Florida City, the City of Homestead, Florida Power & Light Company's (FPL's) Turkey Point nuclear power plant, FPL's Everglades Mitigation Bank, Homestead Air Reserve Base, Florida Keys Aquaduct Authority, multiple quarries, U.S. Highway 1, and Card Sound Road.

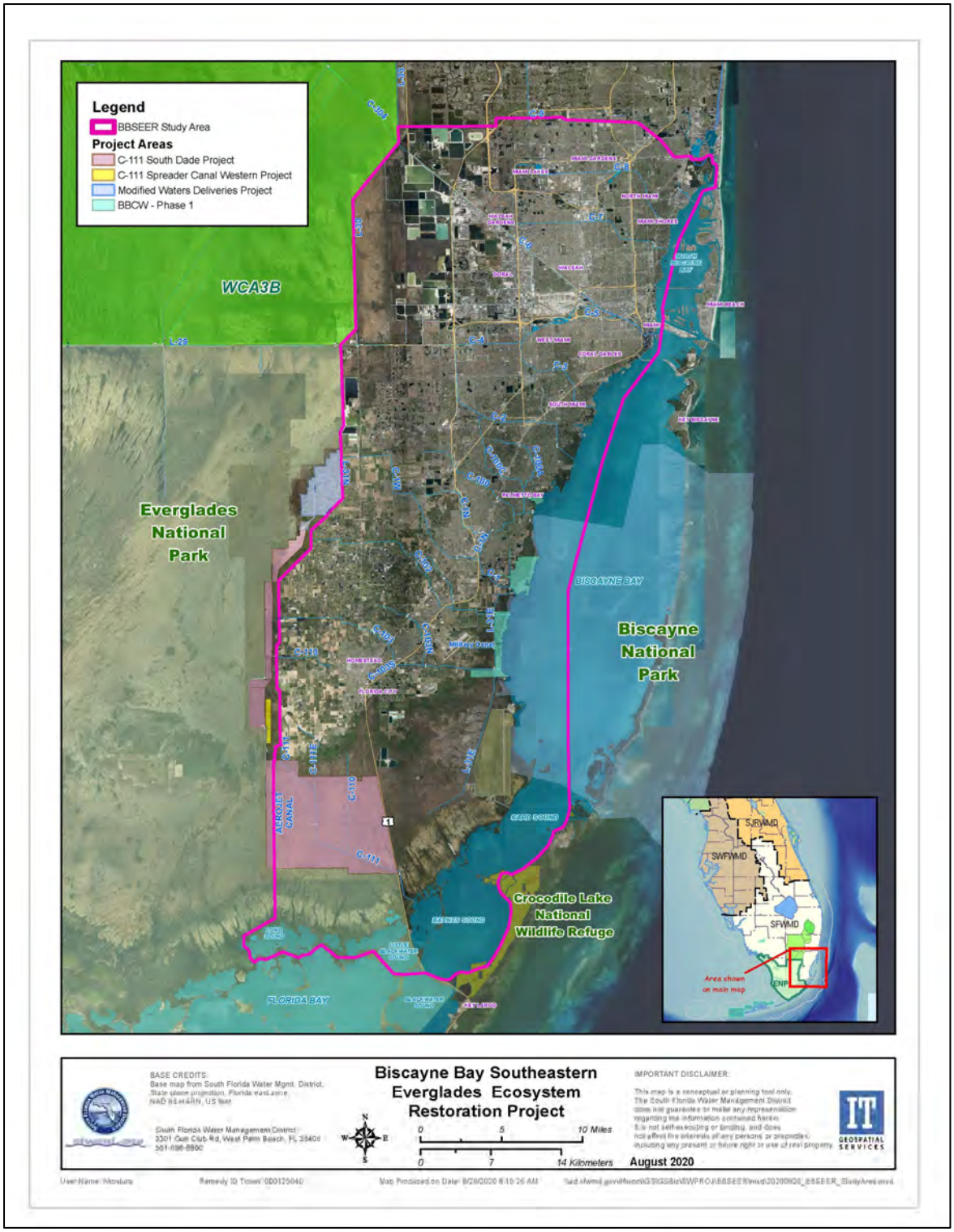

Figure 4. Study Area.

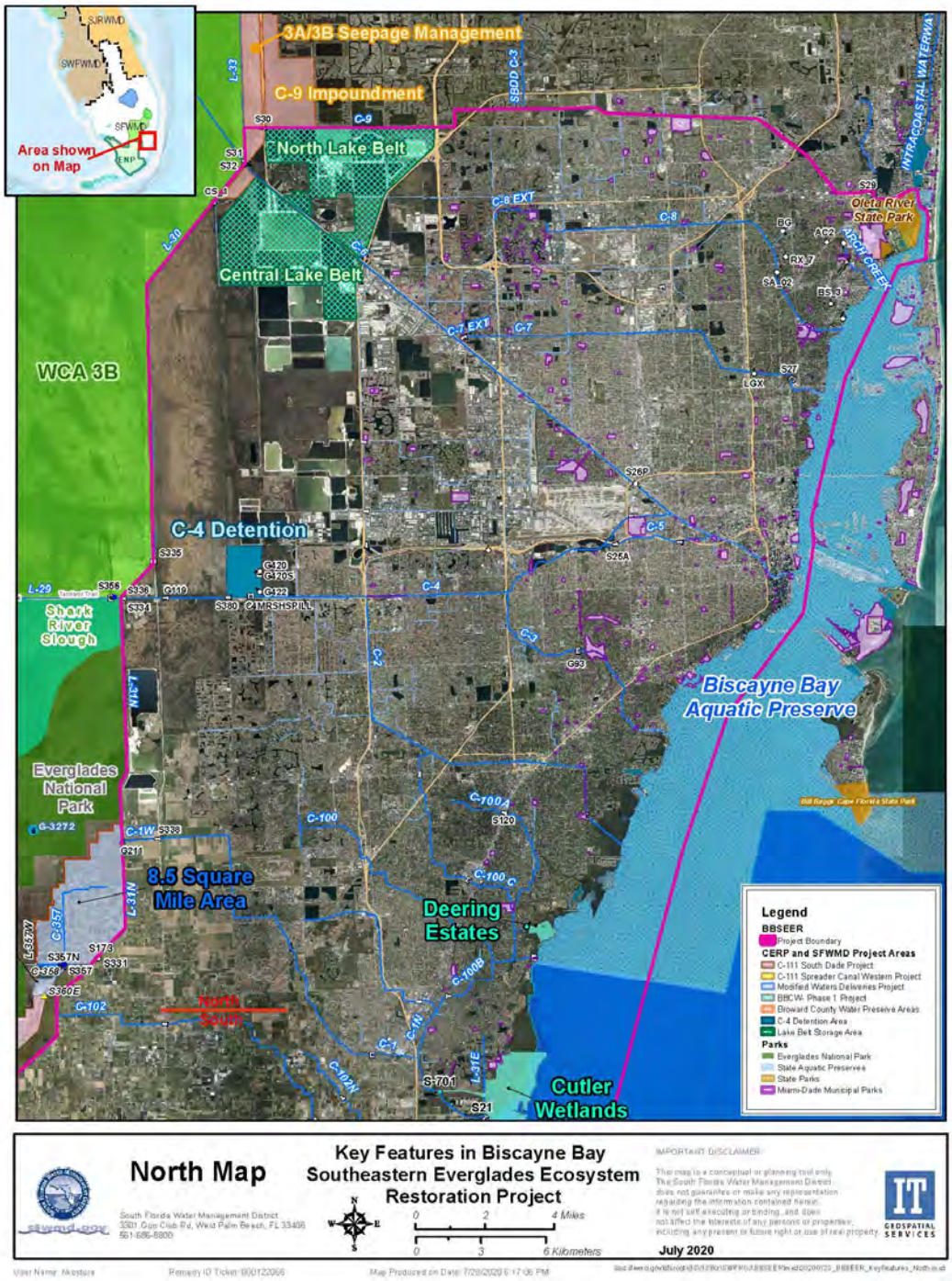

Figure 5. Key Features in the Northern Part of the Study Area.

