Appendix C

Pertinent Correspondence

SFWMD Section 203 Everglades Agricultural Area Southern Reservoir and Stormwater Treatment Area

How to comment

- Email Stacie.J.Auvenshine@usace.army.mil
- Mail Stacie Auvenshine, U.S. Army Corps of Engineers Jacksonville District, P.O. Box 4970 Jacksonville, FL 32232-0019

INDIAN RIVER LAGOON

Now's the time to comment on Lake O reservoir plan

Tyler Treadway
Treasure Coast Newspapers
USA TODAY NETWORK - FLORIDA

The Army Corps of Engineers wants to know what you think about the plans for the reservoir being designed to help cut Lake Okeechobee discharges.

The Corps is preparing an environmental impact statement to evaluate and document possible effects of the reservoir design developed by the South Florida Water Management District and will accept comments on the plan through April 30.

All the comments will be included in both the draft and final environmental impact statements, said Jenn Miller, a Corps spokeswoman.

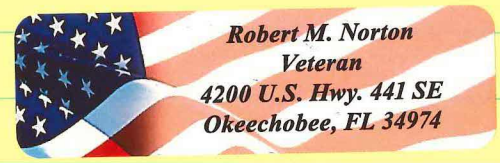
The district submitted its design for the reservoir to the Corps on March 30.

19 April 2018

Dear Stacie J. Allen Shine

My Comment on Lake Okeechobee Reservoir Plan. I have always been for the Reservoir Plan from day one. It is what we have needed to stop, the Lake Discharges and send water South to the Everglades

We also need to enforce action to clean up all run-off water from North of Lake Okeechobee. With the 36 foot elevation drop to Lake Okeechobee, all run-off water from North of Lake goes to Lake Okeechobee. By enforcement of BMPs and the 40E-61 we can clean-up run-off waters.



Robert M Norton
Ecosystem Watch
Lake Okeechobee

From: Abe Levy
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Cc: "Rae Ann Wessel"; "Mitsch, William"; "Jennifer Rubiello"; "Pat Levy"
Subject: [Non-DoD Source] EAA Reservoir
Date: Tuesday, April 24, 2018 10:24:28 AM

I am writing to support strongly the construction of the EAA reservoir.

While I would prefer a much larger and shallower wetland, rather than an over 20-feet deep reservoir, I am grateful for this very modest step in the right direction of moving water southward from Lake Okeechobee into an EAA and from there southward into the Everglades.

Thank you for anything you can do to expedite the construction of this reservoir.

Abe Levy

4875 Pelican Colony Blvd Apt 301

Bonita Springs FL 34134-6916

abe@slought.org <mailto:abe@slought.org>

914-924-1260

From: Mitsch, William
To: abe@slought.org
Cc: Auvenshine, Stacie J CIV USARMY CESAJ (US); Rae Ann Wessel; Jennifer Rubiello; pat@slought.org
Subject: [Non-DoD Source] Re: EAA Reservoir
Date: Tuesday, April 24, 2018 10:31:16 AM

Abe and Pat,
I am less enthusiastic because water quality plan is inadequate and swept under rug just to encumber $2 billion. I am writing piece now for ACOE request on behalf of Friends of Everglades. Might be able to show you draft by Friday. When do you comment? Can u wait till then?
Bill

Sent from my iPhone

On Apr 24, 2018, at 10:24 AM, Abe Levy <abe@slought.org <mailto:abe@slought.org> > wrote:

I am writing to support strongly the construction of the EAA reservoir.

While I would prefer a much larger and shallower wetland, rather than an over 20-feet deep reservoir, I am grateful for this very modest step in the right direction of moving water southward from Lake Okeechobee into an EAA and from there southward into the Everglades.

Thank you for anything you can do to expedite the construction of this reservoir.

Abe Levy

4875 Pelican Colony Blvd Apt 301

Bonita Springs FL 34134-6916

abe@slought.org <mailto:abe@slought.org>

914-924-1260

From: Alan Farago
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Cc: Bill Mitsch
Subject: [Non-DoD Source] Friends of the Everglades: Comments on EIS/ EAA Reservoir scoping
Date: Monday, April 30, 2018 1:31:11 PM
Attachments: 43018FOE re EAA reservoir.pdf
EAA reservoir report for ACOE v3.pdf

Friends of the Everglades
Founded in 1969 by Marjory Stoneman Douglas
11767 South Dixie Highway #232
Miami, Florida 33156
305.669.0858

April 30, 2018
By Email and Regular Mail

Stacie Auvenshine
U.S. Army Corps of Engineers
Jacksonville District
P.O. Box 4970
Jacksonville, FL 32232-0019
Stacie.J.Auvenshine@usace.army.mil

RE: Everglades Agricultural Area Reservoir

Friends of the Everglades offers comments by our consultant, Dr. William J. Mitsch. Friends of the Everglades was founded by Marjory Stoneman Douglas in 1969. Our organization is engaged in legal matters involving Everglades restoration (Miccosukee Tribe of Indians of Florida, Friends of the Everglades, plaintiff, v. United States of America, et al. No. 04-21448-CIV, U.S. District Court South Florida).

We appreciate the opportunity to comment on scoping for the EIS and look forward to providing input during the federal review process.

Sincerely,

Alan Farago, VP Conservation

Cc: William J. Mitsch, Ph.D.

Encl. *Comments on the EAA Reservoir Plan*

Restoring the Florida Everglades: Comments on the EAA Reservoir Plan

by

William J. Mitsch, Ph.D.
Consultant, Friends of the Everglades
Director--Everglades Wetland Research Park,
Eminent Scholar--College of Art & Sciences, and
Juliet C Sproul Chair for Southwest Florida Habitat Restoration,
Florida Gulf Coast University
Chair, U.S. National Ramsar Committee
Founder and Editor-in-Chief, Ecological Engineering 1992-2017
Professor Emeritus of Environmental Science, The Ohio State University
Courtesy Professor of Soil and Water Science, University of Florida
Courtesy Professor, School of Geosciences, University of South Florida

Pertinent Bio

My lab at FGCU, referred to as the "Everglades Wetland Research Park" has published recently and frequently about modeling, monitoring, and experimenting with water quality improvement in the sawgrass "river of grass" eastern half of the Greater Florida Everglades (Mitsch, 2016; Mitsch et al., 2015, 2018; Marios et al., 2015a,b; Yeoman et al., 2017). In addition, over the past 25 years I presented wetland modeling short courses at SFWMD and served on several SFWMD review committees, including serving as chair of a panel reviewing the Everglades Land Model (ELM) in 2006. Over the past 30 years, my lab has published many versions of models specific to wetlands and nutrient retention, particularly related to phosphorus (Mitsch et al., 1982, 1988; Mitsch and Fennessy,1991; Mitsch and Reeder, 1991; Christensen et al., 1994; Wang and Mitsch, 2000; Jørgensen et al., 2005; Zhang and Mitsch, 2005; Marois and Mitsch, 2015a).

Introduction

I believe that the Florida Everglades restoration is now at a crucial crossroad that will determine its long-term success or failure so I consider it prudent to make some comments on the EAA Reservoir Plan as it is currently described. We were unable to delve into the details of hydrologic modeling performed by the SFWMD related to this project given the short time allowed for comments and lack of support for a rigorous modeling effort, but I am providing this hopefully constructive critique so that the U.S. Army Corps of Engineers and the South Florida Water Management District can fine-tune the "EAA Reservoir" plan so that it becomes a significant step forward toward completion of a sustainable Florida Everglades restoration.

I first express my support for seeing an ambitious effort for eliminating decades of stalling with a serious "sending the water south" strategy, the mantra for a generation of those who understand the big picture of what the Florida Everglades restoration is all about. The South Florida Water Management District claims the EAA Reservoir project will — when used in conjunction with other existing and planned projects — reduce the number of damaging discharge events from Lake Okeechobee to the St. Lucie and Caloosahatchee rivers by 63 percent and increase the flow going south by 76% by 160,000 acre-ft/year to 370,000 acre-ft/year (121 billion gallons per year) of water south to the Everglades and Florida Bay from Lake Okeechobee.

But if this plan results in pollutants, particularly phosphorus and nitrogen, getting into greater Everglades (WCAs and south) or develops an unsustainable, un-ecological and/or simply polluted reservoir to manage in perpetuity, we will regret the day we said OK "just to spend the money." I am not assured from what I see written so far from SFWMD that this project is properly focused on what is important—sending clean water to the greater Florida Everglades. If ever there was a need for an ecological engineering and not just civil engineering approaches to lead the Everglades restoration, this is it.

The Plan

A current plan, referred to as C240A (Smith, 2018), calls for sending Lake Okeechobee water to a "EAA Reservoir" to be constructed 30 or so miles south of Lake Okeechobee with the following design: 23-foot-deep, 10,100-acres, with the ability to store up to 240,000 acre-ft (78.2 billion gallons) of excess Lake Okeechobee water. The plan also involves completion of a previously approved 15,000–acre A-1 Flow Equalization Basin with a maximum water storage 60,000 acre-feet (20 billion gallons). The plan also includes the design and operation of 6,500 acres of shallow treatment wetlands (sometimes referred to by the SFWMD as Stormwater Treatment Areas (STAs), similar to the 57,045 acres (23,085 ha) of STAs already constructed to clean the water prior to its discharge to the Everglades to the south.

Concerns

1. My first comment concerns the false expectations by the public so that they approve expenditures of up to $2 billion. I have frequently heard "well the project is not perfect, but let's do it while the money is there." The volume of water being discharged south needs to be put in perspective; the 121 billion gallons/year of water eventually being sent south to the Everglades and Florida Bay in the EAA reservoir plan will not solve the estuarine pollution of the Gulf of Mexico and Atlantic Ocean coastlines. Figure 1 illustrates the Everglades Restoration plan that I have had in my textbooks since we published it in the Mitsch and Jørgensen (2004) ecological engineering book 14 years ago and continued to be published in the 4th and 5th editions of "Wetlands" (Mitsch and Gosselink, 2007, 2015). I am aware that the restoration plan shown in the 3rd panel has been

changed in several more recent publications and in prominent locations including the well-known wall maps at Corkscrew Swamp Sanctuary lobby that now show significant water flowing east and west flow to the coastal estuaries, even when the restoration is complete. It is not clear that the public is aware that this subtle change in graphics represents a major change in the overall restoration goals in the past decade.

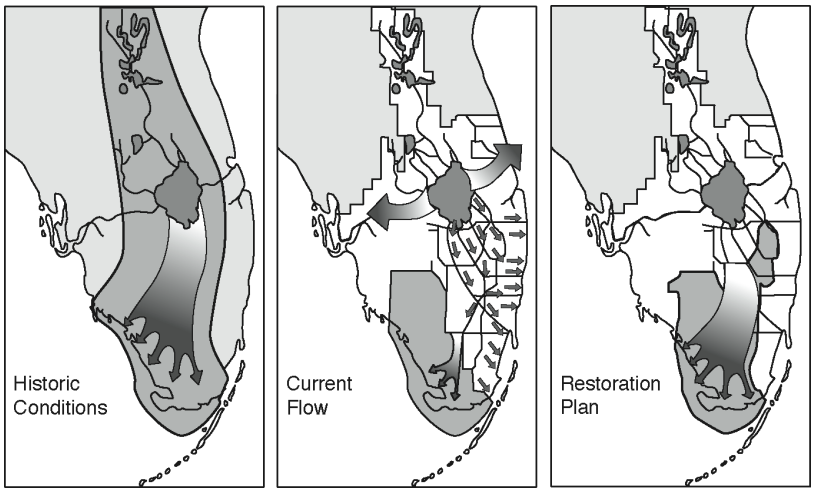


Figure 1. Three-picture summary of historic, current, and restoration water flow in the Florida Everglades as provided by the U.S. Army Corps of Engineers in the early 2000s. (from Mitsch and Jørgensen, 2004)

To put 121 billion gallons of water per year in perspective, 3.1 billion cubic meters or 819 billion gallons) were discharged to the St. Lucie and Caloosahatchee rivers in the El Nino flooding year of 2016 (Table 1), 6.7 times the flow expected to go south with the EAA Reservoir plan. Even in the last 10 years (2008-2017) an average of 1.5 billion cubic meters per year or 396 billion gallons (Table 1) is 3.3 times 121 billion gallons per year of water that will be sent south according to the plan.

Table 1. Freshwater discharges from Lake Okeechobee to the sea over the period 2008-2017, and annually in 2013, 2016, and 2017.

Discharge from Lake Okeechobee	2008-2017	2013	2016	2017
Discharge to Caloosahatachee and Gulf of Mexico ($x10^9$ m^3)	1.3	1.6	2.2	1.7
Discharge to St. Lucie and Atlantic Ocean ($x10^9$ m^3)	0.2	0.6	0.9	0.6
TOTAL Discharge to the sea ($x10^9$ m^3)	1.5	2.2	3.1	2.3
Equivalent depth of Lake O discharged to sea (m)	0.8	1.1	1.6	1.2

Discharge data from:
USGS 02292010 CALOOSAHATCHEE CANAL DWS OF S-77 AT MOORE HAVEN FL
USGS 02276877 ST. LUCIE CANAL BLW S-308

2. There is insufficient detail on water quality in the plan relative to water volume and flow. The flow south to the Everglades will increase by 76% from 210,000 acre-ft/yr (68 billion gallon/yr) to 370,000 acre-ft/yr (121 gallon/yr) according to the most recent approved version of the EAA Reservoir plan (Smith, 2018). Despite the 76% increase in flow, the project shows an increase in treatment wetlands of only 11% (6,500 acres) to designed to improve water quality directly. I estimate a minimum of at least 43,000 additional acres of treatment wetlands (STAs or passive wetlands) will be needed to treat the water flowing south. Further, we note that the estimated average concentration of phosphorus flowing out of Lake Okeechobee is 147 ppb (Goforth, 2010) while the average inflow to the current STAs in about 100 ppb (SFWMD, 2016). Due to the higher flow, it is common sense that the phosphorus concentrations reaching current and future STAs will be higher than the concentrations reaching them now and, in that case, threaten existing state and federal standards on Everglades water quality.

3. The new EAA reservoir will not resemble any natural feature of aquatic ecosystems in the greater Florida Everglades in ecology, morphology or hydroperiod. The hydroperiods will be wrong and exaggerated for south Florida ecology (similar to the way wetland hydroperiods were shifted in the Great Lakes with diked marsh hunt clubs and conservation areas, Mitsch et al., 2001; Mitsch and Gosselink 2015). The potential amplitude of the annual hydroperiods of up to 23 feet in the EAA reservoir is exceeded only rarely in natural or human-created ecosystems, e.g. the Amazon River (Junk et al., 1992) or Three Gorges Dam reservoir (Mitsch et al., 2008). The reservoir may become a “freak ecosystem” over time, i.e., an aquatic ecosystem dissimilar in hydrology and probably ecology to any other aquatic ecosystem in Florida.

4. Most eutrophic lakes in our experience become occasional or even permanent sources rather than sinks of nutrients—Buckeye Lake, Ohio (W.J. Mitsch, personal experience), Taihiu Lake in China (Kelderman et al., 2005), and even Lake Okeechobee (Havens and James, 2005). It is highly probable that the EAA reservoir will not be a nutrient sink in most years, an assumption that is included in this plan. Using a Vollenweider-type model (Hejzlar et al., 2006) in SFWMD’s DMSTA model as proof that the EAA reservoir will always be a nutrient sink is ecologically and hydrologically inaccurate and misleading. The DMSTA model was developed to evaluate multiple STA design alternatives. Model simplicity resulted from aggregation of key variables and processes controlling phosphorus storage and cycling (Walker and Kadlec, 2011). But the DMSTA has not been calibrated for reservoirs. Also, the model can be used on a daily inflow step and the empirically derived coefficients are based on long-term annual average values.

Conclusions

- The EAA Reservoir is considered the heart of this recent attempt to send water south in the Florida Everglades and is a good start of the discussion of solving water excess and scarcity problems. The Florida State Legislature and the South Florida Water Management District plan to increase the southerly flow by 63 percent and send an average of 121 billion gallons of water south to the Everglades and Florida Bay is noteworthy.

- Nevertheless, there is considerable ambiguity in the plan and its model predictions about the quality of the water as it enters the greater Everglades south of the EAA Reservoir and through Miccosukee Tribal lands on its way to the Everglades National Park and Florida Bay. At a minimum, ~50,000 acres of treatment wetlands (STAs) need to be created or restored in proximity to the EAA Reservoir; 6,500 acres of shallow treatment wetlands will be insufficient to protect the Everglades.

- The plan for an EAA reservoir immediately south of Lake Okeechobee needs to be re-examined. For example, purchase of farmland at a fair price coupled with conversion of that land to treatment wetlands (perhaps as many as 150,000 acres from the 700,000 acre EAA) in lieu of construction of a ~$2-billion EAA reservoir is a reasonable alternative to the reservoir for water storage and water quality and should be examined. Additionally, state-owned lands currently leased to agricultural tenants could be incorporated in any comprehensive review of alternatives. Adequate wetland creation to achieve water quality in the Florida Everglades is true “restoration”; creation of large difficult to manage deep reservoirs is not. If a deep reservoir in Florida’s subtropical climate compounds costs and problems for existing Everglades restoration plans, Corps acceptance of this plan should be conditioned by adequate stormwater treatment areas, i.e., treatment wetlands (STA’s) and flow equalization basins (FEB’s) to mitigate the chances of falling short.

References

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From: Alex Gillen
To: Miller, Jennifer S CIV USARMY CESAJ (US); Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] *** Corps accepting comments on environmental review of State's EAA reservoir study ***
Date: Monday, April 16, 2018 12:12:47 PM

Hi,

I am writing to inquire as to how I get on the email list for the EAA reservoir project evaluation updates?

For email updates, can you please add the following email addresses to your distribution list:

apreston@bullsugar.org <mailto:apreston@bullsugar.org>
alanfarago@me.com <Blockedhttp://me.com>

cmaroney@bullsugar.org <mailto:cmaroney@bullsugar.org>

pgirard@bullsugar.org <mailto:pgirard@bullsugar.org>

agillen@bullsugar.org <mailto:agillen@bullsugar.org>

For hard copy information, can updates be sent here:
2336 SE OCEAN BLVD
STE 172
STUART, FL 34996

If there is a greater Everglades Restoration distribution list, we would also like to be included there if possible.

Thanks so much and please let me know if you have any questions or if I should direct this email to anyone else.

Best,

Alex

--

From: andrea stewart
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Reservoir
Date: Saturday, April 21, 2018 3:30:21 PM

Let's be clear about the 7 - 9 year wait for ANY reservoir to be built --- if the Lake O discharges continue, even on a limited basis, there will not be any living creatures left in our beautiful waters. We MUST STOP DUMPING algae ridden, harmful run-off, etc. into ANY estuary, river, canal, etc.

I believe the reservoir needs to be larger in order to almost eliminate the need for harmful discharges that kill the beauty of our environment.

This has taken far too long to resolve. Our waters are a precious natural resource; let's save our home.

Sincerely yours,

Andrea Stewart
Hobe Sound, FL

"Dream like you will live forever, Live like you'll die tomorrow. " James Dean

From: Bill Goodman
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Everglades Agricultural Area (EAA) Storage Reservoir
Date: Sunday, April 22, 2018 1:55:11 PM

The EAA sounds like a good start toward resolving the water problems surrounding Lake O and the harmful discharges into the Caloosahatchee River basin.

Bill Goodman

From: Bob Gibbons
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Enlarge Reservoir
Date: Wednesday, April 18, 2018 8:50:41 AM

We need to totally eliminate discharges from Lake O into the St. Lucie and Loxahachee estuaries. Thus, the Reservoir and wetland filters need to be much larger than current proposal.

Use state-owned land even if that requires cancelling agricultural leases and/or revive eminent domain.

There are far more businesses, livelihoods, families and economics negatively impacted fro the discharges than there are farmers & agri-workers in the EAA. Those in the EAA impacted by expanded reservoir should be assisted in relocation & job training.

Sincerely,

R.A. Gibbons

Business Broker and Lic. RE Agent

Palm Beach Gardens, FL 33410

Sent from Mail <Blockedhttps://go.microsoft.com/fwlink/?LinkId=550986> for Windows 10

<Blockedhttp://www.avg.com/email-signature?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient> Virus-free. Blockedwww.avg.com <Blockedhttp://www.avg.com/email-signature?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=emailclient>

From: Alex Gillen
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] comments on environmental review of State's EAA reservoir study
Date: Monday, April 30, 2018 5:16:53 PM
Attachments: Bullsugar Alliance EAA Reservoir NEPA scoping letter 3.30.2018.docx

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Hello,

Please find attached comments on the environmental review of South Florida Water Management District's Everglades Agricultural Area (EAA) storage reservoir study for Bullsugar Alliance.

Please let me know if you have any questions.

Best,

Alex Gillen

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April 30, 2018

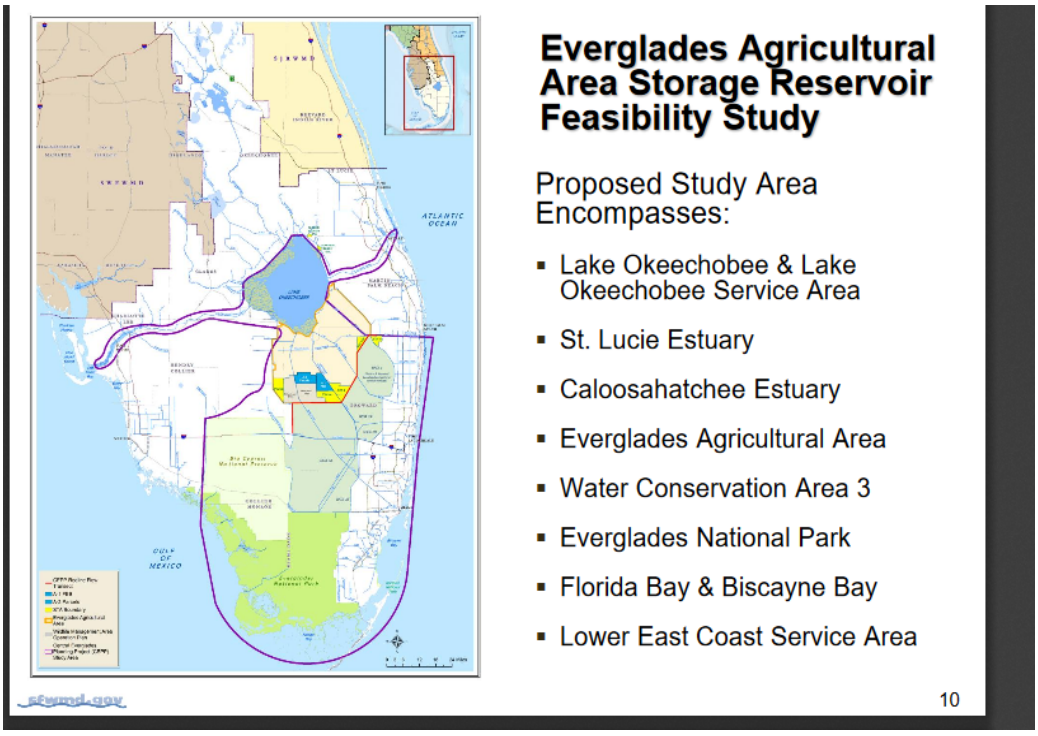
Ms. Stacie Auvenshine
U.S. Army Corps of Engineers Jacksonville District
P.O. Box 4970
Jacksonville, FL 32232-0019
Stacie.J.Auvenshine@usace.army.mil

Re: Everglades Agricultural Area Environmental Impact Statement

Dear Ms. Auvenshine,

This letter is to assist the U.S. Army Corps of Engineers (USACE) in drafting the Environmental Impact Statement (EIS) to evaluate and document potential environmental effects of the South Florida Water Management District (SFWMD) proposed plan for the EAA reservoir, in accordance with the National Environmental Policy Act (NEPA).

Project Area:
The project area for the EAA reservoir, as shown on the map below from the October 23, 2017 meeting at the SFWMD, is too narrowly drawn to adequately account for the environmental impacts of the project.[1]



[1] South Florida Water Management District, *Everglades Agricultural Area Feasibility Study*, at 10, https://www.sfwmd.gov/sites/default/files/documents/pres_2017_1023_eaa_res_scoping_meeting.pdf (accessed April 24, 2018).

The impetus for passage of Senate Bill 10 (SB10) was excessive freshwater and toxic algae plaguing two communities, while a third community was starved for water. This led to the governor declaring a State of Emergency in 2016.[2] The economic and environmental impacts of this mismanagement were felt throughout these communities along the St. Lucie River, Caloosahatchee River, and Florida Bay. Yet, the project area proposed by SFWMD does not include these surrounding communities.

Choosing to not include areas affected by the project is failing to do proper analysis. By pretending beaches in Lee, Martin, Palm Beach, and St. Lucie Counties are not affected, this analysis of the environmental impacts of the discharges is insufficient. For instance, the PACR claims that E.O. 13089 Coral Reef Protection is not applicable because "coral reefs are not affected." But coral reefs exist at Bathtub Reef Beach in Martin County where discharged water closed beaches in 2016.[3][4]

Omitting Hutchinson Island, Bathtub Reef Beach, Stuart Beach, Fort Myers Beach, Sanibel Island, St. Lucie Inlet Preserve State Park, and the Pine Island Aquatic Preserve (to name a few) from the project area understates the benefits of this project. Failure to include these areas in the project area will harm the cost benefit calculation of the project by underestimating the benefits to these harmed areas.

Fish spawning success in Florida Bay is impacted by freshwater flows from the Everglades, which will increase as result of the EAA reservoir project. Fish population recruitment in Florida Bay impacts the economic and ecological environments to at least Key West. By including Key West and Marathon in the project area, proper accounting of the human effects to the environment can be more accurately considered.

Please add all of St. Lucie, Martin, Lee, and Palm Beach Counties to the project area for the EAA reservoir project. Please also extend the project area southward to include Marathon and Key West.

Modeling the alternative:
The Battelle March 12, 2018 independent peer review of the SFWMD's Post Authorization Change Report (PACR) recommended in Final Panel Comment 2 that a much larger reservoir and stormwater treatment area needed to meet water quality standards while delivering project benefits should be evaluated. Please address this alternative as the report suggests.

Jobs Affected:
Please consider the jobs affected in Martin, Lee, Monroe, Hendry, Palm Beach, St. Lucie Counties as a result of this project. Please also see Appendix A, which notes over $4 billion in economic output by the 4 counties declared by Gov. Rick Scott in 2016 to be in a "State of

[2] Fla. Stat. § 373.4598 (2017).
[3] Martin County Florida, *Bathtub Reef Beach*, https://www.martin.fl.us/BathtubReefBeach (accessed April 24, 2018).
[4] CBS12, *Bathtub Reef Beach Closed Due To Toxic Algae*, http://cbs12.com/news/local/bathtub-reef-beach-closed-due-to-blue-green-algae (accessed April 24, 2018).

Emergency" as a result of the discharges. Please include direct, indirect, and induced jobs. Please publish your findings.

Health impacts of toxic algae:
Please consider the human health impacts associated with toxic algae discharges, including those containing beta-Methylamino-L-alanine (BMAA). Please also consider the human health impacts of toxic algae in Lake Okeechobee to the communities south of the Lake that use lake water for their drinking water supply. Please study and conduct analysis of the human health impacts from eating marine animals exposed to toxic algae, as occurred last summer in Lake Okeechobee and the St. Lucie River. Please study and conduct analysis of the human health impacts from swimming in toxic algae, as occurred last summer in Lake Okeechobee and the St. Lucie River. Please address the effects of toxic algae on the commercial catfish industry in Lake Okeechobee. Please include analysis regarding what is being done to address the health concerns from eating Lake Okeechobee fish exposed to toxic algae. Please publish all of your findings from these studies.

Species:
Please consider and study the impact of this project on all state and federal threatened, endangered, and species of special concern in the updated project area, and the effects on the habitat from the discharges within the project area. Please document in the study how the habitat of the marine species in the northern estuaries will benefit from reduction of discharges. Specifically, please consider the use of the St. Lucie Estuary and Indian River Lagoon by the Smalltooth Sawfish. Please consider how discharges affect the Bigmouth Sleeper and Opossum Pipefish in the St. Lucie River. Please consider how discharges affect the worm reefs near the St. Lucie Inlet. Please publish your findings for all of these items.

Sailfish Flats:
The Sailfish Flats are located in Martin County off Sailfish Point on Hutchinson Island. The Sailfish Flats are directly in the path of the discharges and should be considered in the study area. Please study the benefit to the Sailfish Flats as a result of a reduction of discharges. Please include in your analysis the economic and ecological benefit to the community as a result of a healthy Sailfish Flats. Please include what species use the Sailfish Flats for foraging and spawning and how they will benefit from a reduction of discharges. Please publish your findings.

Bathtub Reef Beach:
Bathtub Reef Beach is located in Martin County on Hutchinson Island. The proposed project area for the EAA reservoir does not include Bathtub Reef Beach in the project area for the feasibility study. This is a remarkable omission, because waves of toxic algae on Bathtub Reef Beach were a driving factor in the passage of SB10. To exclude Bathtub Reef Beach in the study area is to say that Bathtub Reef Beach will not benefit from the creation of the EAA reservoir. Please include Hutchinson Island in the study area for this project. Please consider the ecological and economic benefits to Bathtub Reef Beach from the reduction of discharges. Please publish your findings.

Conveyance:
Please model dedicated conveyance to the EAA reservoir. Please include in the analysis a scenario where the total capacity of the dedicated conveyance is equal to the combined capacity of the C-43 and C-44 canals. Please include in your analysis whether and how a third high-capacity outlet from Lake Okeechobee will affect the safety of the Herbert Hoover Dike and the communities located south of the lake, specifically addressing risk factors associated with the dike overtopping with water, as occurred with Hurricane Wilma. Please include information and analysis regarding the legal and technical requirements for dams to include a spillway. Please consider the economic value dedicated conveyance would provide to the dam safety work. Please publish your findings.

Home Values:
Please analyze the effects of toxic discharges to local government tax base as a result of the discharges in Martin, Lee, St. Lucie, and Palm Beach Counties. Please publish your findings.

Biscayne Aquifer:
Please consider the effect of the EAA reservoir project on the Biscayne Aquifer, specifically considering how the reservoir will help recharge the aquifer. Please publish your findings.

Lake Okeechobee Regulations Schedule:
Please consider how the EAA reservoir would function with different regulation schedules. Specifically, consider a scenario where human health is the highest priority for managing Lake Okeechobee. Please publish your findings.

Please study the effects to the health and sustainability of Bass and Crappie fishery when Lake Okeechobee levels are increased above 16 feet. Please publish your findings.

Agricultural jobs:
Please analyze and document the effect on agricultural jobs as a result of the EAA reservoir project. Please publish your findings.

Conclusion:
Thank you for considering these matters.

We are willing and available to work with you and provide technical assistance to further this project. Please do not hesitate to contact me if we can be of further assistance.

Sincerely,

Alex Gillen
Bullsugar Alliance

Appendix A

Economic Contribution of Marine Industries [1/] in Four Counties Declared in 2016 by Gov. Rick Scott to be in a "State of Emergency" from Lake Okeechobee Discharges and Algal Blooms [2/]

	Total Output [3/]	Total Job Impact [4/]	Labor Income [5/]
Lee County [6/]	$1,273 million	9,014	$486 million
Martin County [7/]	$324 million	3,290	$230 million
Palm Beach County [8/]	$1,884 million	18,220	$682 million
St. Lucie County [9/]	$549 million	6,390	$366 million
Total	$4.030 billion	36,914	$1.764 billion

[1/] Marine industries include construction of marine-related infrastructure and facilities; living resources represented by fishing, aquaculture, seafood processing, and seafood markets; offshore minerals, consisting of limestone, sand, and gravel mining, as well as oil and gas exploration and production; ship and boat building, including repair; tourism and recreation, including accommodations and services associated with recreation in coastal areas, such as marinas, boat dealers, amusement and recreational facilities, hotels, restaurants, and sporting goods retailers, and; transportation, including marine passenger and cargo transportation services, and, search and navigation equipment (source: Hodges et al. 2015, cited at note 6/ below).

[2/] "Emergency Management—Lake Okeechobee Discharge." Executive Order Number 16-156, State of Florida Office of the Governor, June 30, 2016, accessed at http://www.flgov.com/wp-content/uploads/orders/2016/EO_16-156.pdf

[3/] Total output includes gross revenue directly from marine industry activities, plus multiplier effects from the input purchases associated with supply chain activities, known as indirect effects; the induced effects from employee and proprietor household spending of earned income and profits; and government expenditures.

[4/] Total job impact includes direct employment in marine industries plus multiplier effects from jobs in supporting indirect and induced activities.

[5/] Labor income includes wages and salaries paid to employees in marine industries plus multiplier effects from wages and salaries in supporting indirect and induced activities.

[6/] Hodges, A.W., T.J. Stephens, and C. M. Adams. 2015. Economic contributions of marine industries in southwest Florida, Table 10. Food and Resource Economics Dept., University of Florida, Gainesville, 29 p., accessed at https://eos.ucs.uri.edu/EOS_Linked_Documents/flsgp/Chuck%20Adams_2015_2.pdf

[7/] East Central Florida Regional Planning Commission and Treasure Coast Regional Planning Commission. 2016. Indian River Lagoon valuation update, 2016, Tables 15 and 18, 54 p., accessed at http://www.tcrpc.org/special_projects/IRL_Econ_Valu/FinalReportIRL08_26_2016.pdf

[8/] Thomas J. Murray & Associates, Inc. 2014. Economic impact of the recreational marine industry Broward, Dade, and Palm Beach Counties, Florida, 2014. Report prepared for Marine Industries Association of South Florida, Executive Summary, Table III, 5 p., accessed at https://mlsvc01-prod.s3.amazonaws.com/bd373c16001/037871fe-351d-422d-bbc1-146c06bc6521.pdf

[9/] See note 7/above.

From: Cara Capp
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] EAA Reservoir EIS Scoping Comments
Date: Monday, April 30, 2018 4:30:42 PM
Attachments: EAA Reservoir Army Corps EIS Scoping -- April 2018.pdf

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Please find the attached scoping comments from 18 stakeholder organizations on the Corps' development of an EIS for the EAA Reservoir Project.

Feel free to contact me anytime should have any questions.

Best,

Cara

Cara Capp

Everglades Restoration Program Manager | National Parks Conservation Association

305.546.6689 | ccapp@npca.org <mailto:ccapp@npca.org> | npca.org

Preserving Our Past. Protecting Our Future.
Speak up for national parks. Join us at npca.org

Stacie Auvenshine
U.S. Army Corps of Engineers
Jacksonville District
P.O. Box 4970
Jacksonville, FL 32232-0019
Stacie.J.Auvenshine@usace.army.mil

April 30, 2018

Re: Everglades Agricultural Area Reservoir

The undersigned organizations write in support of the Army Corps' development of an Environmental Impact Statement for the South Florida Water Management District (SFWMD) Everglades Agricultural Area (EAA) Reservoir Feasibility Study. The EAA Reservoir is an integral component of the Comprehensive Everglades Restoration Plan and the hydrological benefits described in the SFWMD Feasibility Study are significant in achieving reduction of harmful discharges to the Caloosahatchee and St. Lucie estuaries and increasing freshwater flows to Everglades National Park and Florida Bay.

To ensure that the hydrologic benefits of the reservoir are realized simultaneously with meeting the Water Quality Based Effluent Limits (WQBEL), it is important that the Corps of Engineers incorporate into the Reservoir planning documents the water quality assurances included in the March 2018 Florida Department of Environmental Protection Secretarial Order.

We greatly appreciate your expedited review of this critical restoration project so that a Post Authorization Change Report (PACR) can be included in the 2018 Water Resources Development Act (WRDA) for Congressional authorization and the benefits of this project realized as quickly as possible.

The undersigned organizations and many others have remained engaged through the rigorous schedule of public meetings and information sessions that have taken place since the initiation of this planning project in October of 2017. We thank you for the opportunity to comment and look forward to additional opportunities to provide input during the federal review process.

Sincerely,

Celeste De Palma
Director of Everglades Policy
Audubon Florida

Mimi Wolok
Executive Director
Audubon of the Western Everglades

Pete Quasius
Board of Directors
Audubon of Southwest Florida

Alex Gillen
Policy Director
Bullsugar Alliance

Capt. Daniel Andrews
Executive Director
Captains for Clean Water

Jaclyn Lopez
Florida Director
Center for Biological Diversity

Marisa Carrozzo
Senior Environmental Policy Specialist
Conservancy of Southwest Florida

Michael J. Baldwin
President
"Ding" Darling Wildlife Society

Thomas Van Lent, Ph.D.
Vice President of Science and Education
The Everglades Foundation

Lisa Interlandi
Senior Attorney
Everglades Law Center

Charles Causey
President
Florida Keys Environmental Fund

Mark Perry
Executive Director
Florida Oceanographic Society

Manley Fuller
President
Florida Wildlife Federation

Elinor Williams
President
Friends of the Arthur R. Marshall Loxahatchee NWR

Tom Bausch
Board of Directors
Martin County Conservation Alliance

Cara Capp
Everglades Restoration Program Manager
National Parks Conservation Association

George L. Jones
Government and NGO Policy Advisor
Ocean Research & Conservation Assn.

Rae Ann Wessel
Natural Resource Policy Director
Sanibel Captiva Conservation Foundation

From: Carmen Guido
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] reservoir
Date: Thursday, April 19, 2018 10:33:51 AM

Dear Stacie;

Are we really solving the problem or supporting the bribes our politicians are receiving..Seems like 10 years ago I voted to correct this problem but all I read about is the money given by big sugar to certain politicians.

Carmen Guido

From: Cindy
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] EAA Resevoir
Date: Tuesday, April 17, 2018 8:47:06 PM

Dear Ms. Auvenshine:

I am sending you my comments on the proposed EAA reservoir for Lake Ochechobee, Florida.

I am very concerned about 2 major problems with the proposed reservoir. First, it is way too small to substantially reduce toxic water flowing to the Gulf of Mexico or the Atlantic. No modeling appears to have been done to see if it will even work! Reducing toxic flow by barely half is simply not enough to help the estuaries and the everglades to recover. The toxicity of these flows gets worse ever year and this project hardly changes this.

Second, the proposed timetable is outrageously and inexplicably slow. We built the Hoover Dam in only 5 years! There will be nothing left to save given this protracted schedule!!

I hope the Army Corp of Engineers looks very thoroughly at these issues and requires a larger reservoir that will cut toxic flows more substantially-by 75% at least!

Thank you.

Sent from my iPhone

Collier Soil & Water Conservation District
Dennis P. Vasey, Chairman

3434 Hancock Bridge PKWY, STE 209B
North Fort Myers, FL 33903-7005

April 24, 2018

U.S. Army Corps of Engineers Jacksonville District
ATTN: Ms. Stacie Auvenshine
P.O. Box 4970
Jacksonville, FL 32232-0019

Re: Lake Okeechobee Reservoir

Dear Ms. Auvenshine,

Hatched in the final days of a legislative session after months of intense lobbying and championed by the powerful Senate president, Joe Negron, the plan called for construction of a large reservoir in western Palm Beach County aiming to do two things: Stop flushing foul water from Lake Okeechobee to the coasts, and fix the flawed re-engineering of South Florida's tropical wetlands by sending water south to wilting marshes and Florida Bay.

Initially, a grander version pitched by environmentalists envisioned 60,000 acres. It included a portion of sugar fields long blamed for pollution and jump-started construction on a sprawling shallow reservoir south of the lake intended to clean water before it reached Everglades National Park—a project approved in a landmark Everglades restoration plan in 2000. The massive footprint allowed plenty of shallow storage to clean the water, a strict requirement hammered out through years of litigation that forced the state to stop polluting the Everglades.

The legislative direction that landed on the drafting table of South Florida Water Management District managers was a reservoir on state-owned land below the lake. That meant squeezing a deeper reservoir onto a smaller footprint, with less land for cleaning water. The legislation also sacrificed the valuable option to buy sugar land, requiring the South Florida Water Management District to relinquish the state's only leveraging power to acquire more land—long before anyone knows for sure whether the down-sized reservoir and treatment marshes will work.

The District believes the proposed storage reservoir might not work; we're just going to have another Lake Okeechobee belching into the Everglades.

Respectfully,

Dennis P. Vasey

Dennis P. Vasey

From: cshell art
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Reservoir
Date: Sunday, April 22, 2018 7:00:21 PM

The proposed Lake Okeechobee reservoir has the potential to reduce harmful discharges into the Caloosahatchee River by 40 to 60 percent. Every resident of Southwest Florida, including myself, would like to see that happen. Thank you - Claudia Burns, Sanibel resident, Florida voter

Sent from Mail <Blockedhttps://go.microsoft.com/fwlink/?LinkId=550986> for Windows 10

From: Damon D. Hickey
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Lake Okeechobee reservoir
Date: Sunday, April 22, 2018 8:28:40 AM

Dear Stacie J. Auvenshine:

My wife and I were privileged on a recent visit to southwest Florida to take a short cruise with the Sanibel-Captiva Conservation Foundation (SCCF) into some of the oxbows along the Caloosahatchee River, in order to understand better the ecology of the river and its relationship to Lake Okeechobee. As a result of what we learned, we are writing in support of the construction of the proposed Lake Okeechobee reservoir, in order to reduce harmful discharges into the Caloosahatchee River. As you know, excessive amounts of fresh water flowing into the river severely impact the coastal and marine environment downstream, and while the reservoir may not be the perfect solution, it is a big step in the right direction. We strongly support its construction.

