



Water Reservation Rule

Governing Board Meeting

October 8, 2020

Don Medellin
Applied Sciences Bureau

Water Reservations

Section 373.223(4), F.S.

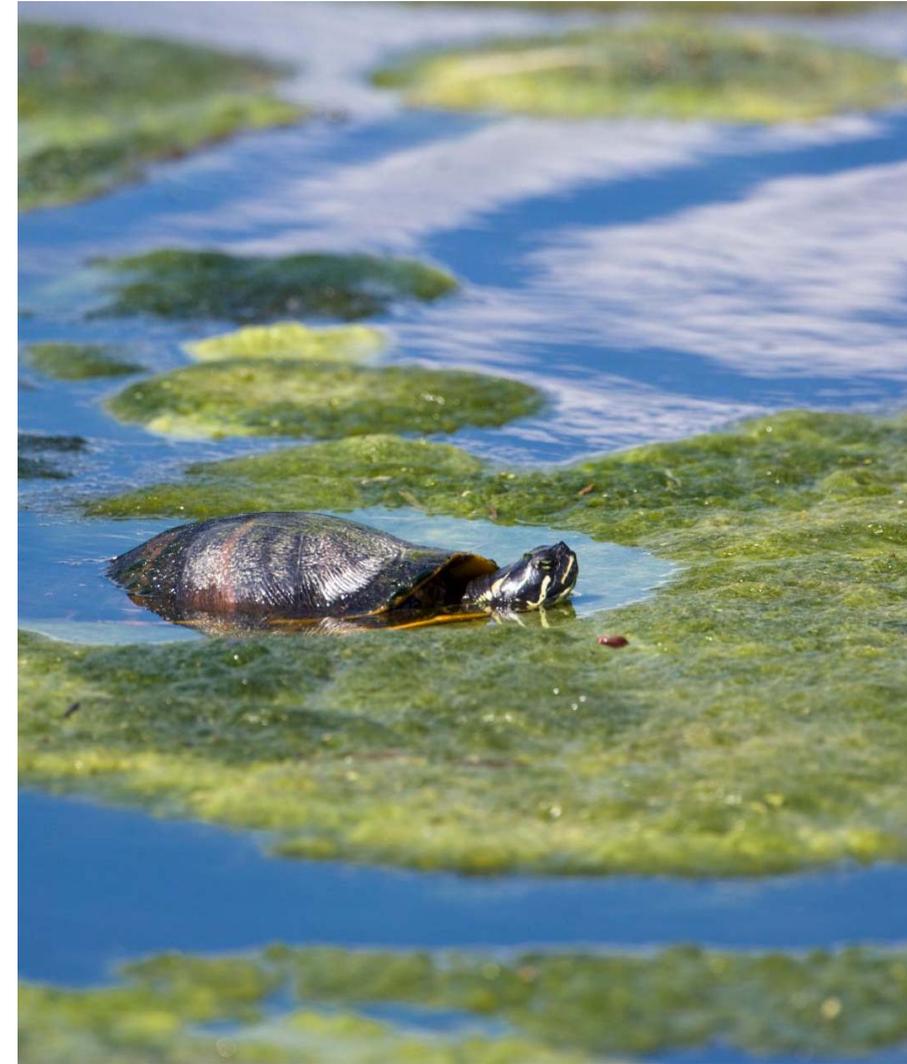
- Reserve water for the protection of fish and wildlife or public health and safety
- Prevent use of reserved water by consumptive users
- Existing legal users are protected
- Reservation may be used for the protection of fish and wildlife to aid in the restoration of natural systems



Osprey (*Pandion haliaetus*) with bass (*Micropterus* sp.) on Merritt's Mill Pond.
Source: <http://nykography.weebly.com>

Water Reservations

- Subject to periodic review and revision in the light of changed conditions
- Prospective reservations are permissible
- District focused on reserving water needed to meet the targets for approved CERP projects
- Legal protection of the water is required before the District and the USACE can execute a Project Partnership Agreement (PPA) to cost-share the construction of CERP project features



Water Reservations Do Not...

- Establish an operating regime
- Drought-proof the natural system
- Ensure wildlife proliferation
- Ensure water quality improvement



