

Lainhart Dam on
Loxahatchee River

Loxahatchee River Watershed Restoration Project (LRWRP)

Project & Rulemaking Overview

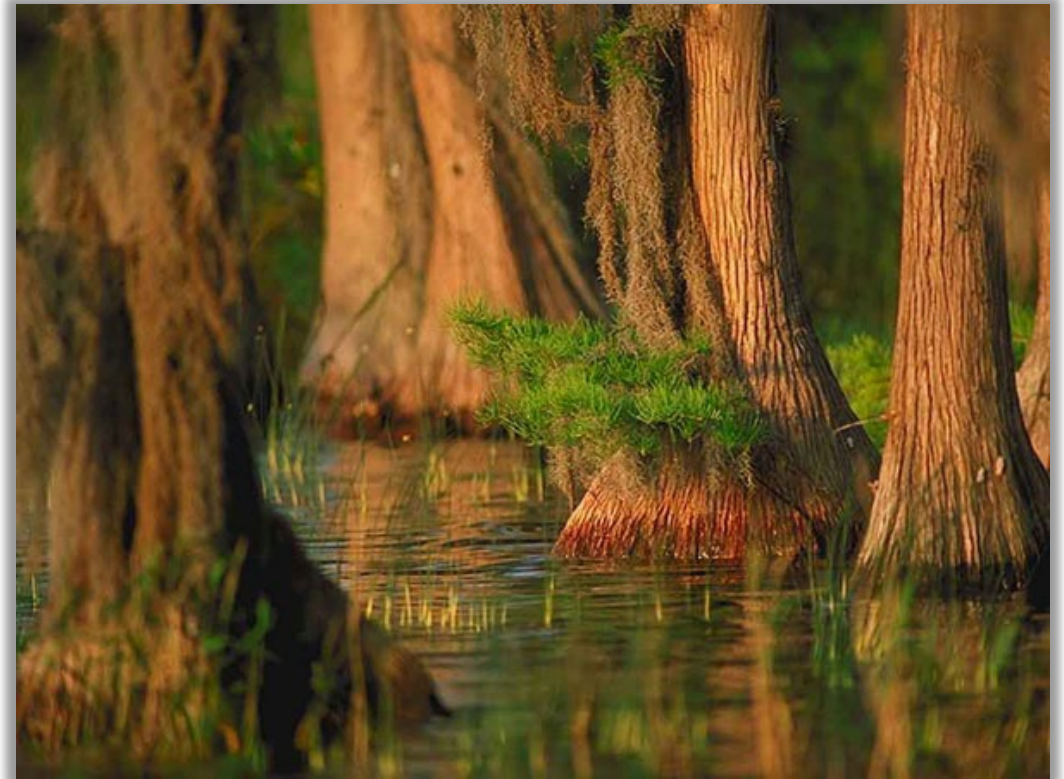
Loxahatchee River Management Coordinating Council Meeting
June 27, 2022



Natalie Kraft
Lead Scientist
Applied Sciences Bureau

Project Purpose & Objectives

- Improve freshwater flows to the national designated Wild and Scenic Northwest Fork of the Loxahatchee River
- Restore estuarine communities
- Increase spatial extent and function of wetlands
- Restore watershed connectivity to improve hydrology
- Restore abundance and diversity of native plant and animal species in the watershed