Damon and Mary Hickey
301 Miller Lake Rd
Wooster OH 44691-2372 USA
330-262-7059

From: DAVID CARLSON
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] EAA Reservoir
Date: Saturday, April 21, 2018 3:30:00 PM

TO: U.S. Army Corps of Engineers

FROM: David J. Carlson DVM

RE: Proposed Southern Everglades Reservoir

I am a practicing veterinarian who has been living on the North Fork of the St. Lucie River for over 15 years. I also work as a volunteer for the Florida Oceanographic Society testing water in the river on a weekly basis. The dramatic decline in sea grass, marine life and water quality that occurs when Lake Okeechobee is discharged east and west is profound.

The proposed 10,100 acre reservoir and 6,500 acre STA are a step in the right direction to curtail necessary discharges to the estuaries. The South Florida Water Management has done extensive modeling on this plan and I have confidence in their science, however, I believe there needs to be some accountability and an expanded plan should it be needed if reality does not match the model. I am disappointed more public land is not being taken out of production and used to increase the size of the reservoir and decrease the depth. The goal of this project must be to convey, store, and clean water to move south and not comingled with agricultural demands for flood control and irrigation.

The foundation of my background started in the dairy industry. I believe that agriculture and the environment can coexist but history has proven many mistakes have been made and we need to rectify these and future negative impacts to save the planet. Animal sentinels are shouting alerts as we discover sickness and death in places like the Indian River Lagoon and even the ocean. Protecting people and animals from lethal cyanotoxins must be given a high priority. The water from Lake Okeechobee is needed south of the lake and must be cleansed of its harmful nutrients. The proposed project as well as other storage and cleaning efforts around the lake will have a huge impact towards reaching the goal of a more balanced ecosystem

From: David Kapell
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] SFWMD proposal for EAA storage reservoir
Date: Thursday, April 19, 2018 4:34:02 PM

Dear Madam:

I support this plan, as opposed to doing nothing at all, which is what has been happening for far too long. However, I do not believe the project is good enough. It is just better than nothing.

The SFWMD is in the pocket of the sugar industry, which does not want any reduction in their farming. The SGWMD asserts that they could not build a larger reservoir, because nobody was willing to see any land. This is a specious argument, since the sugar industry uses public land in addition to private land. In order to build a larger reservoir, it is only necessary is to restrict their use of public land for farming. We would not have to purchase any land.

The SFWMD is misleading the public for the benefit of their friends in the sugar industry.

David Kapell

From: Preston, David
To: Auvenshine, Stacie J CIV USARMY CESAJ (US); Miller, Jennifer S CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] EAA Reservoir Comments
Date: Monday, April 16, 2018 4:06:15 PM
Attachments: image001.gif
image002.gif
image003.jpg
image004.jpg
image005.jpg
image006.png

I am in full support of the EAA Reservoir project as described in CERP. Water storage south of Lake O is arguably the heart of CERP, and without it we are looking at a +/-$20b Everglades Restoration plan that doesn't accomplish its goal and sacrifices the quality of life, environment, economies, and public health of our coastal communities. We cannot afford to kick the can down the road another day on this critical project and its much needed benefits to both the parched Everglades and coastal communities drowning in billions of gallons of polluted fresh water from Lake O on nearly an annual basis. The drinking water supply for 8 million FL residents is also at risk. I urge the ACOE and SFWMD to continue forward with the project, but am very concerned that the footprint was artificially constrained to appease the sugar industry, and that the benefits described by the SFWMD will not be realized. If these benefits are not realized, our taxpayer money has clearly not been well spent. Please leave no stone unturned in maximizing this once in a lifetime opportunity, and ensure that the benefits as described in the SFWMD's proposal are ENSURED. Thank you.

David Preston
Senior Managing Director

Newmark Grubb Knight Frank
1111 Brickell Avenue
Suite 2000
Miami, FL 33131

T 305.350.0933 M 786.384.1320
dpreston@ngkf.com <mailto:dpreston@ngkf.com>

<Blockedhttp://www.ngkf.com/>

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From:	DAVID URICH
To:	Auvenshine, Stacie J CIV USARMY CESAJ (US)
Cc:	David Urich
Subject:	[Non-DoD Source] Need for INCREASED flow from EAA Reservoir under Tamiami Trail to Taylor Slough for Fla Bay - NOW!
Date:	Thursday, April 26, 2018 8:54:27 AM

Dear Ms. Auvenshine;

While I am in full agreement with the SFWMD's EAA storage reservoir, there is a REAL problem with the need for INCREASED Flow to the South! Currently, while we have one bridge of a MILE in length, and a NEW 2.6 mile one under construction - there appear to be not REAL plans for INCREASED flow to the South, via Taylor Slough to Fla Bay - NOW!

Most of the year, the WCAs (Water Conservation Areas) are full and not able to receive water from the new EAA storage reservoir! That will greatly impact the ability to have normal flow through the whole system. It seems that constraints to flow under the Tamiami Trail are imposed due to the Cape Sable Seaside Sparrow's nesting periods as well as some attempts to keep water from the Las Palmas 8.5 mile "agricultural" area created some time ago in the actual Everglades.

Both of these issues need to be studied and corrective actions taken to insure that the NEW EAA Reservoir is able to have a meaningful flow in the entire system South of the WCAs. Otherwise, no meaningful flow will go through the Taylor Slough to Fla Bay! Rainwater alone will not restore the salinity balance needed for Fla Bay!

Sincerely, David A. Urich - Life Member of the Responsible Growth Management Coalition, Inc.

From:	DAVID URICH
To:	thayden@news-press.com; cmcross@gannett.com; cgillis; Auvenshine, Stacie J CIV USARMY CESAJ (US)
Cc:	David Urich; tedwards@sfwmd.gov; emarks@sfwmd.gov; pflood@sfwmd.gov; shannon estenoz; Kirk, Jason A COL USARMY CESAJ (US); allyn childress; astone@agwt.org
Subject:	[Non-DoD Source] PULL the PLUG - SEND Water to Fla Bay, NOW!
Date:	Sunday, April 29, 2018 5:26:23 PM
Attachments:	URICH-Las Palmas - PULL PLUG.jpg URICH-TODAY Link Fla Bay.jpg URICH-pull PLUG 12-30-17.jpg URICH-NO Deep Well Injection.jpg Urich - Picture.jpg

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In response to Chad Gillis' good News-Press article of 4/29/18 regarding DIW (/Deep Injection Wells) I have to raise my voice again to declare that DIW is just a BAD idea! The TRUE problems are CONSTRAINTS on REAL FLOW under the one mile Tamiaimi Trail Bridge and the LACK of a PLAN for an INCREASED Flow for the about to be completed NEW 2.6 mile Bridge! Because of these constraints - the WCAs (Water Conservation Areas) remain FULL in the wet season, thus backing up the WHOLE flow system! Flow is thus constrained from Lake "O" causing it to rise to dangerous levels! THAT is why massive discharges have been sent down BOTH rivers!

Originally the SFWMD plan called for some 150 such DIW installations - this has now been reduced to a MERE 50! This REDUCED plan will cost some $330 MILLION - for planning, permitting & construction, with some $10 Million in annual operating costs! What about the geological danger of 50 such wells in such a small geological area? Could they possibly create a "Swiss Cheese" danger zone of potential collapse of the aquifer? Not to mention that the proposed DIWs are to be operated on an "as needed" basis and will thus be DRY for most of the year! Has anyone studied potential STRUCTURAL weakness due to lack of usage? Other such wells are in CONSTANT use, and are NEVER normally left DRY! They ALSO are widely spread around the State of Fla, not so MANY in one area!

Most of the year, the WCAs (Water Conservation Areas) are FULL and thus will not be able to receive water from the new EAA proposed storage reservoir! That fact continues to greatly impact the whole Lake "O" system's ability to have anything resembling normal flow down to Fla Bay! It seems that constraints to REAL flow under the Tamiam Trail Bridge are imposed due to the Cape Sable Seaside Sparrow's nesting period in the wet portion of the year - as well as some attempts to keep water from the Las Palmas 8.5 mile "agricultural" area created some time ago in the actual Everglades. Yet we are about to finish a NEW 2.6 mile bridge with no apparent plan to INCREASE needed FLOW!

Current Everglades restoration plans will reduce the amount of harmful Lake "O" discharges by about 61 percent, it is reported. It seems that trying to get that up to 77 percent is probable OVERKILL! The same money spent to deal with the Tamiami Trail constraints would be ELIGIBLE for FEDERAL match, and would ALSO help save Fla Bay, NOW! Instead of DISPOSAL of this good water - the SFWMD should join with the Army Corps to DEAL with the South Constraints and lack of capacity in the system, NOW! Let's SAVE this water and get it to where it is needed to SAVE FLA BAY! We have spent some $12 Million on the C-111 Spreader project, yet this essential path to Fla Bay via Taylor Slough is NOT operating at design capacity! Why NOT??

All of these complex issues need to be studied and corrective actions taken to insure that the NEW EAA Reservoir will be able to have a meaningful flow to the entire system South of the WCAs, NOW! The water that has been "going to tide" should NOT be disposed of via DIW - it is NEEDED in the system, NOW! Rainwater alone can NOT restore the salinity balance in Fla Bay!

David A. Urich, Life Member of the Responsible Growth Management Coalition, Inc.

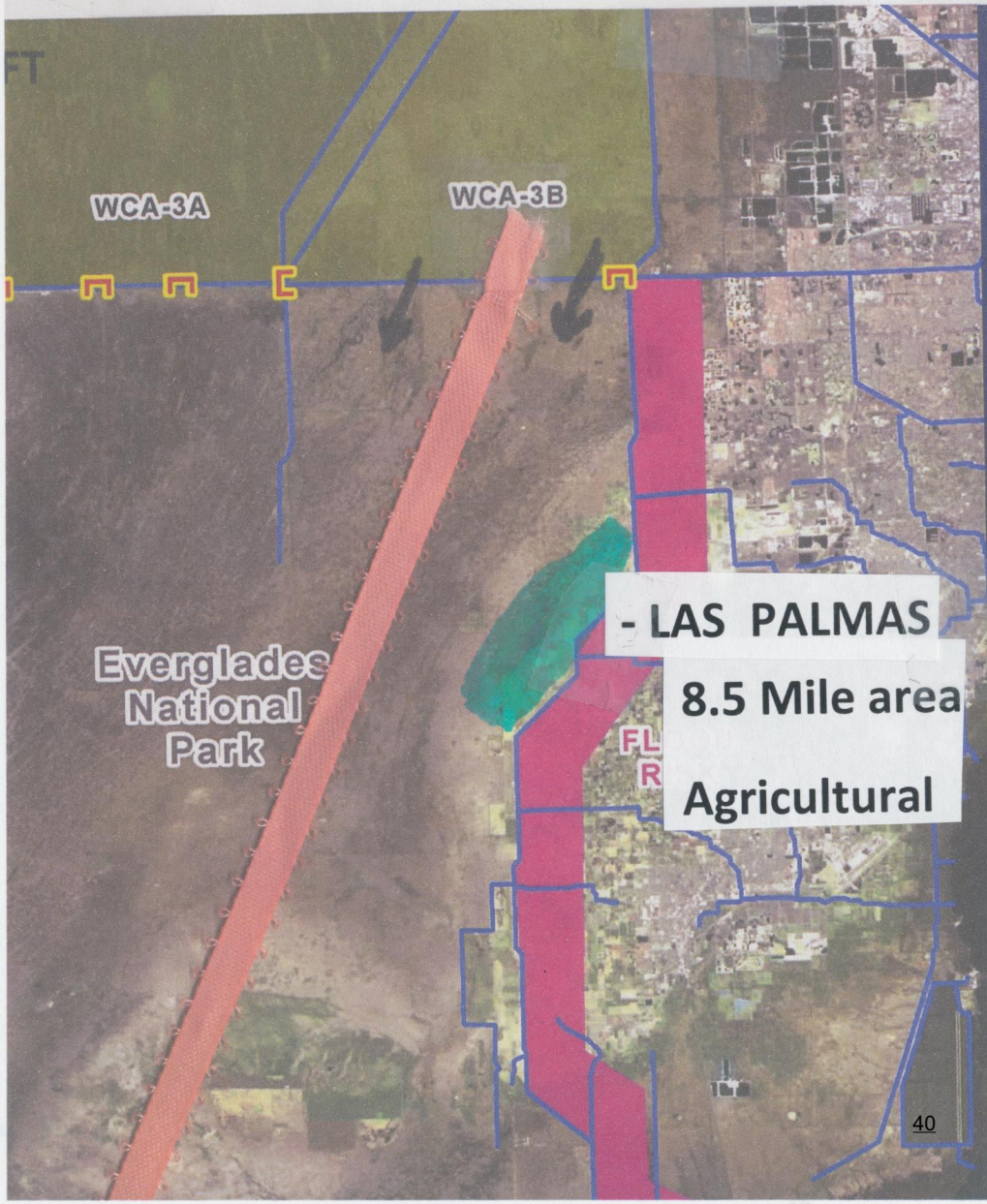
and the SFL Clean Water Movement,

My email is: d.urich@comcast.net <mailto:d.urich@comcast.net> and my cell is (239) 850-2413

PS: I have attached some four graphs that I have made which help show these concepts, also a file picture of myself if needed.

PULL PLUG , NOW !

Water Conservation Area



FLOOD RISK:

South Dade Conveyance System

A primary mission of the C & SF Project is flood control. Many of the canals , levees and pumps were built, and still must be operated, for that specific purpose. As more water is sent to Everglades National Park, facilities have to be in place to make sure flooding is not made worse for the private property east of Everglades National Park.

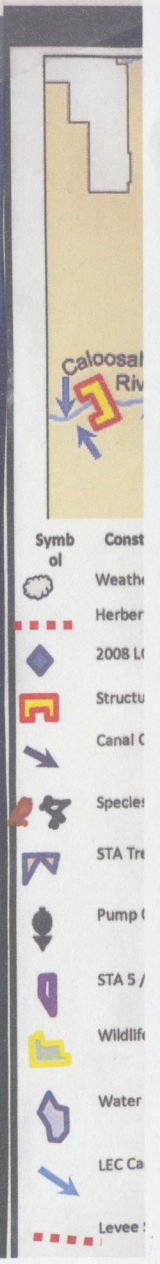
This is a key constraint on the design and operation of the Modified Water Delivery and C-111 Projects. These projects were not designed with an assumption of significant additional water coming through the Everglades from Lake Okeechobee.

Groundwater seepage from the Park is a chronic, existing problem, and significantly more water would only add to the challenge.

Current Initiatives:

Completion of Contract 8 & 9 of C-111 South-Dade

Operation of Mod Waters and C-111



DON'T DESTROY Fla Bay's GOOD WATER !

Deep Well Injection

Use Nature's Way!

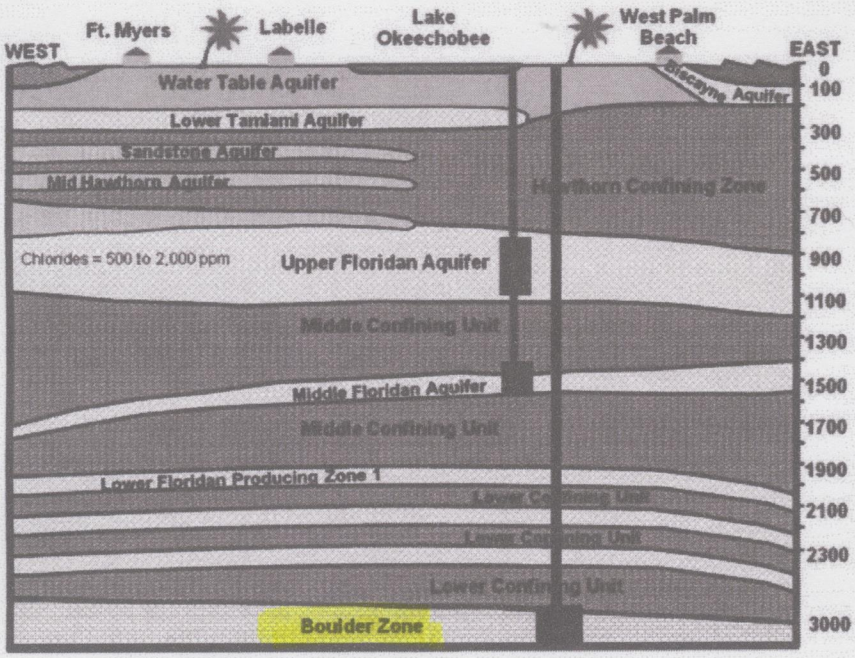
New Everglades plan calls for flushing water in wells deep underground

BAD IDEA - 150 DEEP INJECTION WELLS

By Jenny Staletovich
jstaletovich@miamiherald.com

A new plan is emerging in the political calculus over Everglades restoration: Rather than store, treat and move water into South Florida's parched Everglades, water managers are now considering flushing millions of gallons deep underground near Lake Okeechobee.
The deep injection wells would help control the level of water in the lake during the rainy season, protect its aging dike and help eliminate the need to flush dirty lake water to either coast, which last year outraged residents and business owners when it triggered smelly toxic blooms and killed fish. But environmentalists say it would do nothing to help fix the south end of the Everglades and instead waste valuable water that original restoration plans called for saving.
If we inject that water underground, we only take care of half the problem.
Audubon Florida scientist Paul Gray
"If we inject that water underground, we only take care of half the problem," said Audubon Florida scientist Paul Gray. "The scale that we're talking about here has never been contemplated or done before. ... We're talking something very untested."
They also worry the plan is meant to undermine a push to build a massive reservoir south of the lake backed by Republican Senate President Joe Negron, whose hometown has been hammered by the lake releases, but opposed by powerful sugar farmers.
At a meeting Wednesday, the U.S. Army Corps of Engineers, which is in the midst of mapping out fixes for the Lake Okeechobee watershed, provided an update on alternatives in a planning process expected to take three years.While solving the water storage problem relies heavily on building a series of reservoirs around the lake - which originally provided much of the freshwater flowing south into South Florida - the plans also call for constructing wells that store and recover water as well as the injection wells that dump water in the boulder zone beneath the Florida aquifer.

The Everglades may be in trouble, wilted by decades of flood control and facing growing risk from sea rise driven by climate change. If freshwater is not restored soon, there is a fear the region will begin a self-replicating cycle of decline.

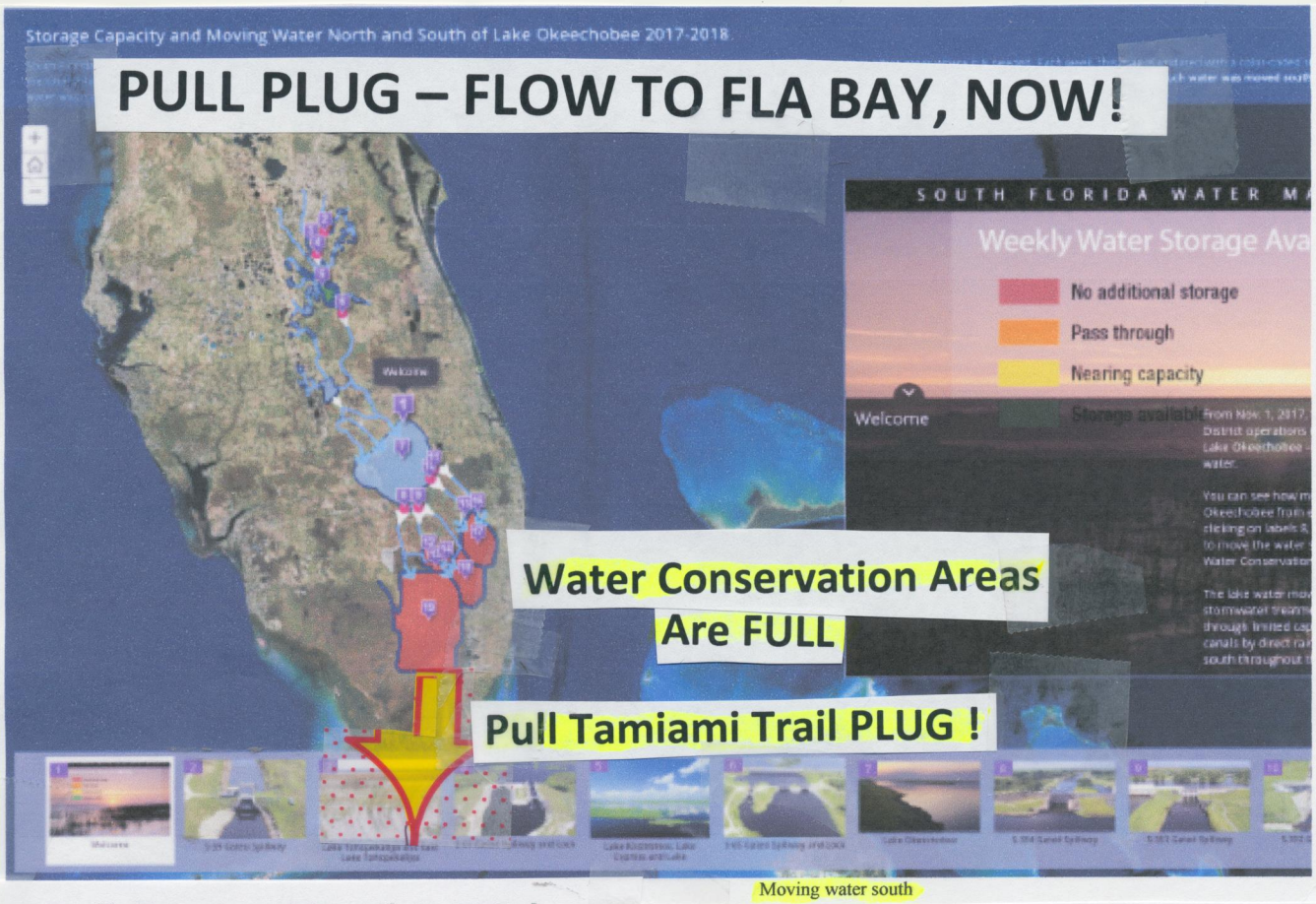


DEEP WELL IDEA
VERY UNTESTED !

Fla Bay Too SALTY

We Just Spent some $20 MILLION on C-111 Spreader, The Headwaters of Fla Bay FEEDS from Taylor Slough

Graphic courtesy South Florida Water Management District.
He said people always want to know how efficient ASR wells will be, since freshwater is pumped into the brackish water of the aquifer. The Kissimmee ASR pilot project had 100 percent recovery, Mr. Verrastro said. He said the Floridan aquifer water is fairly fresh, so they did not have a problem with the freshwater mixing with brackish water found in some ASR projects in other areas.
"Those same conditions pretty much apply throughout the Lake Okeechobee area," he said.
"The water we pump into an ASR well has to go through a filtration and treatment process," he said. "It has to meet drinking water standards, which we were able to do."
"At the Kissimmee ASR system, we found that we are using very lightly treated surface water, it is very stable water," he said.
"Both ASR technology and deep water injection look very promising in our planning process to reduce discharges to the northern estuaries," said Matt Morrison, federal policy chief.
"We're getting one management measure, and that is above ground storage.
If we are really going to reduce the damaging discharges to the Caloosahatchee and St. Lucie estuaries, we need storage," said Mr. Morrison.
"We know we need storage north of the lake. We need storage south of the lake. We know we need storage east and west of the lake.
"The good news is we have construction of storage currently taking place on both the Caloosahatchee and the St. Lucie and the Central Everglades Planning Project, which includes storage south of the lake, was recently approved by Congress for upcoming implementation.
He said about 700,000 acre feet of storage is needed north of the lake.
LOWP project performance measures include:
* Increase water storage capacity in the watershed increasing improved Lake Okeechobee water levels, and reducing the damaging high water levels;
* Improving the quantity and timing of discharges to the St. Lucie and the Caloosahatchee estuaries which adversely affect salinity;
* Creating habitat to increase extent and functionality of freshwater wetlands; and,
* Improve water supply for existing legal users.
Components of LOWP includes above ground reservoirs, ASR, deep well injection and wetland and flood plain restoration. Areas currently under evaluation for reservoirs are west of the Kissimmee River.
Options considered are reservoirs to provide 150,000 acre feet to 300,000 acre feet of above ground storage.
He presented documentation which showed a combination of 250,000 acre foot reservoir and 80 ASRs and 150 deep injection wells could reduce the estuary flows by 82 percent. Total cost for that option is estimated at $3.7 billion.
"We're going to continue to move forward and develop a project plan north of the lake that is going to really help minimize those damaging discharges from Lake Okeechobee that contribute to undesirable conditions in both the St. Lucie and the Caloosahatchee."
"I appreciate this presentation today, as well as the outstanding research of our engineers and hydrologists," said WRAC Chairman Jim Moran. "Multi-faceted storage north of Lake Okeechobee provides a cost-effective, flexible strategy to meet environmental and water supply goals in South Florida."



Moving water south

Pull Tamiami Trail PLUG !

"When are we going to restore the historic flow from Lake Okeechobee to Fla Bay? A new 2.6 mile Tamiami Trail Bridge is under construction, Yet the existing one mile bridge is nowhere near flow capacity. It seems that the U.S. Department of the Interior has restrictions which constrain the water flow. But the huge, three Water Conservation Areas are full of low phosphorus water. As I have said before: 'Pull the plug' and allow South flow. Today, more water is urgently needed for Florida Bay to restore proper salinity. Taylor Slough feeds the historic headwaters of Florida Bay, and thus is the best for today's flow restoration needs. Some $12 million has been spent on C-111 Spreader, yet this essential path to Taylor Slough is not operating at capacity."

Excerpt Ft Myers News-Press 12/28/17 – by David Urich.

239-850=2413
David Urich
3919 McKinley Ave.
Fort Myers, FL 33901
d.urich@comcast.net

2 X as Salty as Ocean !

Sept. 15, 2016

From: Diana Umpierre
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Cc: Cris Costello (Sierra)
Subject: [Non-DoD Source] Sierra Club Comments for USACE on developing the EIS for EAASR
Date: Monday, April 30, 2018 5:19:44 PM
Attachments: SierraClub_Comments_EAA Reservoir_Scoping_11 22 17.pdf
SierraClub_Letter-to-SFWMD_Qs-following-Feb-8 presentation_02 09 18.pdf
SierraClub_Questions-ReSubmitted-to-SFWMD_on_03 08 18.pdf

April 30, 2018

Stacie Auvenshine
U.S. Army Corps of Engineers
Jacksonville District
P.O. Box 4970
Jacksonville, FL 32232-0019

SUBJ: Comments on USACE's development of an Environmental Impact Statement (EIS) for the SFWMD's EAA storage reservoir study

Dear Ms. Auvenshine:

On behalf of the Sierra Club, we would like to provide a copy of comments and questions that we previously provided to SFWMD while they were developing their Tentatively Selected Plan (TSP) for the EAA Storage Reservoir and associated Central Everglades Planning Project Post Authorization Change Report (PACR). These are missing from the PACR, the Integrated Feasibility Study, and the Draft Environmental Impact Statement (FS/DEIS) that SFWMD submitted to Assistant Secretary of the Army for Civil Works on March 26, 2018. This information is missing and is not addressed in the PACR's Appendix C where comments and letters from other stakeholders were included and addressed. Since our input is missing, we are concerned that other stakeholder input might also be missing.

* Nov 22, 2017 Letter with our written scoping comments on the EAA storage reservoir
* Feb 9, 2018 Letter with questions prompted after SFWMD presentation to the Governing Board on February 8, 2018
* Re-submission of February 9, 2018 letter questions and February 22 and 29 questions which remained unanswered.

We look forward to reviewing and providing additional comments once the draft Environmental Impact Statement is available for public input.

Sincerely,

Diana Umpierre

Diana Umpierre, AICP

Organizing Representative

Everglades Restoration Campaign

Sierra Club

e: diana.umpierre@sierraclub.org <mailto:diana.umpierre@sierraclub.org>

c: (954) 829-7632

Explore, enjoy and protect the planet

November 22, 2017

Mike Albert, Project Manager
South Florida Water Management District
3301 Gun Club Road, MSC 8312
West Palm Beach, FL 33406
EAAreservoir@sfwmd.gov

SUBJ: EAA Reservoir Project Scoping Comments

Dr. Mr. Albert:

On behalf of Sierra Club, we would like to submit the following comments and questions as part of the scoping of the Everglades Agricultural Area (EAA) Reservoir Project.

Background

The EAA Reservoir is an integral component of the Comprehensive Everglades Restoration Plan (CERP), which will help solve Florida's ongoing water crisis while restoring the globally unique and invaluable Everglades ecosystem. Florida's coastal waters have long been on the brink of ecological collapse. Billions of gallons of water continue to be discharged from Lake Okeechobee to the St. Lucie and Caloosahatchee estuaries, wasting valuable freshwater needed elsewhere and that is vital to Florida's environment and economy. The extreme freshwater discharges have upset the natural salinity balance in the estuaries needed for oysters, seagrasses, and other aquatic species to survive. The discharges have also carried high levels of nutrients and sediments, causing and contributing to harmful algae blooms, smothering native vegetation, and harming fish and coastal birds. The estuaries' famously clear coastal waters have turned dark brown and green, driving away tourists, damaging local businesses, and reducing home values. Scientists have even detected harmful bacteria in some areas, making the water dangerous for contact with people, pets, and livestock.

At the same time, insufficient freshwater flow to the Southern Everglades caused a substantial seagrass die-off in Florida Bay in 2015 that resulted in the loss of more than 50,000 acres of seagrass in Everglades National Park. The once blue waters looked like pea soup and negatively affected recreational and commercial fishing as well as other water-related activities that bring tourists to the Florida Keys. If this situation persists and is not addressed as quickly as possible, the prediction for Florida Bay is an even deeper collapse.

Increasing storage throughout the Everglades watershed is key to getting the water right on the north and south end of the ecosystem. With storage projects west and north of Lake Okeechobee

already in the planning phase, and given these ongoing emergency conditions, the Sierra Club strongly supports advancing the EAA Reservoir project to provide relief to the ecosystem as envisioned by CERP in 2000.

Our comments and questions below are based on our understanding of the limited information presented thus far via public meetings, which have included substantial repeated information and were held in less than a 1-month period between October 23 and November 16, 2017.

Project Objectives, Scope and Study Area

We agree with the District's dual project objectives of reducing high-volume freshwater discharges to the northern estuaries and identifying storage, treatment, and conveyance south of Lake Okeechobee to increase freshwater flows to the Everglades and Florida Bay. Working toward these goals contemporaneously will lead to a more holistic solution that benefits the entire Greater Everglades, versus segmenting into smaller regions and failing to consider system-wide impacts.

That said, it must be recognized in the project planning process and in the weights assigned to project evaluation criteria and benefits, that SB 10 was introduced and passed in recognition that high-volume freshwater discharges to the St. Lucie and Caloosahatchee estuaries are an emergency and a disaster that must be resolved. Therefore, project alternatives should be weighted accordingly to ensure reduction of these high-volume discharges as much as possible. To achieve this goal, the planning process must include identifying adequate land acreage for stormwater treatment to ensure the maximum possible reduction of discharges.

We urge the District to expand the project study area to include all areas that are adversely affected by high-volume lake discharges as well as all areas that will benefit from this project, or clarify if these are already included. The study area for the EAA Reservoir Project, as outlined by the District in its October 23, 2017 meeting, does not appear to include most of areas that are known to be adversely affected by high-volume lake discharges in Martin and St. Lucie Counties, including Hutchinson Island (slide 10 of meeting presentation). A similar omission was noted along the Caloosahatchee and its estuary. The District should be consistent with the study area identified for the Central Everglades Planning Project (CEPP) to ensure that the entire range of the ecosystem, from Lake Okeechobee to Florida Bay, is included in the scope of work and project benefits analysis.
https://www.sfwmd.gov/sites/default/files/documents/pres_2017_1023_eaa_res_scoping_meeting.pdf.

It is also critical to include the economic and ecologic impacts of high-volume Lake Okeechobee discharges to the northern estuaries. Ignoring these would prejudice the evaluation and decisions against the estuaries by underestimating benefits to the northern estuaries and come up with deep reservoir that will likely be deemed to have insufficient benefits to outweigh the costs.

We have serious concerns over the limited scope of calculating ecosystem benefits as the project advances. At the October 31, 2017 meeting, staff shared that while they embrace increasing southern flows to the Greater Everglades as a project objective, time constraints may prevent staff from fully analyzing flows to Florida Bay and Everglades National Park. Leaving these ecosystem benefits out of calculated benefits would be a disservice to the project, the Everglades, and the Florida Keys.

The District adopted CEPP as its guiding principle in developing the modeling for the EAA Storage Reservoir project, which seems appropriate as the EAA Reservoir is intended to be authorized as a Post Authorization Change Report to CEPP. However, in order to stay consistent with CEPP, reservoir planning should incorporate and adopt the CEPP purpose and need, which is: "to improve the quantity, quality, timing, and distribution of water flows to the Northern Estuaries, central Everglades (Water Conservation Area 3 [WCA 3] and Everglades National Park [ENP], and Florida Bay while increasing water supply for municipal and agricultural users". (CEPP PIR, pg. ES-1). As such, we strongly urge the District to ensure that ecological benefits to Everglades National Park and Florida Bay are included in ongoing EAA Reservoir analysis.

Process and NEPA Compliance

Among the constraints presented at public meetings is the need for compliance with the National Environmental Policy Act (NEPA). We agree that compliance with all requirements of NEPA, as well as other applicable federal laws, is critical for this planning process. Section 203 of the Water Resources Development Act (WRDA) of 1986, under which this project is being developed, requires the Secretary of the Army, prior to recommending the project for approval, to determine if the study, and the process under which the study was developed, comply with all Federal laws and regulations applicable to feasibility studies of water resources development projects. To accomplish this objective, we urge the District to work in close partnership and consultation with the U.S. Army Corps of Engineers to identify, outline, and make publicly available all federal compliance requirements to ensure that they are met in a timely manner.

We urge the District to provide meaningful and accessible NEPA-compliant public participation to those that stand to benefit the most, as well as be impacted, by this project. While it has been appropriate to schedule some of these meetings in West Palm Beach and Clewiston, the District must also provide just and equitable public participation opportunities within other parts of the project study area, in particular Miami-Dade/ Monroe region which faces longer traffic-congested commutes. Since one of the objectives of this project is to benefit the southernmost region of the Everglades ecosystem, residents and other stakeholders in that area should be given equitable opportunity for public engagement. That kind of engagement is not possible via web-casted meetings or via the structure of District governing board meetings.

We ask for the District to provide information on how the planning process is identifying and addressing environmental justice concerns per NEPA requirements and guidance.

Priorities and Assurances

As EAA Reservoir planning advances, Sierra Club wants to ensure that the project provides maximum benefits throughout the Everglades ecosystem with particular emphasis on the following issues:

- **Water Quality**

Meeting state and federal water quality standards is paramount for this and all other CERP projects. The District must make public the results of District modeling so that stakeholders are able to analyze and understand how the project configuration alternatives will maximize storage and conveyance south while meeting water quality standards to ensure that clean water is delivered to the Southern Everglades and Florida Bay.

- **Water for the Natural System**

Per legislative guidelines set forth in SB10, and in compliance with CERP goals, we understand the reservoir will achieve at least 240,000 acre feet of water storage. It is paramount that this amount of water is the *minimum* amount dedicated for the natural system. This volume of water, and more, is needed for Everglades National Park and Florida Bay. Accordingly, alternatives that provide greater quantities of water storage with the necessary water quality treatment should also be evaluated.

- **Maintain Progress**

Both state and federal agencies have committed to keeping the Central Everglades Project on track, particularly PPA South components that will bring direct benefits to Everglades National Park. Maintaining forward momentum on CEP, additional bridging of Tamiami Trail, construction completion and operation of ModWaters, C-111 South Dade, and C-111 Spreader Canal, are all critical to achieve the ecosystem benefits envisioned by the Florida Legislature in SB10.

- **Assessment of Needed Land**

As alternative development and modeling move forward, the critically important issue of the acreage required to achieve all project goals needs to be resolved. We ask the District to not limit its evaluation of alternatives to lands currently in state ownership, but instead to focus its evaluation on alternatives that provide the greatest environmental benefits and to move quickly to identify how much additional land will be needed to develop cost effective project alternatives that achieve the storage, conveyance and water quality goals outlined by the Florida Legislature and CERP.

We ask the District to run modeling for the EAA Reservoir that takes into account ALL state-owned land within the EAA that may be used for land swaps, as well as additional lands that may need to be purchased from willing sellers to meet all project objectives in a cost-effective manner.

Based on the initial modeling provided by the District, we believe that the District has failed to include enough land to construct a reservoir that would provide meaningful benefits to the estuaries as well as provide meaningful conveyance and treatment of water through the EAA and into the Everglades. Instead, the District has proposed to only model reservoir alternatives on the existing footprints of parcels A-1, A-2 and lands just west of A-2. As a result, the proposed reservoir alternatives are much deeper than originally envisioned by CERP, provide less effective STAs, are likely cost-prohibitive, and offer less ecological benefits.

- **Conveyance Capacity**

The EAA Reservoir Project requires conveyance improvements from Lake Okeechobee to the site of the reservoir. To maximize effectiveness and benefits, we recommend the District evaluate cost-effective alternatives that increase canal conveyance capacity to achieve the highest possible reduction in high-volume discharges, as well as increase the amount of freshwater that can be treated and sent south. This should include alternatives that not only smooth existing canal profiles, but also expand them beyond their current footprints.

A common excuse for not sending more Lake Okeechobee water south is insufficient outlet capacity and canal conveyance capacity. To address these limitations, the following features should be evaluated in order to allow for greater capacity and maximize the benefits of the EAA Reservoir project:

- New outlet(s) from Lake Okeechobee to increase the outlet capacity to the south, which would also help reduce the risk of Herbert Hoover Dike (HHD) failure.
- New canal(s) to send Lake Okeechobee water to the EAA reservoir, including during periods of high water in the EAA.
- Hydraulic connection to the western basin, the C-139 Basin in Hendry County, since STA-5/6 often dries out and has excess water treatment capacity, and the west side of WCA-3A often needs more water.

- **Reservoir Water Depth**

We question the cost feasibility, safety and ecological benefits of constructing the deeper reservoir options proposed by the District. One of the options calls for a reservoir that would hold at least 24 feet of water, an amount that is significantly higher than ever envisioned by CERP.

The reservoir dimensions proposed would need very high and wide berms. The design of the reservoir must be cost-effective for federal approval and configurations deeper than 12 feet might not be efficient enough to qualify.

We ask the District to take advantage of the work that led to the 2006 Revised Draft Integrated Project Implementation Report (PIR) and Environmental Impact Statement (EIS) for the Everglades Agricultural Area (EAA) Storage Reservoirs project, which had recommended a 12-ft reservoir providing 360,000 ac-ft of water storage.
http://141.232.10.32/pm/projects/proj_08_eaa_phase_1.aspx

- **Presentation of Results for Wetter Years**

We ask the District to be more forthcoming and clearly present modeling results for wetter years, which are the years when high-volume discharges to northern estuaries are more likely. Instead, as we understand it, the data presented at public meetings includes graphs with only average monthly flows within the model period of record, when the project might send 300,000 acre-feet per year to the south, mainly during dry season. Evaluating project alternatives based on average conditions will underestimate project benefits.

Other Comments and Questions

- We ask for clarification on the specific uses of land outside of effective acreage for storage and treatment.

- The District should not terminate the US Sugar Option Agreement mentioned in SB 10 until all lands needed for this project are acquired.

- Has soil subsidence issues within the EAA been factored into project alternatives?

- We ask for clarification on how applicable federal and state water quality standards were factored into the DMSTA modeling to determine compliance with the strictest applicable standards. The readme.txt file provided by the District with the DMSTA screening results dated November 7, 2017 states the evaluation was performed to achieve 13 ppb or less, of presumably phosphorus. Why 13 ppb and not 10 ppb?

- The District should put on hold the bidding and sale of the larger tracts on the District's land surplus database in order to maximize opportunities for willing land owners to swap lands that could be used for the EAA Reservoir project. When the District conducted its comprehensive land assessment in 2013, the analysis, and hence its recommendations, did not include opportunities to use some of those District lands for purposes of land swaps to benefit the future EAA reservoir project envisioned by CERP.

Thanks for the opportunity to provide these comments and questions. We look forward to staying engaged throughout this important project.