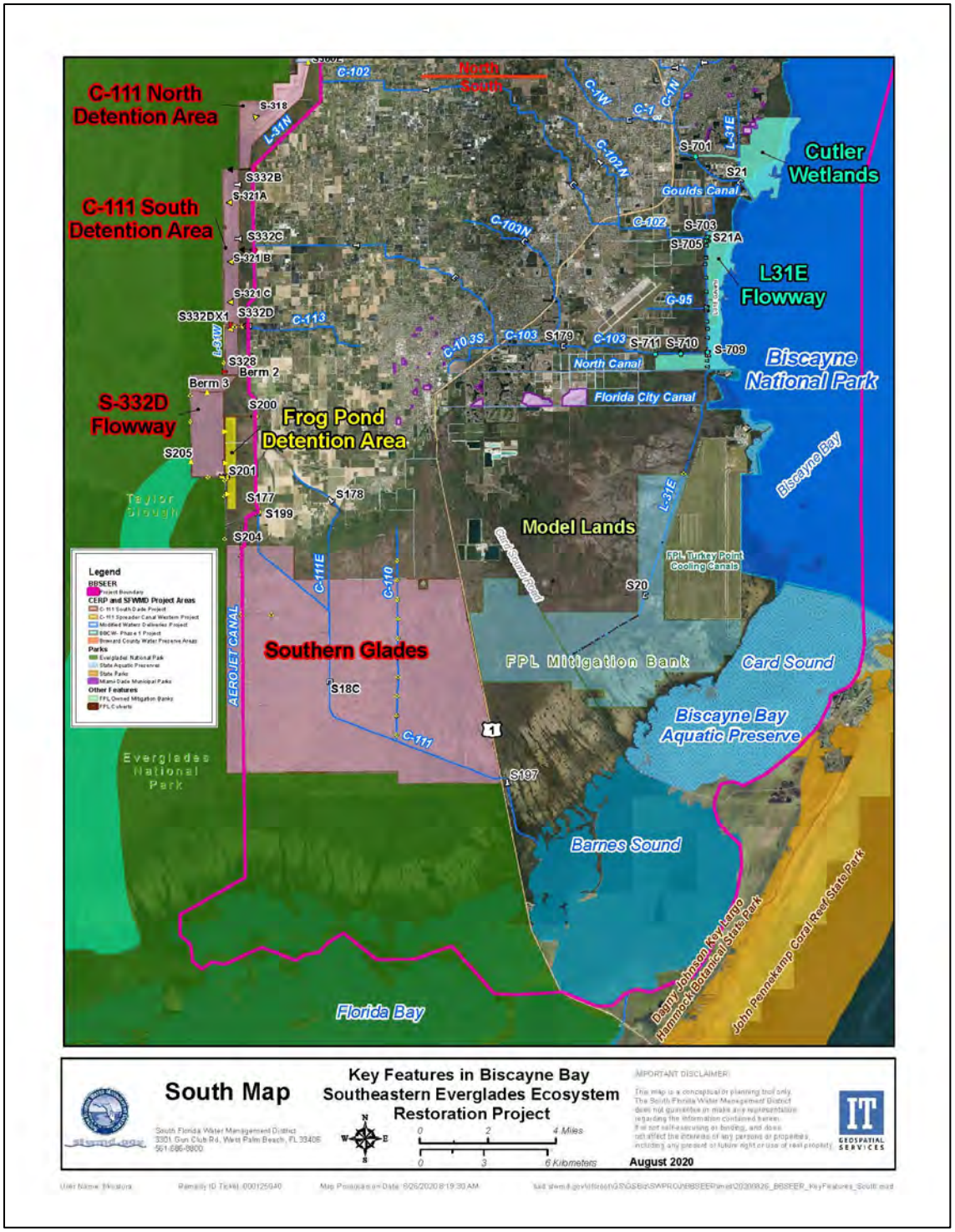

Figure 6. Key Features in the Southern Part of the Study Area.

2.2. CERP Components included in BBSEER

The BBSEER will consider six Yellow Book components in the study: BBB, FFF, HHH, WW, XX and OPE. All of these parts of the CERP contribute flows to Biscayne Bay, Model Lands, and/or the Southern Glades area. The BBCW1 study (see Section 1.2.1) partially implemented the Biscayne Bay Coastal Canals (FFF) and the Biscayne Bay Coastal Wetlands Other Project Element (OPE). This study will include all remaining components to the BBCW preferred alternative, Alternative O, as well as the BBCW1 components that have been completed and are currently under construction or in the engineering and design phase. The C-111 SCW (see Section 1.2.2) partially implemented the C-111 Spreader Canal North (WW). The unconstructed parts of these three components will be considered during BBSEER. The three additional components consider in BBSEER are listed below along with their descriptions from the 1999 Comprehensive Plan (USACE and SFWMD 1999):

1. South Miami Dade County Reuse (BBB)

This feature includes a wastewater plant expansion to produce superior, advanced treatment of wastewater from the existing South District Wastewater Treatment Plant located north of the C-1 Canal in Miami-Dade County. The initial design of this feature assumed that the plant would have a capacity of 131 million gallons per day. More detailed analyses during the study will be required to determine the quality and quantity of water needed to meet the ecological goals and objectives of BBSEER.

2. West Miami Dade Reuse (HHH)

This feature has a similar purpose as (BBB) and would utilize wastewater from a future West Miami-Dade Wastewater Treatment Plant to be located in the Bird Drive Basin in Miami-Dade County. The final configuration of the facility will be determined through more detailed planning and design. The treatment plant would deliver water to the South Dade Conveyance System or the Bird Drive Basin.

3. North Lake Belt (XX)

This feature includes canals, pumps, water control structures, and an in-ground storage reservoir with a total capacity of approximately 90,000 acre-feet located in Miami-Dade County. The initial design of the reservoir assumed 4,500 acres with the water level fluctuating from ground level to 20 feet below grade.

The purpose of North Lake Belt is to capture and store a portion of the stormwater runoff from the C-6, western C-11 and C-9 Basins. The stored water may be used to maintain stages during the dry season in the C-9, C-6, C-7, C-4 and C-2 Canals and to provide water deliveries to Biscayne Bay to aid in meeting salinity targets.

2.3. Related CERP Components in Future Studies

The future Southern Everglades project will improve water deliveries to Everglades National Park including nearshore areas of Florida Bay through comprehensive seepage management along the eastern border of the Water Conservation Areas, further improvements in marsh, overland flow within the Greater Everglades, and storage features to provide carryover capacity to supplement dry season flows into Everglades National Park at the eastern border at Tamiami Trail.

The Southern Everglades Study will include all or portions of Yellow Book components BB - Dade Broward Levee/Pennsuco Wetlands, CC - Broward County Secondary Canal System, EEE - Flows to eastern Water Conservation Area, GG - Lake Okeechobee Aquifer Storage and Recovery (additional phase), QQ - Decompartmentalization of Water Conservation Area 3 (additional phase), S - Central Lakebelt Storage Area, U - Bird Drive Recharge Basin, YY - Divert WCA2 flows to Central Lake Belt Storage, and ZZ - Divert WCA3 flows to Central Lake Belt Storage Area.

The two components that have been suggested that would provide water to Biscayne Bay are discussed below.

1. Central Lake Belt Storage Area (S) --- Together with: Flows to Eastern Water Conservation Area (EEE), Divert WCA2 flows to Central Lake Belt Storage (YY), and Divert WCA3 flows to Central Lake Belt Storage Area (ZZ).

   The purposes of the features are to store excess water from WCA2 and WCA3 and provide environmental water supply deliveries to: (1) Northeast Shark River Slough, (2) WCA3B, and (3) to Biscayne Bay, in that order, if available.

   During Yellow Book modeling, no water was available to deliver to Biscayne Bay. All water went to Northeast Shark River Slough or WCA 3B. Additionally, there is recognition that the Central Lakebelt Storage is technically not feasible and would be cost prohibitive to line pits down 80-ft with uplift pressures. The Southern Everglades study will evaluate how to achieve the intent of these benefits.

2. Bird Drive Recharge (U)

   The purpose of the feature is to recharge groundwater and reduce seepage from the ENP buffer areas by increasing water table elevations east of Krome Avenue. The facility will also provide C-4 flood peak attenuation and water supply deliveries to the South Dade Conveyance System and Northeast Shark River Slough.

   This set of management measures as described in the Yellow Book were deemed unfeasible in a 2012 interagency workshop. A conveyance concept has been developed to meet the intent of project purpose but requires additional feasibility analysis that will taken up in the Southern Everglades study.

2.4. New Information

The BBSEER study will consider changed conditions, reassess prior assumptions, and use new data, resources, and information that was unavailable during the BBCW1 and C-111 SCW studies. These changes include the well documented increase locally in sea level rise rate, future sea level projections, the results of ongoing monitoring and new scientific information taking place in the last 15 years on Biscayne Bay and adjoining areas, revised engineering and C&SF system operations in place or in process that will be in place, as well as other existing programs that would provide synergy to this effort. Potential effects from previous, ongoing, and future studies in the study area will be assessed for impact to the project.