S-67 water control structure (replaced G-85 structure)
Source: SFWMD

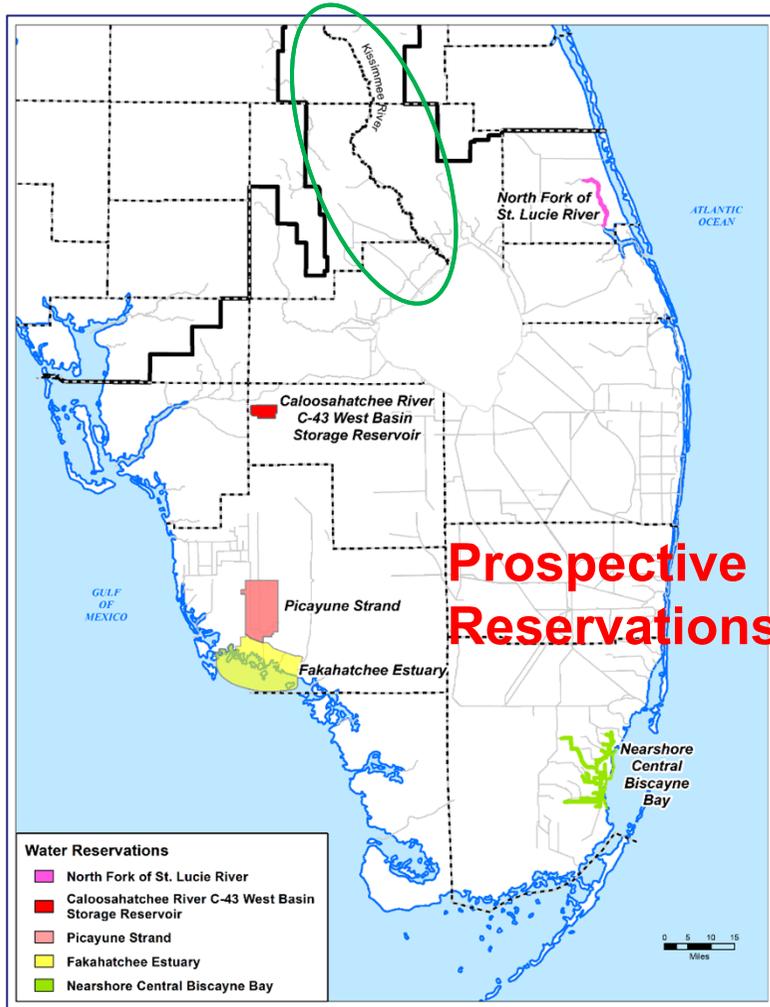


Lake Okeechobee under drought conditions
Source: SFWMD



Birds in a stormwater treatment area
Source: SFWMD

Water Reservations Adopted in SFWMD

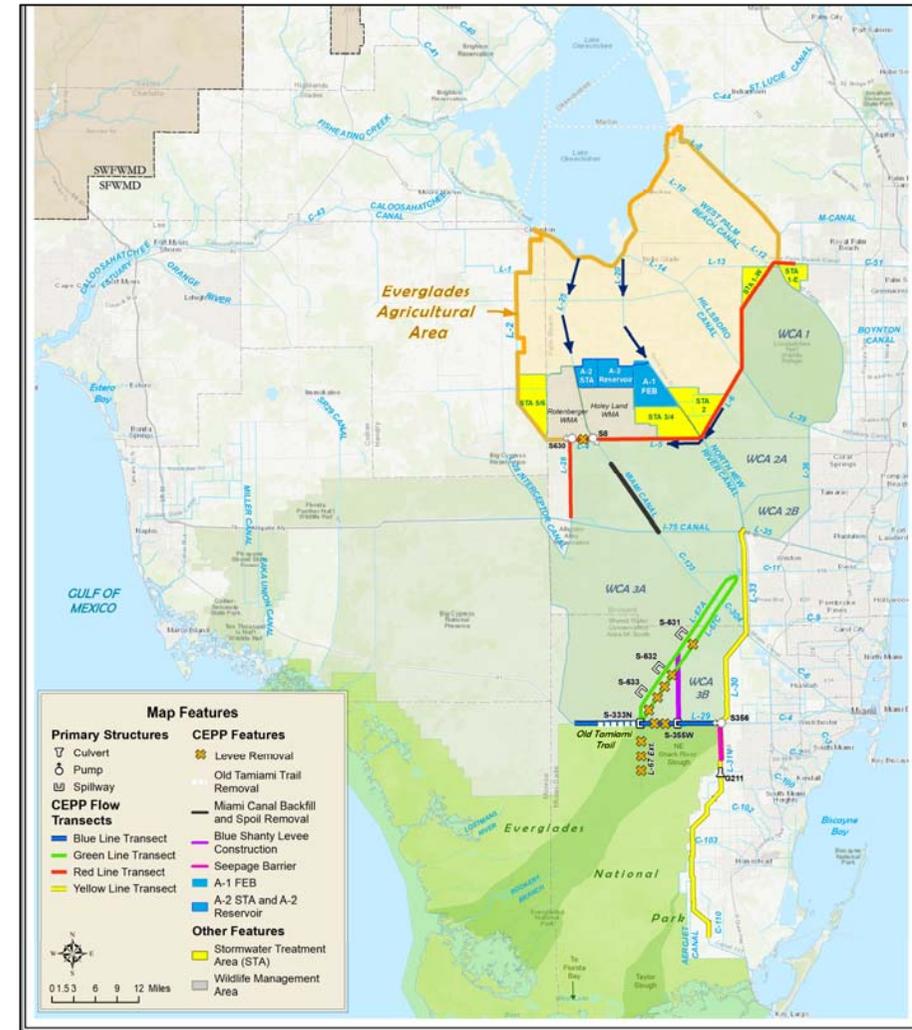


- Fakahatchee Estuary
- Picayune Strand
- Nearshore Central Biscayne Bay
- North Fork of the St. Lucie River
- **Caloosahatchee River C-43 West Basin Storage Reservoir**

- *Cover ~172,074 acres Districtwide*
- *Kissimmee River and Chain of Lakes water reservation is under development*