Authorized Plan: Alt 5R

Flow Way 3

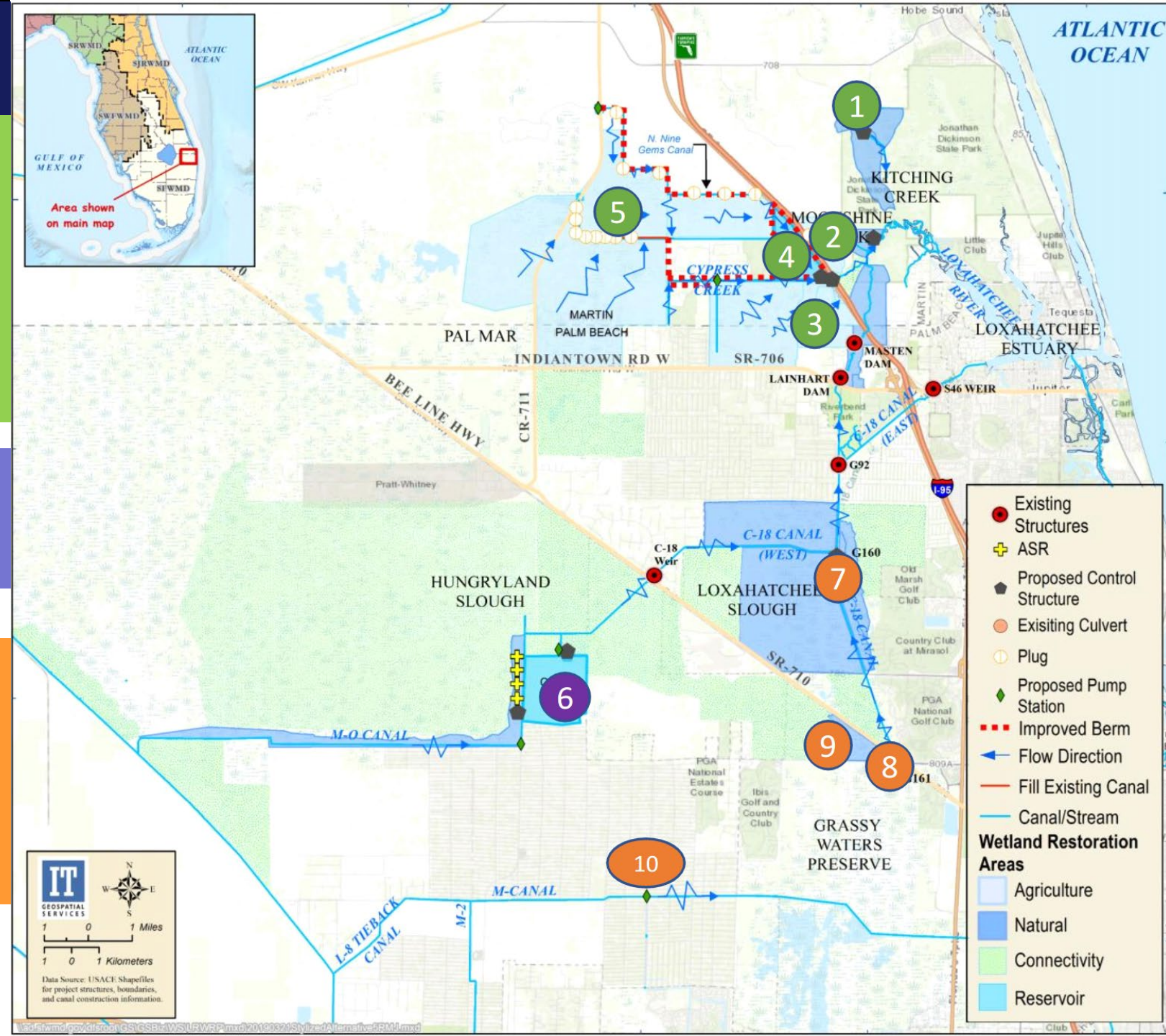
- 1 - Kitching Creek
- 2 - Moonshine Creek/Gulfstream East
- 3 - Cypress Creek Canal
- 4 - Gulfstream West
- 5 - Palmar East

Flow Way 2

- 6 - C-18W Reservoir (9,500 ac-ft & 4 ASR wells)