- Sea level is changing faster than was assumed during BBCW1. Information sources include the ongoing USACE Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study authorized in the Bipartisan Budget Act (2018) and being conducted by USACE Norfolk District, and other agencies' monitoring and modeling information.
- Saltwater intrusion has increased and will threaten local wellfields and the ability to farm in low-lying areas in the future. Information is available from the SFWMD, USGS, and Miami-Dade County.
- Other studies and projects have been approved, are being implemented in the region, or have been implemented. These include the Central Everglades Planning Project, the Combined Operational Plan (COP) for the completed infrastructure of the Modified Water Deliveries to ENP and C-111 South Dade Projects, C-111 SCW including modifications post-2011 PIR/EIS, the Miami-Dade Limestone Products Association L-31N Seepage Barrier and Dade-Broward Levee/Pennsuco Wetlands improvements, and the DOI Tamiami Trail Next Steps Tamiami Trail modifications.
- Water availability. Other ecosystem restoration projects may increase water availability in the regional canals. Some of this water may be available for the BBSEER.
- Improvement in wastewater reuse technologies.
- Land use changes, including conversion of agricultural lands to residential and commercial uses and population growth
- Higher nutrient concentrations/loads in the canals.
- Water demands and future well locations (public, M&I, agricultural) have changed.
- The SFWMD has modified operations for the South Dade Ag Drawdown.
- The SFWMD adopted a water reservation rule for Biscayne Bay.
- Miami-Dade County has modified several canals in the study area.
- FPL's Everglades Mitigation Bank was permitted and is operational and is a major feature in the study area. The project's performance can inform the development of BBSEER features.

- FPL's remediation of saltwater plume associated with its Turkey Point Nuclear Power Plant cooling canals.
- Monitoring information for the performance of BBCW1 features.
- RECOVER Recommendations for Revisions to the Interim Goals and Interim Targets for the CERP: 2020 report.

Alternative plans will be developed and evaluated. At a minimum, the study will evaluate a No Action, Future Without Project (FWOP) condition, the identified CERP components and features, and all features identified for Phase 2 in Alternate O from the BBCW1. Sea level change will be an important consideration affecting the FWOP and project formulation and evaluation, because the Southeastern Everglades (Eastern Panhandle of ENP, Southern Glades, and Model Lands areas) lie at elevations that are low. Recently completed projects will be part of the FWOP.

Additional features considered in BBCW1 and C-111 SCW planning may be reconsidered, as they may perform differently under changed conditions.

2.4.1. CERP Programmatic Analyses

The following have been recognized as needs for the CERP program and are being pursued in parallel with the BBSEER study.

- Storage (not just reservoir) siting analysis,
- Science integration study (tells us what problems we need to address in the study),
- Performance measure (PM) development, (resiliency),
- Modeling tool development,
- Screening level analysis of water budget (available volumes screening/is this water available for use),
- Screening analysis of hard human environment line (will we have anything left to restore between the upland and the mangroves?).
- Climate change, especially sea level rise, strategy and predictions.

2.5. BBSEER Objectives

These are the project objectives:

1. Improve freshwater wetland water depth, ponding duration and flow timing within the Model Lands, Southern Glades and eastern panhandle of Everglades National Park to maintain and improve habitat value.
2. Improve quantity, timing and distribution of freshwater to estuarine and nearshore subtidal areas, including mangrove and seagrass areas, of Biscayne National Park, Card Sound, Barnes Sound, to improve salinity regimes and to reduce damaging pulse releases.
3. Improve ecological and hydrological connectivity between Biscayne Bay coastal wetlands, the Model Lands, and Southern Glades.

4. Increase resiliency of coastal habitats in southeastern Miami-Dade County to sea level change (SLC)

2.6. Management Measures

To meet these objectives, this study will identify, consider, and assess a comprehensive list of features and operational changes. The following list of management measures is a starting point for the study. During the study, additional measures may be added and locations and dimensions will be specified.

- aquifer storage and recovery (ASR)
- above ground reservoirs
- in ground reservoirs
- stormwater treatment areas
- stormwater capture
- seepage capture
- treated wastewater
- canal widening, canal deepening
- new canals
- canal plugs and backfill
- new levees and berms
- remove levees and berms
- weirs
- spillways
- culverts
- pump stations
- controlled burns, fire

3. SUMMARY OF AGENCY AND PDT ROLES AND RESPONSIBILITIES

This section documents the requirements and expectations for the team member and participating agencies.

3.1. PDT Roles and Responsibilities

The PDT is charged with ensuring project execution is within scope, schedule, and cost. The PDT included the following resources and services to accomplish its mission: PM and support staff; geotechnical engineering; cost engineering; construction services; contracting services; legal advice; real estate; hydraulic and hydrology engineering; project formulation; technical reviews; BCOE reviews; safety reviews; and environmental and regulatory compliances.

a. PDT – provides technical and administrative support, resources, and guidance necessary to successfully complete this PIR/feasibility effort, including participation, preparation of work products, and responses to review comments.

b. SFWMD – is the non-federal sponsor contributing funding and/or in-kind contributions, Lands, Easements, Rights-of-way, Relocations, and Disposal (LERRDs), decision-making, and, for the feasibility phase, has other responsibilities and duties as described in the Design Agreement. The sponsor is an integral part of the PDT in overseeing costs, budget, and schedule, and ensuring quality of products.

c. PM – is the primary point of contact for the sponsor, acting as an advocate and consultant, seeking solutions with the network of experts in the Jacksonville District. PM provides day-to-day management and controls of study execution, including management of the scope, budget, and schedule; coordinating PDT meetings; upward briefing and reporting on study progress; issue-resolution needs; and financial/expense reports. The sponsor's PM executes these responsibilities with sponsor's resources and submission of in-kind work crediting requests. Both PM offices have set budget contingencies to account for additional funding requests for modeling or technical discussions needed to refine alternatives, TSP, or other.

d. Planning & Policy Division (PPD) – PPD PDT members are responsible for ensuring PDT members understand and follow the planning and NEPA processes; providing guidance and expertise; evaluating information on proposed management measures and alternative plans; identifying and/or conducting cultural resource studies and coordination/consultation with the Tribes; discussing and evaluating plan refinements and comparison of alternatives; ensuring performance measures and criteria are appropriate to evaluate the alternatives; coordinating approval of planning-level model certifications, briefing and participating in public involvement meetings; assembling the PIR/feasibility report for approvals in compliance with all federal and state laws and regulations; coordinating and ensuring timely independent external peer review; preparing economic analysis; and leading PIR/feasibility coordination and conferences with the vertical team. Planning efforts will also be conducted by the non-federal sponsor to supplement

technical expertise and to ensure concurrence on information and analyses through PIR/feasibility process completion.

e. Engineering Division (EN) – EN PDT members participate and perform technical analysis and documentation, which include hydrologic and hydraulic modeling; PIR-level design, including geotechnical and HTRW analyses; model result evaluations; cost estimating; cost-schedule risk analysis; coordinating ATR review for cost certification; value engineering required for the feasibility report and help in screening of management measures and alternatives. The non-federal sponsor will be responsible for participation and support to modeling efforts and associated products as described in more details in section 7.1.

f. Contracting Division (CT) – CT PDT members are responsible for contract acquisition and administration duties and responsibilities for task order necessary for the cultural resource studies. There are no contracting actions anticipated for the non-federal sponsor other than participating in work scope discussion for the cultural resources work to be contracted.

g. Real Estate Division (RE) – RE PDT members are responsible for identifying and working with the non-federal sponsor in identifying the real estate requirements, analyses, assurances, and making taking determinations. This includes identifying ownership, obtaining rights of entries, providing real estate cost estimates, providing real estate gross appraisals, providing real estate acquisition maps, and the real estate plan in accordance with applicable USACE regulations. Work also includes the review/revisions to the PIR/feasibility report and associated documents. The non-federal sponsor will identify all publicly-owned lands available for the project and provide all necessary documentation.

h. Office of Counsel (OC) – OC PDT members are responsible for conducting physical taking analysis, preparing preliminary Attorney's Opinions of Compensability and Estate Analysis, and providing counsel and advise to ensure the PDT meets its legal and regulatory responsibilities. They also review and provide a Legal Sufficiency statement of decision documents. The non-federal sponsor will provide title policies on lands already owned, research public records on lands not owned to determine estates owned by other public entities, and research ownership information on utilities.

i. Operations Division (OD) – OD PDT members are responsible for developing invasive species and land management plans as part of the overall Adaptive Management Plan. OD team members are also responsible for participation in development of operations optimization for project features and ensuring the proposed operations of features can be implemented.

j. Regulatory Division (RD) – RD PDT members are responsible for providing guidance and advice to ensure the PDT meets all regulatory requirements. The team will be identified, with funding and approval of the Scope, Schedule and Budget provided within this PMP.

See Appendix A for a list of PDT members and their contact details.

3.2. Agency Responsibilities

The SFWMD and Corps have agreed to the primary responsibilities listed in **Table** 1.

Table 1. Responsibility Assignment Matrix.