Sincerely,

Diana Umpierre
Organizing Representative, Sierra Club

cc: Lt. Col. Jennifer A. Reynolds, USACE Jacksonville District
FL Senator Joe Negron

SIERRA CLUB

February 9, 2018

Director Ernie Marks
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

Dear Mr. Marks:

The SFWMD presentation to the Governing Board on February 8, 2018 has prompted a number of questions for which we would greatly appreciate answers, preferably in writing/ email. Our full understanding of the District's position depends on receiving responses to these and perhaps subsequent questions. For now, the questions are the following:

1. What was meant by the statement that the Tentative Selected Plan (TSP) delivers only "near-shore benefits to Florida Bay"? Can you be more specific on where within the Florida Bay will these benefits be delivered and what they will be?

2. A presentation slide stated the TSP delivers ~ 370 kac-ft of new water flows (average annual), but the SFWMD press release says ~300 kac-ft. What is the actual approximate number based on the model outputs? Please specify the graphs/charts when responding.

3. What was meant by the statement that the TSP "approaches" CERP goals for reducing damaging discharges; what exactly does "approaches" mean quantitatively?

4. Will the TSP deliver the CERP goal for clean water conveyed south to Everglades National Park and Florida Bay? What is that CERP goal and where it is documented? We made a similar request on or about December 8, 2017 and received a response from the District that there were no responsive records.

5. What are the CERP goals for the 3 performance measures related to discharges to the northern estuaries mentioned in the presentation?
    a. % reduction of high-discharge events lasting more than 60 days
    b. % reduction of discharge volumes
    c. % reduction of Lake O events that exceed preferred salinity

6. For the percentages related to reducing damaging discharges, how much of those percentages are benefits from CEP vs from CEP+EAA Storage Reservoir? What is the percentage of reductions above what CEP was already scheduled to achieve?

7. C240A was categorized as "multi-purpose" to add extra benefits for the same cost. What was meant by "a multi-purpose reservoir"? Is water supply for agriculture included in this TSP? If yes, how much? In the "Next Steps" slide, can you elaborate on what was meant by "identify water protected for the natural system"?

8. What is the "company" hired by SFWMD to give "independent" feedback? What are the names, titles, affiliations, and credentials for the mentioned "5 to 6 experts"?

9. How is the District communicating with the Miccosukee Tribe and the Seminole Tribe in regards to this specific project, the EAA storage reservoir?

10. Regarding reports, final reports and comment periods:
    a. What will the Governing Board be voting upon on March 8, 2018? Will the Governing Board have seen something other than what was presented on Feb. 8 before that vote? If so, when will public see what the Governing Board will vote upon?
    b. SFWMD staff stated that the "draft" plan will be shared with government agencies and entities (fed/state/local). What are the opportunities for these agencies to respond to/comment on the draft report/ plan? What are the opportunities for other stakeholders and the general public to respond to/comment on the report?
        i. Did the failure to produce and/or make public a draft report on January 30 impact any comment period?
        ii. Upon which date does (or did) the state agency review begin? What is the comment period for stakeholders and the general public?
        iii. Upon which date will the NEPA comment period begin?

11. Has the SFWMD rejected the use of Deep Injection Wells as part of its plan to reduce Lake Okeechobee discharges to the northern estuaries? If not, what are your plans to use deep injection wells?

Thank you in advance for your prompt attention to this matter.

Sincerely,

Diana Umpierre, AICP
Organizing Representative
Everglades Restoration Campaign
Sierra Club

cc: Matt Morrison
Mike Albert

Questions Submitted by Sierra Club via email to SFWMD staff

Submitted Feb 9, 2018 – No response received

The SFWMD presentation to the Governing Board on February 8, 2018 has prompted a number of questions for which we would greatly appreciate answers, preferably in writing/ email. Our full understanding of the District's position depends on receiving responses to these and perhaps subsequent questions. For now, the questions are the following:

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       i. Did the failure to produce and/or make public a draft report on January 30 impact any comment period?
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       iii. Upon which date will the NEPA comment period begin?

11. Has the SFWMD rejected the use of Deep Injection Wells as part of its plan to reduce Lake Okeechobee discharges to the northern estuaries? If not, what are your plans to use deep injection wells?

Submitted Feb 22, 2018 – No response received

On Nov 22, 2017, by a deadline provided by SFWMD for written scoping comments for the EAA storage reservoir, Sierra Club submitted comments via email. Attached/ Below is the email and letter. I am re-forwarding this information because the District has not yet acknowledged receipt. We want to make sure that our comment letter was received and it will be included in the draft CEPP PACR/ FS/ EIS that agencies will be reviewing, including District responses to our questions.

We are concerned that our letter has not been taken into account. This is because on December 8, 2017, we submitted a public records request that asked for "copies of all stakeholder public comments that the SFWMD has received from May 1, 2017 to December 8, 2017, including electronic mail, in-person submissions, and regular mail, regarding the proposed EAA Reservoir pursuant to Chapter 2017-10 of Laws of FL (SB10).".

What we received seemed limited and it did NOT include our own letter submitted to the District on Nov 22. Hopefully, our letter was the only public comment omitted from our request.

PLEASE, CAN YOU CONFIRM THAT OUR LETTER HAS BEEN INCLUDED IN THE DRAFT CEPP PACR/ FS & EIS THAT WILL BE SENT TO THE GOVT AGENCY TECHNICAL REVIEW THAT WILL BE CONDUCTED?

Submitted Feb 26, 2018 – No response received

In addition to the attached questions sent on Feb 9, we have the following additional questions:

>> It was mentioned that District staff will seek GB authorization to submit the Post Authorization Change Report (PACR) to ASA. What specificically will the GB be "authorizing" in their March GB mtg? Will you be sharing with GB members a draft copy of the PACR report, including its appendices/ annexes before their March mtg? If no, what will you be providing so they make an informed decision outside of information on Powerpoint slides?

>> Which specific agencies (federal, state, local and tribal) were invited to the mtg/ teleconference call that was held to kick off the Agency Technical Review meeting? When was this meeting or teleconference kickoff held? How many weeks and/or days did SFWMD give to these agencies to provide comments and in what format?

>> Are the model run output files used to calculate the quantitative benefits of the proposed C240 alternative that were presented at the NAS committee meeting last week on your FTP public site? I looked but only saw the files from an earlier run, posted on Jan 30, 2018. Among others, I'm trying to ascertain if these are model run files that provide the backup data for the estimated increase of flows of approximately 370,000 ac-ft (average annual).

From: Donald Minor
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Lake Ockeeb
Date: Wednesday, April 25, 2018 9:12:35 AM

Hope youse all vote to let ponds to catch water discharges from lake start. It would be nice to have this as first step in many need to keep fowl water out of St Lucie River waters and let area recover from prolong harmful discharges. Looking foward to return to natural flow to Everglades. thanks Don Minor Stuart fl.

From: Mitsch, William
To: abe@slought.org
Cc: Auvenshine, Stacie J CIV USARMY CESAJ (US); Rae Ann Wessel; Jennifer Rubiello; pat@slought.org
Subject: [Non-DoD Source] Re: EAA Reservoir
Date: Tuesday, April 24, 2018 10:31:16 AM

Abe and Pat,
I am less enthusiastic because water quality plan is inadequate and swept under rug just to encumber $2 billion. I am writing piece now for ACOE request on behalf of Friends of Everglades. Might be able to show you draft by Friday. When do you comment? Can u wait till then?
Bill

Sent from my iPhone

On Apr 24, 2018, at 10:24 AM, Abe Levy <abe@slought.org <mailto:abe@slought.org> > wrote:

I am writing to support strongly the construction of the EAA reservoir.

While I would prefer a much larger and shallower wetland, rather than an over 20-feet deep reservoir, I am grateful for this very modest step in the right direction of moving water southward from Lake Okeechobee into an EAA and from there southward into the Everglades.

Thank you for anything you can do to expedite the construction of this reservoir.

Abe Levy

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914-924-1260

Restoring the Florida Everglades: Comments on the EAA Reservoir Plan

by

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Eminent Scholar--College of Art & Sciences, and
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Courtesy Professor of Soil and Water Science, University of Florida
Courtesy Professor, School of Geosciences, University of South Florida

Pertinent Bio

My lab at FGCU, referred to as the "Everglades Wetland Research Park" has published recently and frequently about modeling, monitoring, and experimenting with water quality improvement in the sawgrass "river of grass" eastern half of the Greater Florida Everglades (Mitsch, 2016; Mitsch et al., 2015, 2018; Marios et al., 2015a,b; Yeoman et al., 2017). In addition, over the past 25 years I presented wetland modeling short courses at SFWMD and served on several SFWMD review committees, including serving as chair of a panel reviewing the Everglades Land Model (ELM) in 2006. Over the past 30 years, my lab has published many versions of models specific to wetlands and nutrient retention, particularly related to phosphorus (Mitsch et al., 1982, 1988; Mitsch and Fennessy,1991; Mitsch and Reeder, 1991; Christensen et al., 1994; Wang and Mitsch, 2000; Jørgensen et al., 2005; Zhang and Mitsch, 2005; Marois and Mitsch, 2015a).

Introduction

I believe that the Florida Everglades restoration is now at a crucial crossroad that will determine its long-term success or failure so I consider it prudent to make some comments on the EAA Reservoir Plan as it is currently described. We were unable to delve into the details of hydrologic modeling performed by the SFWMD related to this project given the short time allowed for comments and lack of support for a rigorous modeling effort, but I am providing this hopefully constructive critique so that the U.S. Army Corps of Engineers and the South Florida Water Management District can fine-tune the "EAA Reservoir" plan so that it becomes a significant step forward toward completion of a sustainable Florida Everglades restoration.

I first express my support for seeing an ambitious effort for eliminating decades of stalling with a serious "sending the water south" strategy, the mantra for a generation of those who understand the big picture of what the Florida Everglades restoration is all about. The South Florida Water Management District claims the EAA Reservoir project will — when used in conjunction with other existing and planned projects — reduce the number of damaging discharge events from Lake Okeechobee to the St. Lucie and Caloosahatchee rivers by 63 percent and increase the flow going south by 76% by 160,000 acre-ft/year to 370,000 acre-ft/year (121 billion gallons per year) of water south to the Everglades and Florida Bay from Lake Okeechobee.

But if this plan results in pollutants, particularly phosphorus and nitrogen, getting into greater Everglades (WCAs and south) or develops an unsustainable, un-ecological and/or simply polluted reservoir to manage in perpetuity, we will regret the day we said OK "just to spend the money." I am not assured from what I see written so far from SFWMD that this project is properly focused on what is important—sending clean water to the greater Florida Everglades. If ever there was a need for an ecological engineering and not just civil engineering approaches to lead the Everglades restoration, this is it.

The Plan

A current plan, referred to as C240A (Smith, 2018), calls for sending Lake Okeechobee water to a "EAA Reservoir" to be constructed 30 or so miles south of Lake Okeechobee with the following design: 23-foot-deep, 10,100-acres, with the ability to store up to 240,000 acre-ft (78.2 billion gallons) of excess Lake Okeechobee water. The plan also involves completion of a previously approved 15,000–acre A-1 Flow Equalization Basin with a maximum water storage 60,000 acre-feet (20 billion gallons). The plan also includes the design and operation of 6,500 acres of shallow treatment wetlands (sometimes referred to by the SFWMD as Stormwater Treatment Areas (STAs), similar to the 57,045 acres (23,085 ha) of STAs already constructed to clean the water prior to its discharge to the Everglades to the south.

Concerns

1. My first comment concerns the false expectations by the public so that they approve expenditures of up to $2 billion. I have frequently heard "well the project is not perfect, but let's do it while the money is there." The volume of water being discharged south needs to be put in perspective; the 121 billion gallons/year of water eventually being sent south to the Everglades and Florida Bay in the EAA reservoir plan will not solve the estuarine pollution of the Gulf of Mexico and Atlantic Ocean coastlines. Figure 1 illustrates the Everglades Restoration plan that I have had in my textbooks since we published it in the Mitsch and Jørgensen (2004) ecological engineering book 14 years ago and continued to be published in the 4th and 5th editions of "Wetlands" (Mitsch and Gosselink, 2007, 2015). I am aware that the restoration plan shown in the 3rd panel has been

changed in several more recent publications and in prominent locations including the well-known wall maps at Corkscrew Swamp Sanctuary lobby that now show significant water flowing east and west flow to the coastal estuaries, even when the restoration is complete. It is not clear that the public is aware that this subtle change in graphics represents a major change in the overall restoration goals in the past decade.

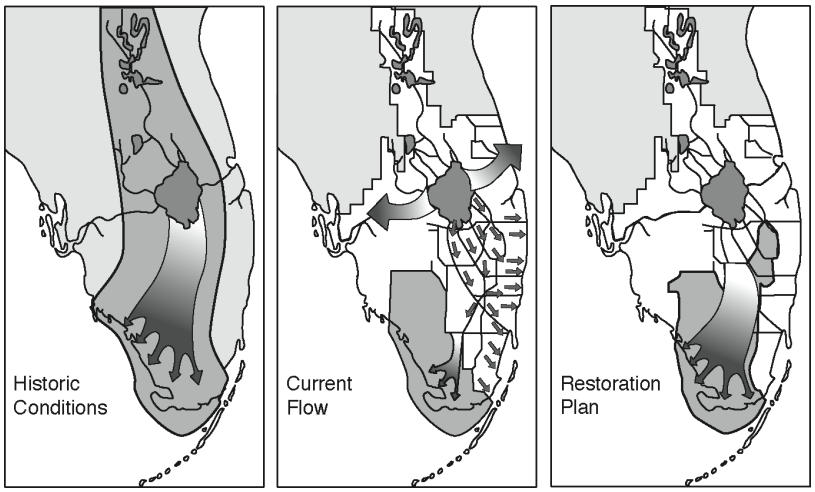

Figure 1. Three-picture summary of historic, current, and restoration water flow in the Florida Everglades as provided by the U.S. Army Corps of Engineers in the early 2000s. (from Mitsch and Jørgensen, 2004)

To put 121 billion gallons of water per year in perspective, 3.1 billion cubic meters or 819 billion gallons) were discharged to the St. Lucie and Caloosahatchee rivers in the El Nino flooding year of 2016 (Table 1), 6.7 times the flow expected to go south with the EAA Reservoir plan. Even in the last 10 years (2008-2017) an average of 1.5 billion cubic meters per year or 396 billion gallons (Table 1) is 3.3 times 121 billion gallons per year of water that will be sent south according to the plan.

Table 1. Freshwater discharges from Lake Okeechobee to the sea over the period 2008-2017, and annually in 2013, 2016, and 2017.

Discharge from Lake Okeechobee	2008-2017	2013	2016	2017
Discharge to Caloosahatachee and Gulf of Mexico ($x10^9$ m^3)	1.3	1.6	2.2	1.7
Discharge to St. Lucie and Atlantic Ocean ($x10^9$ m^3)	0.2	0.6	0.9	0.6
TOTAL Discharge to the sea ($x10^9$ m^3)	1.5	2.2	3.1	2.3
Equivalent depth of Lake O discharged to sea (m)	0.8	1.1	1.6	1.2

Discharge data from:
USGS 02292010 CALOOSAHATCHEE CANAL DWS OF S-77 AT MOORE HAVEN FL
USGS 02276877 ST. LUCIE CANAL BLW S-308

2. There is insufficient detail on water quality in the plan relative to water volume and flow. The flow south to the Everglades will increase by 76% from 210,000 acre-ft/yr (68 billion gallon/yr) to 370,000 acre-ft/yr (121 gallon/yr) according to the most recent approved version of the EAA Reservoir plan (Smith, 2018). Despite the 76% increase in flow, the project shows an increase in treatment wetlands of only 11% (6,500 acres) to designed to improve water quality directly. I estimate a minimum of at least 43,000 additional acres of treatment wetlands (STAs or passive wetlands) will be needed to treat the water flowing south. Further, we note that the estimated average concentration of phosphorus flowing out of Lake Okeechobee is 147 ppb (Goforth, 2010) while the average inflow to the current STAs in about 100 ppb (SFWMD, 2016). Due to the higher flow, it is common sense that the phosphorus concentrations reaching current and future STAs will be higher than the concentrations reaching them now and, in that case, threaten existing state and federal standards on Everglades water quality.

3. The new EAA reservoir will not resemble any natural feature of aquatic ecosystems in the greater Florida Everglades in ecology, morphology or hydroperiod. The hydroperiods will be wrong and exaggerated for south Florida ecology (similar to the way wetland hydroperiods were shifted in the Great Lakes with diked marsh hunt clubs and conservation areas, Mitsch et al., 2001; Mitsch and Gosselink 2015). The potential amplitude of the annual hydroperiods of up to 23 feet in the EAA reservoir is exceeded only rarely in natural or human-created ecosystems, e.g. the Amazon River (Junk et al., 1992) or Three Gorges Dam reservoir (Mitsch et al., 2008). The reservoir may become a “freak ecosystem” over time, i.e., an aquatic ecosystem dissimilar in hydrology and probably ecology to any other aquatic ecosystem in Florida.

4. Most eutrophic lakes in our experience become occasional or even permanent sources rather than sinks of nutrients—Buckeye Lake, Ohio (W.J. Mitsch, personal experience), Taihiu Lake in China (Kelderman et al., 2005), and even Lake Okeechobee (Havens and James, 2005). It is highly probable that the EAA reservoir will not be a nutrient sink in most years, an assumption that is included in this plan. Using a Vollenweider-type model (Hejzlar et al., 2006) in SFWMD’s DMSTA model as proof that the EAA reservoir will always be a nutrient sink is ecologically and hydrologically inaccurate and misleading. The DMSTA model was developed to evaluate multiple STA design alternatives. Model simplicity resulted from aggregation of key variables and processes controlling phosphorus storage and cycling (Walker and Kadlec, 2011). But the DMSTA has not been calibrated for reservoirs. Also, the model can be used on a daily inflow step and the empirically derived coefficients are based on long-term annual average values.

Conclusions

- The EAA Reservoir is considered the heart of this recent attempt to send water south in the Florida Everglades and is a good start of the discussion of solving water excess and scarcity problems. The Florida State Legislature and the South Florida Water Management District plan to increase the southerly flow by 63 percent and send an average of 121 billion gallons of water south to the Everglades and Florida Bay is noteworthy.

- Nevertheless, there is considerable ambiguity in the plan and its model predictions about the quality of the water as it enters the greater Everglades south of the EAA Reservoir and through Miccosukee Tribal lands on its way to the Everglades National Park and Florida Bay. At a minimum, ~50,000 acres of treatment wetlands (STAs) need to be created or restored in proximity to the EAA Reservoir; 6,500 acres of shallow treatment wetlands will be insufficient to protect the Everglades.

- The plan for an EAA reservoir immediately south of Lake Okeechobee needs to be re-examined. For example, purchase of farmland at a fair price coupled with conversion of that land to treatment wetlands (perhaps as many as 150,000 acres from the 700,000 acre EAA) in lieu of construction of a ~$2-billion EAA reservoir is a reasonable alternative to the reservoir for water storage and water quality and should be examined. Additionally, state-owned lands currently leased to agricultural tenants could be incorporated in any comprehensive review of alternatives. Adequate wetland creation to achieve water quality in the Florida Everglades is true “restoration”; creation of large difficult to manage deep reservoirs is not. If a deep reservoir in Florida’s subtropical climate compounds costs and problems for existing Everglades restoration plans, Corps acceptance of this plan should be conditioned by adequate stormwater treatment areas, i.e., treatment wetlands (STA’s) and flow equalization basins (FEB’s) to mitigate the chances of falling short.

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Jacksonville District, US Army Corps of Engineers (USACE)
and South Florida Water Management District (SFWMD)
Environmental Impact Statement (EIS)
For a Central Everglades Planning Project Post Authorization Change
Report for the Everglades Agricultural Area Reservoir, Florida
US Environmental Protection Agency (EPA)
Scoping Comments
April 30, 2018

Background: The EPA understands the purpose of the proposed project is to make improvements to the Central Everglades Planning Project (CEPP) components related to Flow Equalization Basins (FEBs), associated Stormwater Treatment Areas (STAs), and canal conveyance systems that will increase the storage capacity to relieve high water elevations within Lake Okeechobee. The South Florida Water Management District's (SFWMD) stated project goal is to reduce high water elevations within Lake Okeechobee that would then lead to fewer harmful discharge events to the St. Lucie Estuary and Caloosahatchee Estuary, while also increasing flows into the central Everglades[1]. The EPA staff have participated in numerous SFWMD public meetings, conference calls, and webinars regarding this EIS and feasibility study. The SFWMD requested the EPA and other Federal and State resource agencies provide scoping comments as they prepared the Draft EIS. On November 21, 2017, the EPA provided the SFWMD with scoping comments[2] regarding this EIS and feasibility study. The EPA notes that the SFWMD has prepared a Draft EIS (DEIS) and feasibility study pursuant to section 203 of Water Resources Development Act (WRDA) 1986 (Section 203), as amended. In accordance with Section 203, on March 30, 2018 the SFWMD submitted the DEIS and feasibility study to the Assistant Secretary of the Army for Civil Works for review for the purpose of determining whether the study, and the process under which the study was developed, comply with Federal laws and regulations applicable to feasibility studies of water resources development projects. On April 16, 2018, the USACE released a Notice of Intent (NOI)[3] to prepare a DEIS or a CEPP Post Authorization Change Report (CEPP PACR) for the Everglades Agricultural Area (EAA) Reservoir. Pursuant to this NOI, it is the EPA's understanding that the USACE has reinitiated scoping to collect comments from agencies and stakeholders. As of this date, the EPA has not thoroughly reviewed the SFWMD's DEIS and feasibility study and our scoping comments (listed below) reflect our current knowledge of the DEIS and feasibility study.

Water Quality Effluent Based Limit (WQBEL): As noted in the EPA's November 21, 2017, scoping comments, the EPA continues to recommend that the USACE and SFWMD carefully consider the Total Phosphorous (TP) Water Quality Effluent Based Limit (WQBEL) when

[1] South Florida Management District, "Draft Feasibility Study and Environmental Impact Statement Central Everglades Planning Project Post Authorization Change Report", February 2018.
[2] Higgins, Jamie. "EAA Storage Reservoirs EIS." Received by EAAreservoirs@sfwmd.gov, 21 Nov. 2017.
[3] Federal Register Volume 83, Number 73, *Notice of Intent To Prepare a Draft Environmental Impact Statement for a Central Everglades Planning Project Post Authorization Change Report for the Everglades Agricultural Areal Reservoir*, April 16, 2018, pages 16346-16347.

considering various alternatives for the A-2 parcel. In accordance with Sections 373.026(8)(b) and 373.1501(9), Florida Statue, the Florida Department of Environmental Protection (FDEP) prepared a Secretarial Order[4], which approved the proposed project. Regarding the WQBEL, the FDEP states,

> *"The modeling contains various conservative assumptions and practices to provide certainty that the applicable WQBEL will be achieved by the project. Although all modeling and associated assumptions have some level of uncertainty, permitting requirements applicable to the STAs ensure the WQBEL will ultimately be achieved. In the event the WQBEL is not attained, additional actions to meet water quality requirements must be undertaken. For example, the District could convert portions of the A-1 Flow Equalization Basin to a STA."* (page 5)

The EPA acknowledges and supports FDEP's commitment to attaining the WQBEL.

Restoration Strategies Regional Water Quality Plan[5]: In response to an order by the United States District Court, Southern District of Florida, EPA, SFWMD and FDEP began technical discussions in 2010 to identify remedies to achieve Florida's 10 part per billion (ppb) water quality standard for TP in the Everglades Protection Area. The primary objectives were to establish the WQBEL that would ensure that discharges from the STAs do not cause or contribute to exceedances of the 10 ppb TP criterion, and to identify a suite of additional water quality projects that would contribute to reducing TP concentrations in discharges from the STAs to meet the WQBEL. Based on this collaborative effort, a suite of projects was identified that would achieve the WQBEL: the Restoration Strategies (RS) Regional Water Quality Plan[5]. The projects are divided into three flow paths (Eastern, Central, and Western), and primarily consist of FEBs, STA expansions, and associated infrastructure and conveyance improvements. The Central Flow Path contains STA 2, STA 3/4, and the CEPP EAA A-1 Storage Reservoir, which was completed as a shallow FEB in 2015 as a requirement of RS. Each flowpath has a separate construction schedule and the Central Flowpath projects were completed in 2015. The EPA is available to provide technical assistance to USACE and the SFWMD regarding the WQBEL and other water quality issues related to the proposed project.

Tribal Consultation: As noted in our November 21, 2017, scoping comments, the EPA encouraged the SFWMD to engage in meaningful discussions with the Seminole Tribe of Florida and the Miccosukee Tribe of Indians of Florida regarding the project. Because the SFWMD is not a federal entity, we acknowledge that the SFWMD could not conduct "government-to-government consultations" with the Tribes as that term applies to federal agencies under Executive Order No. 13175, "Consultation and Coordination with Indian Tribal Governments"

[4] Valenstein, Noah. Florida Department of Environmental Protection, OGC No. 18-0138, *Final Order Approving the Central Everglades Planning Project Post-Authorization Change Report Everglades Agricultural Area Reservoir.* Mar. 5, 2018.
[5] South Florida Water Management District, *Restoration Strategies Regional Water Quality Plan,* Apr. 27, 2012.

(Nov. 6, 2000). The EPA notes that, in a recent January 8, 2018, letter[1] to the SFWMD, the Miccosukee Tribe of Indians of Florida outlined many concerns regarding the proposed EAA Reservoir. The EPA encourages both the USACE, as the government agency charged with tribal consultation under E.O. 13175, to conduct tribal consultation as it deems appropriate, and the SFWMD to continue its outreach efforts to the Tribes in conjunction with the Project. The EPA also notes that the EPA works closely with both Tribes on Everglades matters and is committed to working with state and federal partners with regard to the Tribes' water quality and water management concerns.

Environmental Justice (EJ): The EPA notes that the current tentatively selected plan is entirely on state lands and does not take any agricultural lands out of production. Should changes to the tentatively selected plan require the conversion of agricultural lands to a component of the project, then the EPA recommends the USACE and SFWMD evaluate impacts to low income, minority farmers, and farm workers.

[1] Cypress, Billy. Letter to Ernie Marks, Executive Director, SFWMD *RE: Discrimination in Water Management Decisions/EAA Reservoir Chapter 2017-10*. Jan 8, 2018.

From: Ed Fielding
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Cc: Ernie Marks (emarks@sfwmd.gov)
Subject: [Non-DoD Source] reservoir
Date: Monday, April 30, 2018 5:03:11 PM

Members of my family were school teachers in Moore Haven area during 1926 hurricane. I have had a lifetime observing the various projects of the Army Corps and so have skeptical hope as we fling out on a new mission of salvation for the Everglades. Often we do a lot of stuff (spend money) with only modest resultant benefit for the patient.

We may do no better this time, but I hope we at least catalog our objectives, establishing metric to determine how we are doing and even which way we are going.

A. OBJECTIVES
1. for Lake, the list to accomplish restoration would be overwhelming, but the modest list for water control as affecting the estuaries and releasing water SOUTH may be within the range of
being doable.
a. Unfortunately the most effective way to address Lake levels, through significant increase of storage in the upper Okeechobee basin, has been thwarted in the LOW Project Plan.
b. If our objective were to eliminate estuary discharge rather than just make unfounded and totally unsupportable claims about percentage improvement in decreased volume of releases
there would be more hope. So should we get a Harvey instead of an Irma it is just a freak of nature; no lack of planning here.
c. To eliminate releases to the St. Lucie estuary we need sufficient capacity to discharge to the South, clean water to meet quality standards and conveyance to move the water into areas
of need and storage areas, reservoir(s), and procedures and policies to move Lake water before EAA drainage fills all the available canals.
2. To release water SOUTH:
a. Conveyance,
b. Sufficient water quality,
c. Movement ahead of EAA drainage.
3. Accumulate in the reservoir via some cleaning process.
4. This additional water to be available for: Park, Tribes, Florida Bay, Key Biscayne, Shark River Slough, etc (i.e. the environment).

B. MEASURE ACHIEVEMENT OF OBJECTIVES

C. PROBLEMS
1. Reliance on outdated weather model; Harvey would have breached the dike, yet we still plan on Irma being the unique storm event;
2. With heavy rain fall still rely on releases to estuary as only outlets with sufficient capacity and lack of water quality standards.
3. EAA releases plug up pathway to getting Lake water releases into reservoir.
4. How to get clean water into reservoir?
5. How to get clean water to Park, Florida Bay, etc?
6. Establish a measuring system so we know when we are and are not meeting expectations at various points along the projected flow pathway.
7. We are not planning sufficiently for water retention in Okeechobee basin nor in chain of Lakes.

Ed Fielding

Commissioner – District 2
Martin County Board of County Commissioners
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From: Florence Chatowsky
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] St Lucie River
Date: Tuesday, May 01, 2018 1:46:10 PM

Science and the St. Lucie

An estuary is defined as a body of water having a freshwater inflow at one end that mixes with saltwater providing a low salinity gradient (brackish water) that connects with the ocean at the other end and is subject to tidal flows. It is not a bay. It is not a river. The St. Lucie River is an estuary. It had fresh water running into it from its upper north and south forks, drainage creeks, and historically above and underground sheet flow water moving in from the west. The lower salinity water of an estuary is important as a nursery for fish such as mullet, redfish, mangrove snapper, snook; also for shrimp, oysters, blue crabs, and other inshore creatures.

When I moved to our home on the St. Lucie estuary 26 years ago water was being released into it from Lake Okeechobee via the St. Lucie locks in low volume pulse releases. I could tell when the water was being released because the fishing improved especially the snook bite. Snook like to feed in moving water and would swim up to the inflowing water at the locks to feed on the mullet that also move into fresh water to feed on vegetation. At the C-23 canal in Palm City that runs into the St Lucie, the fishing is always better when fresh water is flowing over t he dam. There is even a fish pier built below the dam for that reason.

During the pulse releases of the early 1990's the fishing in the St. Lucie was very good. Every winter schools of bluefish, Spanish mackerel, and jacks would feed at channel marker 19 and off the Martin Memorial Hospital shore. The dark water did not bother the fish at all. In fact, most of the fish that inhabit the St. Lucie can live in fresh water. Mullet, snook, and tarpon have been caught in Lake O. Go to Homasassa Springs and see sheepshead, redfish, tarpon, jacks, mullet all thriving in the cold fresh spring water.

As long as the Lake O water was released in low to moderate volumes the fish did fine and there were enough available for both sports fishing and commercial netting. It was not until 1998 after the pulse releases were stopped, that a prolonged release of large volumes of freshwater became necessary and so stressed the estuary, that we began to see lesions on fish and oysters disappearing. When the high volume inflow diminished the lesions diminished and the oysters returned. There is a critical threshold of fresh water inflow from Lake O into the St. Lucie estuary above which its ecosystems are shocked. Is it possible to determine the critical threshold?

I have heard about restoring the original flow of Lake O water south through the Everglades since my first trip to Florida in 1957 to camp in and explore the Everglades National Park. In the meantime the overflow from the lake is now dumped into the St Lucie without a management plan except to release it in large volumes dictated by rain. Are there scientists with the South Florida Management and the U.S. Corps of Engineers, in other words the state and federal governments, knowledgeable about the dynamics of estuaries that with their computer models can design an outflow plan for Lake O water to be released into the St. Lucie in a low volume steady state that does not

exceed the critical threshold and allows the inflowing fresh water to blend with the salt water in a more natural manner? Is that possible?

No fresh water coming into the St. Lucie estuary can have a negative effect as demonstrated during the drought years. The water became clearer but highly saline. The fishing declined and the mullet, which enter the estuary from the ocean stopped coming into it. Finger mullet move up from the ocean into lower saline waters where they feed on aquatic vegetation, algae, and mangrove detritus. Hiding in the mangroves from predators they grow to adult size. Before the drought during the pulse releases the canals and creeks of the St. Lucie would fill up with mullet and you could hear the snook feeding in them all night. Since the drought that no longer happens and only remnants of the great mullet schools are found in the Sr. Lucie now. In fact it was the mullet, glass minnows, and juvenile menhaden that grew in the brackish water luring in the predator fish that made for such good fishing years ago.

In summary: the St. Lucie River is not being addressed as an estuary but as a place for large slugs of Lake O water to be dumped into in an all of none manner. Low volume pulse releases did not harm the fish or fishing, Large volumes of Lake O water in prolonged releases does harm the fish and fishing and promotes algae inflows and algae blooms. Drought and no releases of fresh water over a prolonged period causes higher than normal salinities (salt water intrusion) that can have a negative effect on estuary fish populations.

While we wait for the southern flow from Lake O to be fully restored and proposed water storage areas to be developed can we do something for the St. Lucie estuary now? Will scientists and engineers working together design and implement a release system for Lake O water that provides a low volume flow of water to the St. Lucie in an effort to keep the lake at stable levels and maintain the health of the estuary instead of the current antiquated system of massive releases that shock the estuary and shock the community? Might it be accomplished at a fraction of the money allocated for Everglades Restoration? Can they do it? Is it possible?

Tony Chatowsky

B.S. in Ecology and Master of Marine Affairs

University of Rhode Island

Past MC Audubon Conservation Chair,

17 years doing annual Audubon Christmas Bird Count

on the north and south forks of the St. Lucie River

From: Frank Taube
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Cc: Laura Taube (missygirl40@comcast.net)
Subject: [Non-DoD Source] Lake O Discharges
Date: Friday, April 20, 2018 9:36:49 AM
Attachments: image001.gif
image002.png

Good morning Ms. Auvenshine.

My wife and I fully support the efforts of the Army Corps efforts to reduce the discharges from Lake Okeechobee and improve clean water flow to the everglades. We believe the people that work for the Corps have invested their life's work to improve the environment and human interaction with it to protect our planet. And your plan to build a retaining lake to settle and filter the water to direct it to where it is needed in the everglades is supported by my wife and me.

We have the opportunity to see the Atlantic just north of the St Lucie inlet and can see the vast improvement of the water quality with the reduced discharges in 2018. The ocean is blue again and the fish have begun to return. If we can reduce the number of discharges in a wet season the water quality will improve greatly. If we build this basin and give the water a place to go, it will return Florida to its natural state.

Thank you for your help in this project.

Frank Taube

1925 SE Sailfish Point Blvd

Stuart, Florida 34996

Ftaube3@sysspec.com <mailto:Ftaube3@sysspec.com>

Mobile 248-978-3005

From: Mrs. Ginger Goepper
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Protect our Florida environment from harmful pollutants.
Date: Monday, April 23, 2018 4:43:22 PM

Stacie Auvenshine,

I am writing to support the Army Corp of Engineers' efforts to protect Florida's environment from the harmful pollutants in Okeechobee Lake discharges:

* 23-foot-deep, 10,100-acre reservoir to store up to 78.2 billion gallons of excess lake water
* 6,500-acre man-made marsh to clean the water

When used in conjunction with other existing and planned projects, I believe this will reduce the number of damaging discharge events from Lake Okeechobee to the St. Lucie and Caloosahatchee rivers by 63 percent and send an average of about 120.6 billion gallons of clean water south to the Everglades and Florida Bay.

Respectfully,
Ginger Goepper
Florida Conservation Coalition Team member

From: Howard Snoweiss
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Curtailing discharges from Lake Okeechobee
Date: Wednesday, April 18, 2018 8:39:35 PM

Dear Ms. Auvenshine,
I am writing to express my support of the Army Corps purchasing the land that is required in order to move the water south. As a resident of Stuart, who lives along the St. Lucie inlet, my family and I can attest to the importance of this project. Please move ahead with the land purchase and encourage congress to approve the plan.
Sincerely,
Howard Snoweiss

Howard Snoweiss
2920 S.E. Dune Drive #130
Stuart Fl. 34996
cel 305 215-1220
Hm 772 334-7013
hsnoweiss@mac.com <mailto:hsnoweiss@mac.com>

From: VeroDiehls
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Lake O reservoir
Date: Wednesday, April 18, 2018 10:41:11 AM

This is a multi faceted problem, but the reservoir is at least one step in the right direction. I hope it can be done, along with so many other things need to save this amazing little corner of God's creation with it's fragile waterways. Thanks. Rev/Capt Andrew C. 'Jack' Diehl III, CCA member and Environmental chair for our Sunrise Rotary Club, Vero Beach.

From:	Higgins, Jamie
To:	Auvenshine, Stacie J CIV USARMY CESAJ (US)
Cc:	Higgins, Jamie; Militscher, Chris; Zapata, Cesar; Harper, Cecelia; Scheidt, Dan; Torres, Ramon; Armor, Suzanne; Johnson, Patrick; Mancusi-Ungaro, Philip
Subject:	[Non-DoD Source] CEPP Post Authorization Change Report EIS Scoping Comments
Date:	Monday, April 30, 2018 3:58:22 PM
Attachments:	EAA scoping comments-USACE Final.pdf

Stacie,

Please find attached EPA's scoping comments for the Central Everglades Planning Project Post Authorization Change Report EIS. Please let us know if you have questions.

Thanks,
Jamie

Jamie Higgins

National Environmental Policy Act (NEPA) Program Office

Resource Conservation Restoration Division

Region 4, Environmental Protection Agency

61 Forsyth Street, NW

Atlanta, GA 30303

404-562-9681

Jacksonville District, US Army Corps of Engineers (USACE)
and South Florida Water Management District (SFWMD)
Environmental Impact Statement (EIS)
For a Central Everglades Planning Project Post Authorization Change
Report for the Everglades Agricultural Area Reservoir, Florida
US Environmental Protection Agency (EPA)
Scoping Comments
April 30, 2018

Background: The EPA understands the purpose of the proposed project is to make improvements to the Central Everglades Planning Project (CEPP) components related to Flow Equalization Basins (FEBs), associated Stormwater Treatment Areas (STAs), and canal conveyance systems that will increase the storage capacity to relieve high water elevations within Lake Okeechobee. The South Florida Water Management District's (SFWMD) stated project goal is to reduce high water elevations within Lake Okeechobee that would then lead to fewer harmful discharge events to the St. Lucie Estuary and Caloosahatchee Estuary, while also increasing flows into the central Everglades[1]. The EPA staff have participated in numerous SFWMD public meetings, conference calls, and webinars regarding this EIS and feasibility study. The SFWMD requested the EPA and other Federal and State resource agencies provide scoping comments as they prepared the Draft EIS. On November 21, 2017, the EPA provided the SFWMD with scoping comments[2] regarding this EIS and feasibility study. The EPA notes that the SFWMD has prepared a Draft EIS (DEIS) and feasibility study pursuant to section 203 of Water Resources Development Act (WRDA) 1986 (Section 203), as amended. In accordance with Section 203, on March 30, 2018 the SFWMD submitted the DEIS and feasibility study to the Assistant Secretary of the Army for Civil Works for review for the purpose of determining whether the study, and the process under which the study was developed, comply with Federal laws and regulations applicable to feasibility studies of water resources development projects. On April 16, 2018, the USACE released a Notice of Intent (NOI)[3] to prepare a DEIS or a CEPP Post Authorization Change Report (CEPP PACR) for the Everglades Agricultural Area (EAA) Reservoir. Pursuant to this NOI, it is the EPA's understanding that the USACE has reinitiated scoping to collect comments from agencies and stakeholders. As of this date, the EPA has not thoroughly reviewed the SFWMD's DEIS and feasibility study and our scoping comments (listed below) reflect our current knowledge of the DEIS and feasibility study.

Water Quality Effluent Based Limit (WQBEL): As noted in the EPA's November 21, 2017, scoping comments, the EPA continues to recommend that the USACE and SFWMD carefully consider the Total Phosphorous (TP) Water Quality Effluent Based Limit (WQBEL) when

[1] South Florida Management District, "Draft Feasibility Study and Environmental Impact Statement Central Everglades Planning Project Post Authorization Change Report", February 2018.
[2] Higgins, Jamie. "EAA Storage Reservoirs EIS." Received by EAAreservoirs@sfwmd.gov, 21 Nov. 2017.
[3] Federal Register Volume 83, Number 73, *Notice of Intent To Prepare a Draft Environmental Impact Statement for a Central Everglades Planning Project Post Authorization Change Report for the Everglades Agricultural Areal Reservoir*, April 16, 2018, pages 16346-16347.

considering various alternatives for the A-2 parcel. In accordance with Sections 373.026(8)(b) and 373.1501(9), Florida Statue, the Florida Department of Environmental Protection (FDEP) prepared a Secretarial Order[4], which approved the proposed project. Regarding the WQBEL, the FDEP states,

> *"The modeling contains various conservative assumptions and practices to provide certainty that the applicable WQBEL will be achieved by the project. Although all modeling and associated assumptions have some level of uncertainty, permitting requirements applicable to the STAs ensure the WQBEL will ultimately be achieved. In the event the WQBEL is not attained, additional actions to meet water quality requirements must be undertaken. For example, the District could convert portions of the A-1 Flow Equalization Basin to a STA."* (page 5)

The EPA acknowledges and supports FDEP's commitment to attaining the WQBEL.