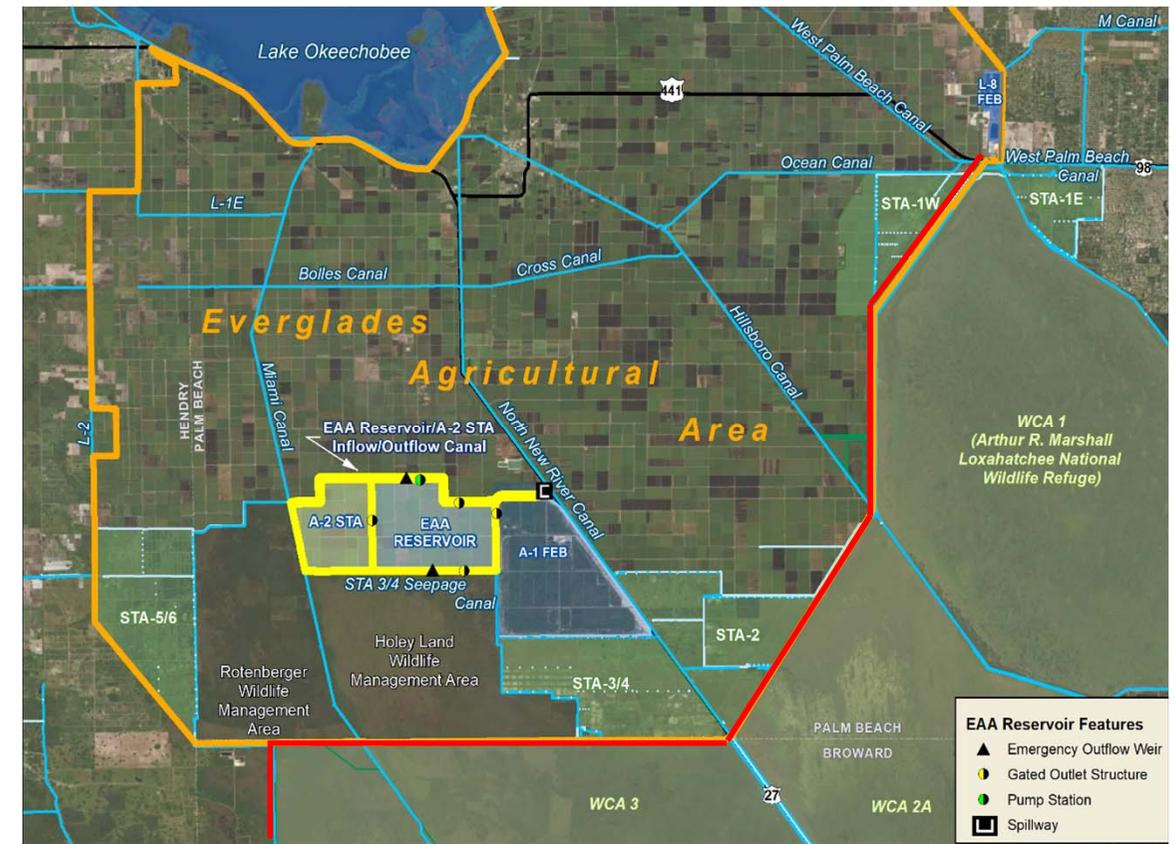
Project Purpose

- Purpose of the Central Everglades Planning Project is to improve the quantity, quality, timing, and distribution of water flows from Lake Okeechobee to the Central Everglades, Everglades National Park, and Florida Bay
 - Decreases damaging discharges to the northern estuaries
 - Increases restoration flows to the Everglades
- The EAA Reservoir is the main storage feature of CEPP, which also includes additional treatment and conveyance features as described in the:
 - Project Implementation Report (2014)
 - Post Authorization Change Report (2018)
 - Environmental Impact Statement (2020)



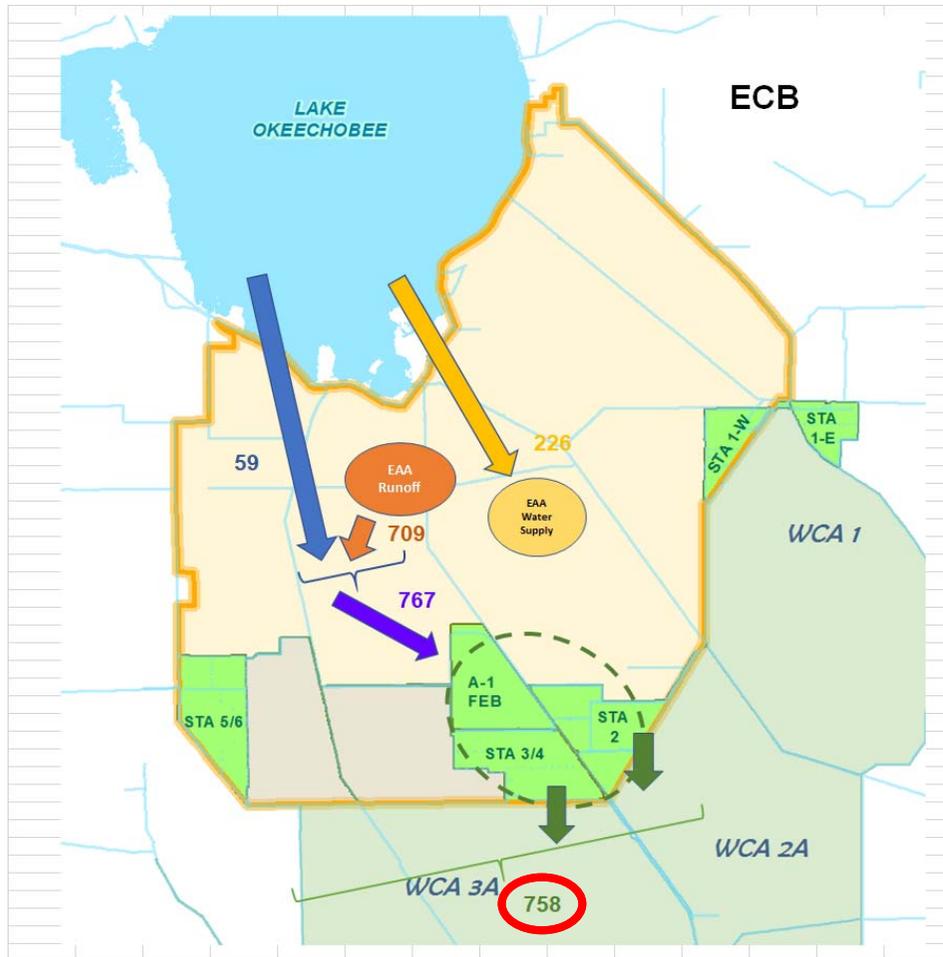
EAA Reservoir Flows

- The additional 240,000 acre-feet of effective detention attenuates EAA basin runoff and Lake Okeechobee regulatory releases
- Generally, flows are attenuated during the wet season and carried over into the dry season
- Based on model simulations, on average annual water year (May-Apr), 825,000 acre-feet of water from the EAA Reservoir flows to the A-2 STA, STA-2, STA-3/4, and/or A-1 FEB
- When combined with existing flows from Lake Okeechobee, EAA runoff, the A-1 FEB, and the STAs, the additional water released across “the redline” is 370,000 acre-feet on average annually