DESCRIPTION	CESAJ	SFWMD	Eco PCX/ Cost DX	USFWS	IMC	SAD/HQ USACE
Development & Approval of Project Management Plan	L	P			P	R
NEPA Compliance – Public Meetings	L	P				P
Development and Updates to Peer Review Plan, Report Synopsis, Risk Register and Decision Management Plan	L	P			P	R
Eco PCX Approval of Peer Review Plan & PM's	L	P	A			R
Model Data Collection & Development	P	P			L	
Develop Performance Measures	L	P				
Initial Array of Alternatives	L	P			P	
Screening Level Modeling	P	P			L	
Screening of Initial Array of Alternatives	L	P			P	A
H&H Modeling Existing & Future Without Project Conditions	P	P			L	
H&H Modeling Alternatives	P	P			L	
Ecological Modeling	L	P			P	
Alternative Evaluation	L	P		P	P	A
TSP – Concept Level Designs	L	P				
Cultural Resources Evaluation	L	P				
Real Estate Analysis Report	L	P				
Biological Opinion	P	P		L		
Write Project Implementation Report/EIS	L	P			P	A
Cost Certification	L	P	A			

DESCRIPTION	CESAJ	SFWMD	Eco PCX/ Cost DX	USFWS	IMC	SAD/HQ USACE
Agency Technical Reviews (ATR)	P	P	L		P	
RECOVER Reviews	L	P		P		PI
IEPR	PI		L			
FWS Coordination Act Report	P	P		L	P	PI
Civil Works Review Board	P	P		P		L / A
Sign Chief's Report	R					L / A

Notes:

L = Lead (Responsible/Accountable)

R = Review (Passive role - receives information and engages as needed)

A = Approve (Active Role/Approval is needed prior to proceeding to next stage of project work)

PI = Provides Input (provides input into the process and information needed by the Study Team)

P = Participate (Active Role in assisting and facilitating)

3.3. Scope of Modeling Efforts during the PIR

The Interagency Modeling Center (IMC) will be responsible for the hydrologic modeling tasks and work as part of the engineering sub-team. The IMC will perform the majority of the required modeling tasks for the project under the guidance of the IMC modeling lead in consultation with project managers and sub-team leads. The modeling team will consist primarily of IMC staff from the SFWMD and the USACE, with participation and support by CESAJ Water Resources Engineering Branch and other USACE staff to perform hydraulic modeling support and ensure compliance with federal plan formulation strategies and requirements. The engineering sub-team lead will be responsible for organizing the project meetings to cover model scoping and application and preparing the agenda and minutes.

The PDT will identify the appropriate base and alternative conditions, and with team input, the modelers will update the models as necessary to incorporate any new land use and water use information, develop the associated model assumption tables, and to prepare any presentations and additional information regarding same for discussion by the PDT. Once all the assumptions and new information have been incorporated, the base runs will be completed, the results will undergo a quality assurance/quality control check, and the modelers will prepare the requested post-processed model results, water budgets, and other pertinent information for PDT discussion.

Modelers will coordinate closely with the engineering and ecological sub-teams to remain current on the proposed management measures, performance measures, and evaluation criteria and will provide input to ensure that the teams' recommended

evaluation metrics and alternatives can be generated to support PDT evaluations. Once the alternatives are identified, the assumptions and other input will be used to set up and complete the alternative runs. The model output will be post processed to produce the suite of requested water budgets, tables and graphics needed for analysis by the PDT. The modeling sub-team will also be responsible for developing the model calibration and Model Documentation Reports (MDRs) for inclusion in the PIR.

3.3.1. List of Models Considered for Use

The BBSEER project location represents a unique hydrologic and geologic region in southeast Florida. There is an interaction between freshwater, saltwater, and brackish mixing zones both at the surface and subsurface due to the project's proximity between the ENP and the coastal areas of Biscayne Bay and Manatee Bay. There is an anticipated need for a suite of complimentary modeling tools, both regional and sub-regional, to support performance evaluations across a wide range of project evaluation metrics. Additionally, and importantly, the suite of modeling tools will need to incorporate the latest USACE guidance with respect to climate change for inland hydrology and SLC. The suite of modeling tools will require upfront resources to incorporate climate variability in order to synchronize with the plan formulation methodology. Ecological factors that may be included but are not limited to salinity; vegetation, both wetland and aquatic, composition, exotic composition; hydro-period, including frequency and duration; flow and fresh water distribution; faunal species that may include ESA and/or indicator species; resiliency factors associated with SLR; and habitat units, ecological zone/health. However, due to the presently undefined project needs for performance metrics and other evaluation metrics, and the uncertainty of the level of effort to upgrade current modeling tools to incorporate sea level change, an initial inventory of potential project modeling tools was created. The list identifies the type of model and the necessary changes needed to modify and upgrade each listed model to meet the needs of the project relative to SLC. The project is not limited to the models listed in the initial inventory. This list will also help identify potential risks for the PDT with respect to staff resources, and schedule and budget considerations. The modeling scope will include, but is not limited to: regional hydrologic modeling (both surface and sub-surface), hydrodynamic modeling, and density dependent modeling (salinity). A more detailed modeling strategy utilizing these and/or other tools will be developed after project scoping to support plan formulation efforts.

1. Regional Hydrologic Surface Modeling
    a. Regional Simulation Model application for the Everglades and Glades Lower East Coast Service Areas (RSMGL): The RSMGL is a hydrologic model developed by SFWMD that simulates the hydrology of overland flow and water management of the Central & Southern Florida Flood Control Project (C&SF). The model domain links the counties of Miami-Dade, Broward and Palm Beach to the Glades region to the west. These are two distinct hydrologic regions whereby the Glades region is low gradient wetlands and the counties are urban and agricultural lands. The RSMGL has a long period of record (1965-2016) at a daily time step that simulates long term trends. This model will need to be updated by the IMC to reflect SLC considerations for the project application.

b. Miami-Dade Regional Simulation Model (MDRSM): The MDRSM includes a smaller domain than RSMGL, which focuses on southern WCA 3, ENP, and Miami-Dade County and has a higher mesh discretization along the East Coast Protective Levee system (ECPL). This model also simulates the hydrology of overland flow and water management of the C&SF project similar to RSMGL. However, MDRSM is more geared for simulating event-based simulations. It has a 15-minute time step and is typically used for simulating dry, normal, and wet hydrologic scenarios on an annual duration. This model will likely be used for evaluating level of service of flood risk management and drought operation scenarios. The MDRSM will also need to be updated by the IMC to reflect SLC considerations for the project application.

2. Regional Hydrologic Three-Dimensional Sub-Surface Salinity Model

   a. Biscayne and Southern Everglades Coastal Transport (BISECT) Model: The BISECT is a model developed by the United States Geological Service (USGS) to evaluate the effects of surface-water stages and flows, hydroperiod, and groundwater levels and salinity in south Florida. BISECT would be a candidate tool for evaluating density dependent flow (salinity) to analyze the interaction between freshwater and saltwater. Enhancement to the model capability to represent C&SF water management operations will likely be needed to support the project application. It is uncertain at this time the scope of applying climate change and SLC guidance to this model, but it is likely that it will be necessary to update this model. Model updates would require a contracting action. The PDT will need to consider associated funding and timelines for the USGS release/review process.

3. Hydrodynamic/Coastal Modeling

   a. Environmental Fluid Dynamics Code (EFDC): The EFDC model is a multifunctional surface water modeling system, which includes hydrodynamic, sediment-contaminant, and eutrophication components. This or a similar modeling tool will likely be needed to evaluate the complex nearshore & offshore hydrodynamics of the estuarine environment posed by the interaction between fresh and saline surface water. The hydrodynamic scope for BBSEER will likely need significant resources and time to be accomplished successfully given the BBSEER complexity. It is uncertain at this time the level of work required to develop the hydrodynamic modeling tool, including efforts needed to implement climate change and SLC to the hydrodynamic modeling effort. Model development may be conducted by the SAJ Water Resources Engineering Branch and/or require a contracting action.

   b. Biscayne Bay Simulation Model: The BBSM is a hydrodynamic model developed in Fortran by Jon Wang at the University of Miami for evaluating restoration efforts and groundwater flow on salinity within BNP. This model is a potential candidate for evaluating nearshore and offshore hydrodynamics relating to salinity. It is uncertain at this time

the level of work required to develop the hydrodynamic modeling tool, including efforts needed to implement climate change and SLC to the hydrodynamic modeling effort. Model development may be conducted by the SAJ Water Resources Engineering Branch and/or require a contracting action.

4. Sub-regional to Local Scale Hydrologic and Hydraulic Modeling
    a. HEC-RAS and HEC-HMS. These models will be used on the sub-regional and/or local scale to develop event-based modeling scenarios, typically using design storms based on precipitation-frequency design storms. The HEC-HMS model simulates the hydrology with the resulting flow hydrographs used as inputs to HEC-RAS for simulating surface water hydraulics.