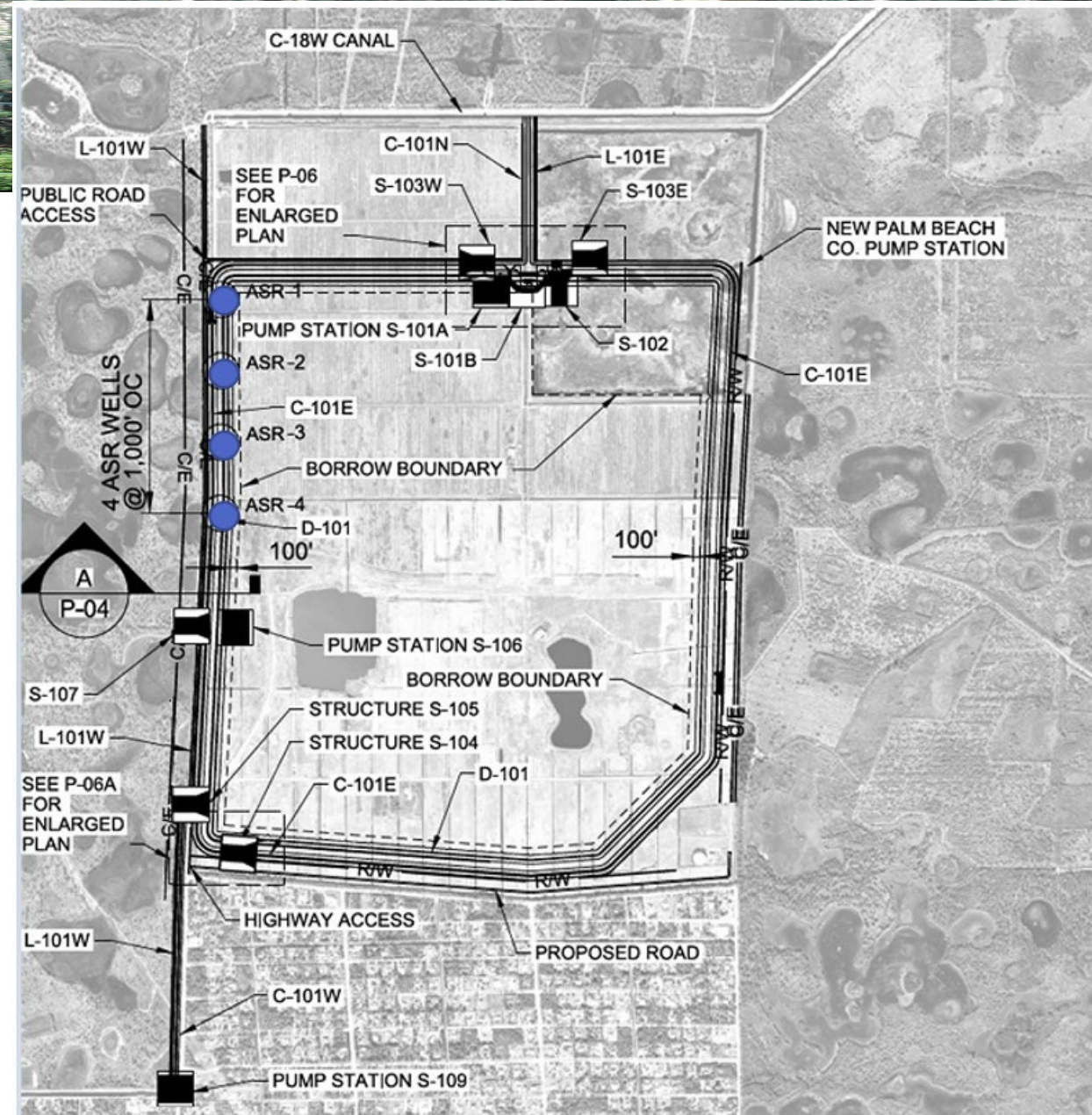
Flow Way 1

- 7 - G-160 Structure
- 8 - G-161 Structure
- 9 - Grassy Waters Triangle
- 10 - M-1 Pump Station



C-18W Reservoir ASR Wells

- Includes four ASR wells, 1,000 ft apart
- Each well at 5 mgd, total capacity 20 mgd (32 cfs)
- Completed in the Upper Floridan aquifer or Avon Park permeable zone
- Assumes a maximum “bubble” of ~30,000 ac-ft
- Reservoir design is still conceptual, well locations could change
- Exploratory test well has yet to be installed



Project Benefits

- Northwest Fork of Loxahatchee River target flows
 - 91% dry season
 - 98% wet season
- Promotes recovery of riverine freshwater species and estuarine zones for fish, seagrass, oysters and other protected species
- Improves watershed wetland hydrology
 - 17,000 acres existing or former agricultural lands
 - 10,000 acres existing natural areas
- Improves/maintains ecological connectivity for ~78,000 acres
- Provides additional recreation opportunities





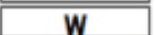


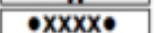
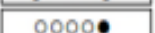

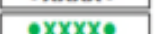
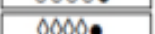