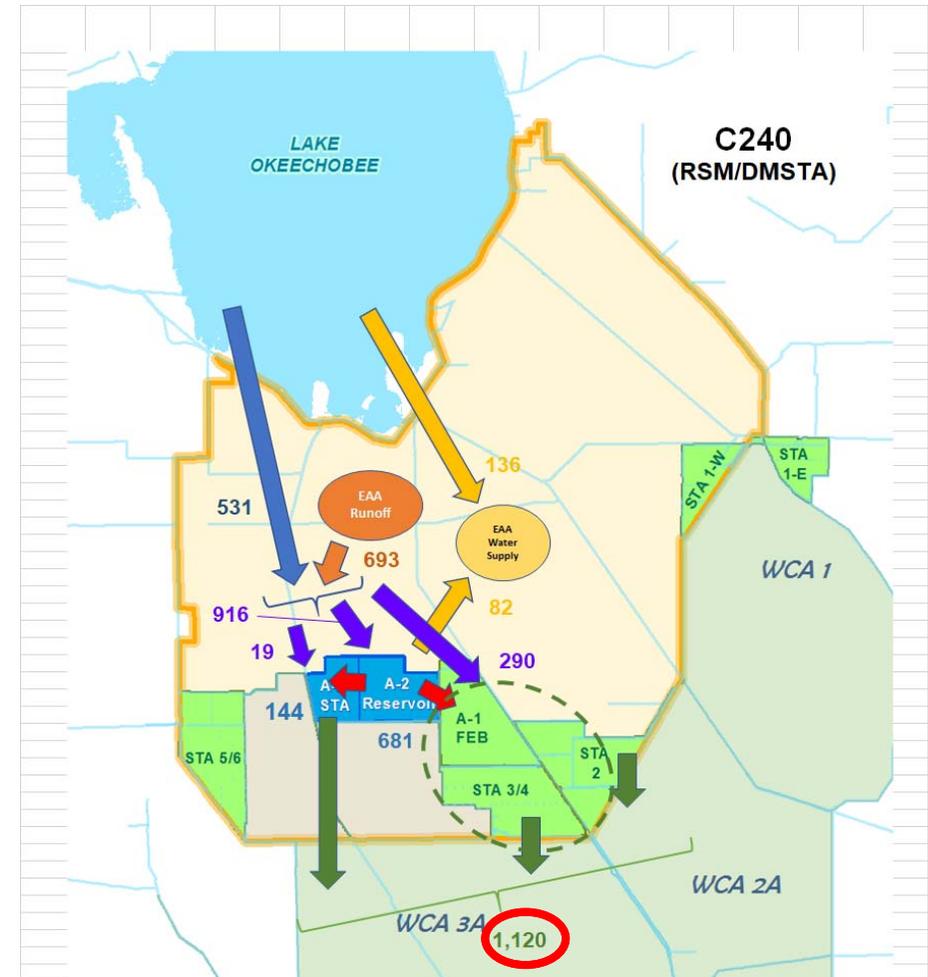


Current versus Future Flows

Current Condition



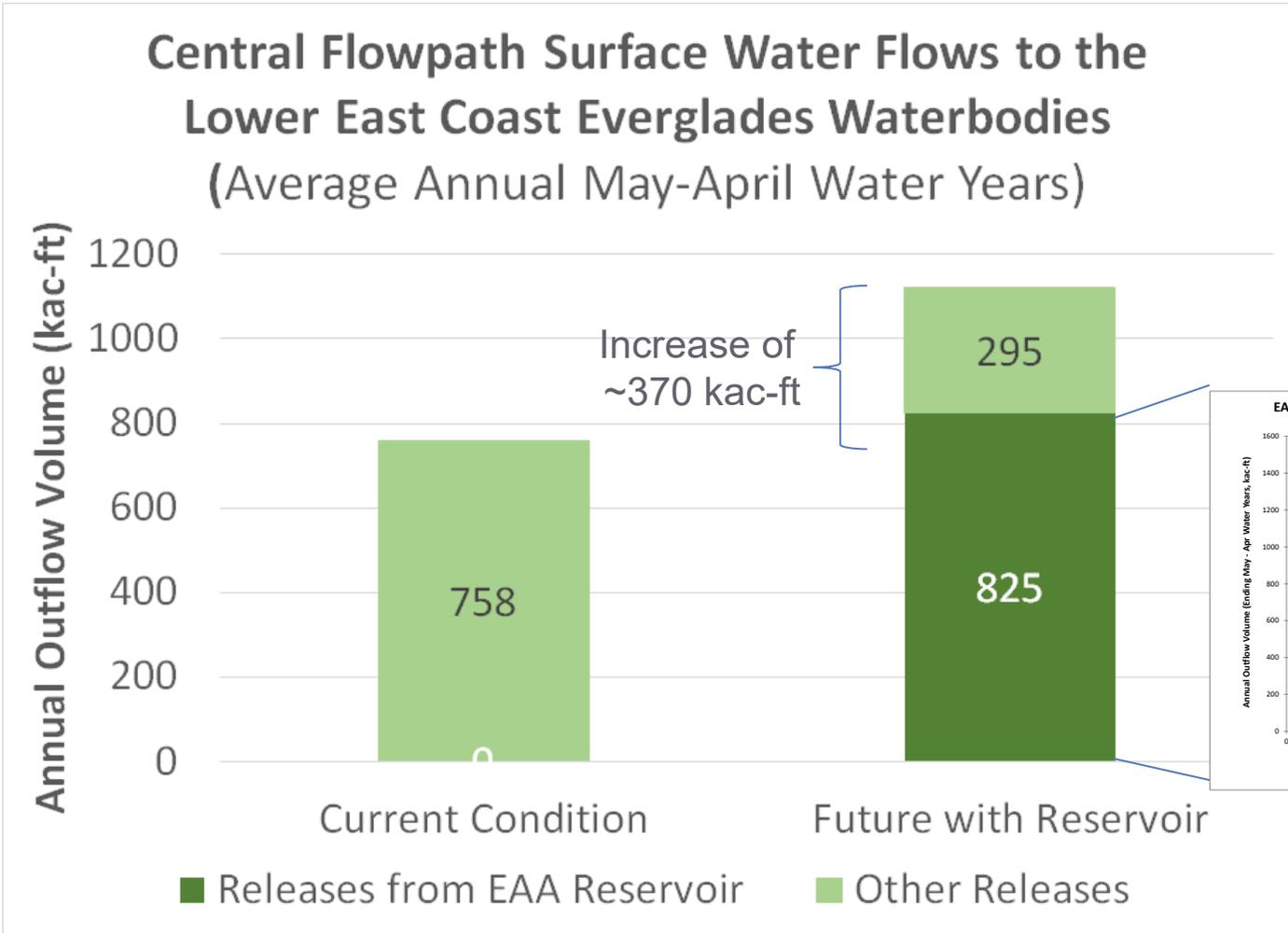
Future Condition



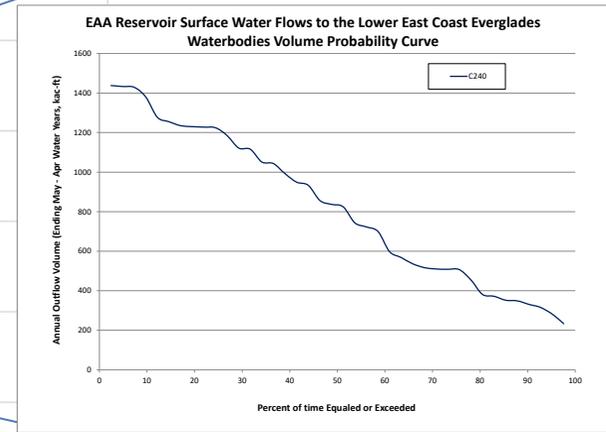
Model Simulations of EAA Reservoir Performance