Modeling Tool	**Organization/Owner**	**Regional/Sub-Regional**	**Type**	**Needs SLC Update**
RSMGL	SFWMD/IMC	Regional	Hydrologic Surface & Subsurface	Yes
MDRSM	SFWMD/IMC	Regional	Hydrologic Surface & Subsurface	Yes
BISECT	USGS	Regional	Hydrologic Subsurface/Salinity	Unknown (water management updates needed)
HEC-HMS	USACE	Sub-Regional	Hydrologic Surface	No
HEC-RAS	USACE	Sub-Regional	Hydraulic Surface	No
BBSM	DOI/NPS	Sub-Regional	Hydrodynamic Surface/Salinity	Yes
EFDC	EPA	Sub-Regional	Hydrodynamic Surface/Salinity	Yes

A subregional hydrologic modeling analysis will be completed to provide input to ecological planning models for evaluation of the overall project performance. More detailed models will also be utilized to address specific questions related to hydraulic designs and other constraints. At this time, the modeling approach does not consider the application of detailed flood event modeling or water quality fate and transport modeling.

4. Critical Assumptions, Constraints, Opportunities, and Considerations

Work on this project operates under the assumptions and constraints and noted below.

4.1. Assumptions

The assumptions for the BBSEER study include:

1. All interested parties will work collectively to address technical, policy, and administrative challenges as they are identified.
2. CERP projects will be sequenced (designed and constructed) per the current Integrated delivery Schedule (IDS).
3. COP EIS is completed.
4. Sufficient funding will be appropriated in a timely manner to allow for the efficient and effective conduct of the work in this Preliminary PMP.
5. Sea level change (SLC) will be considered in the Future Without Project condition and with project scenarios using the guidance in ER 1110-2-8162, Incorporating Sea Level Change in Civil Works Programs.
6. Inland climate change will be considered in the Future Without Project condition and with project scenarios using the guidance in Engineering and Construction Bulletin ECB 2018-14, Guidance for Incorporating Climate Change Impacts to Inland Hydrology in Civil Works Studies, Designs, and Projects.
7. Lake Okeechobee Operations following LORS08.
8. Placeholder assumption for Lake Okeechobee Operations. The Lake Okeechobee System Operating Manual (LOSOM) operations study is expected to be complete at some point during the BBSEER study.

4.2. Constraints

The following planning constraints are applicable for this project:

1. Comply with all Federal, state and local laws, regulations and policies.
2. Maintain levels of flood protection to agricultural and urban lands (Savings Clause [Section 601 (h)(5)(B) of WRDA 2000]).
3. Maintain levels of water supply from existing legal sources (Savings Clause [Section 601 (h)(5)(A) of WRDA 2000]) and Draft Guidance Memorandum (2007).
4. Meet applicable water quality standards.

4.3. Opportunities

The following planning opportunities are applicable for this project:

1. May contribute data to existing and upcoming studies and projects.
2. The project may improve seepage capture and storage for dry season delivery to restoration project features.

3. The project may improve C&SF and canal system operating delivery efficiencies.
4. Restoration will provide opportunities to increase recreational uses.

4.4. Considerations

The following planning considerations are applicable for this project:

1. Impacts to cultural, historical and archaeological resources.
2. Potential impacts to existing compensatory mitigation sites within the project area under Section 404 of the Clean Water Act.
3. Socioeconomic impacts on the local and regional economies.
4. Impacts to federally-listed threatened and endangered species.
5. Changes in water budgets/levels available in the project area since CERP was implemented.
6. Existing structural, meteorological, environmental, and hydrologic conditions that restrict water management operations.

5. PROJECT SCHEDULE

The project schedule is based on the following assumptions:

- Resources will be available for execution of work at the times required to complete tasks.
- Sufficient funding will be available throughout the study duration.
- The SFWMD and the USACE will provide modeling resources, facilitated through the IMC, to support the evaluation of study alternatives.
- H&H modeling will be developed in a three-phase approach.
    - Phase 1 will be an exploratory and water budget analysis with screening of management measures, tool enhancements, and performance measure development.
    - Phase 2 will be limited to four cycles of modeling (3 months per cycle) with the initial cycle being baselines and Yellow Book alternatives, round 1 would include up to 4 alternatives, Round 2 would include up to 3 alternatives and Round 3 will include optimization of the final alternatives and the preliminary TSP (1-2 alternatives). An expanded suite of modeling tools will be available to evaluate the Round 2 and Round 3 modeling (after initial screening during Round 1), to support necessary model development time.
    - Phase 3 (4 months) would include 1-2 alternatives to address SLC and identify the final TSP.
- ATR and IEPR will be required.
- Study will conform to SMART planning requirements.
- The study schedule ends with the signing of the Chief's Report; preliminary schedules for design and construction will be developed as part of the PIR.
- Assume that certain programmatic actions are completed prior to project milestones where they are needed.

5.1. Project Milestones

The PDT will complete the HQUSACE tracked milestones shown in

Table 2 during the development of the PIR/EIS. Project schedule with Work Breakdown Schedule, from Study Initiation to transmittal to Congress, is located in **Appendix B**

Table 2. BBSEER HQ-Tracked Milestones.

MILESTONE DESCRIPTION	SCHEDULED MILESTONE DATE	ACTUAL DATE
Study Initiation	15 September 2020	
Alternatives Milestone (CW060)	25 January 2021	
Tentatively Selected Plan Milestone (CW262)	14 April 2023	
Agency Decision Milestone (CW263)	8 November 2023	
Senior Leaders Panel (CW245)	3 December 2024	
Chief's Report (CW270)	7 March 2025	

6. FINANCIAL MANAGEMENT PLAN

The financial management plan includes the study cost share for the BBSEER study as well as the cost estimates to complete the work in this PMP.

6.1. Financial Management

Under the CERP authorizing legislation and program policies, the CERP is implemented as a 50 percent federal and 50 percent non-federal cost-shared program in which:

- the cost-share balancing occurs at the overall CERP programmatic level (i.e. individual projects can be out of balance);
- there is one Design Agreement covering design efforts for all CERP projects; and
- there is one umbrella Master Agreement for construction, under which individual Project Partnership Agreements for construction are executed for each CERP project.

CERP authorizing legislation, implementation guidance, and program policies allows for reasonable costs of work performed by the non-federal sponsor in connection with the study, preconstruction engineering and design, or construction necessary for plan's implementation.

6.2. Cost Estimates

See Appendix C.

Table 3. Budget to Complete Scope of Study in Section 2.1.

Fiscal Year	USACE Projected	USACE Actual	SFWMD Projected	SFWMD Actual	Projected Total	Actual Total
2020	$83,000		$84,000		$167,000	
2021	$625,000		$630,000		$1,255,000	
2022	$707,000		$736,000		$1,443,000	
2023	$500,000		$500,000		$1,000,000	
2024	$300,000		$200,000		$500,000	
2025	$85,000		$50,000		$135,000	

Table 4. SFWMD & Jacksonville District Cost Estimates of Proposed In-Kind Work.

Construction Work Items	SFWMD Estimate	Corps Estimate
In-Kind Work to be Completed by SFWMD		
Construction Management		
Subtotal		
Work Presently Proposed to be Completed by SFWMD		
Features SFWMD May Construct		
Subtotal		
Total		

7. QUALITY CONTROL PLAN

The QC Plan, normally referred as Technical Review Plan, is a component of the USACE's Quality Management Plan (QMP) available online at: https://intranet.usace.army.mil/sad/saj/engineering/Pages/QMSProcessList.aspx. The QCP is a project/product-specific written plan that defines how quality control will be executed for products. A QCP shall be prepared for every engineering product or service, whether accomplished using in-house personnel, other Corps offices, or contractor forces (i.e., contractor forces include other government agencies as well as private industry sources).

The USACE has created various documents that address quality standards as they apply to various programs, products, and services. Those documents can be found and/or referenced in the USACE Quality Management Information System (QMIS), SAD QMIS, and Jacksonville District QMIS and govern the project's Quality Control. Below are USACE documents pertinent to the QC:

- EC 1165-2-217, Review Policy for Civil Works
- Director's Policy Memorandum (DPM) 2019-01, Policy & Legal Compliance Review.
- EC 1105-2-412, Assuring Quality of Planning Models
- ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1
- ER 1110-1-12, Quality Management
- ER 1110-2-1150, Engineering and Design for Civil Works Projects
- ER 1110-1-8159, Engineering and Design, DRChecks®

The CESAJ's QMIS is the electronic tool used by PDT to execute QC.

7.1. PM and PDT QC Responsibilities during Quality Control

Project Manager (PM) – The PMs are the PDT leaders and are responsible for ensuring that the customer's quality objectives are met. This includes assuring that the team's efforts stay focused on the customer's needs and that all work is integrated and conducted in accordance with a project management plan (PMP). In the quality management process, the PMs provide leadership and facilitation to the PDT; assure customer involvement throughout the process; ensure that the customer understands applicable standards, laws, and codes; work with the PDT to determine the procedures necessary to produce a quality product; and work with customer early on to establish/define quality objectives.