Project Schedule

INTEGRATED DELIVERY SCHEDULE 2021 UPDATE **FINAL DRAFT**

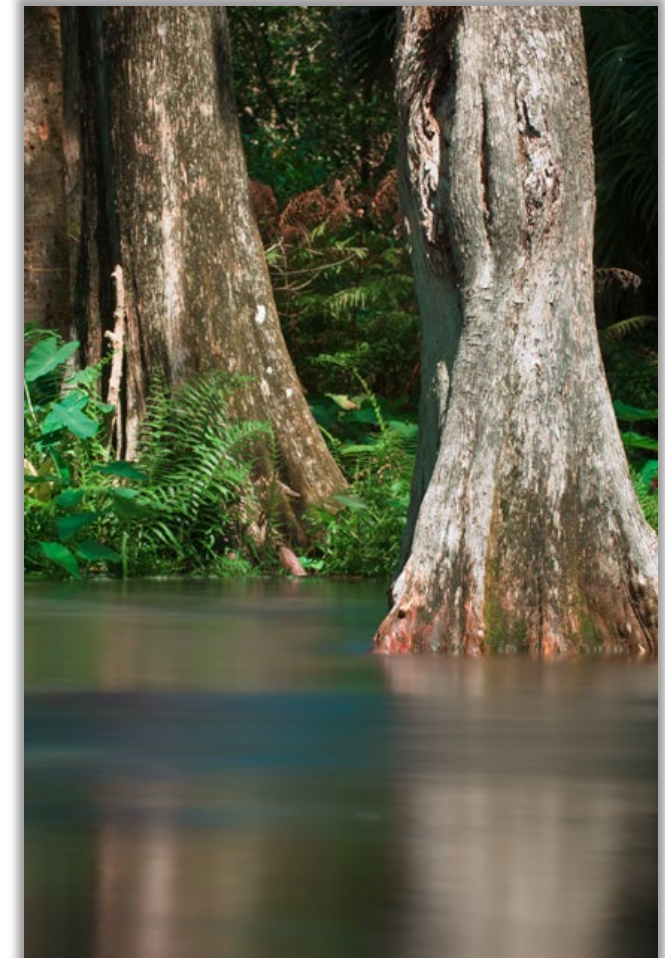
SOUTH FLORIDA ECOSYSTEM RESTORATION | CENTRAL AND SOUTHERN FLORIDA COMPREHENSIVE EVERGLADES RESTORATION PLAN

PROJECT LOCATOR	YELLOW BOOK COMPONENTS	PROJECT	FISCAL YEAR DESIGN AND CONSTRUCTION COSTS (DOLLARS IN MILLIONS) ²												
			2020 W	2021	2022 W	2023	2024 W	2025	2026 W	2027	2028 W	2029	2030 W	2031	2032W
		Planning Estimates Federal Construction Cost (SFER)++	\$ 235	\$ 250	\$ 350										
		Planning Estimates Non-Federal Construction Cost (SFER)++	\$ 363	\$ 258	\$ 329	\$ 828	\$ 814	\$ 964	\$ 1,275	\$ 983	\$ 731	\$ 468	\$ 256	\$ 154	\$ 88
		Planning Estimates Total Construction Cost (SFER)++	\$ 598	\$ 508	\$ 679										
		CERP GENERATION 4 (AUTHORIZED IN WRDA 2020; PPA ANTICIPATED IN 2022)													
P16	K, OPE	Loxahatchee River Watershed Restoration Project			●●●●●										
		Flow-way 1 (M-1 Canal, G160/161, Grassy Water Preserve)				●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●				
		Flow-way 2 (C-18 Reservoir, ASR Wells)				●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	
		Flow-way 3 (Gulf Stream West, Nine Gems, Culpepper, Moonshine, Hobe Grove, Kitching Creek)			●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	

	Non-federal		++	Does not reflect budgetary development dollars or capability		Design, PPA Execution, Real Estate Acquisition
	Federal		W	Expected WRDA year		Construction (Initiated by award of construction contract)
	Fiscal Closeout		●XXXX●	Project Implementation Report		Operational Plan
	Monitoring		●XXXX●	Project Implementation Report with Exemption		Operational Testing and Monitoring Period

Water Protection Overview

- Water resource protection mechanisms
 - Minimum flows and minimum water levels (MFLs)
 - Water reservations
 - Consumptive use permitting rules
 - Water shortage rules
- WRDA 2000 & Section 373.470, F.S., authorize use of reservation or consumptive use permitting rules
- Water made available by a CERP project for the natural system must be protected