Restoration Strategies Regional Water Quality Plan[5]: In response to an order by the United States District Court, Southern District of Florida, EPA, SFWMD and FDEP began technical discussions in 2010 to identify remedies to achieve Florida's 10 part per billion (ppb) water quality standard for TP in the Everglades Protection Area. The primary objectives were to establish the WQBEL that would ensure that discharges from the STAs do not cause or contribute to exceedances of the 10 ppb TP criterion, and to identify a suite of additional water quality projects that would contribute to reducing TP concentrations in discharges from the STAs to meet the WQBEL. Based on this collaborative effort, a suite of projects was identified that would achieve the WQBEL: the Restoration Strategies (RS) Regional Water Quality Plan[5]. The projects are divided into three flow paths (Eastern, Central, and Western), and primarily consist of FEBs, STA expansions, and associated infrastructure and conveyance improvements. The Central Flow Path contains STA 2, STA 3/4, and the CEPP EAA A-1 Storage Reservoir, which was completed as a shallow FEB in 2015 as a requirement of RS. Each flowpath has a separate construction schedule and the Central Flowpath projects were completed in 2015. The EPA is available to provide technical assistance to USACE and the SFWMD regarding the WQBEL and other water quality issues related to the proposed project.

Tribal Consultation: As noted in our November 21, 2017, scoping comments, the EPA encouraged the SFWMD to engage in meaningful discussions with the Seminole Tribe of Florida and the Miccosukee Tribe of Indians of Florida regarding the project. Because the SFWMD is not a federal entity, we acknowledge that the SFWMD could not conduct "government-to-government consultations" with the Tribes as that term applies to federal agencies under Executive Order No. 13175, "Consultation and Coordination with Indian Tribal Governments"

[4] Valenstein, Noah. Florida Department of Environmental Protection, OGC No. 18-0138, *Final Order Approving the Central Everglades Planning Project Post-Authorization Change Report Everglades Agricultural Area Reservoir.* Mar. 5, 2018.
[5] South Florida Water Management District, *Restoration Strategies Regional Water Quality Plan,* Apr. 27, 2012.

(Nov. 6, 2000). The EPA notes that, in a recent January 8, 2018, letter[1] to the SFWMD, the Miccosukee Tribe of Indians of Florida outlined many concerns regarding the proposed EAA Reservoir. The EPA encourages both the USACE, as the government agency charged with tribal consultation under E.O. 13175, to conduct tribal consultation as it deems appropriate, and the SFWMD to continue its outreach efforts to the Tribes in conjunction with the Project. The EPA also notes that the EPA works closely with both Tribes on Everglades matters and is committed to working with state and federal partners with regard to the Tribes' water quality and water management concerns.

Environmental Justice (EJ): The EPA notes that the current tentatively selected plan is entirely on state lands and does not take any agricultural lands out of production. Should changes to the tentatively selected plan require the conversion of agricultural lands to a component of the project, then the EPA recommends the USACE and SFWMD evaluate impacts to low income, minority farmers, and farm workers.

[1] Cypress, Billy. Letter to Ernie Marks, Executive Director, SFWMD *RE: Discrimination in Water Management Decisions/EAA Reservoir Chapter 2017-10*. Jan 8, 2018.

From: jay defrank
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Cc: elisedefrank@gmail.com
Subject: [Non-DoD Source] Request for public input on EAA Reservoir Plan
Date: Wednesday, April 18, 2018 1:10:27 PM

This email is in response to the Army Corps' request for public input. We live on Hutchinson Island in Stuart. We know first hand the damages discharges from Lake Okeechobee do to our waterways, our overall environment, our economy and our quality of life. It is crucial to those of us who live along St Lucie Inlet and the Indian River Lagoon that the EAA reservoir plan delivers what it promises: 370,000 acre-feet of clean water sent south to Florida Bay, and not discharged into our rivers. Thank you.

Sincerely,

James DeFrank, Ph.D.
Colonel, USAF (ret.)
391 NE Plantation Rd, Unit 224
Stuart, FL 34996

Sent from my iPhone

From: jim l kelley
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Lake O
Date: Sunday, April 22, 2018 3:22:54 PM

Dear Stacie Auvenshine,

I spend about 4 months a year on Sanibel and do a lot of fishing. I believe that the water coming from Lake Okeechobee is hurting the water quality and fishing in our area. It seems to me that our government is supporting higher sugar prices for US citizens and helping to create a bad situation for our water quality in FL.

I also believe that there are a lot of environmentalists who for some reason believe that the water from Lake O is too dirty to be sent through the everglades but not too dirty to send to us. The everglades needs more fresh water we need less. The natural flow of water would be to allow it to go through the everglades. The only reasons that we are getting too much fresh water and the everglades is not getting enough are created by special interests and bad government.

The best two solutions would be to stop creating advantages for the Big Sugar industry and allow the fresh water overflow from Lake O to go naturally through the everglades. I know that that is an over simplification but it is the truth. If there is anything that the Corps can do to help solve this man made bad situation it would be greatly appreciated.

Sincerely,
Jim Kelley

From: Joanne Heroy-Giller
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] A vote of support for SFWMD March 26th plan
Date: Sunday, April 22, 2018 8:53:54 AM

Plz. make this happen to help protect our vital Caloosahatchee!
Thank you for your consideration.

Joanne (Heroy-Giller)
Ft. Myers , FL
239 850 1051

From: Joe Gilio
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Environmental review of State"s [Florida] EAA reservoir study
Date: Monday, April 30, 2018 10:15:02 PM
Attachments: USACE response to SFWMD"s EAA reservoir..pdf
Best EAA-res-analysis_1-22-18.pdf

Dear Ms. Auvenshire,

I have attached a letter re: above subject. Much of the information developed therein was in coordination of Dr. Jay O'Laughlin, Ph.D. . That said, Dr. O'Laughlin is not a participant in this letter and as such any errors and omissions developed herein in conjunction with our original joint white paper, also attached, are all mine.

Original O'Laughlin and Gilio white paper on "outside the box" options for the EAA Project/STA Project

Sincerely,

Joseph L. Gilio, PWS Emeritus

To: USACE

From: Joseph L. Gilio, PWS Emeritus

Date : April 30, 2018

Item: Critique of SFWMD's Project G of CERP

Much of this critique is under the ability of the State of Florida and its lead agency the South Florida Water Management District [SFWMD] to rectify. I verbally submitted brief remarks pertaining to these shortcomings at the public hearing of the SFWMD board on March 8, 2018.

There are three shortcomings and a new chemical train concept that could be added to the design of the reservoir project, all combined potentially reducing northern estuary discharges to annual flows amendable to major possibly full recovery of the severely impacted estuaries and the input rivers.

The submitted reservoir concept

SFWMD's submittal to the USACE for a new reservoir of 240,000 acre-feet [AF] on 10,100 acres of A-2 parcel and 6,500 acres of storm water treatment area [STA] proposes to convey 350,000 AF/yr. of Lake Okeechobee water south into the Everglades Protection boundary [EPA] and eventually flow into the Everglades National Park [ENP] and thence Florida Bay.

This concept will utilize both a new 6,500-acre STA and the adjacent functioning STA's ¾ as water treatment flowways in order to meet the 350,000 AF/ yr. objective. CERP's Goal 1 of moving 300,000 MAF lake Okeechobee water would be achieved. This objective while commendable lacks restitution of full lake volume flow into the remnant Everglades and Florida Bay.

Shortcoming # 1- Lack of full volume flow from lake to Everglades

Over the past decade, FEB A-1 and STA's ¾ have processed approximately 1.1 million AF/yr. of Everglades Agricultural Area [EAA] farmlands and lake communities stormwater runoff with minimal treatment of Lake Okeechobee waters. The [EAA + lakeside communities /Lake Okeechobee] ratio has been about 9/1 leading to probable future use conflicts between existing and this proposal's increased use. Alternatively, use of STA ¾ for EAA reservoir treatment may be curtailed and fall short of CERP goal 1 of moving 300,000 MAF at 10 ppb TP Annual geometric Mean [AGM] into the EPA.

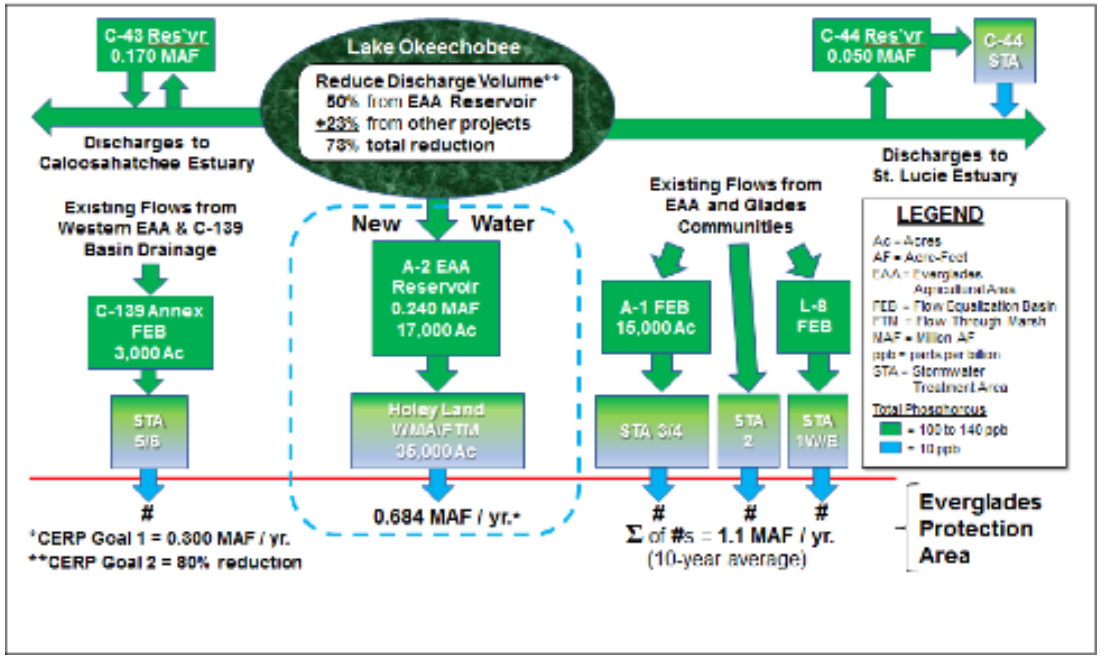
Shortcoming # 2 -- Lack of Full volume attainment Flow to the remnant Everglades

The annual 35 yr. mean inflow water into Lake Okeechobee from north, east and west is about 2.5 MAF/yr. Assuming a 70% Everglades areal remnant, then about 1.8 MAF/yr. would approximate annual full water volume inputs into the EPA. However, past decadal inflow of 1.1 MAF and 350,000 AF [this reservoir project] equals 1.4 MAF or 0.4 MAF less than full historical inflow. And if FEB A-1 & STA ¾ prioritization conflicts occur, the EAA reservoir project may only

attain about half of its goal or 200,000 AF/yr. further decreasing full volume restoration by 0.5 MAF annually.

Shortcoming # 3 - State land capacity not fully realized

SFWMD's concept design is intended to stop Lake Okeechobee's discharges to the Caloosahatchee River and estuary [CR&E] by 55 % volume and major discharge events by 63 %. O'Laughlin and Gilio's 2018 white paper [attached] proposed two options for expanded CERP Project G's EAA reservoir water treatment on State of Florida owned Holleyland's 35,000 ac. and Rotenberger's 25,000 ac. Both are ideally situated adjacent to SFWMD's proposed EAA location.

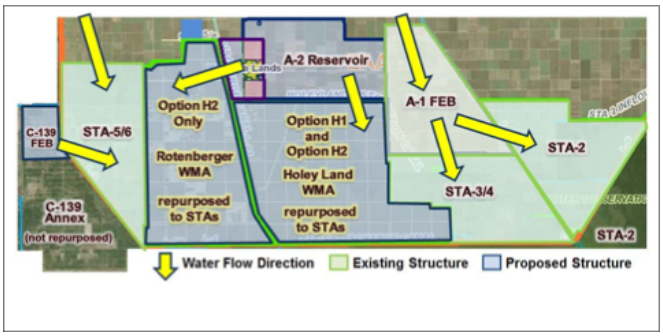


Using Holleyland alone for an STA would increase Lake Okeechobee's flow south into the EPA from 33% to 50% [360,000 AF to 672,000 AF] or a 66% gain with no additional land purchase. Adding other CERP & CEPP projects would increase that flow to 76% with concomitant decreases in volume and discharge events to the northern estuaries. If both tracts were combined, the 64,000-ac. treatment could increase the Lake Okeechobee flow south up to 1,20,000 AF, a 330% increase and decrease northern estuary discharges by up to 92%. At this level of discharge volume, there would be a very high probability of full northern estuary recovery.

Holleyland is more amendable to timely inclusion as it lacks roughly 40 parcels of privately owned parcels within Rothenberger. Noteworthy, is that both tracts were fully functional components of the sawgrass dominated slough, island troughs of the historical Everglades and their management plans call for Everglades restoration.

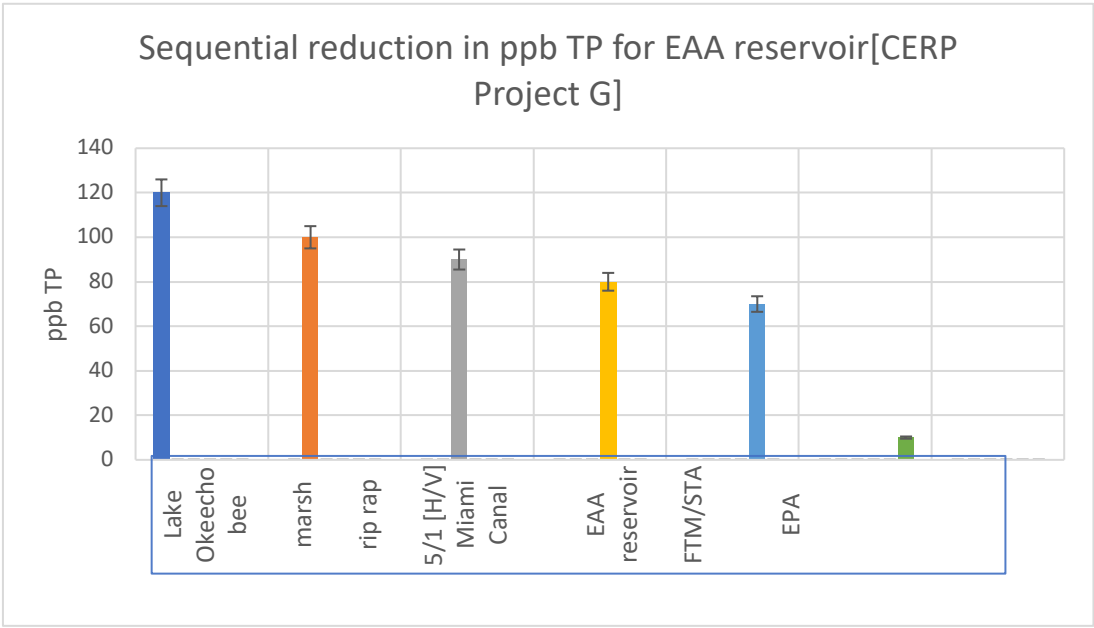
The outflow of the new reservoir into part of the Holleyland tract for water quality treatment to achieve federal 10 ppb TP annual geometric mean [AGM] prior to entry into the Everglades

Protection area [EPA] would turn about a third of Holleyland [10,000 ac.] into an STA. The remainder 25,000 ac. [70%] could be restored to full Everglades form and function, a goal not included in CERP or CEPP. STA's have proven to have some Everglades restorative value even though water quality levels are above Federal standards.



Enhancement of water quality for the concept G project through chemical trains

A sequential TP reduction train composed of expansion of the existing marsh at the southern edge of Lake Okeechobee, an over the top of bank adjustable weir as inflow into the Miami canal, a limestone rip rap cascade from the weir prior to canal entry, an emergent aquatic planting [EAV] on a 5/1 [H/V] edge, a 14 foot deep EAA reservoir with H/V ranges from 4/1 to 10/1 planted with EAV an submergent aquatic vegetation [SAV] , 10,000 ac. of STA designed to be removed of vegetation and sediment periodically and the remainder 25,000 ac. restored as a Flow Thru Marsh [FTM] as a mimic of its historical form and function.



Will a 55% water volume reduction and 63% major discharge events allow northern estuarine past form and functions

It is conjecture at this point in our knowledge to determine what overall volume reductions and percentage historical discharge events would either allow natural processes to oxidize the millions of tons of anaerobic muck that has settled in the CR&E and SLR&E ecosystems or whether man's intervention will be needed to restore the hard bottomed, seagrass dominated estuaries and tapegrass rivers they were prior to Lake Okeechobee discharges that started a century ago. Certainly, the greater the volume and frequency of Lake Okeechobee flow south rather than into the northern estuaries, the greater the probability of natural or man-induced restoration.

Economic Impacts

Various organizations both NGO's and government have estimated the economic benefits or the negative impacts from past and current discharges of Lake Okeechobee waters into the northern estuary. These economic impacts in recovery are a direct function of the volume reduction and major discharge frequencies to the northern estuaries. The greater the flow south into the EPA and its concomitant reduction to the northern estuaries, the greater the realization of full potential economic values that these norther rivers and estuaries formerly provided. Missing is a full increase of lost ecosystem values provided by seagrass and hard bottomed communities.

Some of these positive and negative economic estimates are:

1. Lost market value for residences [especially river frontage] in Martin, St. Lucie and Lee counties –estimate $ 1 Billion dollars.
2. Lost mortgage doc stamps revenue on lower sales prices.
3. Lost water borne activities -boating, fishing, recreational use restrictions. TCRPC estimates $1.1 Billion in total value from the Indian river Lagoon portions of St. Lucie and Martin Counties for 2014. This estimate does not include the St. Lucie River portion of these two counties. The $1.1 Billion revenue stream was severely impacted during the 1998-99, 2015-2016 Lake Okeechobee discharges.
4. Lost seasonal rentals due to Microcystis bloom occurrences. What % volume decrease to northern estuaries is needed to eliminate toxic bloom occurrences in the receiving estuaries and rivers.
5. Lost ecological value of the southern IRL where over 800 different fish species had been identifies as using some portion of that area for all or some of their life functions.

Summary

The major critique of the SFWMD's Concept G' EAA reservoir is that it will store and treat less Lake Okeechobee waters than possible in two areas:

1. It reduces discharges to the northern Caloosahatchee and St. Lucie River ecosystems by 55% volume when the potential for 76% even 92% reductions are possible using existing state owned Holleyland and Rotenberger tracts.

2. The SFWMD proposal fails to meet Goal II of full water volume south into the EPA for remnant Everglades and Florida Bay restoration.
3. How much economic, human & non-human health conditions and ecological restoration will be lost, quite possibly forever, if only 55% volume reduction and 63% major discharges are accomplished through implementation of Concept G reservoir as currently presented to the USACE.

References Cited

Florida Realtors. 2015. The impact of water quality on Florida's home values. Florida Realtors, Orland, Florida. https://www.floridarealtors.org/ResearchAndStatistics/Other-Research-Reports/upload/FR_WaterQuality_Final_Mar2015.pdf

Gilio, J.L. 2017. Guest column: Three win-win options for Senate Bill 10. *TCPalm*, April 12. https://www.tcpalm.com/story/opinion/contributors/2017/04/12/guest-column-three-win-win- options-senate-bill-10/100369532/

O'Laughlin, J. 2017. Arguments against the EAA Reservoir and rebuttals. Paper prepared for The Guardians of Martin County, April 16. Available online at http://theguardiansofmartincounty.com/wp-content/uploads/2017/04/arguments-rebuttals_EAA- reservoir_JayOL_04-16-2017.pdf

O'Laughlin and Gilio, 2018. White paper. "Outside the Box" Options for the EAA Reservoir /STA Project. [attached]

SFWMD. 2018. Progress report on SFWMD implementation of Senate Bill 10 (Section 373.4598 Florida Statutes). South Florida Water Management District, West Palm Beach, Florida. Available online at https://www.sfwmd.gov/sites/default/files/documents/eaa_res_progress_report_fl_leg.pdf

http://www.tcrpc.org/council_meetings/2016/July2016/11_IRLValuation.pdf

"Outside the Box"[1] Options for the EAA Reservoir/STA Project

by

Jay O'Laughlin, Ph.D.[2]

and

Joseph L. Gilio[3, 4]

January 22, 2018

(revised from January 4, 2018)

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1. Florida Senate President Joe Negron said he wanted "state engineers to think ***outside the box*** and outside the 'footprint' they're considering for a reservoir south of Lake Okeechobee" (interview in *TCPalm*, December 14, 2017, emphasis added). As yet South Florida Water Management District (SFWMD) engineers have not done so.

2. Jay O'Laughlin, Ph.D., is Professor Emeritus and Director Emeritus, Policy Analysis Group, College of Natural Resources, University of Idaho. He lives in Hobe Sound adjacent to the Indian River Lagoon, and writes water policy analyses* for The Guardians of Martin County, a 501(c)3 organization committed to educating Martin County residents about balanced use of natural and man-made resources. Contact: jayo@uidaho.edu

3. Joseph L. Gilio is a Professional Wetlands Scientist Emeritus, with 40 years of experience designing and maintaining constructed wetlands and lakes achieving TMDL for total phosphorous. He lives in Palm City on the South Fork of the St. Lucie River. Contact: www.jlgilio.com

4. The authors acknowledge with thanks help from Gary Goforth, P.E., Ph.D., consulting water resources engineer in Stuart, Florida, with 35 years of experience including design, construction, and operation of 41,000 acres of constructed wetlands. Contact: www.garygoforth.net

* For example, "Florida's Future Water Supply Depends on Improved Surface Water Management" (December 2016) and "Arguments Against the EAA Reservoir and Rebuttals" (April 2017). These documents can be read or downloaded at, respectively:

http://theguardiansofmartincounty.com/wp-content/uploads/2016/12/GMC_Water_Position.pdf

http://theguardiansofmartincounty.com/wp-content/uploads/2017/04/arguments-rebuttals_EAA-reservoir_JayOL_04-16-2017.pdf

Table of Contents

Executive Summary

The Florida Legislature passed a law in 2017 authorizing and partially funding the creation of a water storage reservoir and necessary water quality treatment facilities in the Everglades Agricultural Area (EAA) south of Lake Okeechobee. The purposes of the project are a) to send more water south of the EAA into the Everglades Protection Area and b) to reduce the discharge of excess Lake Okeechobee water to the estuaries east and west of the lake. The reservoir is one project component of the Comprehensive Everglades Restoration Plan (CERP).

Current Options. The South Florida Water Management District (SFWMD) is responsible for the project, and has two options for meeting requirements in the law. The Everglades Foundation (EF) has proposed a different project configuration. We call these the current options, and analyze the effectiveness of their designs to meet CERP goals and water quality standards. In addition we identify where the EF water treatment areas could be built on state-owned lands.

All three current options are designed to meet CERP Goal 1 of sending an additional 300,000 acre-feet (ac-ft) of water south of the EAA each year. None of the three current options comes close to meeting CERP Goal 2, which is an 80 percent reduction of discharges from the lake from all authorized CERP projects. We calculate that either of the two SFWMD options alone would reduce discharges by 29 percent, the EF option by 32 percent. Based on SFWMD analysis other authorized CERP projects together would reduce discharges by an additional 23 percent. SFWMD and EF options would reduce discharges by 50-55 percent, well short of CERP Goal 2.

Modified Options. Two hybrid "outside the box" options analyzed herein improve on the performance of the three current options. Both use the same reservoir footprint as the EF option (the A-2 parcel) but with different water quality treatment configurations on state-owned lands near the reservoir. The first hybrid option (H1) would more than double CERP Goal 1 and by itself would reduce discharges by 50 percent. The second option (H2) would send 1.2 million ac-ft/yr south of the EAA, or four times CERP Goal 1 and by itself reduce discharges by 69 percent. H2 is the "optimal configuration" to meet CERP goals without needing to acquire private lands.

When discharge reductions from other authorized CERP projects are added to those of project options, H1 would reduce discharges by a total of 73 percent, and H2 by 92 percent. Flow schematic diagrams for the five options, plus analytical results, are provided in **Appendix A**.

H1 would repurpose the Holey Land Wildlife Management Area (WMA) for water quality treatment; H2 would add Rotenberger WMA. WMAs are adjacent to the A-2 parcel and are owned by the Internal Improvement Trust Fund. The Board of Trustees is comprised of the governor and cabinet. "The Board has a duty to hold lands in trust for the use and benefit of the people of the state" (Florida Statutes 253.001). Therefore the Board's duty is to weigh the benefits of repurposing WMAs compared to their current use. The H2 option, for example, would create an estimated 31,000 temporary construction jobs and 1,000 new permanent jobs operating and maintaining infrastructure and providing recreation opportunities.

Introduction

In 2017 the Florida Legislature passed a law authorizing the creation of a water storage reservoir and necessary water quality treatment facilities (such as stormwater treatment areas, or STAs) in the Everglades Agricultural Area (EAA) immediately south of Lake Okeechobee and appropriated $800 million to do so. If the project meets requirements of the Comprehensive Everglades Restoration Plan (CERP), the federal government will also provide $800 million for the project. The law was signed by Governor Rick Scott in May 2017.

This report analyzes three current options for the EAA Reservoir/STA project; two are offered by the South Florida Water Management District (SFWMD) and one by the Everglades Foundation (EF). We offer two "outside the box" options that improve considerably on the performance of the SFWMD and EF options.

EAA Reservoir/STA Project Goals

The Everglades Agricultural Area (EAA) Reservoir project was conditionally authorized in the Water Resources Development Act of 2000 as project component G of the Comprehensive Everglades Restoration Plan (CERP). The EAA is 700,000 acres immediately south of Lake Okeechobee, of which approximately 500,000 acres are farmed, mostly for sugarcane. According to the SFWMD (2018) CERP goals for the EAA Reservoir project are:

1) 300,000 acre-feet per year (ac-ft/yr) of additional water moving south from the EAA into the Everglades Protection Area, and
2) reduce by 80 percent discharges of excess Lake Okeechobee water to the Northern Estuaries (St. Lucie and Caloosahatchee).

In addition, the EAA Reservoir project must meet water quality standards. Stormwater Treatment Areas (STAs) are constructed wetlands where water flow is controlled so that aquatic vegetation can uptake or absorb phosphorous, the most problematic pollutant in South Florida. The success of the EAA Reservoir project in meeting its goals depends on the adequacy of STAs for treating water stored in the reservoir before it can move south.

In 2017 the Florida Legislature passed Senate Bill 10 and in May 2017 Governor Rick Scott signed it (Florida Statutes 373.4598 Water Storage Reservoirs). The South Florida Water Management District (SFWMD) is charged with designing and constructing the EAA Reservoir, and the law specifies the minimum size as 240,000 acre-feet (ac-ft) of nominal storage and identifies 31,000 acres of lands the state already owns that the SFWMD could use for the reservoir. The law authorizes the SFWMD to acquire additional lands, and if owned privately, only from willing sellers, which means the state cannot exercise its power of eminent domain.

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Assumptions and Analytical Variables

We make several assumptions in this analysis. First, STAs will be filled throughout the year at the depths we specify. Second, the Everglades Protection Area can receive all water flowing out of the EAA STAs that meets water quality standards. Extending the duration of time water is retained in the STA may increase the uptake of phosphorus by vegetation and sediment in the STA (Chen et al. 2015).

Our analytical approach is based on the simple premise that the storage reservoir is not static, but will be managed dynamically so that its effective annual capacity could be several times more than its nominal capacity. Because it does not meet water quality standards, stored water must be treated before it can be sent south. The SFWMD has designed, constructed, and operated six STAs at the southern edge of the EAA. Over the past ten years, the 57,000 acres of STAs in the EAA have treated an average of 1.1 million ac-ft/yr (SFWMD 2017a).

STA effectiveness is a function of area, depth, and rate of flow. We use both 1.5 feet and 4 foot depths, basically doing the analysis twice for each Reservoir/STA configuration. The measure of STA effectiveness we use is the average number of days that water is retained in the STA. The higher the number, the longer water is retained in the STA, and the more time vegetation has to absorb or uptake phosphorous, the major pollutant of concern.

At an average 1.5 foot depth, the 57,000 acres of STAs in the EAA have a Nominal Storage Capacity of 85,500 ac-ft; at a 4 foot depth, 228,000 ac-ft. Dividing the average treatment of 1.1 million ac-ft/yr by the STA Nominal Storage Capacity produces what we call the number of STA Flow Through Cycles per year, which is 12.86 at 1.5 foot STA depth and 4.82 at 4 foot depth. To convert this to number of days the water is retained in the STA, we divide the number of days in one year (365) by the STA Flow Through Cycle, resulting in 28 days at 1.5 foot STA depth and 76 days at 4 foot depth. We can then use these results as a benchmark to compare with calculated STAs for the EAA Reservoir/STA project configuration options. (Descriptions of model variables and calculations formulas are provided in **Appendix B**.)

This approach can only be used if the quantity of water treated per year is provided. We call this the Reservoir Effective Annual Capacity. In essence, the analyst uses this to force calculation of the STA Flow Through Cycle by dividing the Reservoir Effective Annual Capacity by STA Nominal Capacity, which is acres of STAs times depth. Otherwise, we default to the actual STA Flow Through period in the EAA described above, and use it to force the calculation of Reservoir Effective Annual Capacity.

Reservoir Flow Through Cycle is similar to the STA Flow Through Cycle, in that it tells us how many times water can flow into and out of the reservoir in one year, which is how many times the reservoir can be refilled in one year. The more refills, the more efficiently public funds are being used. The number of Reservoir Flow Through Cycles per year multiplied by the Reservoir Nominal Storage Capacity produces what we call Reservoir Effective Annual Capacity. This

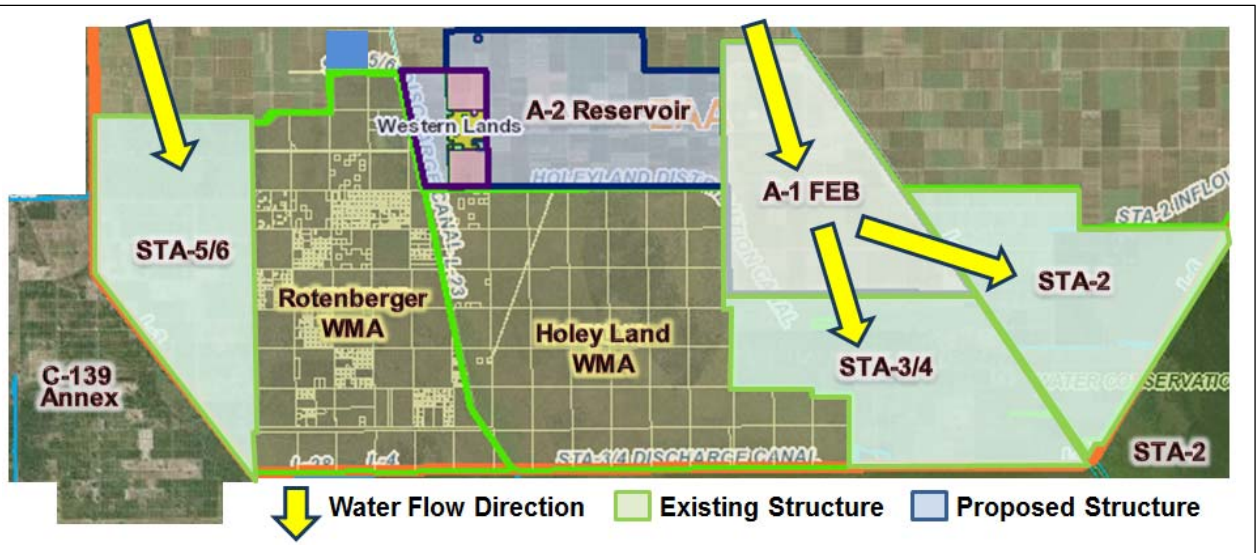
quantity is the same as how many additional acre-feet per year of excess Lake Okeechobee water will flow south into the Everglades Protection Area. This can be compared to the CERP Goal 1 target of 300,000 ac-ft/yr stored, treated and sent south.

Reservoir Effective Annual Capacity is used to calculate project option contributions to attainment of CERP Goal 2. We use actual annual discharges of excess Lake Okeechobee water to the St. Lucie River from 1980 through 2017. Because discharges to the Caloosahatchee are double that to the St. Lucie, we take one-third of the Reservoir Effective Annual Capacity for the St. Lucie River and two-thirds for the Caloosahatchee. In the 18 years when discharges exceeded that reduction benefit, we tally the entire benefit. In years when the benefit was greater than the actual discharges, we tally only the actual discharges as the reduction amount.

Current Options and CERP Goal 1 Attainment

Starting with public meetings in October 2017, the SFWMD has presented two main options. In December 2017, the Everglades Foundation, dissatisfied with the SFWMD options, created one of its own. We will call this the EF option and compare it to the SFWMD options in this section.

SFWMD Options. Both SFWMD options are confined to the 31,000 acres identified in the law. These are called the A-1 and A-2 parcels (see **Map 1**). The State purchased the land from the Talisman Sugar Co. in 1999 to facilitate Everglades restoration. This is the "box" that Senator Negron urged the SFWMD to look outside of for, as the law puts it, the "optimal configuration" of reservoir and treatment areas.

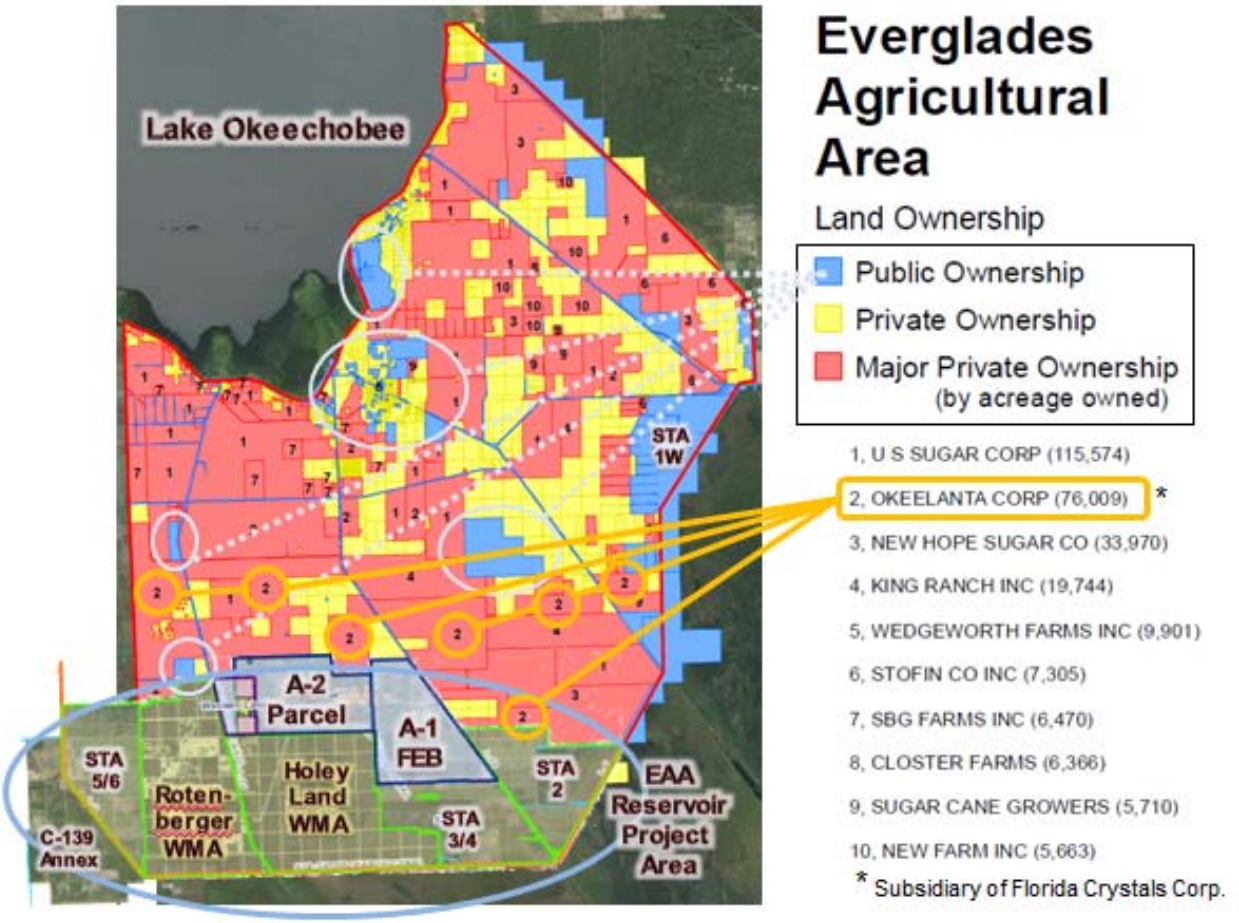


Map 1. EAA Reservoir/STA Project Area

The R240A "best buy" option uses only the A-2 parcel for a 240,000 ac-ft reservoir 23 feet deep and stormwater treatment areas (STAs) to treat the water before it can be sent south. Two alternative configurations were developed, but only the "best buy" variation is considered herein.

The C360C "best buy" option uses the A-2 parcel and repurposes portions of the A-1 parcel, which already has a 4 foot deep flow equalization basin (FEB) on it. (An FEB is a constructed impoundment for providing steady flow to STAs.) Three alternative variations of the R360 option call for a 360,000 ac-ft reservoir 18 feet deep. We consider only the District's C360C "best buy" option.

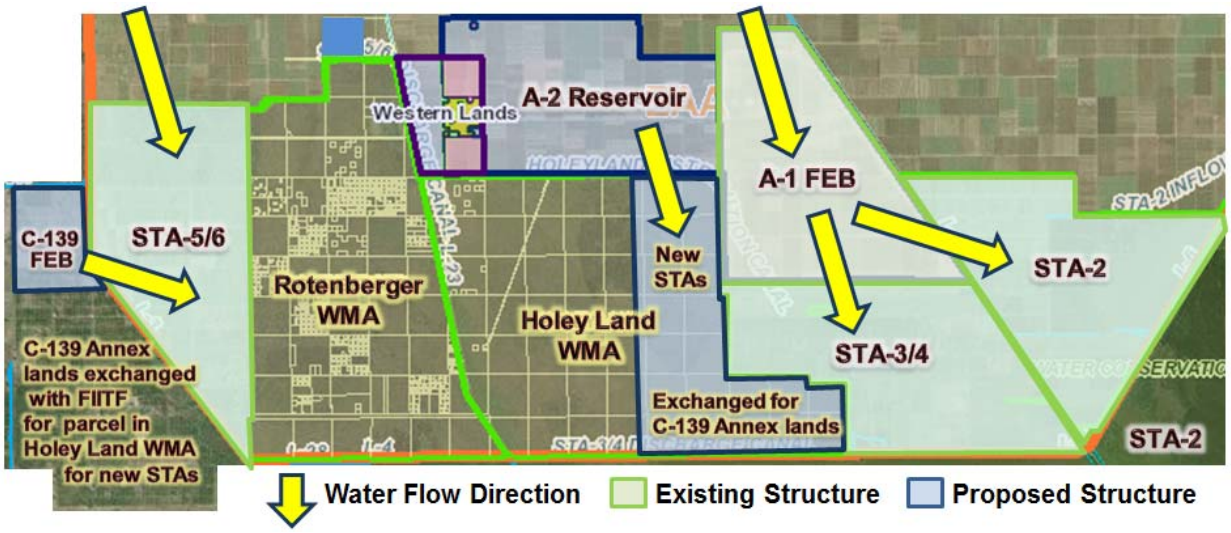
Everglades Foundation Option. The Everglades Foundation (EF) option calls for constructing a 14 foot deep reservoir on the A-2 parcel and leaving the A-1 FEB functioning as is. The EF stated that 13,000 acres of STAs are needed to treat the stored water before it can be released south, but the EF did not go "outside the box" to identify a location for those STAs. According to a story by Treadway (2018), the EF is expecting the SFWMD to exchange lands it owns for private lands on which to construct the STAs. A large proportion of the private lands that are just north of the project area are owned by Okeelanta Corp., a subsidiary of Florida Crystals Corp. owned by the Fanjul family of Palm Beach, Florida, and indicated by orange circles around the numeral 2 on **Map 2**.



Map 2. EAA land ownership with EAA Reservoir project area overlay, plus C-139 Annex. Ownership information from Treasure Coast Regional Planning Commission http://www.tcrpc.org/departments/MapGallery/2016/1604a_EAA_Private.pd

As **Map 2** indicates, the SFWMD itself has more than 18,000 acres, including 17,890 acres in the C-139 Annex and an unidentified section abutting the north side of the Rotenberger Wildlife Management Area (WMA). The Holey Land and Rotenberger Wildlife Management Areas (WMAs) are obvious candidates for STAs, as they are adjacent to the A-2 parcel where the reservoir would be built.

To facilitate the EF option, we make an "outside the box" suggestion that exchanging a 13,000 acres parcel in the C-139 Annex owned by the SFWMD for a similar-sized parcel in the Holey Land WMA owned by the Florida Internal Improvement Trust Fund is a potential opportunity to maintain the A-1 parcel within the "box" as a flow equalization basin (FEB) and build new water quality treatment areas on state-owned lands near the reservoir (**Map 3**).