Project Delivery Team (PDT) – The PDT team members form an interdisciplinary group with individual members accountable for product quality in their respective areas of responsibility. It is this team that is responsible for producing a decision or implementation document. In the quality management process, the PDT team members ensure the quality of the work that they produce; keep commitments for

completion of their portion of the project, per the PMP; and understand the need for and maintain fiscal stewardship.

The PDTs are to interpret, translate, and apply quality objectives to the project. The project-specific quality objectives must be prescriptive, understandable, realistic, and when possible, measurable. These project-specific quality objectives are included in the project technical review plan available online. The PDT will conduct the work effort in such a fashion that these objectives are achieved. The PDT will ensure that the various checks and balances are in place to allow the product to meet quality standards and document the achievements of the quality objectives through certifications, after action reviews, meeting notes; and forwarding the more significant improvements to other teams through the annual lessons learned meeting, Civil Works summit meetings, or other venues. Only then can the level of success (i.e. quality performance) of the project be determined.

7.2. Requests for PDT Members, DQC Reviewers, and ATR/IEPR Reviewers

A Technical Review Plan (TRP) describing the level of reviews required for the different decision documents will be prepared for this project. In addition, the TRP includes a list of planning and engineering models that may be during the project's planning phase.

The TRP will be developed in accordance with EC 1165-2-217, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and OMRR&R phases. The EC outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. In addition to these levels of review and in accordance with EC 1165-2-217, decision documents are also subject to cost engineering review and certification/approval. Guidance on quality assurance for engineering models is contained in ER 1110-2-1150, "Engineering and Design for Civil Works Projects." Planning models must be reviewed and approved pursuant to EC 1105-2-412, Assuring Quality of Planning Models.

Description of the technical reviews required for this study's documents follows:

- *District Quality Control (DQC)* – All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). The home district shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of the District and the home Major Subordinate Command (MSC).
- *Agency Technical Review (ATR)* – ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.). The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses

presented are technically correct and comply with published US Army Corps of Engineers (USACE) guidance, and that the document explains the analyses and results in a reasonably clear manner for the public and decision makers. ATR is managed within USACE by a designated Risk Management Organization (RMO) and is conducted by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. ATR teams will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate. To assure independence, the leader of the ATR team shall be from outside the home MSC.

- *Independent External Peer Review (IEPR)* – IEPR Type I is required for decision documents prepared for this project. IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. A risk-informed decision, as described in EC 1165-2-217, is made as to whether IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR: Type I is generally for decision documents and Type II is generally for implementation products.
- *Policy and Legal Compliance Review* – All decision documents will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Director's Policy Memorandum (DPM) 2019-01, Policy & Legal Compliance Review, and Appendix H of ER 1105-2-100. These reviews culminate in determinations of whether the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the Chief of Engineers. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.
- "*State and Agency" and Public Reviews* – Agencies including local, state, and federal, and Native American Tribes, and the public will be afforded opportunities to review and provide comments for consideration by the project team on all decision documents required for project authorization. Before releasing documents for these reviews, the team must obtain approval to release the draft documents.

In performing reviews of technical products, the reviewers are asked to rationalize their comments as being either formal comments or informal comments, and that they use the appropriate tools/methods, as described below, for documenting and transmitting comments.

Formal comments are those that will likely affect or impact: 1) a project's budget and/or schedule, 2) safety and/or security, or 3) conflict with laws, policy, and/or guidance, and/or 4) alter key decisions in the study. These types of comments shall be

entered into DrChecks®, which is the mandated system for submitting, tracking, and responding to comments on engineering and design products.

Informal comments, oftentimes considered to be courtesy comments, are those such as grammatical, editorial, and non-critical comments intended to alert the PDT to items or issues that they may want to consider further. These types of comments can be passed along to the PDT in a way coordinated with the Review Manager and PDT. Informal comments must not be entered in DrChecks®, but must be documented for future reference.

For both categories of comments, it is requested that reviewers refrain from personal preference type comments unless there is a very strong basis for making the suggestion; in which case, the rationale should clearly be stated. For instance, if there is another way to do an analysis, but the way chosen by the PDT member is consistent with Corps guidance and best practices, then this can be provided informally for consideration but should not be a formal comment.

8. Project Delivery Acquisition Strategy

The result of this study will be a PIR and the accompanying NEPA document.

Some contract support may be required for specific tasks such as collecting data to supplement information already available. In order to facilitate this acquisition existing Jacksonville District Indefinite Delivery Indefinite Quantity (IDIQ) contracts may be utilized. Upon identification of those sources, this section will be updated.

9. Risk Management Plan

Risk identification should be based on the complexity involved with proceeding to design, construction, and in operation and management of the authorized components. The team will periodically review changes to assess and mitigate adverse risks.

A traditional risk analysis shall be conducted and will be updated as required to calculate and present the cost and schedule contingencies using the risk analysis processes as mandated by ER 1110-2-1150, "Engineering and Design for Civil Works"; ER 1110-2-1302, "Civil Works Cost Engineering"; and Engineer Technical Letter 1110-2-573, "Construction Cost Estimating Guide for Civil Works." A report will be prepared to summarize the contingency results for both cost and schedule risks for all project features. The study and presentation can include or exclude consideration for operation and maintenance or life cycle costs, depending upon the program or decision document intended for funding. In addition, the team will document and prioritize study risks throughout the study, per current Planning Community of Practice guidance (currently the guidance is to use a Risk Register), as described below. The team will use defined risk-management measures applicable to the project. Identified risks will be periodically reviewed, monitored, and evaluated. If new risks are identified or variable to identified risks, the team will determine impacts and significance of the risks, to include scope, schedule, and cost impacts.

9.1. Cost and Schedule Risk Analysis

The traditional risk analysis process must follow the USACE Headquarters requirements and the guidance provided by the Cost Engineering Directory of Expertise for Civil Works (Cost Engineering DX). The risk analysis process uses probabilistic cost and schedule risk analysis methods. The risk analysis results are intended to serve several functions, one being the establishment of reasonable contingencies reflective of an 80 percent confidence level to successfully accomplish the project work within that established contingency amount.

Risk analysis results are also intended to provide project leadership with contingency information for scheduling, budgeting, and project control purposes, as well as provide tools to support decision-making and risk management as the project progresses through planning and implementation. To fully recognize its benefits, cost and schedule risk analyses should be considered as an ongoing process conducted concurrent to, and iteratively with, other important project processes such as scope and execution plan development, resource planning, procurement planning, cost estimating, budgeting, and scheduling.

In addition to broadly defined risk analysis standards and recommended practices, the risk analysis is performed to meet the requirements and recommendations of the following documents and sources:

- ER 1110-2-1150, Engineering and Design for Civil Works Projects.
- ER 1110-2-1302, Civil Works Cost Engineering.
- ETL 1110-2-573, Construction Cost Estimating Guide for Civil Works.
- Cost and Schedule Risk Analysis Process guidance prepared by the USACE Cost Engineering DX.
- Memorandum from Major General Don T. Riley (U.S. Army Director of Civil Works), 3 Jul 2007.
- Engineering and Construction Bulletin issued by James C. Dalton, P.E. (Chief, Engineering and Construction, Directorate of Civil Works), dated September 10, 2007.

9.2. Study Risk Register

A study risk register can be an effective tool for managing identified risks throughout the project life cycle. The risk register reflects the results of risk factor identification and assessment, risk factor quantification, and contingency analysis. Recommended uses of the risk register going forward include:

- Documenting risk mitigation strategies being pursued in response to the identified risks and their assessment in terms of probability and impact.
- Providing project sponsors, stakeholders, and leadership/management with a documented framework from which risk status can be reported in the context of project controls.
- Communicating risk management issues.

- Providing a mechanism for eliciting risk analysis feedback and project control input.
- Identifying risk transfer, elimination, or mitigation actions required for implementation of risk management plans.

10. Safety and Occupational Health Plan

The safety and occupational health plan for the project will be updated during later project phases.

11. Change Management Plan

All changes to the project are subject to the approval levels identified in the CERP Guidance Memorandum (CGM) # 7.0. The project schedule and cost consist of four components: baseline, current approved, forecast, and actual. These components are defined as follows:

- Baseline: The Baseline Schedule and Cost Estimate are defined by the approved initial PMP. The baseline remains constant until an updated PMP is approved and is compared with projected and actual schedules and costs.
- Current Approved: The Current Approved Schedule and Cost Estimate reflect changes in project scope, schedule, or cost estimates that have been approved at the appropriate levels. The approval authorities required for a specific change are defined in the CGM and are related to the magnitude of the change. Approvals for some minor changes are within the Project Managers' authority while other more substantive changes might require the approval of the CERP Program Managers.
- Forecast: When the Project Managers initially identify changes that impact the current approved schedule and cost estimate, such changes should be reflected in the forecast schedule and cost estimate until they are approved in accordance with CGM procedures.
- Actual: The costs and dates of completed milestones will be documented in the Actual Cost and Schedules, respectively.