Flow toward the "Redline" →

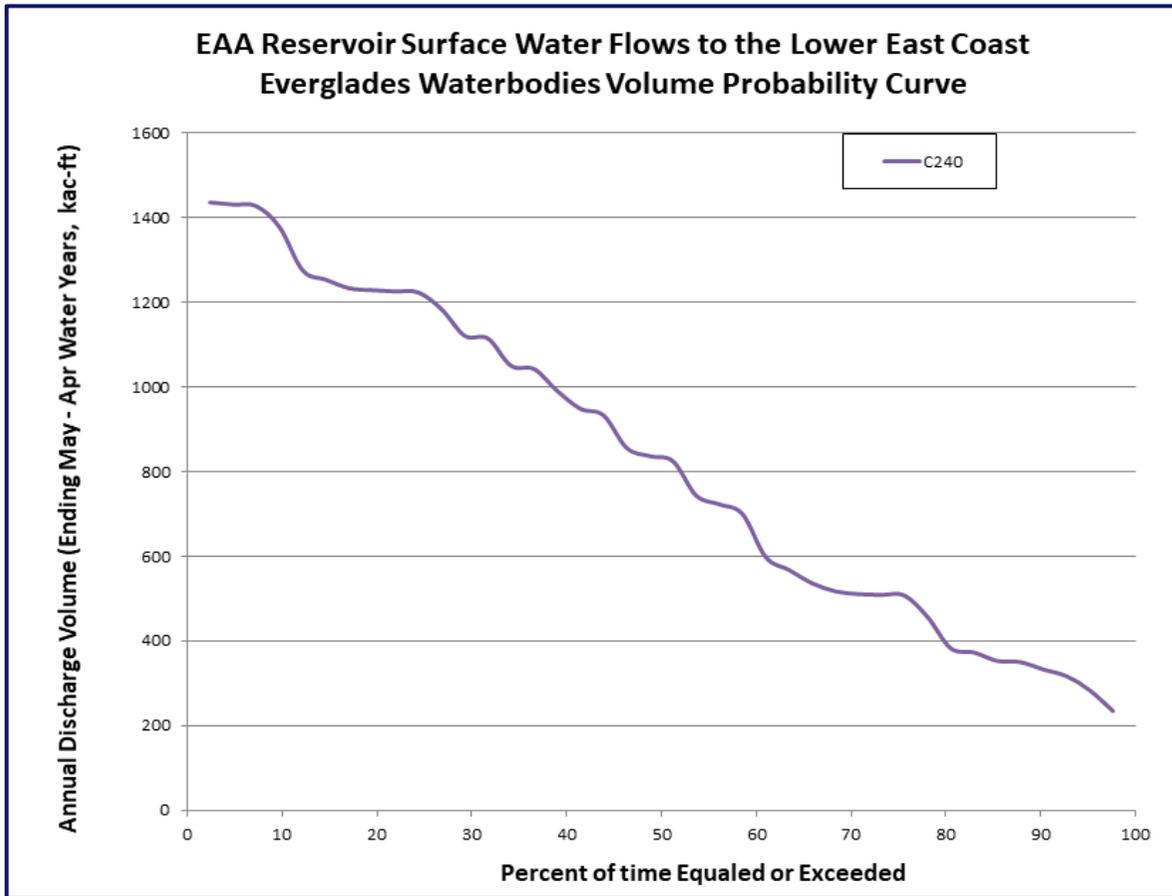


Informed by both RSM (Hydrologic) and DMSTA (Water Quality) Modeling

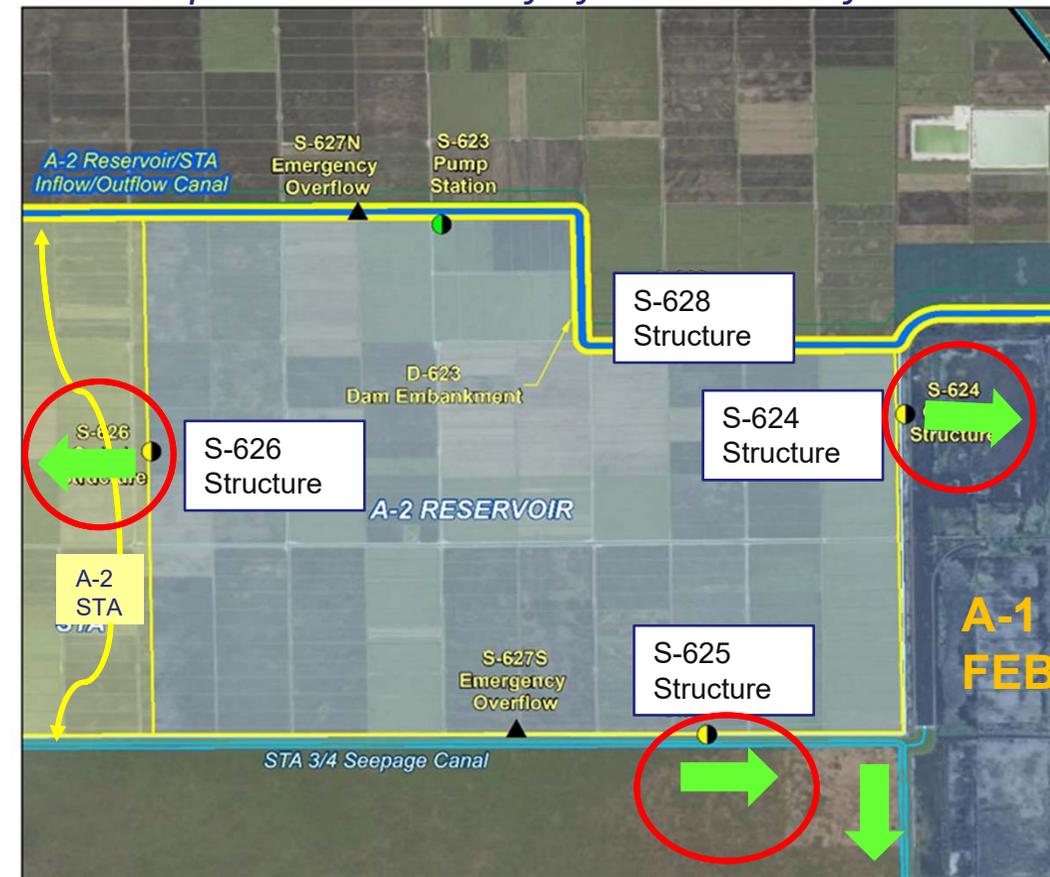


Water Prospectively Reserved for Fish and Wildlife

Average annual water year discharge of 825 kaf predicted to benefit fish and wildlife