Map 3. Everglades Foundation option possibility for its unidentified STA footprint: Exchanging 13,000 acres of C-139 Annex lands for easternmost portion of Holey Land WMA for STAs

The Board of Trustees of the Florida Internal Improvement Trust Fund is comprised of the governor, attorney general, chief financial officer, and commissioner of agriculture. "The Board has a duty to hold lands in trust for the use and benefit of the people of the state" (Florida Statutes 253.001). "The Board may exchange lands under its control for other lands in the state and may fix the terms and conditions of any such exchange" (Florida Statutes 253.42(1)).

In 1983 the Board signed a Memorandum of Agreement (MOA) with the SFWMD and two agencies (since renamed the Florida Department of Environmental Protection and Florida Fish and Wildlife Commission) allowing the "construction and operation of a water control system that attempts to restore and preserve natural Everglades habitat" on the Holey Land WMA (Kosier and McBryan 2015).

The SFWMD is planning an 11,000 acre-feet FEB (~3,000 acres) as part of the Restoration Strategies program on the northern portion of the C-139 Annex parcel (**Map 3**). The remaining C-139 Annex lands could provide the 13,000 acres that the EF option needs for its STAs. However it would likely be difficult to convey water from a reservoir on the A-2 parcel to the C-139 Annex lands.

To overcome the conveyance hurdle, an exchange of 13,000 acres of the C-139 Annex for a like amount in the eastern part of the Holey Land WMA would allow creation of new STAs adjacent to the reservoir, as indicated on **Map 3**. The C-139 Annex was purchased from U.S. Sugar Corporation in 2010 for water quality purposes, including reducing discharges of excess Lake Okeechobee water into the Northern Estuaries.

CERP Goal 1 Attainment. At a public meeting on December 21, 2017, SFWMD hydrologic modeler Walter Wilcox presented a slide stating that "All scenarios [are] close to achieving [the] desired increase of 300,000 ac-ft average annual flow south." Therefore we will assume that all SFWMD options meet CERP Goal 1 and use that desired increase as a "forcing" variable to calculate a measure of STA effectiveness, which we call STA Flow Through. It is the number of days that it takes for water to flow into and out of the STA. STA Flow Through is the water soak time for reducing pollutants.

If Lake Okeechobee water is being held in the reservoir or in the STAs, then this volume of water is not being discharged to the Northern Estuaries (St. Lucie and Caloosahatchee). This is a great benefit whether or not that water meets water quality criteria for immediate release south of the EAA. Even if the STA cleanses lake water to standards, downstream levels may mean temporary retention before southward flow.

In a letter to the SFWMD dated December 19, 2017, the EF said that its proposal could exceed CERP Goal 1 and send 340,000 ac-ft/yr south of the EAA. We accept that, as we did the similar claim by the SFWMD, and will also use these as a forcing variable to calculate STA Flow Through in days (see **Appendix B** for details).

Table 1 summarizes analysis of the two main options presented by the SFWMD and that of the EF. The SFWMD R240A "best buy" option is for 240,000 ac-ft of Reservoir Nominal Storage Capacity; the C360C "best buy" option for 360,000 ac-ft; the EF option puts a 240,000 ac-ft reservoir on 17,000 acres (**Table 1**, Col. [2]). Each option is analyzed at two STA depth scenarios: an average depth of 1.5 feet, and the maximum 4 foot depth.

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Table 1. Summary Analysis of Current Options

Reservoir Features				STA		Project Analysis			
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Option Identifier	Nominal Storage Capacity (ac-ft.)	Acres	Depth (ft.)	Acres	Nominal Capacity at 1.5 ft depth (ac-ft)	Total Acres	Flow Through STA [1] (days)	Flow Through Reser-voir [2] (cycles per year)	Reserv'r Effective Annual Capacity (ac-ft/yr) [3]
SFWMD R240A	240,000	10,100	23	6,500	9,750	16,600	12	1.25	300,000
SFWMD C360C	360,000	19,700	18	11,500	17,250	31,200	21	0.83	300,000
Everglades Found'n	240,000	17,000	14	13,000	19,500	30,000	21	1.42	340,000
					at 4 ft depth				
SFWMD R240A	240,000	10,100	23	6,500	26,000	16,600	32	1.25	300,000
SFWMD C360C	360,000	19,700	18	11,500	46,000	31,200	56	0.83	300,000
Everglades Found'n	240,000	17,000	14	13,000	52,000	30,000	56	1.42	340,000

NOTES: STA = Stormwater Treatment Area; ac-ft = acre-feet

[1] STA Flow Through (days) = 365 days/yr ÷ (Reservoir Effective Annual Capacity [Col. 10] ÷ STA Nominal Capacity [Col. 6])

[2] Reservoir Flow Through Cycles per year [Col. 9] = Reservoir Effective Annual Capacity [Col. 10] ÷ Reservoir Nominal Storage Capacity [Col. 2]

[3] Reservoir Effective Annual Capacity [Col. 10] is a "forcing" variable entered by the analyst for the purpose of calculating STA Flow Through [Col. 8]

The SFWMD R240A option would need 1.25 Reservoir Flow Through Cycles per year to meet the CERP Goal 1; the C360C could do it with 0.83 cycles (**Table 1**, Col. [9]). Then the model is solved for STA Flow Through (see **Table 1**, Notes, and a more detailed explanation in **Appendix B**). As cited earlier (Chen et al. 2015), extending the time water stays in the STA may allow longer contact with vegetation and sediment so that the level of total phosphorous can be reduced. The SFWMD C360C and EF options at 4 ft STA depth both have water retained in the STAs for 56 days (**Table 1**, Col. [8]). The other options and scenarios may not be able to meet water quality standards because the water may not be retained in the STAs for enough time.

Current Options and CERP Goal 2 Attainment

According to Matt Morrison, SFWMD Federal Policy and Coordination Bureau Chief, CERP Goal 2 is to reduce by 80 percent discharges of excess Lake Okeechobee water to the Northern Estuaries (St. Lucie and Caloosahatchee). During a presentation at a public meeting on December 21, 2017, he said that other authorized CERP projects plus the EAA R240A project option would reduce discharges a total of 50 percent; the C360C option, 54 percent. Using the data set, model variables and methods described above, the SFWMD reservoir options each reduce discharges by 29 percent. Subtracting that from what Mr. Morrison said, the other CERP

projects will reduce discharges by an average of 23 percent. The EF option is slightly better than the SFWMD options.

Modified Options and CERP Goal 1 Attainment

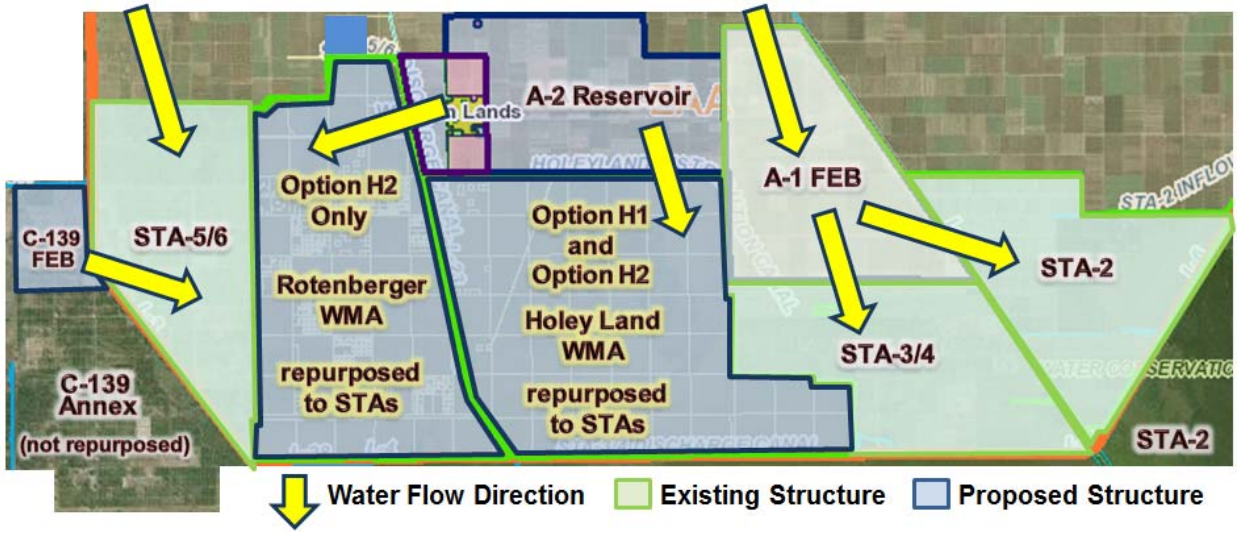
Two different hybrid options are considered. Both offer substantial improvements relative to CERP Goal 1 when compared with the current SFWMD and EF options in **Table 1** above. Each uses the A-2 parcel for the EAA Reservoir, as does the EF option analyzed above, and the A-1 FEB remains as it is. Then two different STA configurations on state-owned lands are considered.

Hybrid R240 H1. The reservoir is the same as the EF option: 240,000 ac-ft on the 17,000 A-2 parcel. The A-1 FEB remains as it is. The 35,000 acres of STAs are in the Holey Land WMA which would be repurposed by the Board of Trustees as a water quality treatment area (**Map 4**).

The H1 option would result in a Reservoir Effective Annual Capacity of 684,000 ac-ft/yr with 1.5 foot deep STAs and 672,000 ac-ft/yr with 4 foot deep STAs (**Table 2**, Col. [10]). The results are not very sensitive to STA depth because flow through time differs.

Hybrid R240 H2. Again the reservoir is the same as the EF option: 240,000 ac-ft on the 17,000 A-2 parcel, and the A-1 FEB remains as it is. The 64,000 acres of STAs results from adding of the 29,000 acres in Rotenberger WMA to the 35,000 acres in the Holey Land WMA (see **Map 4**).

The H2 option does even better than H1, as its STA system is larger. This option would send more than 1.2 million ac-ft/yr south into the Everglades Protection Area (**Table 2**, Col. [10]).



Map 4. Hybrid options R240 H1 and H2: Repurposing Rotenberger and Holey Land WMAs

Table 2. Summary Analysis of Hybrid Options

Reservoir Features				STA		Project Analysis			
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
							Flow Through		
Option Identifier	Nominal Storage Capacity (ac-ft.)	Acres	Depth (ft.)	Acres	Nominal Capacity at 1.5 ft depth (ac-ft)	Total Acres	STA 1/ (days)	Reser-voir 2/ (cycles per year)	Reserv'r Effective Annual Capacity (ac-ft/yr) 3/
Hybrid R240 H1	240,000	17,000	14	35,000	52,500	52,000	28	2.85	684,000
Hybrid R240 H2	240,000	17,000	14	64,000	96,000	81,000	28	5.21	1.25 million
					at 4 ft depth				
Hybrid R240 H1	240,000	17,000	14	35,000	140,000	52,000	76	2.80	672,000
Hybrid R240 H2	240,000	17,000	14	64,000	256,000	81,000	76	5.12	1.23 million

NOTES: STA = Stormwater Treatment Area; ac-ft = acre-feet; n.a. = not applicable

1/ STA Flow Through is a "forcing" variable for calculating Reservoir Flow Through Cycles/yr [Col. 9] and then Reservoir Annual Effective Capacity [Col. 10]; it is derived from performance of the existing 57,000 acre STA system in the EAA, through which a 10-yr average of 1.1 million ac-ft per year is treated. At 1.5 ft average depth, STA Flow Through is 28 days (365 days ÷ (1.1 million ac-ft/yr ÷ (1.5 ft x 57,000 acres)); at 4 ft depth it is 76 days (same formula, substituting 4 in place of 1.5).

2/ Reservoir Flow Through Cycles/yr [Col. 9] = (STA Nominal Capacity [Col. 6] x (365 days ÷ STA Flow Through [Col. 8])) ÷ Reservoir Nominal Storage Capacity [Col. 2]

3/ Reservoir Effective Annual Capacity = Reservoir Nominal Storage Capacity [Col. 2] x Reservoir Flow Through Cycles/yr [Col. 9]

Modified Options and CERP Goal 2 Attainment

The H1 option by itself would result in a 50 percent reduction of actual discharges during the period 1980-2017. The H2 option would result in 69 percent reduction. In the next section these results are explained in more detail and then compared with those of the three current options.

Analytical Summary of All Options

The average annual discharges from Lake Okeechobee into the St. Lucie were 240,877 ac-ft/yr during the period 1980 to 2017, ranging from near zero to more than one million ac-ft/yr; in 18 of the past 38 years discharges to the St. Lucie exceeded 100,00 ac-ft/yr in 1998 (**Figure 1**, bars). Reductions in discharges are depicted in **Figure 1** as different colored bands overlaying the bar chart. These are the incremental additions to total discharge reductions for each option. Because the model results are not sensitive to STA depth, only the 1.5 foot STA depth is displayed (the 4 foot STA depth chart is nearly identical).

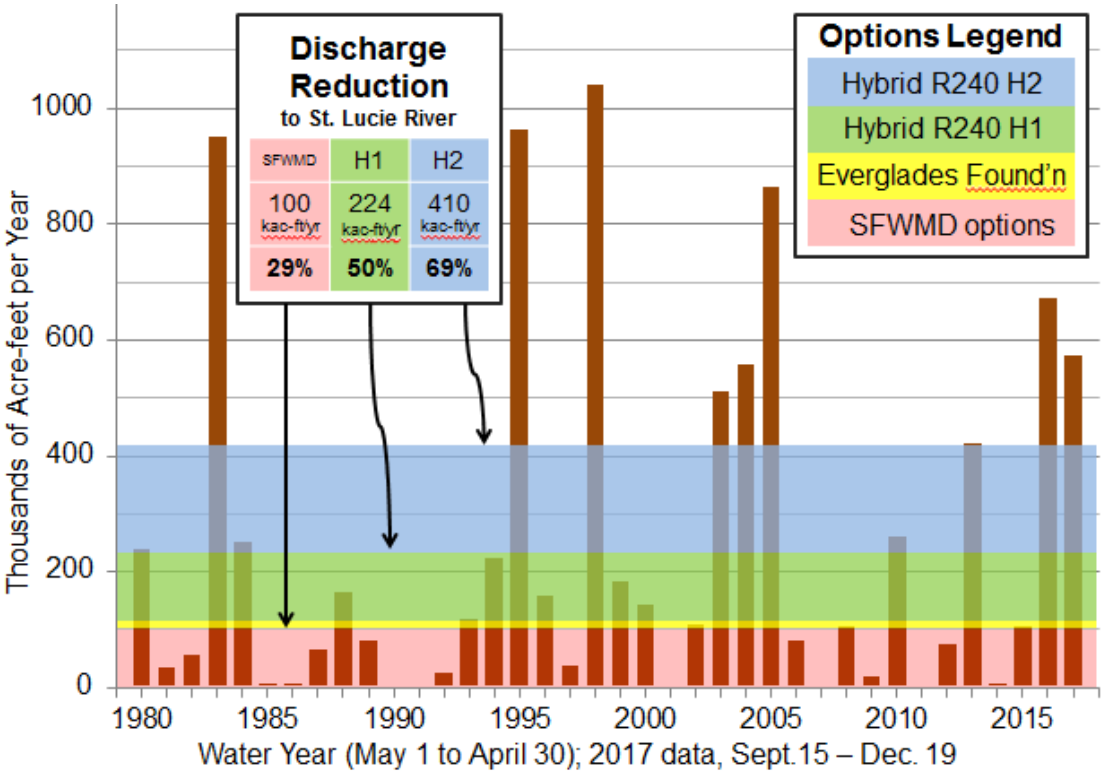


Figure 1. Lake Okeechobee annual discharges to St. Lucie, 1980-2017 (bars), and reductions from EAA Reservoir/STA options (bands), at 1.5 foot STA depth

Caloosahatchee discharges are almost exactly twice that to the St. Lucie, so if reductions in discharges are apportioned that way, with 300,000 ac-ft/yr. moving south from the EAA, then the St. Lucie potential benefit is 100,000 ac-ft/yr, and in the Caloosahatchee, 200,000 ac-ft/yr. In years when actual discharges were less than 100,000 ac-ft/yr in the St. Lucie, then the actual reduction is the amount of the actual discharge. In the 18 years when actual discharges exceeded 100,000 ac-ft/yr, the actual reduction is a maximum of 100,000 ac-ft/yr.

The sum of annual benefits of SFWMD reduced discharges to the St. Lucie during the 38-year period analyzed would have averaged 68,930 ac-ft/yr. In sum, as mentioned above, the SFWMD options would have reduced actual discharges to the St. Lucie by 29 percent (the top of the red shaded area in **Figure 1**). The EF option is only marginally better, reaching 32 percent (the top of the yellow-shaded area in **Figure 1**). Because the H1 and H2 options feature more STA acreage and longer duration of the Reservoir Flow Through Cycle, the percent of actual discharges that would have been reduced had these options been in place is 50 percent with the H1 option (top of the green-shaded area in **Figure 1**), and 69 percent with the H2 option (top of the blue-shaded area in **Figure 1**). As noted above, the results are not sensitive to STA depth, so **Figure 1** displays only the 1.5 foot STA depth.

Table 3 presents summary information and analysis for all options. It is presented in two parts, one for the 1.5-foot deep STAs, and the other for 4-foot deep STAs. Similar to the summary presented in **Table 2**, the results are not particularly sensitive to STA depth.

Table 3. Summary of All EAA Reservoir/STA Project Options

Option Name	Reservoir Area (acres)	Storm Water Treatment Areas (STAs) (acres)	Reservoir Flow Through Cycles per Year	Effective Annual Reservoir Capacity (acre-feet/yr)	Avg. Annual Reduction in Lake O Discharges to St. Lucie (acre-feet/yr)	Actual Reduction in Lake O Discharges, 1980-2017 (percent)
(at 1.5 foot STA depth)						
SFWMD R240A	10,100	6,500	1.25	300,000	100,000	29%
SFWMD C360C	19,700	11,500	0.83	300,000	100,000	29%
Everglades Found'n	17,000	13,000	1.42	340,000	113,333	32%
Hybrid R240 H1	17,000	35,000	2.80	672,000	228,000	51%
Hybrid R240 H2	17,000	64,000	5.20	1.2 million	410,000	69%
(at 4 foot STA depth)						
SFWMD R240A	10,100	6,500	1.25	300,000	100,000	29%
SFWMD C360C	19,700	11,500	0.83	300,000	100,000	29%
Everglades Found'n	17,000	13,000	1.42	340,000	113,333	32%
Hybrid R240 H1	17,000	35,000	2.50	672,000	224,000	50%
Hybrid R240 H2	17,000	64,000	5.33	1.3 million	417,000	69%

As mentioned above, according to the SFWMD, when the discharge reductions from the EAA Reservoir/STA project are added to discharge reductions from other authorized CERP projects, the sum total of reductions is 50 percent for the R240A option and 54 percent for the C360c option. We calculated the discharge reduction from either of the SFWMD options to be 29 percent. This implies that the discharge reduction from other CERP projects is 21 percent for R240A and 25 percent for C360C. The average of these is 23 percent and is applied to the EF option and the two hybrid options. The EF option then would have total reductions of 55 percent. Recall that CERP Goal 2 is 80 percent reduction. Neither the SFWMD options at an average of 52 percent or the EF option at 55 percent come close to this goal.

Again using the average 23 percent discharge reduction from other authorized CERP projects and adding the reductions from the Hybrid R240 H1 and H2 options, the H1 option attains a total 73 percent reduction, and the H2 option a 92 percent reduction (**Figure 2**, a format similar to a chart that the SFWMD used on December 21, 2017).

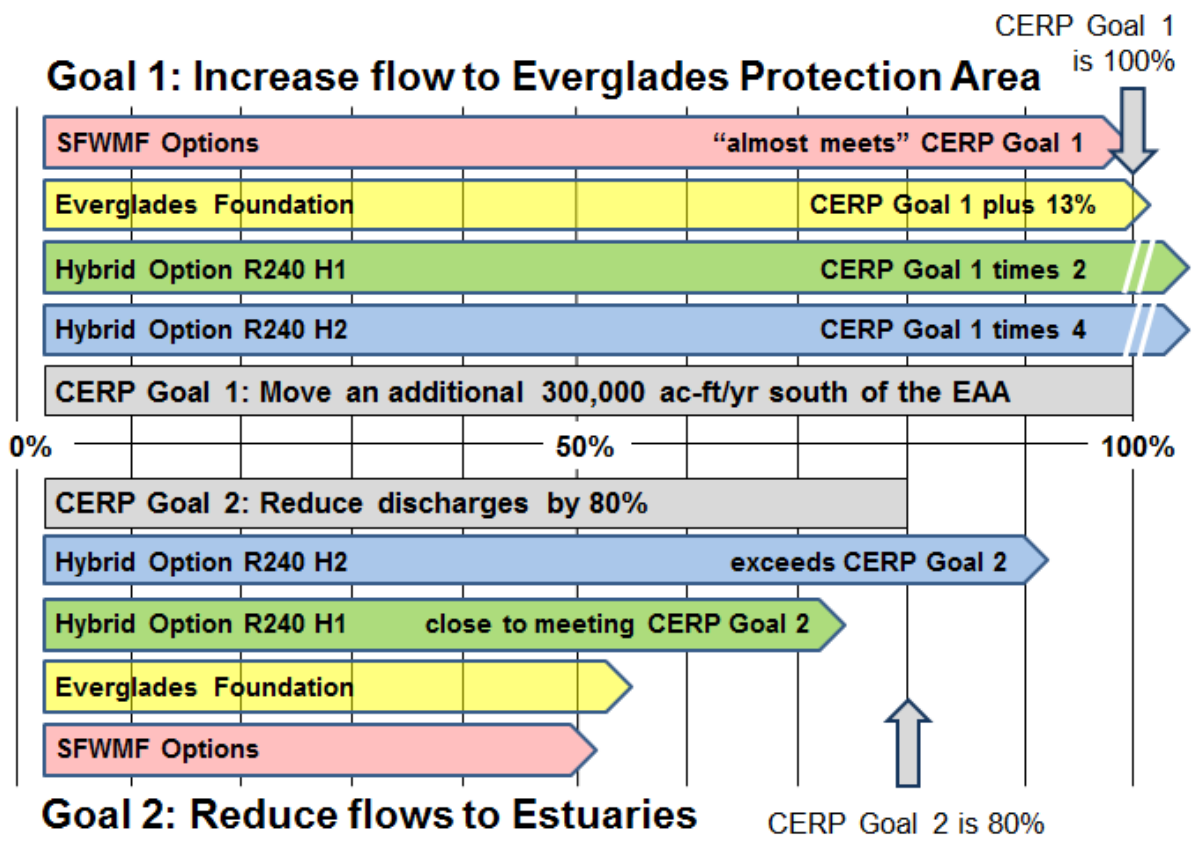


Figure 2. Performance of EAA Reservoir/STA options for improving flow conditions and attaining CERP goals

NOTE: For CERP Goal 2, analysis shows that other authorized CERP projects would reduce discharges by 23 percent, which is added to the reduction from the EAA Reservoir/STA project.

Benefits from the EAA Reservoir/STA Project

As mentioned above, the primary benefit of the EAA Reservoir/STA project is reducing discharges of excess water from Lake Okeechobee in to St. Lucie and Caloosahatchee reservoirs; instead, that water is sent south to be stored and treated before it makes its way south into the Everglades Protection Area where it is needed. There are many types of ancillary benefits that need to be considered.

Public Health. Reduction in discharges has public health benefits because toxic algal blooms such as those experience in recent years coincident with Lake Okeechobee discharges would be reduced, commensurate with the quantity of discharge reduction.

Jobs. Employment is another benefit from this project. Temporary construction jobs would be several times greater than the 1,000 jobs for building the smaller C-44 Reservoir/STA project now under construction in Martin County (see Westlund 2017). After the infrastructure is in place, operations and maintenance would create permanent jobs.

For example, O'Laughlin (2017) estimated employment impacts per 1,000 acres of both reservoir and treatment area footprints (**Table** 4 below). Applying this information to a 17,000 acres reservoir with 13,000 acres of treatment areas would result in more than 10,000 direct jobs in reservoir construction and 14,000 indirect jobs. Treatment area construction would involve 1,500 direct construction jobs and 1,600 indirect jobs. This total of 27,000 jobs is temporary, and would be spread out over however long it takes to build the project infrastructure. Permanent jobs would include 440 in reservoir operations and maintenance as well as recreation and tourism, and another 440 indirect jobs. New treatment area permanent jobs would be about 100 direct jobs, mostly in recreation and tourism, and another 100 indirect jobs (after some allowance for jobs associated with existing facilities). If larger portions of the WMAs were repurposed to water quality treatment areas, the number of jobs likely would increase proportionately. For example, the hybrid R240 H2 option would create 31,000 temporary construction jobs and, after some allowance for existing jobs around the WMAs, 1,000 new permanent jobs.

Table 4. Employment impacts associated with proposed EAA Reservoir/STA project (per 1,000 acres)

Economic Sector*	Employment Impacts** (per 1,000 acres)		
	Direct Jobs	Indirect and Induced Jobs	Total Jobs
Reservoir construction	593	829	1,422
Water treatment area construction	92	130	222
Reservoir operations & maintenance (O&M)	12	12	24
Water treatment area O&M	2	2	4
Reservoir recreation & tourism	14	14	28
Water treatment area recreation & tourism	14	14	28

***** Economic sector data sources, methods used to estimate jobs, and employment impact category descriptions are provided in O'Laughlin (2017, Appendix A).

******Direct jobs are those held by construction workers, and people employed to operate and maintain water resource infrastructure and provide goods and services for recreation/tourism opportunities created by new water storage and treatment areas. Indirect jobs are for purchases of goods and services needed by direct employees, such as motor vehicles and their maintenance. Induced jobs are from spending of income by those with direct and indirect jobs, such as restaurants and entertainment.

Real Estate Values. Based on studies conducted for the Florida Realtors (2015) it is safe to say that improved water quality in the St. Lucie and Caloosahatchee areas would increase the economic value of residential real estate by at least $1 billion.

Enhanced Wildlife Habitat. Several endangered species—Everglades kite and Cape Sable seaside sparrow—would benefit if flow-through marshes were part of the design for water quality treatment areas. Ducks and largemouth bass would also thrive in these areas (Gilio 2017). And as noted above, these areas would create jobs for outfitters and guides.

Flow-through Marshes. Water quality treatment areas can be one of three different types: stormwater treatment areas (STAs), flow equalization basins (FEBs), or flow-through marshes (FTMs). STAs are large, constructed wetlands with inflow and outflow structures for controlling water movement. Aquatic plants in the STAs remove and store excess nutrients (phosphorus) found in the stormwater runoff. An FEB is a constructed impoundment for providing steady flow to STAs (SFWMD 2017b). Like the other two types, a flow-through marsh is a constructed wetland. But unlike then, its walls are gently sloping. They are cheaper to build, operate and maintain and provide better habitat for imperiled birds (Gilio 2017).

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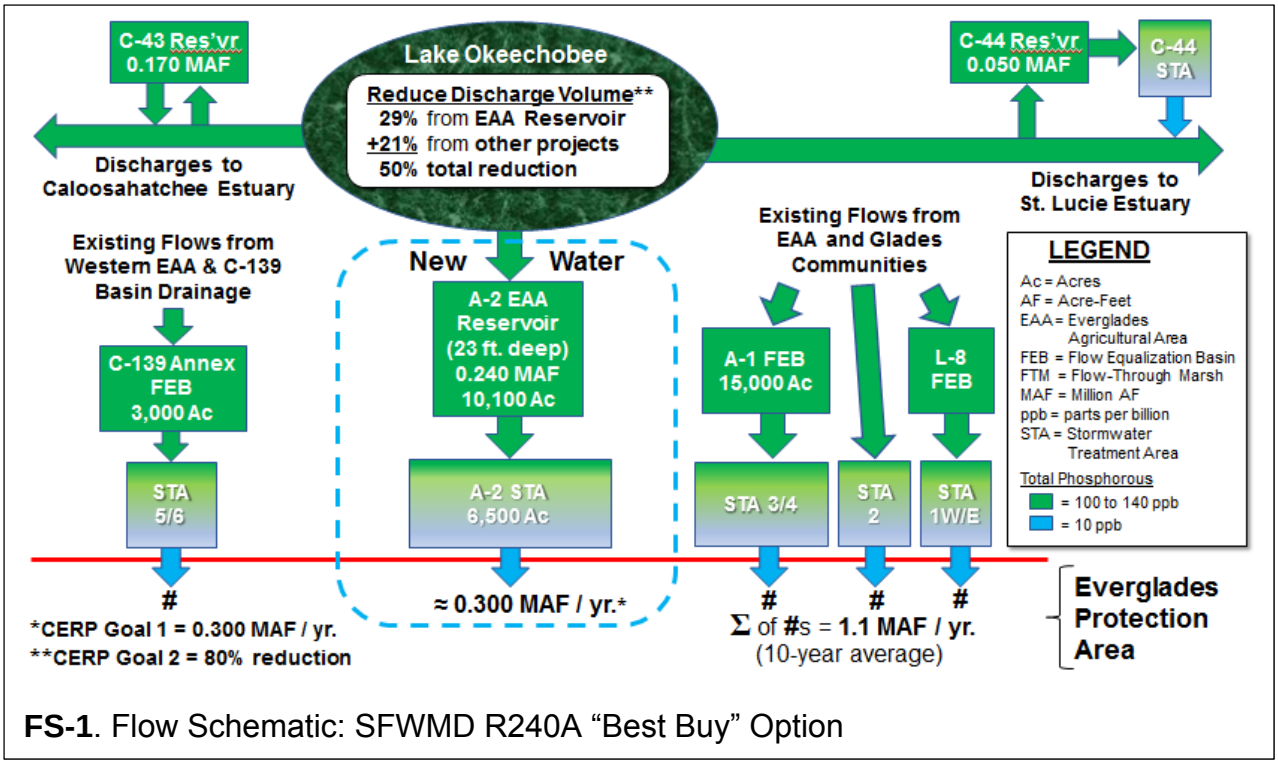
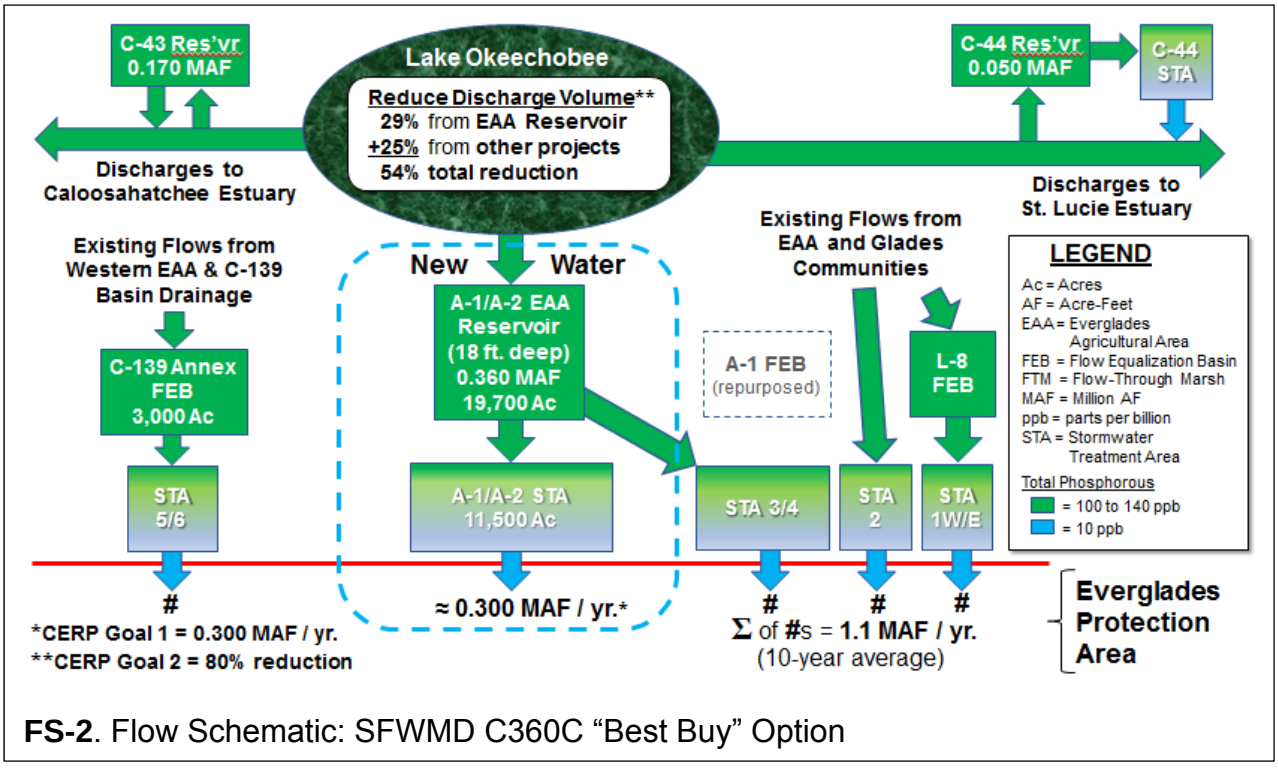
Lake Okeechobee maximum possible release to St. Lucie River, February 6, 2016 totaling 4.9 billion gallons per day (15 million acre-feet per day)

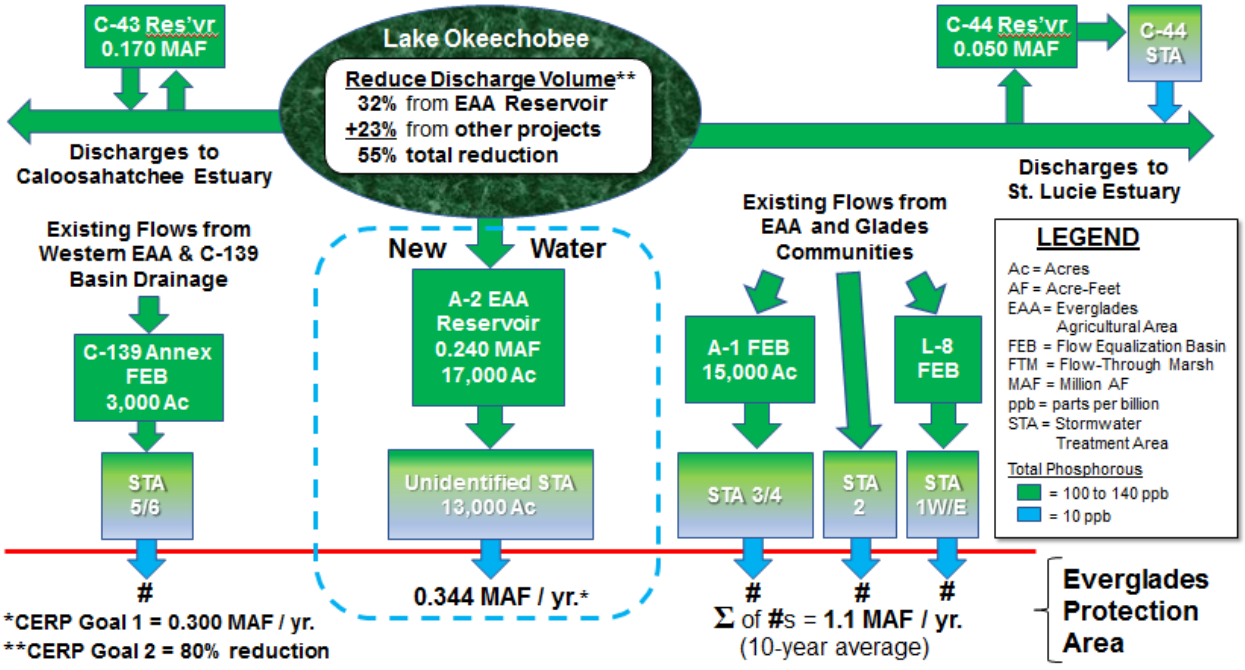
Appendix A. Flow Schematic Diagrams of Three Current and Two Hybrid Options



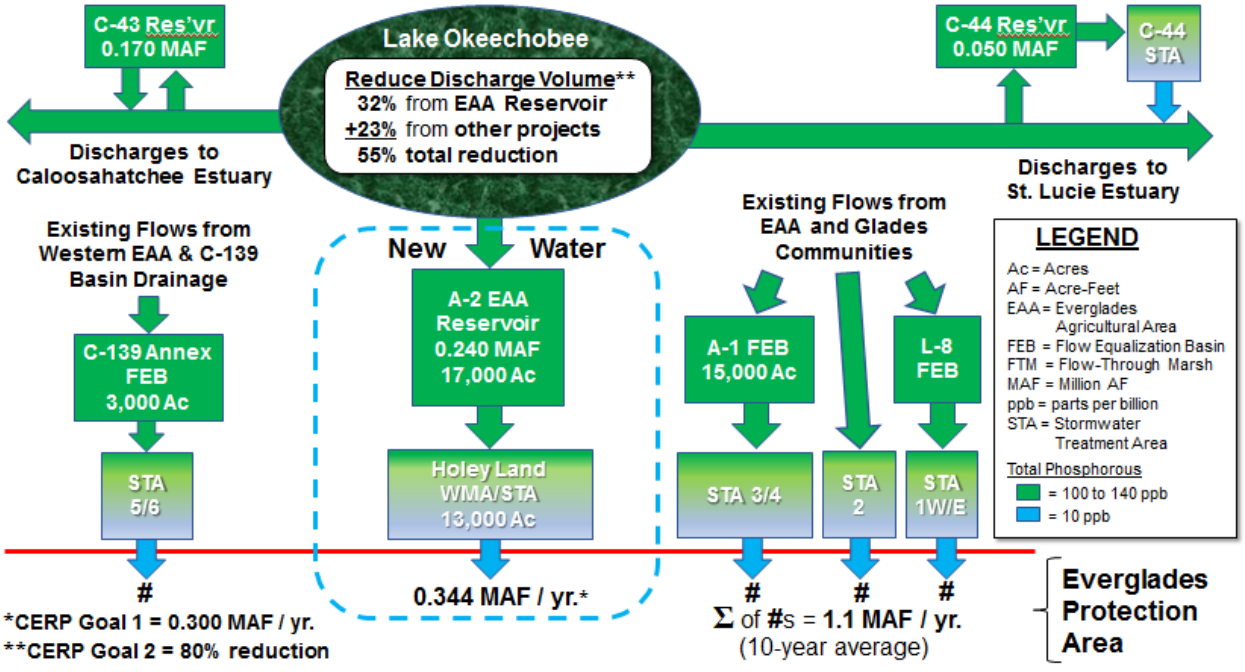
FS-1. Flow Schematic: SFWMD R240A "Best Buy" Option



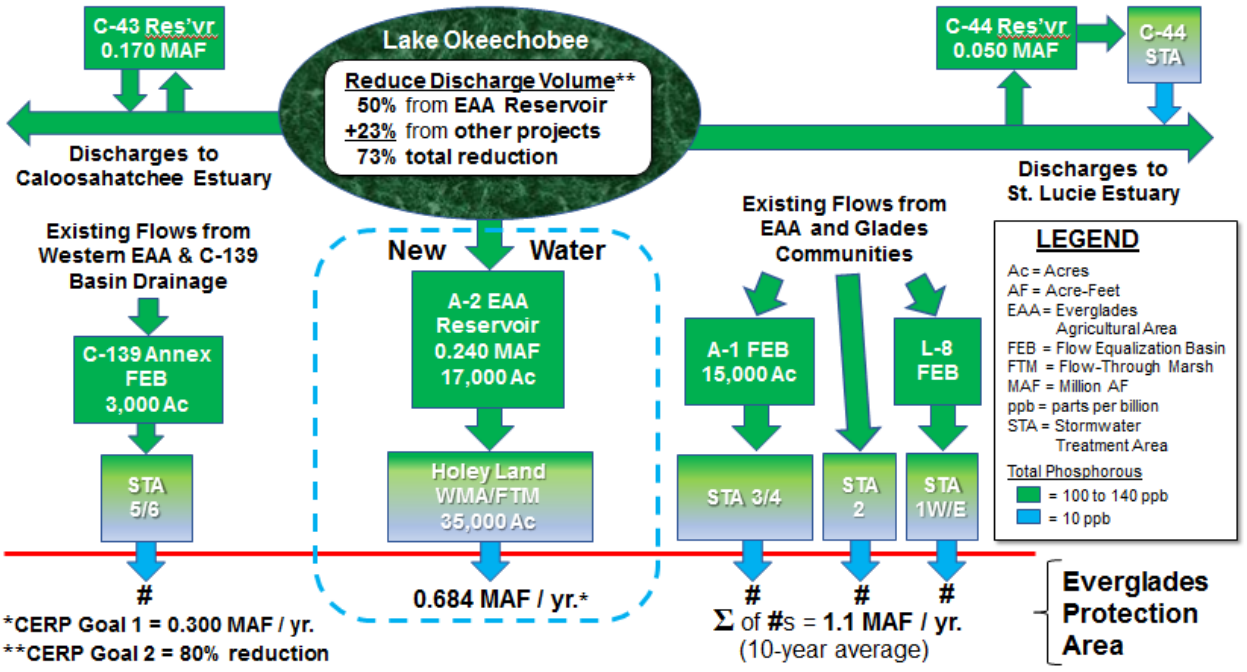
FS-2. Flow Schematic: SFWMD C360C "Best Buy" Option



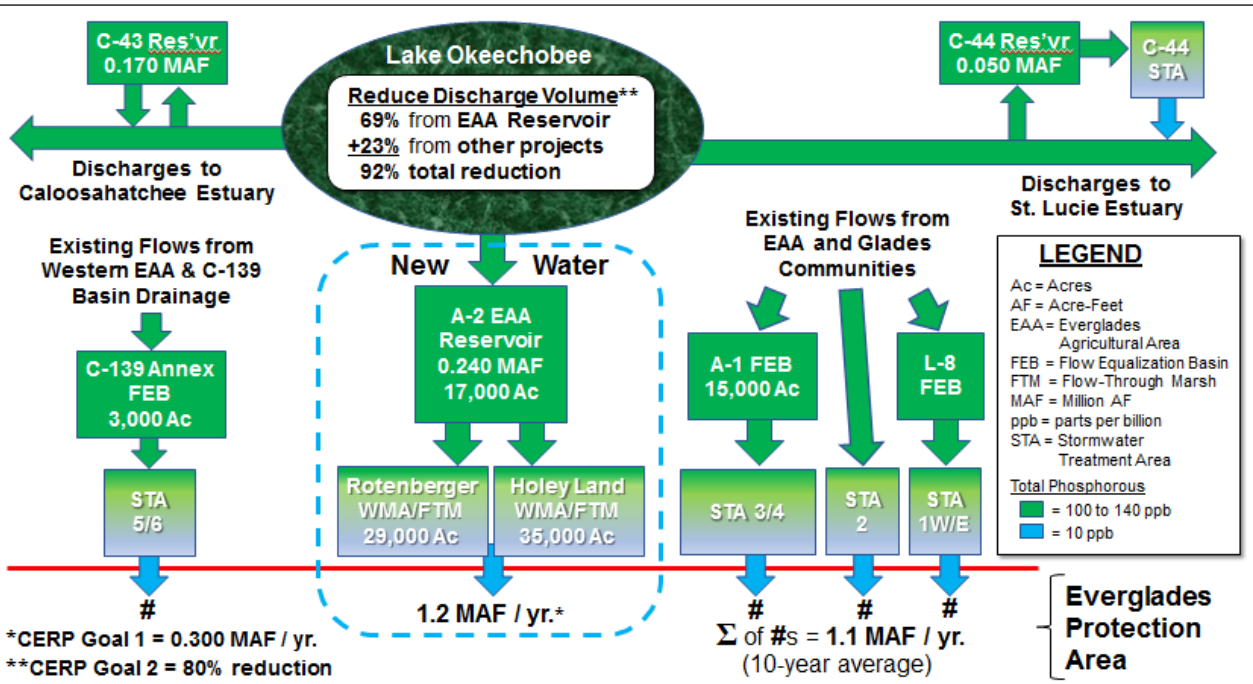
FS-3A. Flow Schematic: Everglades Foundation Option, STA unidentified



FS-3B. Flow Schematic: Modified Everglades Foundation Option, STA identified



FS-4. Flow Schematic: Hybrid R240 H1 Option



FS-5. Flow Schematic: Hybrid R240 H2 Option

Appendix B. Model Variable Descriptions and Calculation Formulas

Model Variables (bracketed numbers correspond to columns in **Table 1**)

RES is shorthand for reservoir

RES_{Acres} [3] is Acreage footprint of reservoir

RES_{EAC} [10] is Reservoir Effective Annual Capacity, which is the amount of additional water in one year that will flow out of the reservoir flow through the STAs and flow into the Everglades Protection Area.