The PM and PDT are responsible for identifying and justifying the need for changes to the scope, schedule, costs, and for initiating requests for approval of such changes. Any office requesting a change will identify to the PM the anticipated schedule and cost impacts of the requested change. The PM is responsible for proper evaluation, coordination, approval, and managing of project schedule and cost change requests, and accountable for documenting impacts resulting from the change.

11.1. Changes during the Design Phase

Approval of design changes will follow normal USACE procedures for project authorization. Discretionary changes may be initiated by the SFWMD and will be evaluated in regards to the need for the project and once a determination made regarding if the change constitutes or not a betterment, relocation for which the SFWMD is responsible, or for other considerations/requirements necessary for the project's functionality. Appendix C has the required form(s) for change management approval during design phases. From 2013 forward, technical offices will be required to complete the technical change control request (CCR) form in Appendix C.

11.2. Changes during the Construction Phase

Changes during the construction phase can result from a variety of sources. Contract changes shall be held to a minimum in an effort to maintain schedule, scope, and costs under control. Accomplishment by separate, competitively bid contracts shall, in each instance, be explored and shall be used unless it can be clearly shown that the change is required. Construction changes generally fall into mandatory or discretionary change category.

- Mandatory Changes—These are unavoidable changes that are required to provide a complete and useable facility. Such changes are caused by unforeseen factors discovered during design (e.g., design oversights/errors or mandatory criteria changes) or construction (e.g., changed site conditions or unavailability of materials). These changes do not include enhancements or improvements that are absolutely necessary for completion of the project; even those justified by improved efficiency of operation, maintainability, function or appearance.
- Discretionary Changes—These are generally customer requested changes that are not absolutely required to provide a complete and useable facility which meets operational requirements as specified in the contract. This would include any criteria changes that are not mandatory for ongoing projects; or changes that would improve (betterments) the efficiency, maintainability, function, or appearance of the facility. Basically, any change that is not absolutely necessary is considered "discretionary."

Changes to contract requirements arise from field conditions (including differing site conditions), design deficiencies, and requests by the SFWMD. In general, changes arising from differing field conditions and design deficiencies are mandatory and changes requested by the SFWMD are discretionary. For changes requiring clarification and/or resolution, the PDT will make final determination if the changes are considered mandatory or discretionary.

Changes to the construction contract will not be initiated until a Basic Change Document (BCD) has been completed and approved. For mandatory changes, a BCD will be initiated by the Resident Engineer's Office, or designee, as needed. In addition to obtaining change authorization, the BCD will indicate the need for additional design and/or cost engineering support. Discretionary changes can only be initiated and approved by the PM, in consultation with Program Manager(s).

PDT coordination among USACE and SFWMD shall occur as early as possible and always prior to proceeding with the change, and regardless of the scope, cost, and schedule impacts. The extent of coordination and approval authority for changes is based upon the size and complexity of the change. Appendix C has the required CCR form for approvals of changes made during construction.

11.3. PMP Updates and Revisions

Documentation of PMP updates and revisions are required when changes to project scope, schedule, and costs are approved. **Table 5** will track updates and revisions to the original PMP.

Table 5. PMP Updates and Revisions.

Date	Type (update/rev)	Page	Description	Reason for Change
14SEP2020	Update			Stakeholder feedback

12. COMMUNICATIONS MANAGEMENT PLAN

The purpose of the Communication Management Plan (CMP) is to ensure proper coordination of information intended for release internally and externally to the USACE. Internal and external communication strategies are essential to facilitate the implementation of the BBSEER Project. The Jacksonville District uses several internal communication methods to disseminate information and guidance, which provide either direct or indirect communication as described below. Internal communications are most effective when indirect communications are followed up by direct communications.

Direct communications provide the means to ensure that the information is understood by responding to questions and inviting ideas. BBSEER Project member meetings ensure direct communication within the PDT for those that participate in these regular meetings (see Appendix A for member list). Other topic(s)-focused project meetings provide opportunities to share project information to participants. The monthly Program Updates and Project Review Board (PRB) meetings provides the District Commander, technical leaders and project managers with an opportunity to discuss project issues and develop resolutions to project problems.

Indirect communications use websites and emails to disseminate project information, guidance, and direction. Process execution process documents are readily accessible to all District personnel through the District Knowledge Management Environment (KME) SharePoint website and share drives. The QMS documents describe the procedures for each process.

12.1. PDT Communication Requirements

The CESAJ and SFWMD are the principal federal and non-federal sponsors for the C&SF in the central and southern Florida region. CESAJ will lead the Project Delivery Team (PDT) meetings for the BBSEER study with support from SFWMD.

In accordance with the National Environmental Policy Act (NEPA), public comment periods and public meetings will also be conducted as part of the planning effort for scoping, presenting the final array of alternatives, and draft report.

To allow public and stakeholder opportunities to participate in project planning and development, scoping meetings, workshops, inter-agency meetings, and other opportunities may be provided.

Sub-teams will be organized as necessary to accomplish the technical tasks required to achieve project objectives and allow collaborative discussion at the detailed technical level. Sub-teams will be open to all PDT members. Sub-teams will set their

own meeting schedules to accomplish the required tasks. Each sub-team will report back to the full PDT.

Each PDT member needs to have situational awareness of current events, requirements, activities, opportunities, policies, guidance, and new initiatives that may impact the project positively or negatively. The urgency and importance of the communication determines the best methods for communicating.

Effective communications among PDT members is critical to project's success. This PMP was developed, endorsed, and must be used by PDT members as a guide to deliver their products or services required for the project. Project status reports and the Project Review Board (PRB) provide the means for the District's upper management to be kept informed of project issues, so that their decisions are based on current information and are communicated to all those involved with the project. However, each PDT member is responsible for maintaining his/her management chain informed on project status and progress, particularly of the products and services the respective office is responsible. Communications required by this plan include schedules, briefings, and project controls as defined below.

12.1.1. Schedules

These project schedules are required:

- Project Schedule – Detailed schedule outlining tasks in a work breakdown structure (WBS). The schedule includes updated start and end dates, baseline dates, predecessors and successors for each task. The Project Manager manages the project plan in coordination with the Project Scheduler. This detailed schedule will be developed once the project is funded.
- Gantt Chart – A chart of major phases broken down into milestones for each phase.

12.1.2. Briefings

These briefings are required:

- Technical Review Board (TRB): Facilitates communication between the SFWMD and the Corps during the study to ensure proper coordination between agency engineering staff, and resolve design and engineering related issues.
- Quarterly Executive Team (QET): Provides direction from the chairs to their respective agency staff on issues brought forward for a decision. If items cannot be resolved at a lower level they are raised to the QET for a decision. There is usually a pre-QET the week prior to brief SAJ leadership on the issues being presented.
- Project Review Board (PRB): Serves as the corporate governing body of this command in the area of project execution through review of implementation challenges that focuses on providing guidance to the PDT.

- South Florida Ecosystem Restoration (SFER) Briefing: Briefs District Command weekly on new developments with projects in the Restoration Branch.
- Project Delivery Team (PDT) meetings: Provides the project PDT a forum to present updates, issues, or solutions to ensure the project stays on schedule.
- Water Resources Accountability and Collaboration (WRAC) Public Forum meetings: Monthly meetings to provide updates on regional water resources concerns in south Florida. Provides forum to receive feedback on regional interest and effects of projects.

12.1.3. Project Controls

Project controls track and document project progress, issues for resolution, open action items, and changes to the project plan. The Project Manager will closely monitor the following documents and logs in order to manage the schedule, resources, and issues which impact successful project completion.

- Meeting Agendas: Communicates the meeting's purpose, topics, and deliverables during project team, group, or town hall meetings. Agendas allow participants the time to properly prepare for meetings enabling successful and timely meetings.
- Meeting Summaries: Captures the main discussion occurring during the meeting and any action items required after the meeting.
- Monthly Activity Report Status (MARS): Documents schedule status on a monthly basis. Reports associated with the MARS include a 90-day look ahead and a milestone comparison to the current approved baseline schedule. Also included in the MARS are updated notebook topics, that summarize completed activities, current project status, and potential issues that would have an impact on the schedule. The PM coordinates with the Project Scheduler to develop the MARS.
- Monthly Expenditures Reports: Provide status of expenditures as compared to the baseline and overall costs. This document will not be shared outside Corps and SFWMD.
- Action Item Matrix: Provides a centralized point from which to manage project action items. The PM is responsible for updating and managing the action items matrix.

12.2. Tribal Government-to-Government Consultation

In order to ensure effective and mutually beneficial relationships with Tribal partners, the Jacksonville District will follow the accountable process mandated in Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (November 2000). USACE Tribal Consultation Policy (November 2012) further refines the process.