Restricted Allocation Areas

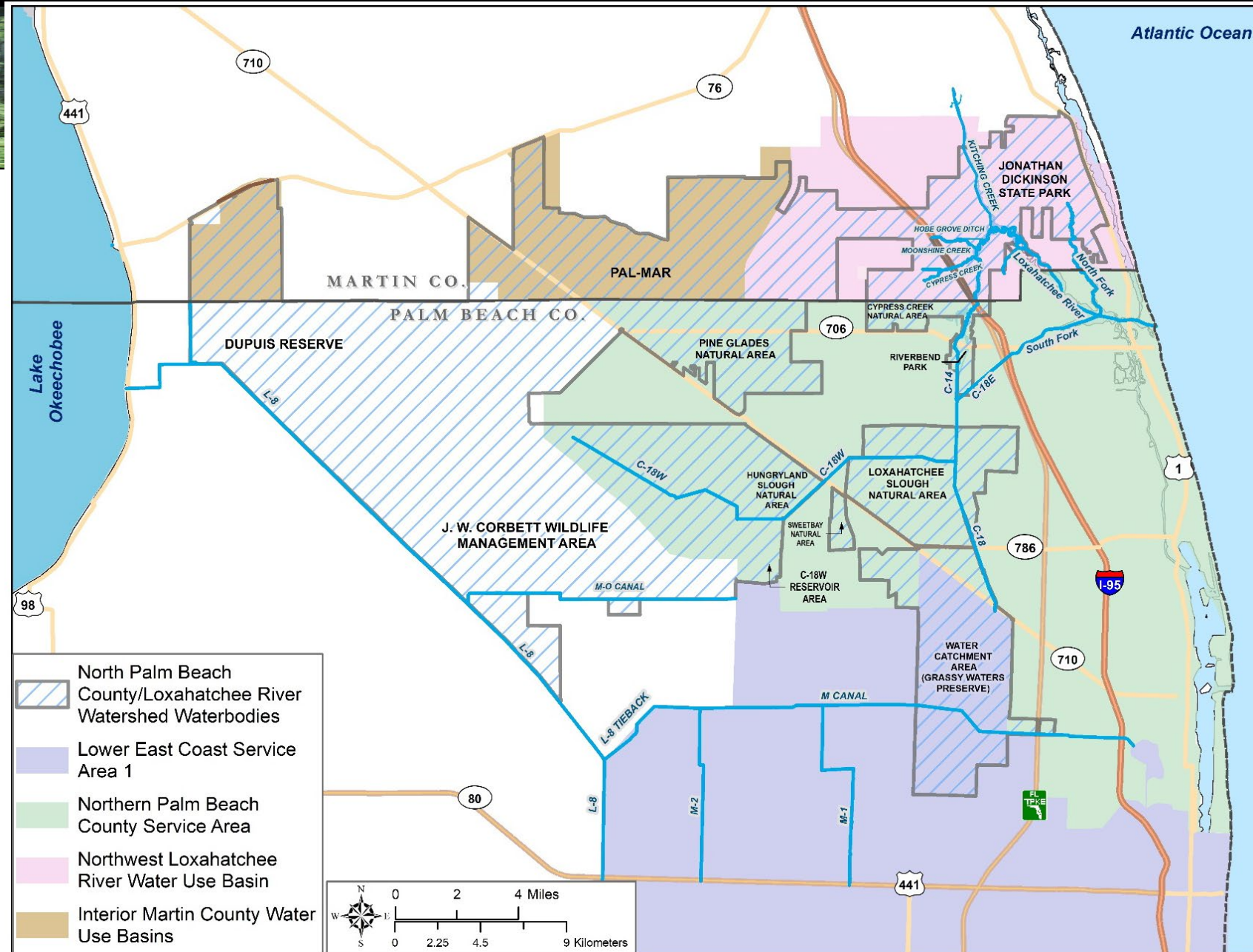
- RAAs are listed in Section 3.2.1 of the Applicant's Handbook for Water Use Permit Applications within the South Florida Water Management District (Applicant's Handbook)
- RAAs are defined geographic areas where use of specific water supply sources is restricted
- RAAs are adopted for a variety of reasons, including:
 - Where there is insufficient water to meet the projected needs of a region
 - To address regional, resource-specific concerns
 - As part of MFL recovery or prevention strategies
- Requests for water allocations in these areas must comply with RAA criteria and all other applicable criteria listed in the Applicant's Handbook

Surface Water Protection

3.2.1 Restricted Allocation Areas

E. Lower East Coast Regional Water Availability

Figure 3-2. North Palm Beach County/Loxahatchee River Watershed Water Bodies and Major Integrated Conveyance Canals.