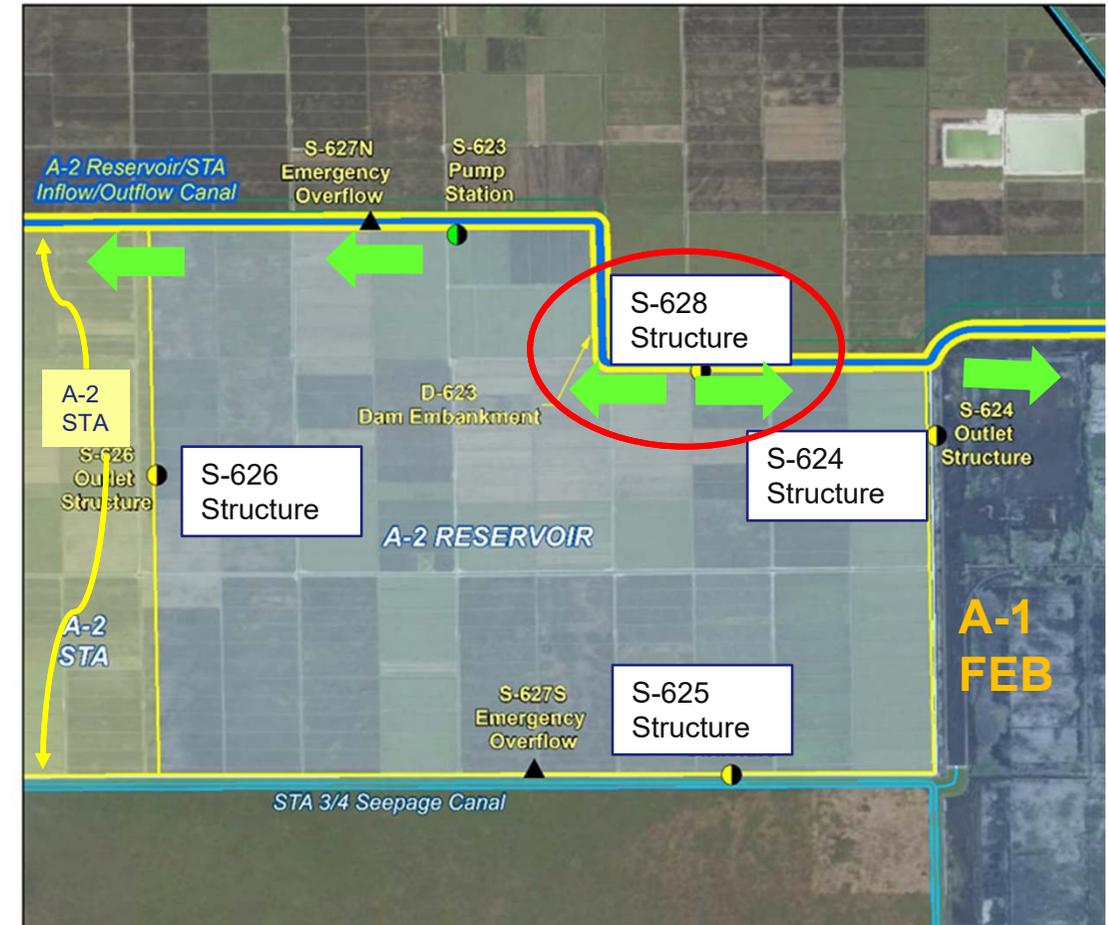
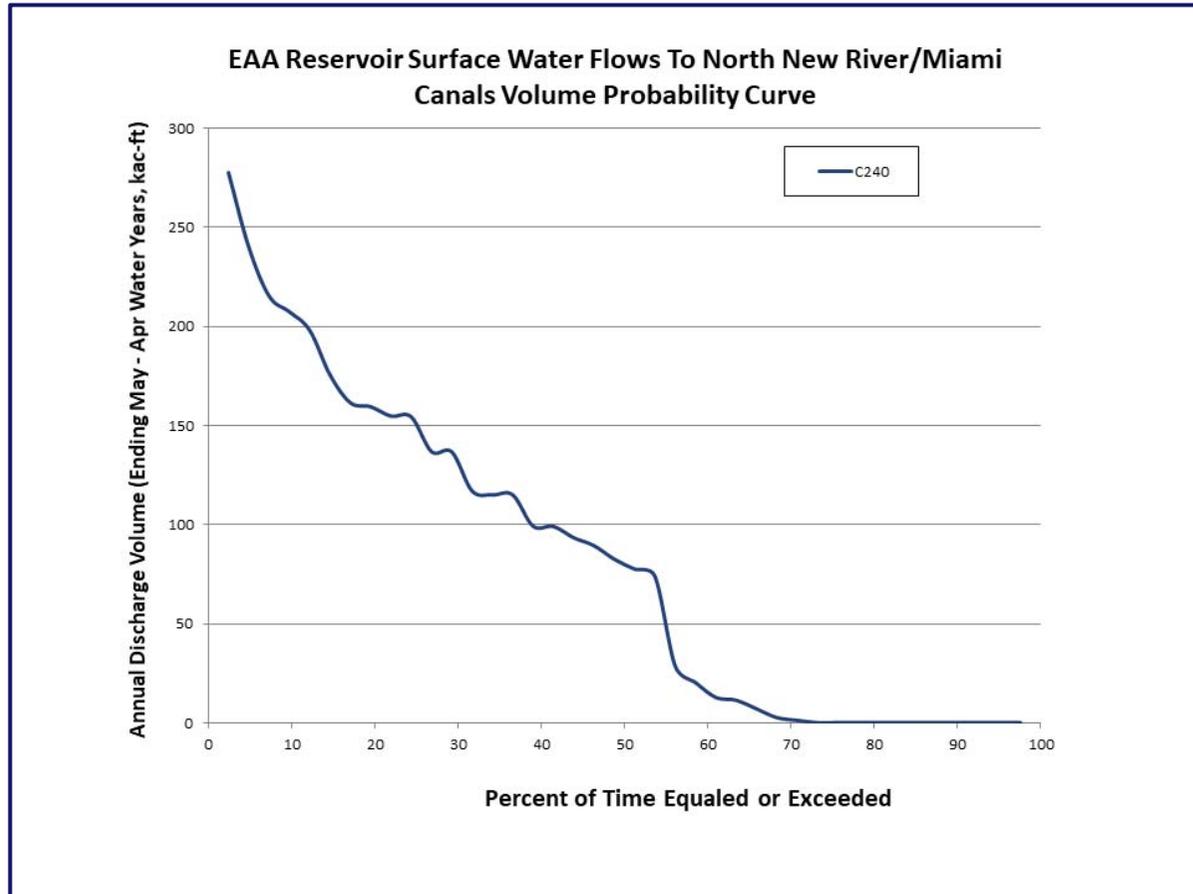


Volume of surface water discharged from reservoir through structures S-624, S-625, and S-626



Volume of Water NOT Reserved for Fish and Wildlife

Average annual water year discharge of 82,000 kaf predicted to North New River and Miami Canals



Volume of surface water discharged from reservoir through structure S-628

Technical Aspects of Defining Water to be Reserved

- Identify the “reservation waterbody”
- Characterize the hydrology of the waterbody
- Identify water needed for key indicator species
- Identify linkages between hydrology and fish and wildlife
- Define the water needed for the protection of fish and wildlife



Florida Panther



Summary of Modeled Ecological Benefits by Key Indicators

Taxa	Function	Benefit of the EAA Reservoir
	Prey for snail kites	20-50% Improvement
	Major energy source	20-50% Improvement
	Major energy source	10-20% Improvement

Taxa	Function	Benefit of the EAA Reservoir
	Ridge and slough habitat indicator	10-20% Improvement
	Keystone species	10-20% Improvement