RES_{FTC} [9] is Reservoir Flow Through Cycles per year, which is = STA_{NSC} x STA_{FTC} / RES_{NSC}

RES_{NSC} [2] is Reservoir Nominal Storage Capacity, and for the EAA Reservoir project specified in law as either 240,000 ac-ft or 360,000 ac-ft (Florida Statutes 373.4598 (5)(a), (5)(c) (a.k.a. Senate Bill 10)

STA is shorthand for stormwater treatment areas.

STA_{Acres} [5] is Acres of STAs

STA_{Depth} is Depth of STAs, which average about 1.5 feet over the course of a year, and at a maximum are 4 feet deep

STA_{FTC} is STA Flow Through Cycles per year; it is RES_{EAC} [10] ÷ (STA_{Acres} [5] x STA_{Depth}); when divided into 365 days quotient is STA_{FTdays}

STA_{FTdays} [8] is STA Flow Through in days

STA_{NSC} is STA Nominal Storage Capacity, which is the product of STA_{Acres} and STA_{Depth}

Calculation Formulas (bracketed numbers correspond to columns in **Table 1**)

[5] Although not done in this analysis, it is possible to use the model to calculate the quantity of STA Acres that would meet the CERP Goal of 300,000 ac-ft/yr additional flow from the EAA Reservoir/ STA system (or another goal), using STA_{FTdays} [8] as a "forcing" variable

[5] STA_{Acres} = RES_{FTC} [9] ÷ (365 ÷ STA_{FTdays} [8]) RES_{NSC} [2] ÷ STA_{Depth}

where

STA_{Depth} is 1.5 feet and STA_{FTdays} is 28 days, or

STA_{Depth} is 4 feet and STA_{FTdays} is 76 days

[6] STA_{NSC} = STA_{Acres} [5] x STA_{Depth}

where

STA_{Depth} is 1.5 feet, or

STA_{Depth} is 4 feet

[7] Total Acres = RES_{Acres} [3] + STA_{Acres} [5]

[8] STA Flow Through in days

- for the three current options (SFWMD and EF) this is calculated using RES_{EAC} [10] as a "forcing" variable:

  [8] STA_{FTdays} = 365 days/yr ÷ (RES_{EAC} [10] ÷ (STA_{Acres} [5] x STA_{Depth}))

  where

  RES_{EAC} [10] = 300,000 ac-ft/yr for SFWMD options or 340,000 ac-ft/yr for EF option and STA_{Depth} is either 1.5 feet or 4 feet

- for the two hybrid options it is calculated from performance of the entire 57,000 acre EAA STA system, which treated an average 1.1 million ac-ft/yr over the past ten years (derived from figure on p. 5B-10 in SFWMD's 2017 South Florida Environmental Report)

  therefore

  [8] STA_{FTdays} when STA_{Depth} is 1.5 feet = 365 days/yr ÷ (1,100,000 ac-ft/yr ÷ (57,000 ac x 1.5 ft) = 28 days

  [8] STA_{FTdays} when STA_{Depth} is 4 feet = 365 days/yr ÷ (1,100,000 ac-ft/yr ÷ (57,000 ac x 4 ft) = 76 days

[9] RES_{FTC} is Reservoir Flow Through Cycles

- for current options (SFWMD and EF options)

  [9] RES_{FTC} = RES_{EAC} [10] ÷ RES_{NSC} [2]

- for hybrid options RES_{FTC} is calculated using STA_{FTdays} [8] for the entire EAA STA system as a "forcing" variable (either 28 days at 1.5 foot STA depth, or 76 days at 4 foot depth)

  [9] RES_{FTC} = (STA_{NSC} [6] x (365 days/yr ÷ STA_{FTdays} [8])) ÷ RES_{NSC} [2]

[10] RES_{EAC} is Reservoir Effective Annual Capacity

- For SFWMD current options RES_{EAC} is given by SFWMD modelling as the CERP Goal 1 of 300,000 ac-ft/yr
- For EF current option RES_{EAC} is given by EF modelling as 340,000 ac-ft/yr
- For hybrid options RES_{EAC} is calculated using STA_{FTdays} [8] for the entire EAA STA system as a "forcing" variable (28 days at 1.5 foot STA depth; 76 days at 4 foot depth)

  [10] RES_{EAC} = RES_{NSC} [2] x RES_{FTC} [9]

  = STA_{NSC} [6] x (365 days/yr ÷ STA_{FTdays} [8])

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From: John Lumley
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Reservoir planning
Date: Thursday, April 19, 2018 9:59:10 AM

Hello Stacie,

Lets do the math. How many cubic feet of dirt will be dug out of the 10,100 acre by 23 feet deep?

Are you going to sell the dirt to pay for the machinery and labor to dig this big hole?

The past price for a situation like this is fifty cents .50 cents per yard paid to the land owner and the excavation company
comes, digs, takes the dirt and pays the owner. Check with Clyde Dawson at Indiantown, FL as he has done this with the State for
new highway construction fill.

However, the real solution is to let the water flow South to the Florida Bay the way Nature made it.

Open a channel South of the lake to allow water to flow South.

It appears that the Sugar Companies have tremendous political sway in Washington due to their large donations and Lobbyists.

Big sugar, Big money= Everglades and Mother Nature suffers.

The Big Sugar is paying for prime time ads regarding their NON pollution of the water which is hard to believe with the crop spraying and
chemicals applied as fertilizeres, etc. I fly for a living and have to deal with the HUGE clouds of smoke while they burn the sugar cane and
other growing lands. You have to see to believe.

Big sugar blames the property owners that are in Orlando and along the Kissimmee River for the pollution they are spewing off their farmland.

Somebody needs to fight for the Everglades and restore the natural flow of water to Florida Bay.

Sincerely,

John Lumley
Delray Beach, FL

From: Just
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Lake Okechobee water
Date: Wednesday, April 18, 2018 3:57:07 PM

The real solution is Emminent Domain by the state and open a corridor for Lake O water to head to Florida bay as it did in the past.

The sugar and agricultural companies have blocked the natural flow to Florida Bay from Lake O.

I invite u to come and fly with me and look at the problem from the air. Free. I have a flight school and fly over the area constantly.

The Corps of Engineers has a history of BAD
Plans including the Kissimmee River debacle of years past. Open up a path to Florida Bay as it is a logical solution.

I imagine Palm Beach Commissioners or other political hacks own the land u want to put the reservoir on! Lots of MONEY to be made from selling the fill dug out for the reservoir as well. More of the same.

DO IT RIGHT THIS TIME. Restore the water flow to Florida bay.

Sincerely,
John Lumley

Sent from my iPhone

From: Sullivan, Joseph(FHWA)
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] SFWMD CERP mod study
Date: Wednesday, April 25, 2018 4:26:44 PM

Hi Stacie,

I do not have a comment at this time, as I have not reviewed the documents yet, but would like to ensure that I am included on future mailings (either email or paper).

Thanks.

Take care,

Joe

Joseph P. Sullivan

Environmental Specialist

Federal Highway Administration

3500 Financial Plaza, Suite 400

Tallahassee, FL 32312

850-553-2248

Joseph.Sullivan@dot.gov

From: Kellie Ralston
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] USACE EAA Reservoir EIS Scoping Comment Letter
Date: Monday, April 30, 2018 6:04:08 PM
Attachments: USACE EAA EIS Scoping Comment Letter.pdf

Stacie-

Attached, please find our comment letter in support of the EAA Reservoir. Please let me know if you have any questions. Thank you!

Kellie Ralston

Florida Fisheries Policy Director

Keep Florida Fishing

American Sportfishing Association

9167 Shoal Creek Drive

Tallahassee, FL 32312

(904) 553-3733

kralston@asafishing.org <mailto:kralston@asafishing.org>

Blockedwww.asafishing.org <Blockedhttp://www.asafishing.org/>

April 30, 2017

Stacie Auvenshine
U.S. Army Corps of Engineers Jacksonville District
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Ms. Auvenshine:

The American Sportfishing Association (ASA) appreciates the opportunity to provide comments on the Everglades Agricultural Area Storage (EAA) Reservoir project. ASA is the nation's recreational fishing trade association and represents sportfishing manufacturers, retailers, wholesalers, and angler advocacy groups, as well as the interests of America's 46 million recreational anglers, over 3 million of whom reside in or frequent Florida. ASA also safeguards and promotes the social, economic, and conservation values of sportfishing in America, which result in a $115 billion per year impact on the nation's economy. In Florida, the Fishing Capital of the World, this translates to a significant $9.6 billion economic engine supporting over 128,000 jobs and makes clean waters and abundant fisheries in the State of paramount importance to our industry.

As a result, we are committed to comprehensive Everglades restoration efforts and support expediting related projects whenever possible. Restoring the southerly flow of clean water from Lake Okeechobee (Lake) to Florida Bay (Bay) is critical to reducing the frequency and volume of releases to the Caloosahatchee and St. Lucie Rivers as well as to maintaining proper salinity and water quality conditions in the Bay. Once completed, restoration will mitigate the associated detrimental environmental impacts these systems currently experience from altered flows.

Providing water storage south of the Lake through the EAA Reservoir is an important component of the Comprehensive Everglades Restoration Plan (CERP). Expediting the completion of this project in conjunction with the Central Everglades Planning Project will increase southern water flow and reduce the need for and the duration of releases to the northern estuaries.

As you prepare the Environmental Impact Statement (EIS) for the reservoir, we urge your swift and favorable consideration of the project and its significant positive effects to the overall system. ASA supports the design submitted by the South Florida Water Management District, which provides maximum benefits within the allowable footprint. Moving forward with this project quickly will allow for its timely inclusion in the anticipated Water and Resources Development Act anticipated this Congress and prevent further harm to the environment and our community.

ASA appreciates your consideration of our comments and looks forward to final approval of the EAA Reservoir by the USACE.

Thank you for your consideration.

Sincerely,

Kellie Ralston

Kellie Ralston
Florida Fisheries Policy Director

From: LIN CHILDRESS
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Cc: Howard Snoweiss
Subject: [Non-DoD Source] Reservoir to help cut Lake Okeechobee discharges
Date: Monday, April 23, 2018 2:41:53 PM

To whom it may be concerned: We are adamantly in favor of building the reservoir south of Lake Okeechobee in order to reduce lake discharges into the St. Lucie River and the Caloosahatchee River. Such discharges are destroying our esturary along with all of the wildlife, destroying waterfront homes, jobs, etc. We ask for your support for this project to start and be completed as soon as possible. Thanks very much. Sincerely, Linwood L. Childress and Howard Snoweiss, 2920 S.E. Dune Drive, Apt. 130, Stuart, Fl. 34996.

From: mary shabbott
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Protect what little Florida has left
Date: Monday, April 23, 2018 4:48:53 PM

Stacie Auvenshine,
I am writing to support the Army Corp of Engineers' efforts to protect Florida's environment from the harmful pollutants in Okeechobee Lake discharges:

23-foot-deep, 10,100-acre reservoir to store up to 78.2 billion gallons of excess lake water
6,500-acre man-made marsh to clean the water
When used in conjunction with other existing and planned projects, I believe this will reduce the number of damaging discharge events from Lake Okeechobee to the St. Lucie and Caloosahatchee rivers by 63 percent and send an average of about 120.6 billion gallons of clean water south to the Everglades and Florida Bay.
Respectfully,
Mary Shabbott

From:	Michael Baldwin
To:	Auvenshine, Stacie J CIV USARMY CESAJ (US)
Cc:	Kirk, Jason A COL USARMY CESAJ (US); Reynolds, Jennifer A LTC USARMY CESAJ (US); Taplin, Kimberley A CIV USARMY CESAJ (US); Paul Tritaik; Jim Metzler; Sarah Ashton; Birgie Miller
Subject:	[Non-DoD Source] Environmental Review of State"s EAA Reservoir Study
Date:	Saturday, April 28, 2018 1:30:16 PM
Attachments:	Auvenshine 04-25-18.pdf

Dear. Ms. Avenshine – the attached letter is submitted as a comment from the “Ding” Darling Wildlife Society – Friends of the J. N. “Ding” Darling National Wildlife Refuge on the subject study,

M J Baldwin

Michael J. Baldwin, PhD

President

“Ding” Darling Wildlife Society

Phone: 239-472-8997

Cell: 239-410-7931

E-Mail: drmikeb@comcast.net <mailto:drmikeb@comcast.net>

1 Wildlife Drive, P.O. Box 565, Sanibel, FL • tel (239) 472-1100 • fax (239) 472-7803 • www.dingdarlingsociety.org

April 25, 2018

Ms. Stacie Auvenshine
U.S. Army Corps of Engineers, Jacksonville District
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Ms. Auvenshine:

This letter is in response to the Corps' call for comments on its environmental review of the South Florida Water Management District's Everglades Agricultural Area (EAA) storage reservoir study. Water quality is critical not only for the Ding Darling Wildlife Refuge, but also for all of south Florida. As highlighted by Congressman Francis Rooney, "The Lake Okeechobee Watershed and Everglades have far-ranging impact on the entire State of Florida and the country, but especially in Southeast and Southwest Florida, where 55% of all real estate in the state is affected - 2 trillion dollars of economic impact across 164 cities and 16 counties."[1]

The Ding Darling Wildlife Society (DDWS) recognizes the fact that there may be limited objections to the South Florida Water Management District's study as there is always more that could be done. However, we believe that the implementation of the recommendations in the study will significantly improve the water quality in South Florida and as such, we strongly support that they be implemented in as timely a manner as possible.

Sincerely yours,

(Signed)

Michael J. Baldwin, President

Cc: Lt. Col. Jennifer Reynolds, ACoE
Col. Jason Kirk, ACoE
Kim Taplin, ACoE
Paul Tritaik, DDNWR
Jim Metzler/Sarah Ashton, DDWS
Birgie Miller, DDWS

[1] https://francisrooney.house.gov/news/documentsingle.aspx?DocumentID=331

From: Micheal Conner
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] EAA reservoir effectiveness
Date: Wednesday, April 18, 2018 8:39:54 AM

Hello Stacie,

I appreciate the opportunity to provide comment on the standing plan for the EAA reservoir.

I feel that the project as is will not provide the needed relief from Lake Okeechobee discharges to either the St. Lucie River or the Caloosahatchee River. A 50 to 60 percent reduction is not going to spare these failing estuaries. I live in Stuart and the damage wrought by the past three or four discharge events have killed too much grass and marine organisms, and the public health threat is unacceptable.

The amount of water that the EAA project will send south to Florida Bay is inadequate as well. Specifically, the project footprint does not allow for enough water cleansing. A 24 foot deep reservoir is not what we envisioned. The A2 and A1 land will not get this job done. The SFWMD did not put enough effort into acquiring land, as was directed by Senate Bill 10.

As I understand it, during dry times, the agricultural industry will be granted the right to tap the EAA reservoir for irrigation. That is ludicrous. The sugar industry fought against this project tooth and nail. They should not be given a drop of that water.

I am disappointed that we must wait 8 or more years for something that won't do the job.

Thanks,

Capt. Mike Conner
Stuart, FL
772-521-1882

Sent from my iPad

From: Mike D Brown
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Lake O reservoir
Date: Wednesday, April 18, 2018 7:56:09 AM

I want you to stop sending Lake O waters into the IRL and into the Gulf and never send it there again. I want you to send lake O water through marshes to clean contaminants out of the water and down into the Everglades. I want you to begin doing this as quickly as possible. Thank you.

Mike D Brown
mojomikebrown@aol.com

From: Patricia Noonan
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Reservoir plan
Date: Wednesday, April 18, 2018 8:30:51 AM

Good morning,

Even though it is not enough to clean up the water that surrounds our homes here, I want to voice my support for the reservoir plan. We still will get discharges into the St. Lucie River, the oysters will still die and have to be reintroduced regularly, and we still will get warnings to stay out of the water in certain areas. But it is a start and something that we can build upon in the future.

Thank you,

Patricia Noonan

Patricia S. Noonan
6401 SE Inlet Way
Stuart, FL 34996
772.225.1520
cell 914.393.9133

From my iPad

From: rich magoo
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Lake Okeechobee Time To Use Some COMMON SENSE 4/30/2018
Date: Monday, April 30, 2018 6:17:19 PM

COMMON SENSE Tells US that the Solutions are not Too Difficult i.e. Lake Okeechobee is polluting the ST. Lucie and Caloosahatchee Estuaries. This Polluted Water is going to end up in the Atlantic Ocean anyway, So Why not build a Pipeline from the C-44 Canal to the ocean and send the polluted water to the ocean . If this water is Dispensed through a Christmas tree it will be Cooled and at Specific Gravity Of 1.0 will rise to the top while mixing with the 1.2 Specific Gravity ocean water. This will help in the Global Warming Problem. New York City Dumps their Garbage in the Ocean, and the Amazon River dumps at least 5 Lake O's everyday in the Ocean, so EPA should not be a Problem. As For Cleaning the Water Going to the Everglades. Lake Okeechobee is one of the Bigger Filters in the World. And Though Everyone CLEANS or Replaces Their Air Conditioner Filter, Replaces their Refridgerators/ Feezer Water Filter for Ice cubes and Drinking Water, And replaces Vacuum Cleaner Filter. NO ONE EVER CLEANS THE LAKE OKEECHOBEE FILTER. The Solution Could Be: Get One or Two Of The Humongous Fertilizer Companies To Filter All The Water Leaving Lake Okeechobee. While Doing this You Could use Maybe 4 SOLAR POWERED GPS CONTROLLED BARGES with several Propellers To Stir up The Phosphorous Sediment, and direct it South. every day 24/7 There would be less Sediment Collected until finally the Fertilizer Companies will go home. and Everyone lived Happily Ever After.

dupolin@yahoo.com

Thank You,
RICHARD C. MCGEOUGH
573 SW CARTER AVE.
PORT SAINT LUCIE,FL 34983-2983

From: Richard Persson
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Reservoir
Date: Monday, April 16, 2018 12:06:14 PM

Important consideration should be given to the sportsmen in the reservoir. A littoral area should be included in the plans in order for fish to spawn, and a boat ramp should be included in any plans. Any reservoir can serve a dual purpose such as water storage, and a good sustainable fishery can be maintained. This will also bring a boost to the economy in the area. Richard Persson Past Vice President, South Florida Anglers for Everglades Restoration.

Sent from Yahoo Mail on Android <Blockedhttps://go.onelink.me/107872968?pid=InProduct&c=Global_Internal_YGrowth_AndroidEmailSig__AndroidUsers&af_wl=ym&af_sub1=Internal&af_sub2=Global_YGrowth&af_sub3=EmailSignature>

From:	Robert Gibbons
To:	Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject:	[Non-DoD Source] Reservoir should be at least TWICE as large & deeper than currently proposed. We need the discharges stopped 100%, except for emergencies after Hurricanes.
Date:	Wednesday, April 18, 2018 8:42:32 AM

There are many more businesses and livelihoods at risk on both coasts than are employed in the Everglades Agri-Area.

I recommend relocating farming families who may be impacted and assisting them with new job training, etc.

Sincerely,

Robert Gibbons

Stuart, FL 34997

Sent from Mail <Blockedhttps://go.microsoft.com/fwlink/?LinkId=550986> for Windows 10

From: Scott, W Ray
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] EAA Storage PACR Scoping Comments
Date: Tuesday, May 01, 2018 9:48:46 AM
Attachments: EAA Storage PACR Scoping Comments submitted 05012018.pdf

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Please find attached FDACS comments re:

South Florida Water Management Section 203 Tentatively Selected Plan for a Post Authorization Change Report to modify the Central Everglades Planning Project features specific to the New Water Project Partnership Agreement – U.S. Army Corps of Engineers Environmental Impact Statement Scoping Comments

Thank you for the opportunity to provide comments.

W. Ray Scott

Deputy Director

Office of Agricultural Water Policy

Florida Department of Agriculture and Consumer Services

850-617-1716

850-617-1701 Fax

850-544-9871 Cell

Ray.Scott@FreshFromFlorida.com <mailto:Ray.Scott@FreshFromFlorida.com>

Physical Address:

The Elliot Building

401 South Monroe

Tallahassee, Florida 32399

Mailing Address:

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407 South Calhoun Street, Mail Stop E1

Tallahassee, Florida 32399-0800

Blockedwww.floridaagwaterpolicy.com <Blockedhttp://www.floridaagwaterpolicy.com/>

OFFICE OF AGRICULTURAL WATER POLICY
(850) 617-1700

THE MAYO BUILDING
407 SOUTH CALHOUN STREET
TALLAHASSEE, FLORIDA 32399-0800

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

COMMISSIONER ADAM H. PUTNAM

May 1, 2018

Ms. Gina Paduano Ralph
Chief, Environmental Branch
Department of the Army
Jacksonville District Corps of Engineers
701 San Marco Boulevard
Jacksonville, Florida 32207-0019

RE: South Florida Water Management Section 203 Tentatively Selected Plan for a Post Authorization Change Report to modify the Central Everglades Planning Project features specific to the New Water Project Partnership Agreement – U.S. Army Corps of Engineers Environmental Impact Statement Scoping Comments

Dear Ms. Ralph:

The Florida Department of Agriculture and Consumer Services (FDACS) appreciates the opportunity to provide comments on the Environmental Impact Statement (EIS) the United States Corps of Engineers (USACE) is preparing in accordance with the National Environmental Policy Act (NEPA) on the South Florida Water Management (SFWMD) Section 203 Tentatively Selected Plan (TSP) for a Post Authorization Change Report (PACR) to modify the Central Everglades Planning Project (CEPP) features specific to the New Water Project Partnership Agreement (PPA). We are submitting the following comments for consideration.

Our review focused on aspects of the SFWMD CEPP New Water PPA PACR which may impact private agricultural lands and agricultural operations. The comments provided are specific to the topics addressed below and do not constitute a review of the entire PACR and its supporting appendices.

1) Water Supply. We are pleased to see the significant reduction in water shortage cutbacks shown in the PACR through use of the EAA reservoir to meet irrigation needs in the service area. The Corps needs to be explicit in making this operational requirement a formal part of the operation manual section associated with the reservoir.

2) Flood Protection. Agricultural flood protection is another major concern for FDACS. Based on a quick review of the model output readily available, it appears that the current level of service will be maintained. The EAA reservoir project in the 1999 plan approved by Congress was one of only two projects that included the enhancement of flood protection as a project purpose. The conveyance enhancements in this plan coupled with the new inflow pump station for the reservoir would allow some enhancement to be achieved through purely operational means and it would seem this should be part of the analysis. The ability to reduce peak stage in both the Miami and North New River Canals could greatly reduce the need for flood control pumping at S-2 and S-3 while providing improved flood protection for the farms and cities near the lake

3) Schedule. The schedule shown in the PACR needs to convey a realistic time frame in keeping with the constrained schedule provided in the CEPP report and the actual federal funds that have been made available for Comprehensive Everglades Restoration Plan (CERP) projects since.

4) Project Dependencies. The project dependencies and sequencing of CEPP and non-CEPP projects is a major concern for FDACS since the success of all projects without negative impacts to both developed and undeveloped lands relies on proper sequencing to address water quality, construction prerequisites, operational options, and seepage control. Based on our review, it is not clear to us that the carefully thought out sequencing included in CEPP has been followed.

5) Operational Changes Available Under Existing CERP. Several areas show improved environmental performance that seems to be related to operational changes that are not dependent on changes to the size of the A-2 reservoir. It specifically mentions changes to the upper bands of the Lake Okeechobee schedule and modifications to south Dade operations to achieve more benefits for Florida Bay. These changes, and potentially others, that are not dependent on the additional storage in A-2 should be included in the EIS analysis so it is clear that all the outcomes shown in the PACR are not related solely to the additional storage being proposed and are available under the existing CERP authorization.

Gina Ralph
May 1, 2018
Page Three

FDACS appreciates the opportunity to provide scoping comments. We look forward to continued progress on CERP projects and working with our state and federal partners to improve system-wide capabilities. If you have any questions regarding FDACS' comments, please contact Ray Scott at (850) 617-1716 or Rebecca Elliott at (561) 682-6040.

Sincerely,

W. Ray Scott
Deputy Director
Office of Agricultural Water Policy

From: Sharon Smith Purdy
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Lake O Discharge
Date: Sunday, April 22, 2018 7:02:10 PM

Ms. Auvenshine,

Please, please, please, approve the plan to change the runoff from Lake O....there are so many negative, environmental impacts occurring with current status quo. All who have the influence and power to make a change must make that change happen now!
Please be part of the solution.
Happy Earth Day...May we all learn to better respect this planet....

Sharon Smith Purdy
Age 66 and finally getting in tune with our environment.

Sharon Smith Purdy
508-962-1300

From: Shaun G. MacKenzie, P.E.
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] CERP Comment
Date: Wednesday, April 18, 2018 9:19:11 AM

I support the proposed project.

Shaun G. MacKenzie

Palm City, FL 34990

From: Shirley Harris
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Florida Dike
Date: Wednesday, April 18, 2018 1:27:03 PM

I think you should NEVER have built the dike in the first place. It has caused problems for years and now people live all around Lake Okeechobee. You have created a monster problem and now want money to fix it. You should take the funds to fix your problems out of your budget.

Shirley M. Harris

Well-behaved women seldom make history.

From: Treble Hook
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Everglades Agricultural Area Best I can explain....
Date: Monday, April 16, 2018 10:28:25 PM

Welcome to Florida! Watch out for deadly sharks, snakes, and Gators. Know worries! Most of the Florida Black Bears, and most all of the Panthers have been forever lost to uncontrolled Devil-lopers and greased poly-contritions. And that's just the tip of the wastewater treatment pond they call the 4th largest lake in the USA,
LAKE OCHEECHOBEE!

" cast-a-line let your Florida S¤UL Shine!..."

Treble Hook Scott Rexroat 727-418-2918

The TREBLE HOoks Facebook! <Blockedhttp://www.facebook.com/thetreblehooks>

From: WILLIAM LAIN
To: Auvenshine, Stacie J CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Reservoir
Date: Wednesday, April 18, 2018 10:44:34 AM

I view the proposed reservoir as a very positive step in the right direction. It is not a complete perfect solution but it appears to be a substantial part of one. History shows it may not be best to effect what we think is a perfect solution all at once anyway. We once thought draining Okeechobee through the Saint Lucie and Caloosahatchee was a great idea. Given where we are now the proposed reservoir appears to be a very good experiment. Bill Lain, 9750 Riverview Dr. Micco, Fl 32976

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-0019

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

MAY 23 2018

Mr. Fred Dayhoff, Tribal Representative
NAGPRA, Section 106
Miccosukee Tribe of Indians of Florida
HC 61 SR 68
Ochopee, Florida 34141

Re: South Florida Water Management District (SFWMD) Section 203 Everglades Agricultural Area (EAA) Southern Reservoir and Stormwater Treatment Area (STA)

Dear Mr. Dayhoff:

The U.S. Army Corps of Engineers, Jacksonville District (Corps) is preparing National Environmental Policy Act (NEPA) documentation related to a feasibility study (study) prepared by SFWMD pursuant to Section 203(a)(1) of the Water Resources Development Act (WRDA) of 1986 (33 U.S.C. 2231(a)(1)), as amended. The SFWMD submitted its study on March 30, 2018 to the Assistant Secretary of the Army for Civil Works (ASA(CW)) for review in order to determine under 33 U.S.C. 2231(b) whether the study complies with Federal laws and regulations applicable to water resources development project feasibility studies . This SFWMD study, if authorized, would modify the Central Everglades Planning Project (CEPP), which was authorized as a Federal project by Congress in 2016. The SFWMD study proposes modifications to CEPP features specific to the New Water Project.

The Federal action of the ASA(CW) is to evaluate and report whether the project is feasible and provide any recommendations concerning the project design or conditions for construction to several congressional committees. Under Section 203 guidance, the Corps is not involved in a non-Federal Interest's development of alternatives but may provide technical assistance at the non-Federal Interest's expense (in this case SFWMD is the non-Federal Interest). The National Historic Preservation Act (NHPA), NEPA, and other relevant environmental laws, statutes, and executive orders apply to the federal action in response to the submittal of the feasibility study. Therefore, the Corps is preparing an Environmental Impact Statement (EIS) in accordance with NEPA to evaluate and document effects on the human environment of the SFWMD Section 203 Study Locally Preferred Alternative compared to the No Action Alternative, which is the currently authorized CEPP project, and conduct consultation under Section 106 of the NHPA.

The currently authorized CEPP Recommended Plan stores, treats, and redirects approximately 210,000 acre-feet of water on an average annual basis to the historical Everglades ecosystem in lieu of releasing the excess water from Lake Okeechobee through the St. Lucie Canal (east) and the Caloosahatchee Canal (west) to the coastal estuaries (referred to as the Northern Estuaries). The SFWMD Section 203 study recommends changes to the CEPP New Water Project in response to Florida Law Chapter 2017-10 providing direction to SFWMD to expedite planning, design, and construction of improved conveyance, water storage and treatment in the EAA with a reservoir holding a minimum of 240,000 acre-feet. The SFWMD Section 203 Study Locally Preferred Alternative would increase CEPP flows to the central portion of the Everglades from an average annual of approximately 210,000 acre-feet to 370,000 acre-feet overall. Specific changes to the authorized CEPP project features considered in the Locally Preferred Alternative include adjusting from a 14,000 acre flow equalization basin (FEB) to a 10,500 acre, 23-feet deep water reservoir and the addition of a 6,500 acre storm water treatment area (STA) (Figures 1 and 2). Additional features of the study would add conveyance improvements to the Miami and North New River canals and construct new structures to route and discharge water. The effects of these changes are to be evaluated in the EIS and coordinated under Section 106 of the NHPA. SFWMD's proposed modifications to CEPP would require Congressional authorization.

The area of potential effects (APE) for cultural resources in the SFWMD Section 203 Study Locally Preferred Alternative measures approximately 34,500 acres, and is comprised of the A-1 and A-2 parcels, portion of the A-2 Expansion area, portions of the Miami Canal, and portions of the North New River Canal. Three cultural resources surveys have been conducted for approximately 30,000 acres of the APE and are documented in the 2016 report produced by Southeastern Archaeological Research, Inc. (SEARCH) titled *Archaeological Identification and Evaluation of the Miami and North New River Canals and a Phase I Survey in the Everglades Agricultural Area, Palm Beach County, Florida* (Austin 2016); the 2013 SEARCH report titled *Central Everglades Planning Project, Cultural Resources Investigation of Everglades Agricultural Area Cell A-2, Palm Beach County, Florida* (Austin 2013); and the 2012 report prepared by the Florida Bureau of Archaeological Research titled *A Cultural Resource Assessment Survey of the EAA A-1 Property, Palm Beach County, Florida* (Seinfeld and Rothrock 2012) (see Figure 1). These investigations resulted in the identification of three historic properties evaluated as potentially eligible for listing in the National Register of Historic Places (NRHP); including the North New River (NNR) Canal, the Miami Canal, and prehistoric site 8PB16039. An additional archaeological site (8PB16040) was identified as a result of these surveys; however, more information will be required prior to determining the NRHP eligibility of the resource. These surveys and recommendations of NRHP eligibility were consulted with the Florida State Historic Preservation Officer (SHPO), the Seminole Tribe of Florida, the Miccosukee Tribe of Indians of Florida, and other interested parties on numerous occasions between 2011 and 2014 (DHR Project File Nos.: 2012-01115; 2012-2895; 2013-2375; 2013-4293; 2013-3571; 2013-4407; 2013-4408).

For purposes of cultural resources, the SFWMD Section 203 Study Locally Preferred Alternative effects minimal change relative to the currently authorized 2014 CEPP Recommended Plan. The proposed change enlarges the project footprint by approximately 4,500 acres. As coordinated during CEPP, the Corps will employ a phased process to identify and evaluate historic properties and assess effects. This approach will also be documented in the Corps' EIS in accordance with Section 106 of the NHPA (36 CFR § 800.4[b][2]).

Once the project has been authorized by Congress, each suite of features will be subject to separate consultation and consideration of effects during preconstruction engineering and design (PED) as the area of potential effects (APE) may be subject to change based on final designs or modifications of project features. Supplementary cultural resources assessments will be conducted in areas that have not been previously surveyed. During PED and prior to construction, these surveys and a final determination of effects for any historic properties within the APE will be coordinated with your office.

Pursuant to Section 106 of the National Historic Preservation Act (54 U.S.C. 306108) and it's implementing regulations (36 CFR 800), and in consideration of the Corps' Trust Responsibilities to the Miccosukee Tribe of Indians of Florida, the Corps kindly requests continued consultation on this project. Please send any comments within 30 calendar days of receipt of this letter. If there are any questions, please contact Ms. Meredith Moreno at 904-232-1577 or e-mail at Meredith.a.moreno@usace.army.mil.

Sincerely,

Gina Paduano Ralph, Ph.D.
Chief, Environmental Branch

Enclosure

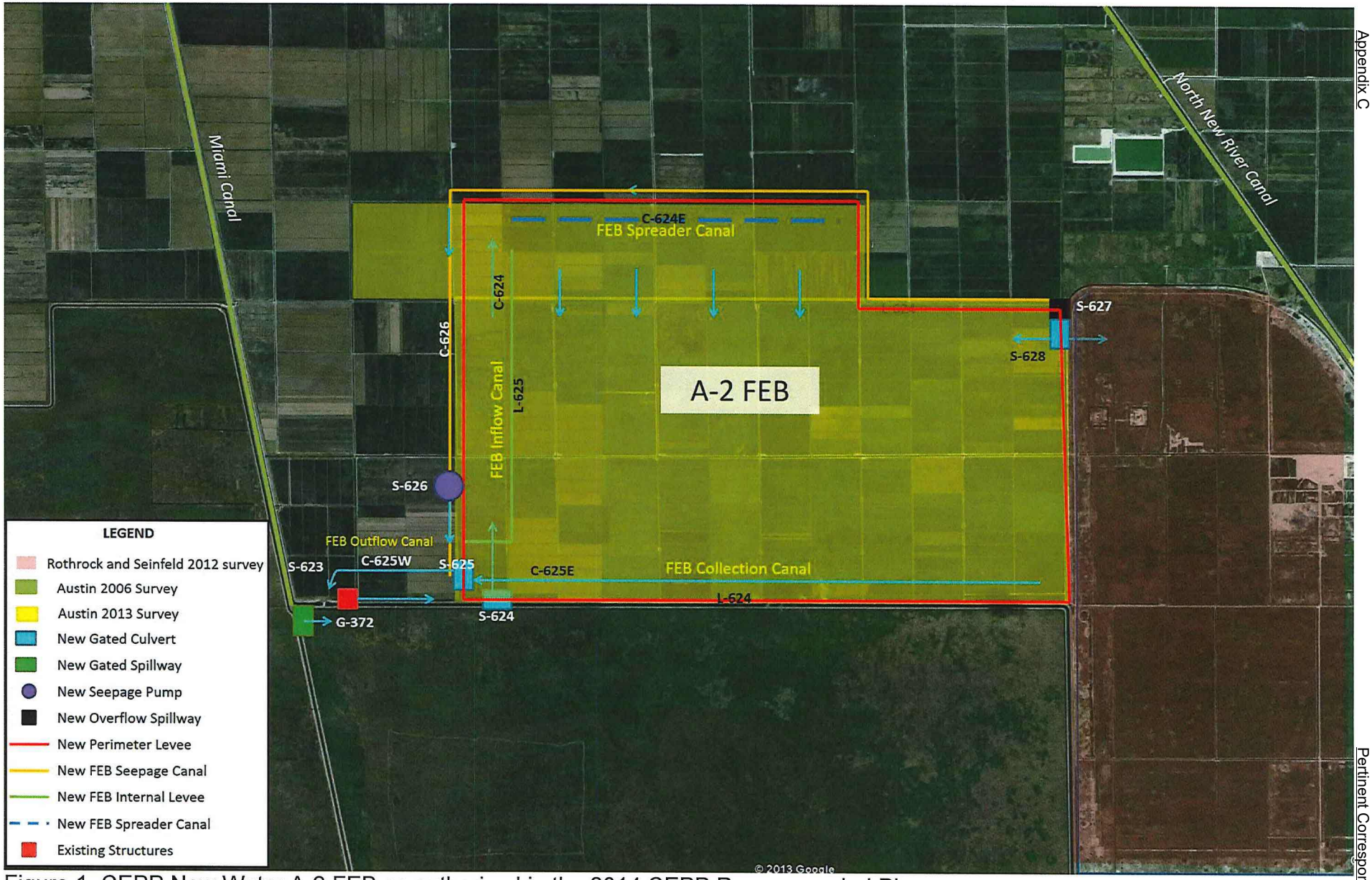

Figure 1. CEPP New Water A-2 FEB as authorized in the 2014 CEPP Recommended Plan.