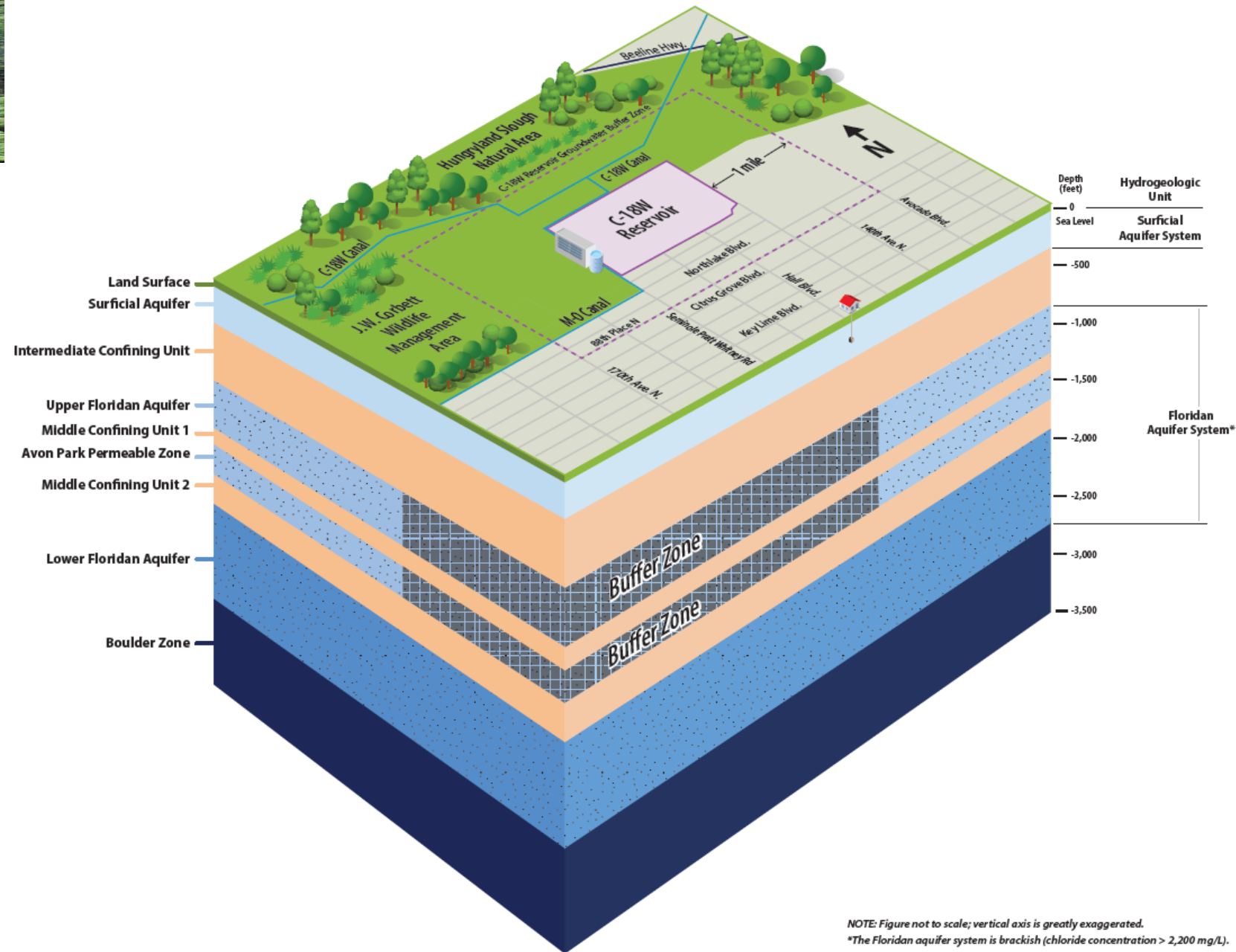


ASR Groundwater Protection

3.2.1.G

Utilization of the Upper Floridan Aquifer or Avon Park Permeable Zone Near the C-18W Reservoir

Figure 3-4. Protected areas in the UFA and APPZ related to the ASR wells at the C-18W Reservoir.



Discussion

Loxahatchee River in
Palm Beach County