The Jacksonville District will conduct formal Consultation under guidance from the District Tribal Liaison. The Jacksonville District will develop a formal Consultation

Plan, appropriate to the project scope, during the initial Consultation meeting with each Tribal Nation. Two sovereign nations exist in Florida: in South Florida the Seminole Tribe of Florida (STOF) and the Miccosukee Tribe of Indians of Florida. The consultation plan will be documented in an MFR following the initial Tribal Consultation meeting with each Tribe.

13. Value Management Plan

A value management plan will be completed, if necessary, after initial review of this PMP.

14. Data Management Plan

The data management plan for the project will be updated after initial review of this PMP.

15. Closeout Plan

After approval of the Chief's Report and signing of the ROD by HQUSACE, the CESAJ will close the BBSEER project. This section will be updated for future project phases.

APPENDIX A: PDT MEMBERS

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Additional Members TBD			

APPENDIX B: PROJECT SCHEDULE

Activity Name	Start	Finish	MS CW
Study Initiation (117 days)			
Study Kick-off	15-Sep-20	15-Sep-20	
H&H model & tools development	30-Jul-20	1-Feb-21	
Coordinate with Agencies, schedule & products	22-Sep-20	2-Oct-20	
Conduct NEPA Scoping/include meeting (15 Sept)	16-Sep-20	16-Sep-20	
ECO-PCX Endorse Review Plan	11-Sep-20	23-Oct-20	
MSC Review Plan Approval	26-Oct-20	7-Jan-21	
SAJ Post Review Plan	8-Jan-21	23-Feb-21	
Existing Conditions (207 days)			
Develop Risk Register	30-Jul-20	4-Sep-20	
Prepare Charrette Read Ahead Material	31-Aug-20	29-Sep-20	
Submit Charrette Read Ahead Material		29-Sep-20	
Conduct Planning Charrette (scalable)	30-Sep-20	5-Oct-20	
Problems and Opportunities	31-Aug-20	30-Sep-20	
Updated Risk Register	8-Sep-20	14-Sep-20	
Objectives and Constraints	1-Sep-20	22-Sep-20	
IPR 1/3, ECB FWO POOC	19-Nov-20	1-Dec-20	
Planning Model (HU) development	9-Oct-20	7-Jan-21	
Performance Measures (ecological)	30-Jul-20	8-Oct-20	
Prepare Planning Model Review Plan	8-Jan-21	23-Feb-21	
Prepare Planning Model Documentation	8-Jan-21	23-Feb-21	
Planning Model Review Plan Approval	24-Feb-21	6-Apr-21	
Planning Model Certification	7-Apr-21	30-Jun-21	
Alternatives (430 days)			
IPR 2/3, strategy for alts, measures w issues	2-Dec-20	15-Dec-20	
Management Measures	23-Sep-20	14-Oct-20	
Eval revised alts	21-Dec-21	18-Mar-22	
Screen measures	15-Oct-20	12-Nov-20	
Assemble initial alternative plans	13-Nov-20	11-Dec-20	
Model initial alts	14-Dec-20	21-Apr-21	
Screen initial alts & develop revised alts	8-Jun-21	10-Aug-21	
Model revised alts	11-Aug-21	20-Dec-21	
Screen revised alts & develop alt(s) to optimize	21-Mar-22	20-May-22	
Prepare Read Ahead Material for Alternatives Milestone	16-Dec-20	7-Jan-21	
Submit Read Ahead Material for Alternatives Milestone		7-Jan-21	
Conduct Alternatives Milestone Meeting		25-Jan-21	CW261
Alternatives MFR		28-Jan-21	CW060

Activity Name	Start	Finish	MS CW
Alternative Evaluation & Analysis (829 days)			
Cost Certification from Cost DX		14-May-24	
Respond to IEPR Comments	4-Aug-23	15-Sep-23	
Receive Final IEPR Report	3-Aug-23	3-Aug-23	
Initiate IEPR Contract		25-Jan-21	
Negotiate IEPR Contract	5-Jan-23	16-Feb-23	
Detailed Evaluation of Alternatives (460 days)			
Analysis of Final Array)	23-May-22	28-Nov-22	
Planning Level Cost, abbreviated CSRA	29-Jan-21	26-Mar-21	
CE/ICA, each objective, 4 accounts, 4 P&G criteria	8-Jun-21	6-Jul-21	
finish writing main, appendices, annexes	7-Jul-21	17-Aug-21	
Modeling of Alternative Plans	29-Jan-21	7-Jun-21	
Environmental effects of alternatives	29-Jan-21	26-Mar-21	
Tentative Selected Plan (538 days)			
Cost Schedule Risk Analysis	29-Nov-22	4-Jan-23	
Update Report, Report Synopsis, Risk Register, DMP and Report	5-Jan-23	9-Feb-23	
Update Report Synopsis, Risk Register, DMP and Report Consistent w/ TSP	18-Aug-21	22-Sep-21	
DQC Review of Draft Report	10-Feb-23	31-Mar-23	
Legal Review of Draft Report	10-Feb-23	14-Mar-23	
Read Ahead Material for Tentatively Selected Plan	3-Apr-23	14-Apr-23	
Submit TSP Milestone Package		14-Apr-23	CW262
TSP MFR		28-Apr-23	CW060
Conduct TSP Milestone Meeting		28-Apr-23	
Prepare Draft Report for Concurrent Review	1-May-23	22-May-23	
Prepare NOA	23-May-23	6-Jun-23	
Post Report to Web / send to VT, ATR, IEPR	23-May-23	30-May-23	
ATR of Draft Report	31-May-23	20-Jun-23	
IEPR of Draft Report	31-May-23	2-Aug-23	
Vertical Team Policy Review	31-May-23	27-Jun-23	
Public Review Period Start		6-Jun-23	CW250
NOA Filed in Federal Register		6-Jun-23	
Public Draft Report and NEPA Comment Period	7-Jun-23	24-Jul-23	
Responses to concurrent reviews	24-Jul-23	19-Sep-23	
Prepare Read Ahead for Agency Decision Milestone	19-Sep-23	11-Oct-23	
Feasibility Level Analysis (244 days)			
SAJ Submit Final Report Package (District Engineer)		30-Sep-24	CW160
ASA Policy Exception Letter Signed for LPP (If necessary)	11-Oct-23	25-Oct-23	
Submit Read Ahead Material for Agency Decision Milestone		25-Oct-23	
Agency Decision Milestone		8-Nov-23	CW263

Activity Name	Start	Finish	MS CW
Agency Decision MFR		14-Nov-23	CW060
HQ Finalize Comments and Project Guidance Memo	14-Nov-23	6-Dec-23	
Additional Engineering, Economic, Real Estate and Environmental Analysis (if necessary)	6-Dec-23	14-May-24	
Complete Final FR/EA/EIS (ROD)	14-May-24	28-Jun-24	
Final Report Complete		16-Sep-24	
Prepare Final Report Package	16-Sep-24	30-Sep-24	
DQC of Final Report	28-Jun-24	7-Aug-24	
ATR of Final Report	7-Aug-24	16-Sep-24	
Chief's Report Milestone (237 days)			
Briefing, Readiness for S&A Review	2-Dec-24	3-Dec-24	
Prepare Package for State and Agency Review	3-Dec-24	20-Dec-24	
State and Agency Review of Final PIR/EIS and Draft Chief's Report	3-Dec-24	6-Jan-25	
Response Letters to S&A comments (If required)	6-Jan-25	21-Jan-25	
OWPR & RIT Coordination of Final Report Packet & Chief's Report	21-Jan-25	21-Feb-25	
Vertical Team Review of Final Report Package	30-Sep-24	2-Dec-24	
Release Proposed Chief's Report		3-Dec-24	CW245
Chief Signs Report of the Chief of Engineers (130 days)			
Chief Signs Report of the Chief of Engineers		7-Mar-25	CW270
Chief's Report Forwarded to ASA(CW) (RIT TASK)	7-Mar-25	21-Mar-25	
ASA(CW) Signs Record of Decision (ROD) (before goes to Congress)		21-Mar-25	CW230
Feasibility Report Transmittal to Congress	21-Mar-25	10-Sep-25	
Feasibility Report to Congress		10-Sep-25	CW180

APPENDIX C: CERTIFIED PROJECT COST ESTIMATE

TBD

APPENDIX D: PUBLIC INVOLVEMENT PLAN

Public outreach is a process by which interested and affected individuals, organizations, agencies and governmental entities are informed of a project and its goals, and have the opportunity to participate in the decision-making process. Public outreach supports the exchange of ideas and information among individuals and groups, which is critical to resolving the challenges involved in implementing CERP. Outreach work will be conducted with the input and involvement of both the Corps and SFWMD Outreach Project Delivery Team members. In addition to relying upon standard methods of communication and involvement, the outreach activities for the Biscayne Coastal Wetlands Project may include activities aimed at informing and engaging minorities and other traditionally under-represented communities, socially and economically disadvantaged persons, including those with a limited ability to communicate in English.