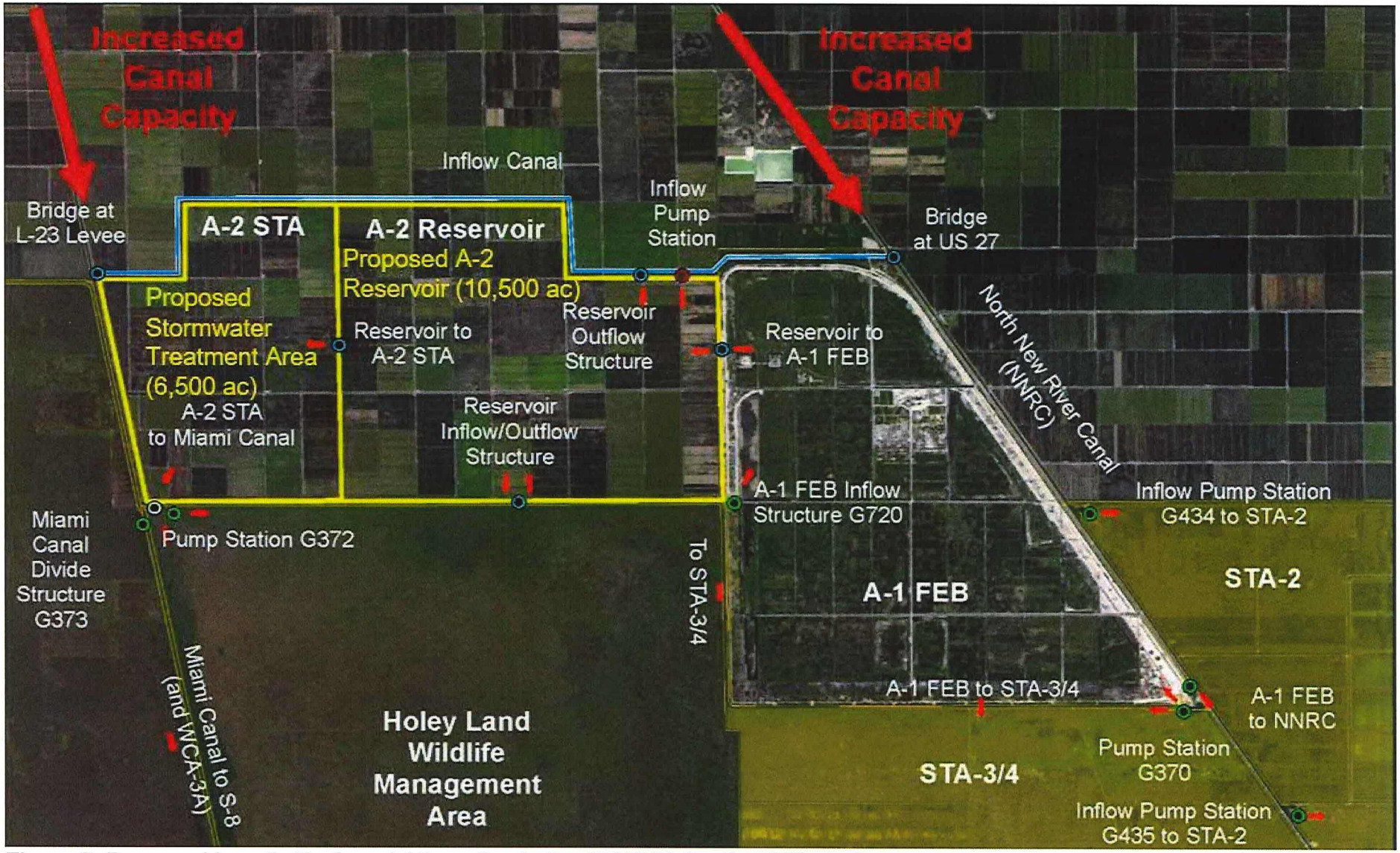

Figure 2. Proposed Locally Preferred Alternative in the SFWMD Section 203 study.

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-0019

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

MAY 23 2018

Dr. Paul Backhouse, THPO
Seminole Tribe of Florida
Tribe Historic Preservation Office
30290 Josie Billie Highway
PMP 1004
Clewiston, FL 33440

Re: South Florida Water Management District (SFWMD) Section 203 Everglades Agricultural Area (EAA) Southern Reservoir and Stormwater Treatment Area (STA)

Dear Dr. Backhouse:

The U.S. Army Corps of Engineers, Jacksonville District (Corps) is preparing National Environmental Policy Act (NEPA) documentation related to a feasibility study (study) prepared by SFWMD pursuant to Section 203(a)(1) of the Water Resources Development Act (WRDA) of 1986 (33 U.S.C. 2231(a)(1)), as amended. The SFWMD submitted its study on March 30, 2018 to the Assistant Secretary of the Army for Civil Works (ASA(CW)) for review in order to determine under 33 U.S.C. 2231(b) whether the study complies with Federal laws and regulations applicable to water resources development project feasibility studies . This SFWMD study, if authorized, would modify the Central Everglades Planning Project (CEPP), which was authorized as a Federal project by Congress in 2016. The SFWMD study proposes modifications to CEPP features specific to the New Water Project.

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The currently authorized CEPP Recommended Plan stores, treats, and redirects approximately 210,000 acre-feet of water on an average annual basis to the historical Everglades ecosystem in lieu of releasing the excess water from Lake Okeechobee through the St. Lucie Canal (east) and the Caloosahatchee Canal (west) to the coastal estuaries (referred to as the Northern Estuaries). The SFWMD Section 203 study recommends changes to the CEPP New Water Project in response to Florida Law Chapter 2017-10 providing direction to SFWMD to expedite planning, design, and construction of improved conveyance, water storage and treatment in the EAA with a reservoir holding a minimum of 240,000 acre-feet. The SFWMD Section 203 Study Locally Preferred Alternative would increase CEPP flows to the central portion of the Everglades from an average annual of approximately 210,000 acre-feet to 370,000 acre-feet overall. Specific changes to the authorized CEPP project features considered in the Locally Preferred Alternative include adjusting from a 14,000 acre flow equalization basin (FEB) to a 10,500 acre, 23-feet deep water reservoir and the addition of a 6,500 acre storm water treatment area (STA) (Figures 1 and 2). Additional features of the study would add conveyance improvements to the Miami and North New River canals and construct new structures to route and discharge water. The effects of these changes are to be evaluated in the EIS and coordinated under Section 106 of the NHPA. SFWMD's proposed modifications to CEPP would require Congressional authorization.

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For purposes of cultural resources, the SFWMD Section 203 Study Locally Preferred Alternative effects minimal change relative to the currently authorized 2014 CEPP Recommended Plan. The proposed change enlarges the project footprint by approximately 4,500 acres. As coordinated during CEPP, the Corps will employ a phased process to identify and evaluate historic properties and assess effects. This approach will also be documented in the Corps' EIS in accordance with Section 106 of the NHPA (36 CFR § 800.4[b][2]).

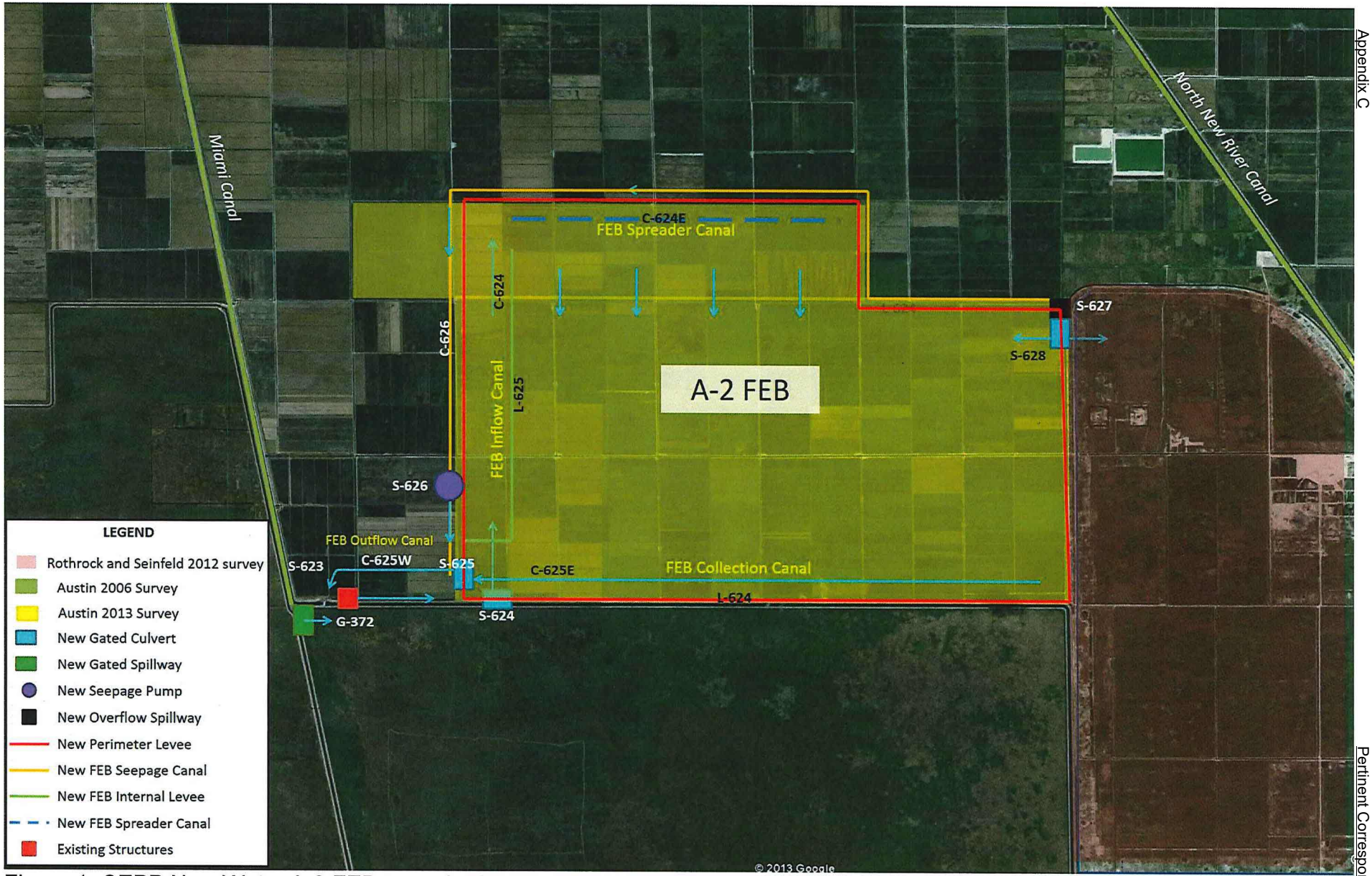
Once the project has been authorized by Congress, each suite of features will be subject to separate consultation and consideration of effects during preconstruction engineering and design (PED) as the area of potential effects (APE) may be subject to change based on final designs or modifications of project features. Supplementary cultural resources assessments will be conducted in areas that have not been previously surveyed. During PED and prior to construction, these surveys and a final determination of effects for any historic properties within the APE will be coordinated with your office.

Pursuant to Section 106 of the National Historic Preservation Act (54 U.S.C. 306108) and it's implementing regulations (36 CFR 800), and in consideration of the Corps' Trust Responsibilities to the Seminole Tribe of Florida, the Corps kindly requests continued consultation on this project. Please send any comments within 30 calendar days of receipt of this letter. If there are any questions, please contact Ms. Meredith Moreno at 904-232-1577 or e-mail at Meredith.a.moreno@usace.army.mil.

Sincerely,

Gina Paduano Ralph, Ph.D.
Chief, Environmental Branch

Enclosure



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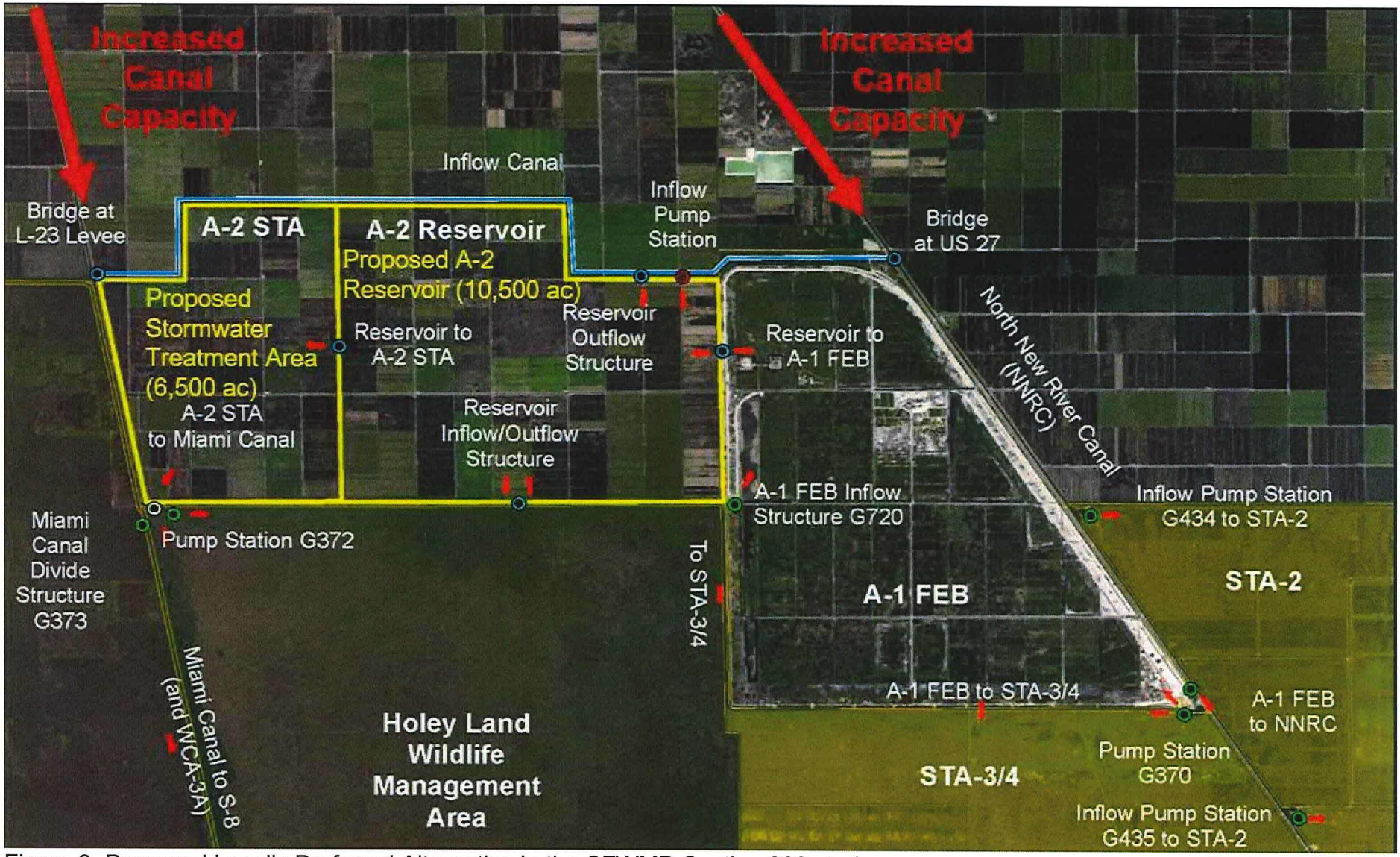

Figure 2. Proposed Locally Preferred Alternative in the SFWMD Section 203 study.

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-0019

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

MAY 23 2018

Mr. Theodore Isham
Historic Preservation Officer
Seminole Nation of Oklahoma
PO Box 1498
Wewoka, Ok 74884

Re: South Florida Water Management District (SFWMD) Section 203 Everglades Agricultural Area (EAA) Southern Reservoir and Stormwater Treatment Area (STA)

Dear Mr. Isham:

The U.S. Army Corps of Engineers, Jacksonville District (Corps) is preparing National Environmental Policy Act (NEPA) documentation related to a feasibility study (study) prepared by SFWMD pursuant to Section 203(a)(1) of the Water Resources Development Act (WRDA) of 1986 (33 U.S.C. 2231(a)(1)), as amended. The SFWMD submitted its study on March 30, 2018 to the Assistant Secretary of the Army for Civil Works (ASA(CW)) for review in order to determine under 33 U.S.C. 2231(b) whether the study complies with Federal laws and regulations applicable to water resources development project feasibility studies . This SFWMD study, if authorized, would modify the Central Everglades Planning Project (CEPP), which was authorized as a Federal project by Congress in 2016. The SFWMD study proposes modifications to CEPP features specific to the New Water Project.

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The area of potential effects (APE) for cultural resources in the SFWMD Section 203 Study Locally Preferred Alternative measures approximately 34,500 acres, and is comprised of the A-1 and A-2 parcels, portion of the A-2 Expansion area, portions of the Miami Canal, and portions of the North New River Canal. Three cultural resources surveys have been conducted for approximately 30,000 acres of the APE and are documented in the 2016 report produced by Southeastern Archaeological Research, Inc. (SEARCH) titled *Archaeological Identification and Evaluation of the Miami and North New River Canals and a Phase I Survey in the Everglades Agricultural Area, Palm Beach County, Florida* (Austin 2016); the 2013 SEARCH report titled *Central Everglades Planning Project, Cultural Resources Investigation of Everglades Agricultural Area Cell A-2, Palm Beach County, Florida* (Austin 2013); and the 2012 report prepared by the Florida Bureau of Archaeological Research titled *A Cultural Resource Assessment Survey of the EAA A-1 Property, Palm Beach County, Florida* (Seinfeld and Rothrock 2012) (see Figure 1). These investigations resulted in the identification of three historic properties evaluated as potentially eligible for listing in the National Register of Historic Places (NRHP); including the North New River (NNR) Canal, the Miami Canal, and prehistoric site 8PB16039. An additional archaeological site (8PB16040) was identified as a result of these surveys; however, more information will be required prior to determining the NRHP eligibility of the resource. These surveys and recommendations of NRHP eligibility were consulted with the Florida State Historic Preservation Officer (SHPO), the Seminole Tribe of Florida, the Miccosukee Tribe of Indians of Florida, and other interested parties on numerous occasions between 2011 and 2014 (DHR Project File Nos.: 2012-01115; 2012-2895; 2013-2375; 2013-4293; 2013-3571; 2013-4407; 2013-4408).

For purposes of cultural resources, the SFWMD Section 203 Study Locally Preferred Alternative effects minimal change relative to the currently authorized 2014 CEPP Recommended Plan. The proposed change enlarges the project footprint by approximately 4,500 acres. As coordinated during CEPP, the Corps will employ a phased process to identify and evaluate historic properties and assess effects. This approach will also be documented in the Corps' EIS in accordance with Section 106 of the NHPA (36 CFR § 800.4[b][2]).

Once the project has been authorized by Congress, each suite of features will be subject to separate consultation and consideration of effects during preconstruction engineering and design (PED) as the area of potential effects (APE) may be subject to change based on final designs or modifications of project features. Supplementary cultural resources assessments will be conducted in areas that have not been previously surveyed. During PED and prior to construction, these surveys and a final determination of effects for any historic properties within the APE will be coordinated with your office.

Pursuant to Section 106 of the National Historic Preservation Act (54 U.S.C. 306108) and it's implementing regulations (36 CFR 800), and in consideration of the Corps' Trust Responsibilities to the Seminole Nation of Oklahoma, the Corps kindly requests continued consultation on this project. Please send any comments within 30 calendar days of receipt of this letter. If there are any questions, please contact Ms. Meredith Moreno at 904-232-1577 or e-mail at Meredith.a.moreno@usace.army.mil.

Sincerely,

Gina Paduano Ralph, Ph.D.
Chief, Environmental Branch

Enclosure

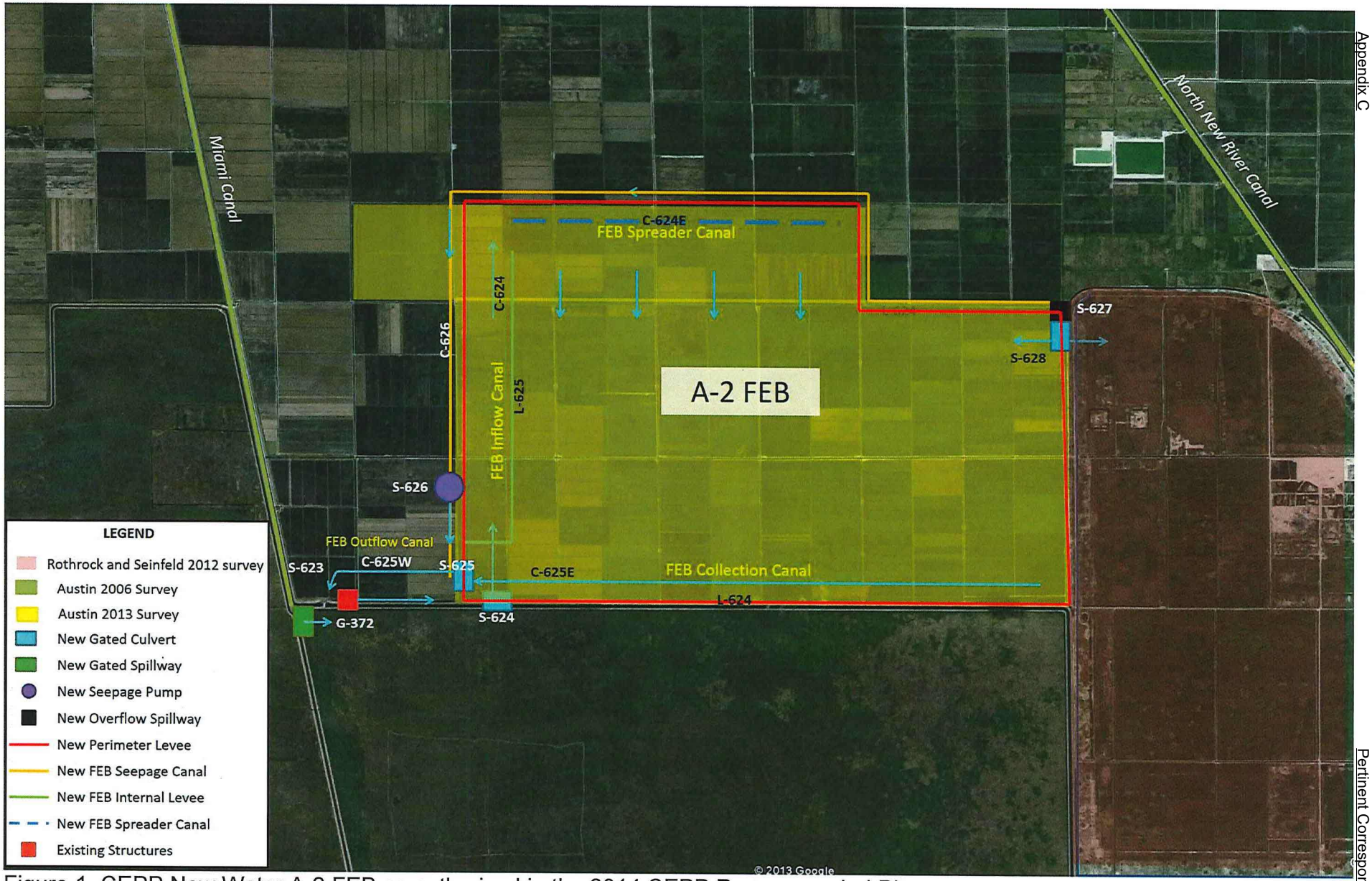

Figure 1. CEPP New Water A-2 FEB as authorized in the 2014 CEPP Recommended Plan.

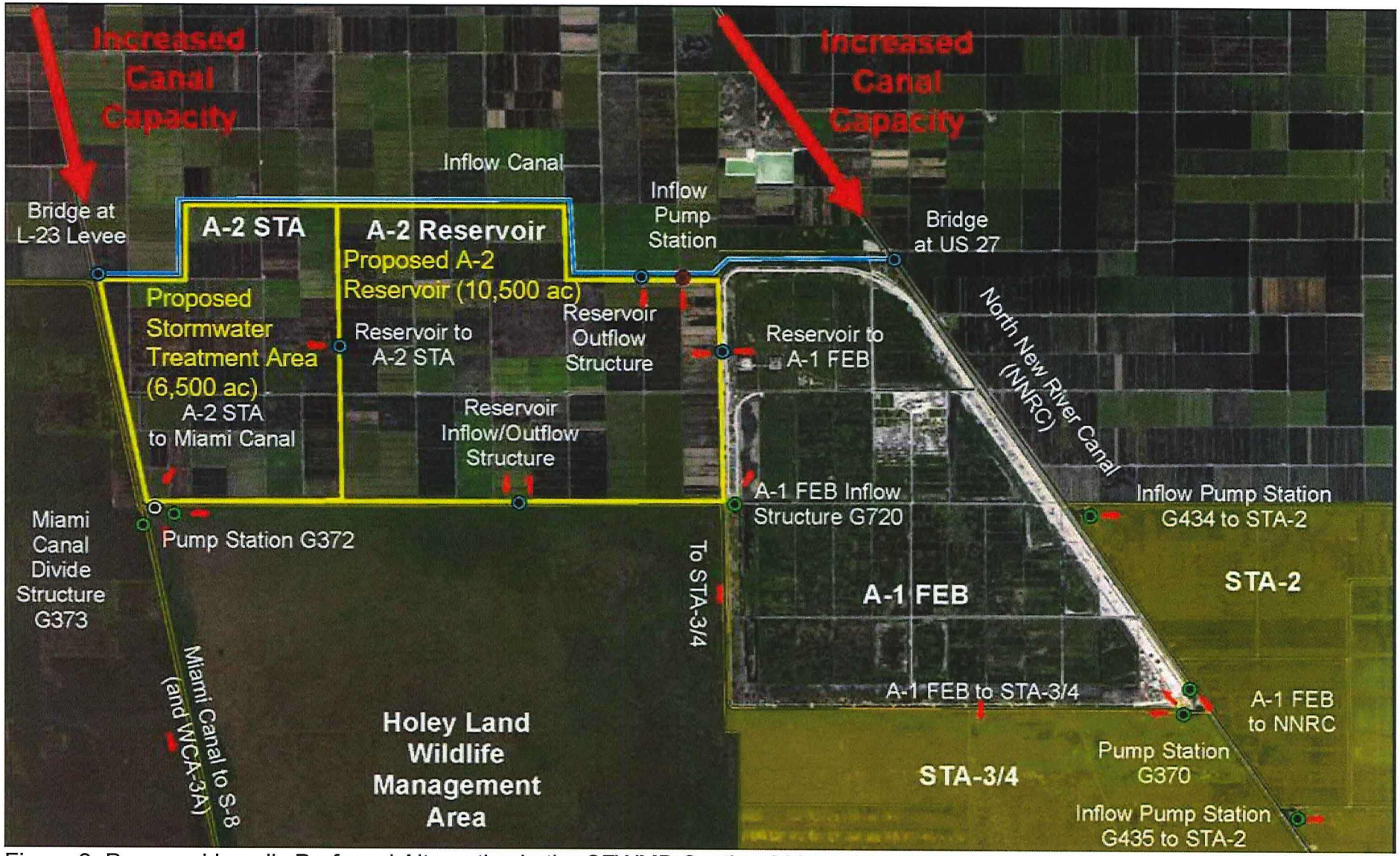

Figure 2. Proposed Locally Preferred Alternative in the SFWMD Section 203 study.

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-0019

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

MAY 23 2018

Tim Parsons, Ph.D. SHPO
Division of Historical Resources
State Historic Preservation Officer
500 South Bronough Street
Tallahassee, Florida 32399-0250

Re: South Florida Water Management District (SFWMD) Section 203 Everglades Agricultural Area (EAA) Southern Reservoir and Stormwater Treatment Area (STA)

Dear Dr. Parsons:

The U.S. Army Corps of Engineers, Jacksonville District (Corps) is preparing National Environmental Policy Act (NEPA) documentation related to a feasibility study (study) prepared by SFWMD pursuant to Section 203(a)(1) of the Water Resources Development Act (WRDA) of 1986 (33 U.S.C. 2231(a)(1)), as amended. The SFWMD submitted its study on March 30, 2018 to the Assistant Secretary of the Army for Civil Works (ASA(CW)) for review in order to determine under 33 U.S.C. 2231(b) whether the study complies with Federal laws and regulations applicable to water resources development project feasibility studies . This SFWMD study, if authorized, would modify the Central Everglades Planning Project (CEPP), which was authorized as a Federal project by Congress in 2016. The SFWMD study proposes modifications to CEPP features specific to the New Water Project.

The Federal action of the ASA(CW) is to evaluate and report whether the project is feasible and provide any recommendations concerning the project design or conditions for construction to several congressional committees. Under Section 203 guidance, the Corps is not involved in a non-Federal Interest's development of alternatives but may provide technical assistance at the non-Federal Interest's expense (in this case SFWMD is the non-Federal Interest). The National Historic Preservation Act (NHPA), NEPA, and other relevant environmental laws, statutes, and executive orders apply to the federal action in response to the submittal of the feasibility study. Therefore, the Corps is preparing an Environmental Impact Statement (EIS) in accordance with NEPA to evaluate and document effects on the human environment of the SFWMD Section 203 Study Locally Preferred Alternative compared to the No Action Alternative, which is the currently authorized CEPP project, and conduct consultation under Section 106 of the NHPA.

The currently authorized CEPP Recommended Plan stores, treats, and redirects approximately 210,000 acre-feet of water on an average annual basis to the historical Everglades ecosystem in lieu of releasing the excess water from Lake Okeechobee through the St. Lucie Canal (east) and the Caloosahatchee Canal (west) to the coastal estuaries (referred to as the Northern Estuaries). The SFWMD Section 203 study recommends changes to the CEPP New Water Project in response to Florida Law Chapter 2017-10 providing direction to SFWMD to expedite planning, design, and construction of improved conveyance, water storage and treatment in the EAA with a reservoir holding a minimum of 240,000 acre-feet. The SFWMD Section 203 Study Locally Preferred Alternative would increase CEPP flows to the central portion of the Everglades from an average annual of approximately 210,000 acre-feet to 370,000 acre-feet overall. Specific changes to the authorized CEPP project features considered in the Locally Preferred Alternative include adjusting from a 14,000 acre flow equalization basin (FEB) to a 10,500 acre, 23-feet deep water reservoir and the addition of a 6,500 acre storm water treatment area (STA) (Figures 1 and 2). Additional features of the study would add conveyance improvements to the Miami and North New River canals and construct new structures to route and discharge water. The effects of these changes are to be evaluated in the EIS and coordinated under Section 106 of the NHPA. SFWMD's proposed modifications to CEPP would require Congressional authorization.

The area of potential effects (APE) for cultural resources in the SFWMD Section 203 Study Locally Preferred Alternative measures approximately 34,500 acres, and is comprised of the A-1 and A-2 parcels, portion of the A-2 Expansion area, portions of the Miami Canal, and portions of the North New River Canal. Three cultural resources surveys have been conducted for approximately 30,000 acres of the APE and are documented in the 2016 report produced by Southeastern Archaeological Research, Inc. (SEARCH) titled *Archaeological Identification and Evaluation of the Miami and North New River Canals and a Phase I Survey in the Everglades Agricultural Area, Palm Beach County, Florida* (Austin 2016); the 2013 SEARCH report titled *Central Everglades Planning Project, Cultural Resources Investigation of Everglades Agricultural Area Cell A-2, Palm Beach County, Florida* (Austin 2013); and the 2012 report prepared by the Florida Bureau of Archaeological Research titled *A Cultural Resource Assessment Survey of the EAA A-1 Property, Palm Beach County, Florida* (Seinfeld and Rothrock 2012) (see Figure 1). These investigations resulted in the identification of three historic properties evaluated as potentially eligible for listing in the National Register of Historic Places (NRHP); including the North New River (NNR) Canal, the Miami Canal, and prehistoric site 8PB16039. An additional archaeological site (8PB16040) was identified as a result of these surveys; however, more information will be required prior to determining the NRHP eligibility of the resource. These surveys and recommendations of NRHP eligibility were consulted with the Florida State Historic Preservation Officer (SHPO), the Seminole Tribe of Florida, the Miccosukee Tribe of Indians of Florida, and other interested parties on numerous occasions between 2011 and 2014 (DHR Project File Nos.: 2012-01115; 2012-2895; 2013-2375; 2013-4293; 2013-3571; 2013-4407; 2013-4408).

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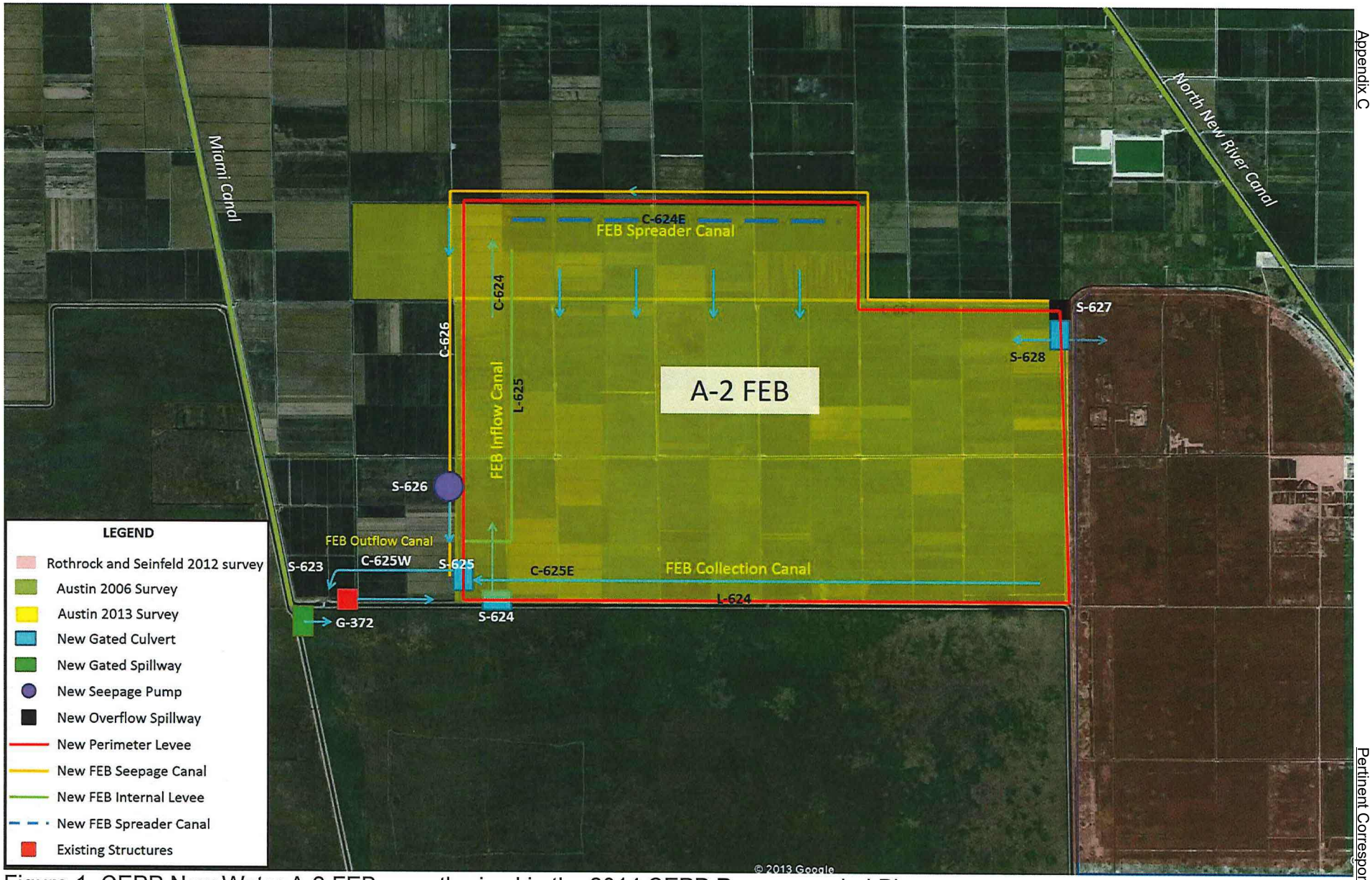
Pursuant to Section 106 of the National Historic Preservation Act (54 U.S.C. 306108) and it's implementing regulations (36 CFR 800), the Corps kindly requests continued consultation on this project. Please send any comments within 30 calendar days of receipt of this letter. If there are any questions, please contact Ms. Meredith Moreno at 904-232-1577 or e-mail at Meredith.a.moreno@usace.army.mil.

Sincerely,

Gina Paduano Ralph, Ph.D.
Chief, Environmental Branch

Enclosure



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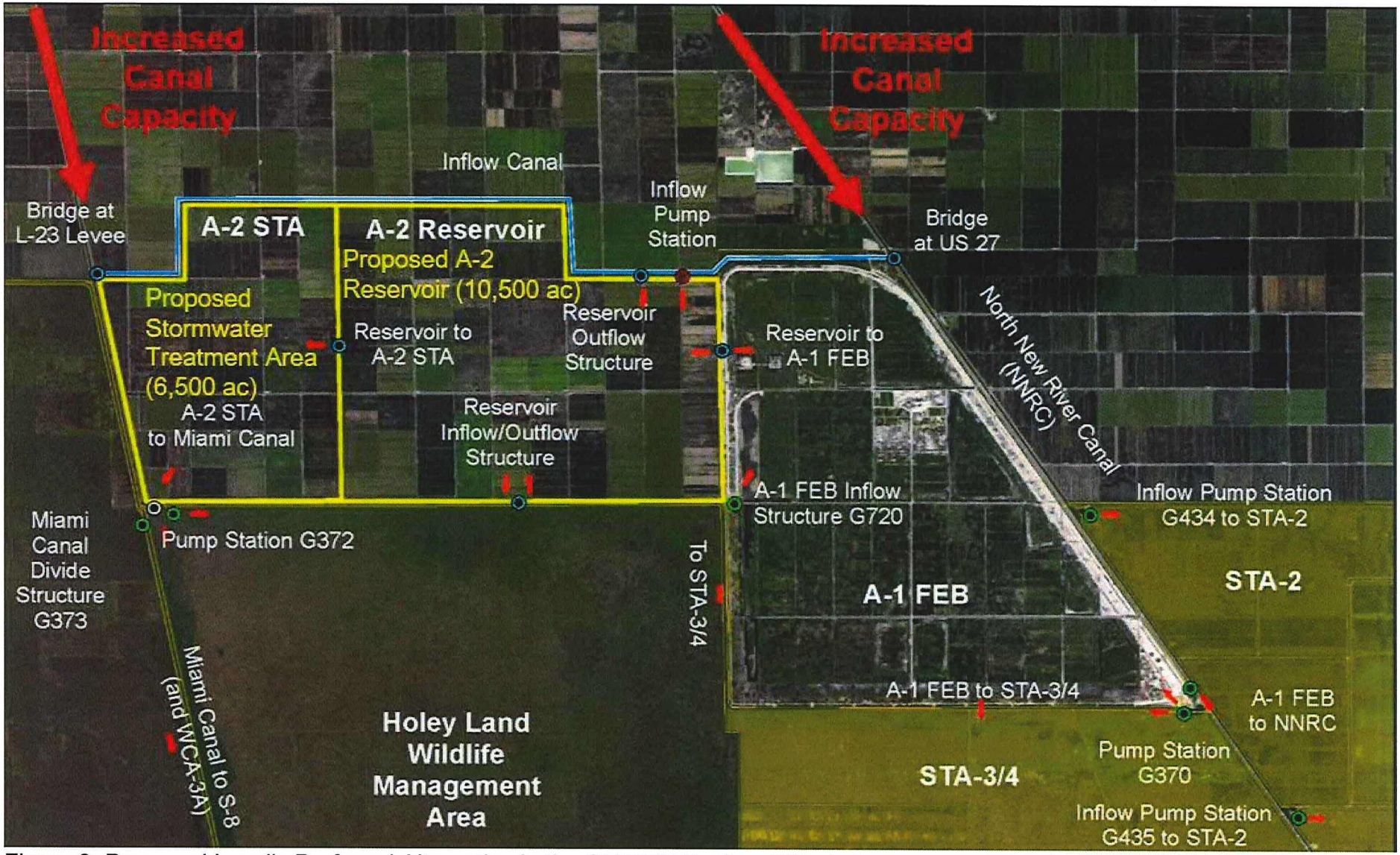

Figure 2. Proposed Locally Preferred Alternative in the SFWMD Section 203 study.

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-0019

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

MAY 23 2018

Mr. Terry Clouthier
Tribal Historic Preservation Officer
Thlopthlocco Tribal Town
PO Box 188
Okemah, Ok 74859

Re: South Florida Water Management District (SFWMD) Section 203 Everglades Agricultural Area (EAA) Southern Reservoir and Stormwater Treatment Area (STA)

Dear Mr. Clouthier:

The U.S. Army Corps of Engineers, Jacksonville District (Corps) is preparing National Environmental Policy Act (NEPA) documentation related to a feasibility study (study) prepared by SFWMD pursuant to Section 203(a)(1) of the Water Resources Development Act (WRDA) of 1986 (33 U.S.C. 2231(a)(1)), as amended. The SFWMD submitted its study on March 30, 2018 to the Assistant Secretary of the Army for Civil Works (ASA(CW)) for review in order to determine under 33 U.S.C. 2231(b) whether the study complies with Federal laws and regulations applicable to water resources development project feasibility studies . This SFWMD study, if authorized, would modify the Central Everglades Planning Project (CEPP), which was authorized as a Federal project by Congress in 2016. The SFWMD study proposes modifications to CEPP features specific to the New Water Project.