Key Project Milestones for Water Reservation

- April 9, 2020 - Governing Board authorized Notice of Rule Development
- April 21, 2020 - Draft technical document completed for peer review
- May 29, 2020 - Public Peer Review Session conducted
- June 18, 2020 - Final Peer Review Report received
- July 14, 2020 - Rule Development Workshop #1
- August 6, 2020 - Rule Development Workshop #2



Public Comments – Stakeholder Letters

- Audubon Florida
- City of West Palm Beach
- Everglades Foundation
- Florida Crystals
- Florida Department of Agriculture and Consumer Services
- Florida Farm Bureau
- Lake Worth Drainage District
- Palm Beach County
- Seminole Tribe of Florida
- Southeast Florida Utility Council
- South Florida Wildlands Association
- United States Sugar Corporation
- United States Geological Survey

Stakeholder Concern

➤ Savings Clause –

- Analysis will need to be updated with new lake schedule
- Assurance Existing Legal Users and future water supply will not be impacted
- Not clear if reservoir reduces or increases water supply

District Response

➤ Savings Clause –

- Modified draft rule to indicate
 - It's a prospective reservation
 - **ALL** reservation criteria will be revised before the project is deemed operational
 - Any differences in water quantity will also be reconciled
- A new savings clause analysis will be performed as per federal requirements
- Statement added to technical document- staff's analysis showed that Existing Legal Users are not contrary to the project intent

Stakeholder Concern

- **Quantity of water to be reserved inconsistent with PIR (825K and 370K ac-ft)**
 - Limit reservation to the 370kaf in Project Implementation Report (PIR)
 - Limited description of the analysis to determine 825kaf
 - Hold a workshop to explain the analysis
 - Unclear is 825kac-ft was derived as the quantity of water to be reserved

District Response

- Revised draft rule and technical document to explain relationship between 825kaf discharges from EAA Reservoir and 370kaf increase in flows to Everglades
- Added a new appendix - provides a detailed explanation and bridge between the two methods to quantify water
 - Appendix F – Model Documentation Report

Stakeholder Concern

- **Reservation is Premature – LOSOM and Project Operations unknown**
 - Wait until Lake Okeechobee System Operating Manual (LOSOM) process is completed
 - Construction not planned for years – What is the rush?
 - Future operations of the EAA Reservoir are not clear

District Response

- Revised draft rule - reservation will be revised in light of changed conditions
- Revisions to technical document:
 - Water must be legally protected before entering into a cost-share agreement with USACE
 - Added information regarding Draft Project Operating Manual and process to establish a Final Project Operating Manual
 - Added information to discuss reservoir operations and dependency on Lake Okeechobee schedule revision

Stakeholder Concerns

- **Reservation should identify, quantify and reserve contributing Lake Okeechobee flows to reservoir**

District Response

- Timing and distribution from the reservoir benefits fish and wildlife in Everglades
 - Reservoir discharges/outflow is connected to the underpinning associated with the science
 - Links hydrology/biology needed for reservation
 - Reserved water in the reservoir is inherently dependent on flows from the lake to meet environmental benefits
- EAA Basin runoff and Lake Okeechobee water-both are sources of inflows to EAA Reservoir

Stakeholder Concerns

- **Concerns about water supply reliability – water not reserved**
 - Protections for existing legal users, including public water supply
 - Can't increase water supply later – after Project Partnership Agreement signed with the U.S. Army Corps of Engineers
- **Doesn't specify the volumes of water reserved or not reserved**

District Response

- Technical document revised to address water supply
- **ALL** reservation criteria will be revised before the project is deemed operational
- Rule revised to state - any differences in water quantity will be reconciled later
- Statute gives discretion to District
- Only required to estimate the volumes of water to be reserved, to the extent practical
- All Water reserved is a narrative quantification

Stakeholder Concern

- **Add a sunset provision in the rule within 5 years or indicate rules are interim**
 - Reinitiate rulemaking for re-evaluation
 - Update analysis

District Response

- A sunset provision does not meet federal requirements to enter into a Project Partnership Agreement with the U.S. Army Corps of Engineers
- Clarified the reservation rule is prospective and no water is available until operation is certified by the Governing Board

EAA Reservoir Reservation Schedule

Project Milestone	Date	
Public Peer Review Session	May 29, 2020	✓
Rule Development Workshop #1	July 14, 2020	✓
Rule Development Workshop #2	August 6, 2020	✓
Notice of Proposed Rule*	October 8, 2020	
Rule Effective Date **	December 6, 2020	

*Governing Board action required

** Provided no changes are made and no request for public hearing is timely received

Public Comment on Item 31

If you're participating via Zoom –
use the Raise Hand feature

If you're participating via Phone –

3:00

*9 Raises Hand

*6 Mutes/Unmutes

Governing Board

Questions / Discussion



Recommended Action

Publish Notice of Proposed Rule and Adopt Amendments to Rules, 40E-10.021, 40E-10.031, 40E-10.061, and 40E-2.091, F.A.C., and the “Basis of Review for Water Use Permit Applications within the South Florida Water Management District” to establish a prospective water reservation and associated permitting criteria for the EAA Reservoir (provided no changes are made and no request for public hearing is timely received).

THANK YOU

EAA Reservoir - Reservation Project Team

- Jennifer Brown
- Michael “Clay” Brown
- Emily Canney
- Mark Cook
- Toni Edwards
- Natalie Kraft
- Dong Yoon Lee
- Don Medellin
- Brenda Mills
- Matt Morrison
- Alberto Naya
- Sue Newman
- Laura Scala-Olympio
- Jan Sluth
- Leslye Waugh

Managers:

- Jessica Frost
- Lawrence Glenn
- Jennifer Leeds
- Jennifer Reynolds
- Fred Sklar
- Simon Sunderland
- Walter Wilcox