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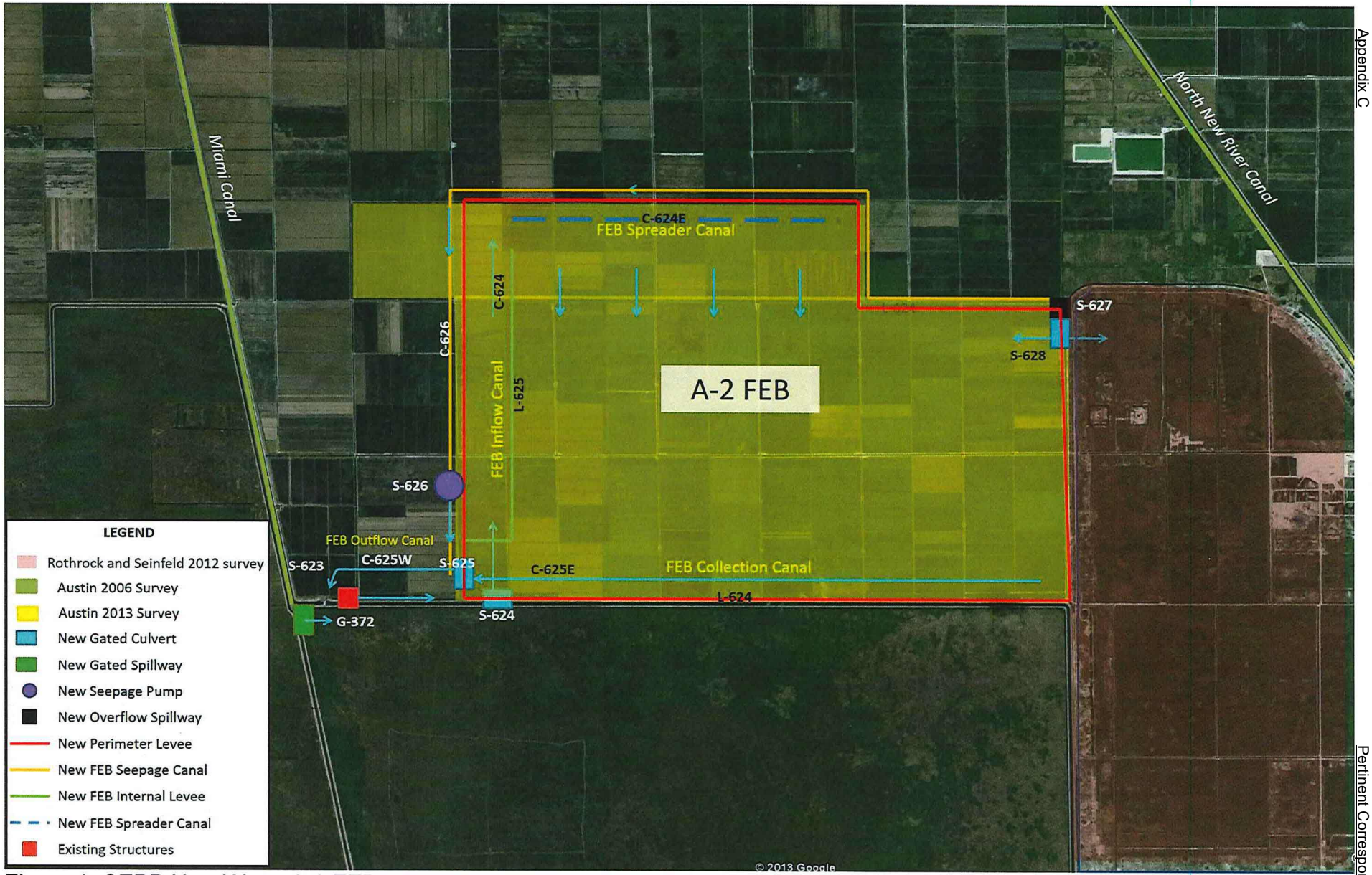
Sincerely,

Gina Paduano Ralph, Ph.D.
Chief, Environmental Branch

Enclosure



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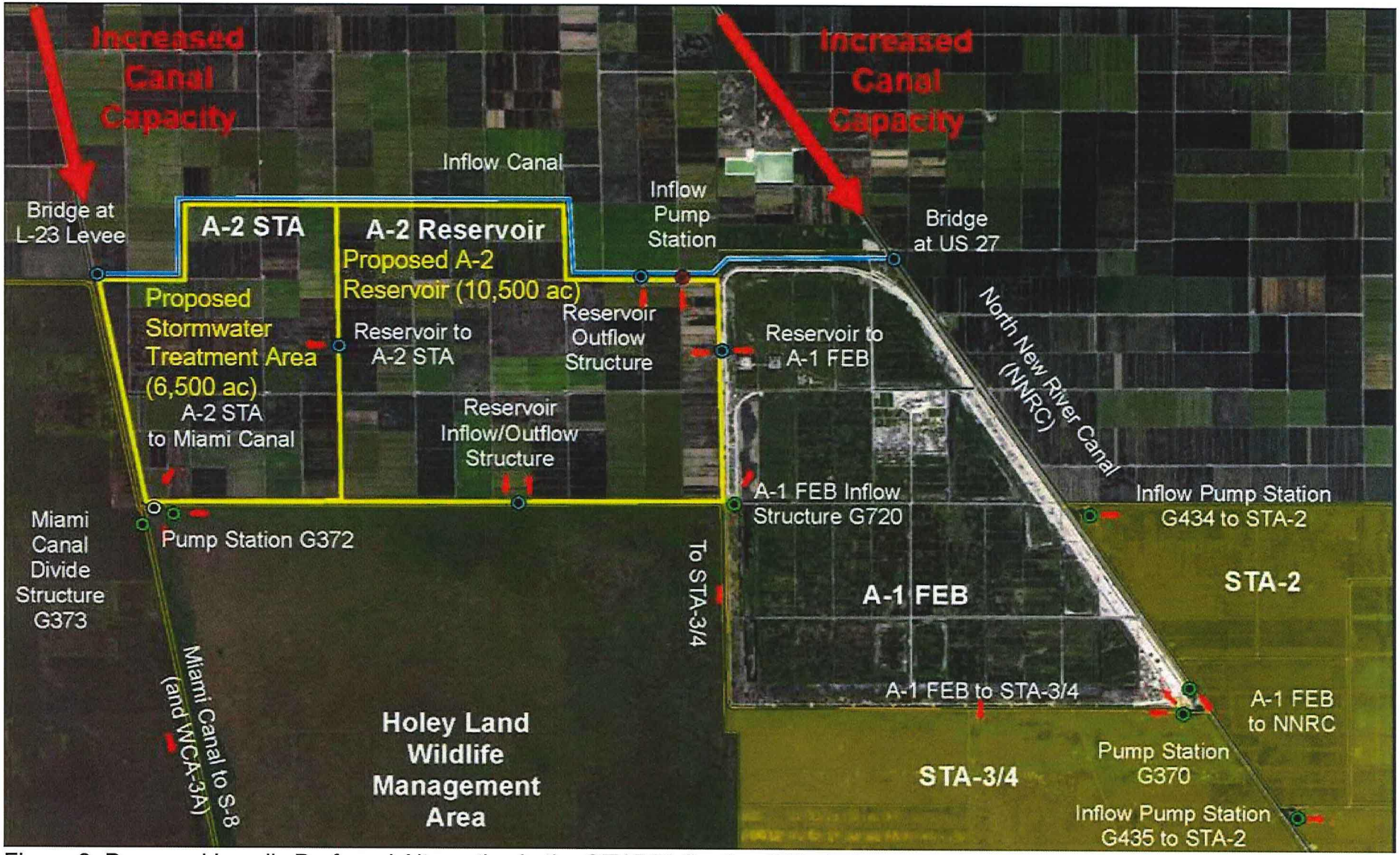

Figure 2. Proposed Locally Preferred Alternative in the SFWMD Section 203 study.

EAA Southern Reservoir Study – EIS Scoping Comment Response Matrix

Formal Letter Comment Response Matrix

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
Private Citizens		
Robert M. Norton	19 April 2018 Dear Stacie J. Auvenshine My comment on Lake Okeechobee Reservoir plan. I have always been for the reservoir plan from day one. It is what we have needed to stop, the lake discharges and send water south to the Evergaldes. We also need to enforce action to clean up all run-off water from North of Lake Okeechobee. Weith the 36 foot elevation drop to lake Okeechobee, all run-off water from north of lake goes to Lake Okeechobee. By enforcement of BMPs and the 40E-61 we can clean-up run-off waters.	Your support for the project is noted. The state is responsible for addressing water quality clean up. Their efforts are explained in the SFMWD Section 203 Report, Appendix C.1.3.12.
Agencies		
Collier Soil and Water Conservation District		
Dennis P. Vasey Chairman	April 24, 2018 Re: Lake Okeechobee Reservoir Hatched in the final days of a legislative session after months of intense lobbying and championed by the powerful Senate president, Joe Negron, the plan called from construction of a large reservoir in western Palm Beach County aiming to do two things: Stop flushing foul water from Lake Okeechobee to the coasts, and fix the flawed re-engineering of South Florida's tropical wetlands by sending water south to wilting marshes and Florida Bay. Initially, a grander version pitched by environmentalists envisioned 60,000 acres. It included a portion of sugar fields long blamed for pollution and jump-started construction on a sprawling shallow reservoir south of the lake intended to clean water before it reached Everglades's national Park – a project approved in a landmark Everglades restoration plan in 2000. The massive footprint allowed plenty of shallow storage to clean the water, a strict requirement hammered out through years of litigation that forced the state to stop polluting the Everglades. The legislative direction that landed on the drafting of South Florida Water Management District managers was a reservoir on state-owned land below the lake. That mean squeezing a deeper reservoir onto a smaller footprint, with less land for cleaning water. The legislation also sacrificed the valuable option to buy sugar land, requiring the South Florida Water Management District to relinquish the states only leveraging power to acquire land-long before anyone knows for sure whether the down-size reservoir and treatment marshes will work.	Thank you for your comment.

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	The district believed the proposed storage reservoir might not work; were just going to have another Lake Okeechobee belching into the Everglades.	

Email Comment Response Matrix

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
AGENCIES		
Alex Gillen Bullsugar Alliance agillen@bullsugar.org	Subject: *** Corps accepting comments on environmental review of State's EAA reservoir study *** I am writing to inquire as to how I get on the email list for the EAA Reservoir project evaluation updates? For email updates, can you please add the following email addresses to your distribution list: apreston@bullsugar.org alanfarago@me.com cmaroney@bullsugar.org pgirard@bullsugar.org agillen@bullsugar.org For hard copy information, can updates be sent here: 2336 SE Ocean Blvd. STE 172 Stuart, FL 34996 If there is a greater Everglades Restoration distribution list, we would also like to be included there is possible. Thanks so much and please let me know if you have any questions or if I should direct this email to anyone else.	All email addresses are added to our email distribution list regarding Everglades.
Alex Gillen Bullsugar Alliance agillen@bullsugar.org	Subject: Comments on Environmental Review of State's EAA Reservoir Study Please find attached comments on the environmental review of South Florida Water Management District's Everglades Agricultural Area (EAA) storage reservoir study for Bullsugar Alliance. Please let me know if you have any questions. **- ATTACHMENTS: -**	

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	This letter is to assist the U.S. Army Corps of Engineers (USACE) in drafting the Environmental Impact Statement (EIS) to evaluate and document potential environmental effects of the South Florida Water Management District (SFWMD) proposed plan for the EAA reservoir, in accordance with the National Environmental Policy Act (NEPA). **Project Area:** The project area for the EAA reservoir, as shown on the map below from the October 23, 2017 meeting at the SFWMD, is too narrowly drawn to adequately account for the environmental impacts of the project. [1] South Florida Water Management District, *Everglades Agricultural Area Feasibility Study*, at 10, https://www.sfwmd.gov/sites/default/files/documents/pres_2017_1023_eaa_res_scoping_meeting.pdf (accessed April 24, 2018). The impetus for passage of Senate Bill 10 (SB10) was excessive freshwater and toxic algae plaguing two communities, while a third community was starved for water. This led to the governor declaring a State of Emergency in 2016. The economic and environmental impacts of this mismanagement were felt throughout these communities along the St. Lucie River, Caloosahatchee River, and Florida Bay. Yet, the project area proposed by SFWMD does not include these surrounding communities. Choosing to not include areas affected by the project is failing to do proper analysis. By pretending beaches in Lee, Martin, Palm Beach, and St. Lucie Counties are not affected, this analysis of the environmental impacts of the discharges is insufficient. For instance, the PACR claims that E.O. 13089 Coral Reef Protection is not applicable because "coral reefs are not affected." But coral reefs exist at Bathtub Reef Beach in Martin County where discharged water closed beaches in 2016. Omitting Hutchinson Island, Bathtub Reef Beach, Stuart Beach, Fort Myers Beach, Sanibel Island, St. Lucie Inlet Preserve State Park, and the Pine Island Aquatic Preserve (to name a few) from the project area understates the benefits of this project. Failure to include these areas in the project area will harm the cost benefit calculation of the project by underestimating the benefits to these harmed areas. Fish spawning success in Florida Bay is impacted by freshwater flows from the Everglades, which will increase as result of the EAA reservoir project. Fish population recruitment in Florida Bay impacts the economic and ecological environments to at least Key West. By including Key West and Marathon in the project area, proper accounting of the human effects to the environment can be more accurately considered.	The study area or affected area is the same that was considered for the authorized CEPP project. This is outlined in the SFWMD Section 203 Report Section 1.5 of the main report and in the following sections: Modeling alternative information - Section 3, 3.1.2 plan formulation strategy, 3.2 screening section and 3.5 formulation of final array of alternatives Information on the TSP - 4.6.2 Identifying the TSP Acceptability - 4.1.2 on pg. 4-7, 4-8 Table 4-2 is the public and stakeholder acceptability. The intent of the project is to store more water in order to reduce flows to the Nothern Estuaries and provide more freshwater south to the Everglades. Those benefits are documented in the SFWMD Section 203 report in Section 4.0. The section 203 process does not allow the Corps to alter the SFWMD report to include additional areas of analysis for benefits, nor does it allow for adding additional alternatives. This Draft EIS describes the effects of the proposed project compared to the 2016 Congressionally

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	Please add all of St. Lucie, Martin, Lee, and Palm Beach Counties to the project area for the EAA reservoir project. Please also extend the project area southward to include Marathon and Key West. **Modeling the alternative:** The Battelle March 12, 2018 independent peer review of the SFWMD's Post Authorization Change Report (PACR) recommended in Final Panel Comment 2 that a much larger reservoir and stormwater treatment area needed to meet water quality standards while delivering project benefits should be evaluated. Please address this alternative as the report suggests. **Jobs Affected:** Please consider the jobs affected in Martin, Lee, Monroe, Hendry, Palm Beach, St. Lucie Counties as a result of this project. Please also see Appendix A, which notes over $4 billion in economic output by the 4 counties declared by Gov. Rick Scott in 2016 to be in a "State of Emergency" as a result of the discharges. Please include direct, indirect, and induced jobs. Please publish your findings. **Health impacts of toxic algae:** Please consider the human health impacts associated with toxic algae discharges, including those containing beta-Methylamino-L-alanine (BMAA). Please also consider the human health impacts of toxic algae in Lake Okeechobee to the communities south of the Lake that use lake water for their drinking water supply. Please study and conduct analysis of the human health impacts from eating marine animals exposed to toxic algae, as occurred last summer in Lake Okeechobee and the St. Lucie River. Please study and conduct analysis of the human health impacts from swimming in toxic algae, as occurred last summer in Lake Okeechobee and the St. Lucie River. Please address the effects of toxic algae on the commercial catfish industry in Lake Okeechobee. Please include analysis regarding what is being done to address the health concerns from eating Lake Okeechobee fish exposed to toxic algae. Please publish all of your findings from these studies. **Species:** Please consider and study the impact of this project on all state and federal threatened, endangered, and species of special concern in the updated project area, and the effects on the habitat from the discharges within the project area. Please document in the study how the habitat of the marine species in the northern estuaries will benefit from reduction of discharges. Specifically, please consider the use of the St. Lucie Estuary and Indian River Lagoon by the Smalltooth Sawfish. Please consider how discharges affect the Bigmouth Sleeper and Opossum Pipefish in the St. Lucie River. Please consider how discharges affect the worm reefs near the St. Lucie Inlet. Please publish your findings for all of these items. **Sailfish Flats:**	Authorized version of CEPP. However, this comment is documented in the record for decision-makers. Economic benefits of the project are included in the SFWMD Section 203 Report, Section 5.2.15 of the main report. Additional analysis on harmful algal bloom effects to specific human environment factors listed in your comment cannot be conducted as part of this Draft EIS under the section 203 process. However, these points are noted for record.

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	The Sailfish Flats are located in Martin County off Sailfish Point on Hutchinson Island. The Sailfish Flats are directly in the path of the discharges and should be considered in the study area. Please study the benefit to the Sailfish Flats as a result of a reduction of discharges. Please include in your analysis the economic and ecological benefit to the community as a result of a healthy Sailfish Flats. Please include what species use the Sailfish Flats for foraging and spawning and how they will benefit from a reduction of discharges. Please publish your findings. **Bathtub Reef Beach:** Bathtub Reef Beach is located in Martin County on Hutchinson Island. The proposed project area for the EAA reservoir does not include Bathtub Reef Beach in the project area for the feasibility study. This is a remarkable omission, because waves of toxic algae on Bathtub Reef Beach were a driving factor in the passage of SB10. To exclude Bathtub Reef Beach in the study area is to say that Bathtub Reef Beach will not benefit from the creation of the EAA reservoir. Please include Hutchinson Island in the study area for this project. Please consider the ecological and economic benefits to Bathtub Reef Beach from the reduction of discharges. Please publish your findings. **Conveyance**: Please model dedicated conveyance to the EAA reservoir. Please include in the analysis a scenario where the total capacity of the dedicated conveyance is equal to the combined capacity of the C-43 and C-44 canals. Please include in your analysis whether and how a third high-capacity outlet from Lake Okeechobee will affect the safety of the Herbert Hoover Dike and the communities located south of the lake, specifically addressing risk factors associated with the dike overtopping with water, as occurred with Hurricane Wilma. Please include information and analysis regarding the legal and technical requirements for dams to include a spillway. Please consider the economic value dedicated conveyance would provide to the dam safety work. Please publish your findings. **Home Values**: Please analyze the effects of toxic discharges to local government tax base as a result of the discharges in Martin, Lee, St. Lucie, and Palm Beach Counties. Please publish your findings. **Biscayne Aquifer**: Please consider the effect of the EAA reservoir project on the Biscayne Aquifer,specifically considering how the reservoir will help recharge the aquifer. Please publish your findings. **Lake Okeechobee Regulations Schedule**:	The Corps initiated consultation with the USFWS under the Endangered Species Act on May 1, 2018. A biological assessment of effects of the proposed plan on species listed under the endangered species act is included as part of appendix A entitled FWS coordination.

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	Please consider how the EAA reservoir would function with different regulation schedules. Specifically, consider a scenario where human health is the highest priority for managing Lake Okeechobee. Please publish your findings. Please study the effects to the health and sustainability of Bass and Crappie fishery when Lake Okeechobee levels are increased above 16 feet. Please publish your findings. **Agricultural jobs**: Please analyze and document the effect on agricultural jobs as a result of the EAA reservoir project. Please publish your findings. **Conclusion**: Thank you for considering these matters. We are willing and available to work with you and provide technical assistance to further this project. Please do not hesitate to contact me if we can be of further assistance.	
Michael Baldwin "Ding" Darling Wildlife Society drmikeb@comcast.net	Subject: Environmental Review of States EAA Reservoir Study the attached letter is submitted as a comment from the "Ding" Darling Wildlife Society – Friends of the J. N. "Ding" Darling National Wildlife Refuge on the subject study, This letter is in response to the Corps' call for comments on its environmental review of the South Florida Water Management District's Everglades Agricultural Area (EAA) storage reservoir study. Water quality is critical not only for the Ding Darling Wildlife Refuge, but also for all of south Florida. As highlighted by Congressman Francis Rooney, "The Lake Okeechobee Watershed and Everglades have far-ranging impact on the entire State of Florida and the country, but especially in Southeast and Southwest Florida, where 55% of all real estate in the state is affected - 2 trillion dollars of economic impact across 164 cities and 16 counties."1 The Ding Darling Wildlife Society (DDWS) recognizes the fact that there may be limited objections to the South Florida Water Management District's study as there is always more that could be done. However, we believe that the implementation of the recommendations in the study will significantly improve the water quality in South Florida and as such, we strongly support that they be implemented in as timely a manner as possible.	Your support for the project is noted.
Joseph Sullivan (FHWA)	Subject: SFWMD CERP Mod Study Hi Stacie, I do not have a comment at this time, as I have not reviewed the documents yet, but would like to ensure that I am included on future mailings (either email or paper). Thanks.	Email added to the distribution list.

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
Alan Farago, VP Conservation Friends of the Everglades	Subject: Friends of the Everglades: Comments on EIS/EAA Reservoir Scoping RE: Everglades Agricultural Area Reservoir Friends of the Everglades offers comments by our consultant, Dr. William J. Mitsch. Friends of the Everglades was founded by Marjory Stoneman Douglas in 1969. Our organization is engaged in legal matters involving Everglades restoration (Miccosukee Tribe of Indians of Florida, Friends of the Everglades, plaintiff, v. United States of America, et al. No. 04-21448-CIV, U.S. District Court South Florida). We appreciate the opportunity to comment on scoping for the EIS and look forward to providing input during the federal review process.	Please see comment responses to Dr. William J. Mitsch
William J. Mitsch, Ph.D. Consultant, Friends of the Everglades Director--Everglades Wetland Research Park, Eminent Scholar--College of Art & Sciences, and Juliet C Sproul Chair for Southwest Florida Habitat Restoration, Florida Gulf Coast University Chair, U.S. National Ramsar Committee	Pertinent Bio: My lab at FGCU, referred to as the "Everglades Wetland Research Park" has published recently and frequently about modeling, monitoring, and experimenting with water quality improvement in the sawgrass "river of grass" eastern half of the Greater Florida Everglades (Mitsch, 2016; Mitsch et al., 2015, 2018; Marios et al., 2015a,b; Yeoman et al., 2017). In addition, over the past 25 years I presented wetland modeling short courses at SFWMD and served on several SFWMD review committees, including serving as chair of a panel reviewing the Everglades Land Model (ELM) in 2006. Over the past 30 years, my lab has published many versions of models specific to wetlands and nutrient retention, particularly related to phosphorus (Mitsch et al., 1982, 1988; Mitsch and Fennessy,1991; Mitsch and Reeder, 1991; Christensen et al., 1994; Wang and Mitsch, 2000; Jørgensen et al., 2005; Zhang and Mitsch, 2005; Marois and Mitsch, 2015a). Introduction: I believe that the Florida Everglades restoration is now at a crucial crossroad that will determine its long-term success or failure so I consider it prudent to make some comments on the EAA Reservoir Plan as it is currently described. We were unable to delve into the details of hydrologic modeling performed by the SFWMD related to this project given the short time allowed for comments and lack of support for a rigorous modeling effort, but I am providing this hopefully constructive critique so that the U.S. Army Corps of Engineers and the South Florida Water Management District can fine-tune the "EAA Reservoir" plan so that it becomes a significant step forward toward completion of a sustainable Florida Everglades restoration. I first express my support for seeing an ambitious effort for eliminating decades of stalling with a serious "sending the water south" strategy, the mantra for a generation of those who understand the big picture of what the Florida Everglades restoration is all	Thank you for your comments.

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Founder and Editor-in-Chief, Ecological Engineering 1992-2017 Professor Emeritus of Environmental Science, The Ohio State University Courtesy Professor of Soil and Water Science, University of Florida Courtesy Professor, School of Geosciences, University of South Florida	about. The South Florida Water Management District claims the EAA Reservoir project will — when used in conjunction with other existing and planned projects — reduce the number of damaging discharge events from Lake Okeechobee to the St. Lucie and Caloosahatchee rivers by 63 percent and increase the flow going south by 76% by 160,000 acre-ft/year to 370,000 acre-ft/year (121 billion gallons per year) of water south to the Everglades and Florida Bay from Lake Okeechobee. But if this plan results in pollutants, particularly phosphorus and nitrogen, getting into greater Everglades (WCAs and south) or develops an unsustainable, un-ecological and/or simply polluted reservoir to manage in perpetuity, we will regret the day we said OK "just to spend the money." I am not assured from what I see written so far from SFWMD that this project is properly focused on what is important—sending clean water to the greater Florida Everglades. If ever there was a need for an ecological engineering and not just civil engineering approaches to lead the Everglades restoration, this is it. The Plan: A current plan, referred to as C240A (Smith, 2018), calls for sending Lake Okeechobee water to a "EAA Reservoir" to be constructed 30 or so miles south of Lake Okeechobee with the following design: 23-foot-deep, 10,100-acres, with the ability to store up to 240,000 acre-ft (78.2 billion gallons) of excess Lake Okeechobee water. The plan also involves completion of a previously approved 15,000–acre A-1 Flow Equalization Basin with a maximum water storage 60,000 acre-feet (20 billion gallons). The plan also includes the design and operation of 6,500 acres of shallow treatment wetlands (sometimes referred to by the SFWMD as Stormwater Treatment Areas (STAs), similar to the 57,045 acres (23,085 ha) of STAs already constructed to clean the water prior to its discharge to the Everglades to the south. Concerns: 1. My first comment concerns the false expectations by the public so that they approve expenditures of up to $2 billion. I have frequently heard "well the project is not perfect, but let's do it while the money is there." The volume of water being discharged south needs to be put in perspective; the 121 billion gallons/year of water eventually being sent south to the Everglades and Florida Bay in the EAA reservoir plan will not solve the estuarine pollution of the Gulf of Mexico and Atlantic Ocean coastlines. Figure 1 illustrates the Everglades Restoration plan that I have had in my textbooks since we published it in the Mitsch and Jørgensen (2004) ecological engineering book 14 years ago and continued to be published in the 4th and 5th editions of "Wetlands" (Mitsch and Gosselink,	The water must be 10 ppb to enter into the Everglades.

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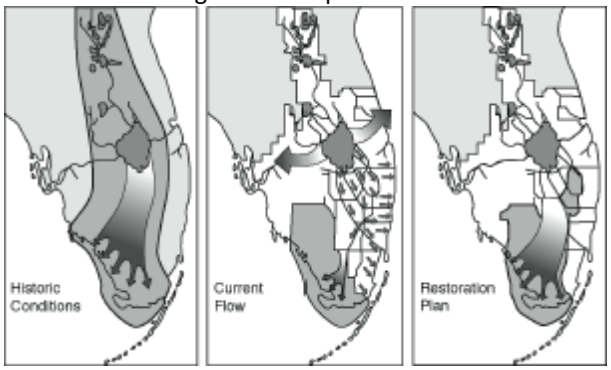
	2007, 2015). I am aware that the restoration plan shown in the 3rd panel has been changed in several more recent publications and in prominent locations including the well-known wall maps at Corkscrew Swamp Sanctuary lobby that now show significant water flowing east and west flow to the coastal estuaries, even when the restoration is complete. It is not clear that the public is aware that this subtle change in graphics represents a major change in the overall restoration goals in the past decade.  Figure 1. Three-picture summary of historic, current, and restoration water flow in the Florida Everglades as provided by the U.S. Army Corps of Engineers in the early 2000s. (from Mitsch and Jørgensen, 2004) To put 121 billion gallons of water per year in perspective, 3.1 billion cubic meters or 819 billion gallons) were discharged to the St. Lucie and Caloosahatchee rivers in the El Nino flooding year of 2016 (Table 1), 6.7 times the flow expected to go south with the EAA Reservoir plan. Even in the last 10 years (2008-2017) an average of 1.5 billion cubic meters per year or 396 billion gallons (Table 1) is 3.3 times 121 billion gallons per year of water that will be sent south according to the plan. Table 1. Freshwater discharges from Lake Okeechobee to the sea over the period 2008-2017, and annually in 2013, 2016, and 2017.	1.The Corps and SFWMD have provided extensive public involvement opportunities throughout the last decade when CERP projects have been proposed.

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Discharge from Lake Okeechobee	2008-2017	2013	2016	2017
Discharge to Caloosahatachee and Gulf of Mexico ($x10^9$ m^3)	1.3	1.6	2.2	1.7
Discharge to St. Lucie and Atlantic Ocean ($x10^9$ m^3)	0.2	0.6	0.9	0.6
TOTAL Discharge to the sea ($x10^9$ m^3)	1.5	2.2	3.1	2.3
Equivalent depth of Lake O discharged to sea (m)	0.8	1.1	1.6	1.2

Discharge data from:
USGS 02292010 CALOOSAHATCHEE CANAL DWS OF S-77 AT MOORE HAVEN FL USGS 02276877 ST. LUCIE CANAL BLW S-308

2. There is insufficient detail on water quality in the plan relative to water volume and flow. The flow south to the Everglades will increase by 76% from 210,000 acre-ft/yr (68 billion gallon/yr) to 370,000 acre-ft/yr (121 gallon/yr) according to the most recent approved version of the EAA Reservoir plan (Smith, 2018). Despite the 76% increase in flow, the project shows an increase in treatment wetlands of only 11% (6,500 acres) to designed to improve water quality directly. I estimate a minimum of at least 43,000 additional acres of treatment wetlands (STAs or passive wetlands) will be needed to treat the water flowing south. Further, we note that the estimated average concentration of phosphorus flowing out of Lake Okeechobee is 147 ppb (Goforth, 2010) while the average inflow to the current STAs in about 100 ppb (SFWMD, 2016). Due to the higher flow, it is common sense that the phosphorus concentrations reaching current and future STAs will be higher than the concentrations reaching them now and, in that case, threaten existing state and federal standards on Everglades water quality.

2.The SFWMD Section 203 Report details are located in the following locations in Annex A: Water quality - Section5, 5.2.9 Table 5.2-2, Appendix C.2.1, C.2.2, Annex F, modeling including DMSTA - Appendix A, Annex A-2 Hydrologic modeling
Also refer to Timing of Sending Treated Flows South, Figure 6-6, pg. 6-17
Implementation sequencing, figure 6-10, 6-11 on pg. 6-54

3. The new EAA reservoir will not resemble any natural feature of aquatic ecosystems in the greater Florida Everglades in ecology, morphology or hydroperiod. The hydroperiods will be wrong and exaggerated for south Florida ecology (similar to the way wetland hydroperiods were shifted in the Great Lakes with diked marsh hunt clubs and conservation areas, Mitsch et al., 2001; Mitsch and Gosselink 2015). The potential amplitude of the annual hydroperiods of up to 23 feet in the EAA reservoir is exceeded only rarely in natural or human-created ecosystems, e.g. the Amazon River (Junk et al., 1992) or Three Gorges Dam reservoir (Mitsch et al., 2008). The reservoir may become a “freak ecosystem” over time, i.e., an aquatic ecosystem dissimilar in hydrology and probably ecology to any other aquatic ecosystem in Florida.

3.The purpose of the EAA reservoir is to hold water in order to provide freshwater to the Everglades during the dry season when needed. The intent is not for the reservoir to be reverted back to the natural Evergaldes ecosystem.

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	4. Most eutrophic lakes in our experience become occasional or even permanent sources rather than sinks of nutrients—Buckeye Lake, Ohio (W.J. Mitsch, personal experience), Taihiu Lake in China (Kelderman et al., 2005), and even Lake Okeechobee (Havens and James, 2005). It is highly probable that the EAA reservoir will not be a nutrient sink in most years, an assumption that is included in this plan. Using a Vollenweider-type model (Hejzlar et al., 2006) in SFWMD's DMSTA model as proof that the EAA reservoir will always be a nutrient sink is ecologically and hydrologically inaccurate and misleading. The DMSTA model was developed to evaluate multiple STA design alternatives. Model simplicity resulted from aggregation of key variables and processes controlling phosphorus storage and cycling (Walker and Kadlec, 2011). But the DMSTA has not been calibrated for reservoirs. Also, the model can be used on a daily inflow step and the empirically derived coefficients are based on long-term annual average values. Conclusions: • The EAA Reservoir is considered the heart of this recent attempt to send water south in the Florida Everglades and is a good start of the discussion of solving water excess and scarcity problems. The Florida State Legislature and the South Florida Water Management District plan to increase the southerly flow by 63 percent and send an average of 121 billion gallons of water south to the Everglades and Florida Bay is noteworthy. • Nevertheless, there is considerable ambiguity in the plan and its model predictions about the quality of the water as it enters the greater Everglades south of the EAA Reservoir and through Miccosukee Tribal lands on its way to the Everglades National Park and Florida Bay. At a minimum, ~50,000 acres of treatment wetlands (STAs) need to be created or restored in proximity to the EAA Reservoir; 6,500 acres of shallow treatment wetlands will be insufficient to protect the Everglades. • The plan for an EAA reservoir immediately south of Lake Okeechobee needs to be re-examined. For example, purchase of farmland at a fair price coupled with conversion of that land to treatment wetlands (perhaps as many as 150,000 acres from the 700,000 acre EAA) in lieu of construction of a ~$2-billion EAA reservoir is a reasonable alternative to the reservoir for water storage and water quality and should be examined. Additionally, state-owned lands currently leased to agricultural tenants could be incorporated in any comprehensive review of alternatives. Adequate wetland creation to achieve water quality in the	4.See reponse to #2.

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	Florida Everglades is true "restoration"; creation of large difficult to manage deep reservoirs is not. If a deep reservoir in Florida's subtropical climate compounds costs and problems for existing Everglades restoration plans, Corps acceptance of this plan should be conditioned by adequate stormwater treatment areas, i.e., treatment wetlands (STA's) and flow equalization basins (FEB's) to mitigate the chances of falling short.	
Kellie Ralston Florida Fisheries Policy Director Keep Florida Fishing American Sportfishing Association	Subject: USACE EAA Reservoir EIS Scoping Comment Letter Attached, please find our comment letter in support of the EAA Reservoir. Please let me know if you have any questions. Thank you	Your support for the project is noted.
Jamie Higgins US Environmental Protection Agency (EPA)	Subject: CEPP Post Authorization Change Report EIS Scoping Comments Please find attached EPA's scoping comments for the Central Everglades Planning Project Post Authorization Change Report EIS. Please let us know if you have questions. **Background:** The EPA understands the purpose of the proposed project is to make improvements to the Central Everglades Planning Project (CEPP) components related to Flow Equalization Basins (FEBs), associated Stormwater Treatment Areas (STAs), and canal conveyance systems that will increase the storage capacity to relieve high water elevations within Lake Okeechobee. The South Florida Water Management District's (SFWMD) stated project goal is to reduce high water elevations within Lake Okeechobee that would then lead to fewer harmful discharge events to the St. Lucie Estuary and Caloosahatchee Estuary, while also increasing flows into the central Everglades1. The EPA staff have participated in numerous SFWMD public meetings, conference calls, and webinars regarding this EIS and feasibility study. The SFWMD requested the EPA and other Federal and State resource agencies provide scoping comments as they prepared the Draft EIS. On November 21, 2017, the EPA provided the SFWMD with scoping comments regarding this EIS and feasibility study. The EPA notes that the SFWMD has prepared a Draft EIS (DEIS) and feasibility study pursuant to section 203 of Water Resources Development Act (WRDA) 1986 (Section 203), as amended. In accordance with Section 203, on March 30, 2018 the SFWMD submitted the DEIS and feasibility study to the Assistant Secretary of the Army for Civil Works for review for the purpose of determining whether the study, and the process under which the study was developed, comply with Federal laws and regulations	

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	applicable to feasibility studies of water resources development projects. On April 16, 2018, the USACE released a Notice of Intent (NOI) to prepare a DEIS or a CEPP Post Authorization Change Report (CEPP PACR) for the Everglades Agricultural Area (EAA) Reservoir. Pursuant to this NOI, it is the EPA's understanding that the USACE has reinitiated scoping to collect comments from agencies and stakeholders. As of this date, the EPA has not thoroughly reviewed the SFWMD's DEIS and feasibility study and our scoping comments (listed below) reflect our current knowledge of the DEIS and feasibility study. **Water Quality Effluent Based Limit (WQBEL**): As noted in the EPA's November 21, 2017, scoping comments, the EPA continues to recommend that the USACE and SFWMD carefully consider the Total Phosphorous (TP) Water Quality Effluent Based Limit (WQBEL) when considering various alternatives for the A-2 parcel. In accordance with Sections 373.026(8)(b) and 373.1501(9), Florida Statue, the Florida Department of Environmental Protection (FDEP) prepared a Secretarial Order4, which approved the proposed project. Regarding the WQBEL, the FDEP states, "*The modeling contains various conservative assumptions and practices to provide certainty that the applicable WQBEL will be achieved by the project. Although all modeling and associated assumptions have some level of uncertainty, permitting requirements applicable to the STAs ensure the WQBEL will ultimately be achieved. In the event the WQBEL is not attained, additional actions to meet water quality requirements must be undertaken. For example, the District could convert portions of the A-1 Flow Equalization Basin to a STA*." (page 5) The EPA acknowledges and supports FDEP's commitment to attaining the WQBEL. **Restoration Strategies Regional Water Quality Plan5:** In response to an order by the United States District Court, Southern District of Florida, EPA, SFWMD and FDEP began technical discussions in 2010 to identify remedies to achieve Florida's 10 part per billion (ppb) water quality standard for TP in the Everglades Protection Area. The primary objectives were to establish the WQBEL that would ensure that discharges from the STAs do not cause or contribute to exceedances of the 10 ppb TP criterion, and to identify a suite of additional water quality projects that would contribute to reducing TP concentrations in discharges from the STAs to meet the WQBEL. Based on this collaborative effort, a suite of projects was identified that would achieve the WQBEL: the Restoration Strategies (RS) Regional Water Quality Plan. The projects are divided into three flow paths (Eastern, Central, and Western), and primarily consist of FEBs, STA expansions, and associated infrastructure and conveyance improvements. The Central Flow Path contains STA 2, STA 3/4, and the CEPP EAA A-1 Storage Reservoir, which was completed as a shallow FEB in 2015 as a requirement of RS. Each flowpath has a separate construction schedule and the Central Flowpath projects were completed in 2015. The EPA	Water quality information is located in the SFWMD Section 203 Report, Annex A in the following locations: Water quality - Section5, 5.2.9 Table 5.2-2, Appendix C.2.1, C.2.2, Annex F, modeling including DMSTA - Appendix A, Annex A-2 Hydrologic modeling Also refer to Timing of Sending Treated Flows South, Figure 6-6, pg. 6-17 Implementation sequencing, figure 6-10, 6-11 on pg. 6-54

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	is available to provide technical assistance to USACE and the SFWMD regarding the WQBEL and other water quality issues related to the proposed project. 4 Valenstein, Noah. Florida Department of Environmental Protection, OGC No. 18-0138, Final Order Approving the Central Everglades Planning Project Post-Authorization Change Report Everglades Agricultural Area Reservoir. Mar. 5, 2018. 5 South Florida Water Management District, Restoration Strategies Regional Water Quality Plan, Apr. 27, 2012. **Tribal Consultation:** As noted in our November 21, 2017, scoping comments, the EPA encouraged the SFWMD to engage in meaningful discussions with the Seminole Tribe of Florida and the Miccosukee Tribe of Indians of Florida regarding the project. Because the SFWMD is not a federal entity, we acknowledge that the SFWMD could not conduct "government-to-government consultations" with the Tribes as that term applies to federal agencies under Executive Order No. 13175, "Consultation and Coordination with Indian Tribal Governments" (Nov. 6, 2000). The EPA notes that, in a recent January 8, 2018, letter[1] to the SFWMD, the Miccosukee Tribe of Indians of Florida outlined many concerns regarding the proposed EAA Reservoir. The EPA encourages both the USACE, as the government agency charged with tribal consultation under E.O. 13175, to conduct tribal consultation as it deems appropriate, and the SFWMD to continue its outreach efforts to the Tribes in conjunction with the Project. The EPA also notes that the EPA works closely with both Tribes on Everglades matters and is committed to working with state and federal partners with regard to the Tribes' water quality and water management concerns. **Environmental Justice (EJ):** The EPA notes that the current tentatively selected plan is entirely on state lands and does not take any agricultural lands out of production. Should changes to the tentatively selected plan require the conversion of agricultural lands to a component of the project, then the EPA recommends the USACE and SFWMD evaluate impacts to low income, minority farmers, and farm workers. .	Thank you for the inforamation and assistance. **Tribal Consultation:** The Corps has initiated Government to Government Consultation with the Miccosukee Tribe of Indians of Florida, the Seminole Tribe of Florida, the Seminole Nation of Oklahoma, and the Thlopthlocco Tribal Town. **EJ:** The plan still includes the same footprint as previously reviewed.
18 Stakeholder Organizations	Subject: EAA Reservoir EIS Scoping Comments Please find the attached scoping comments from 18 stakeholder organizations on the Corps' development of an EIS for the EAA Reservoir Project. April 30, 2018 Re: Everglades Agricultural Area Reservoir	Your support for the project is noted.

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	The undersigned organizations write in support of the Army Corps' development of an Environmental Impact Statement for the South Florida Water Management District (SFWMD) Everglades Agricultural Area (EAA) Reservoir Feasibility Study. The EAA Reservoir is an integral component of the Comprehensive Everglades Restoration Plan and the hydrological benefits described in the SFWMD Feasibility Study are significant in achieving reduction of harmful discharges to the Caloosahatchee and St. Lucie estuaries and increasing freshwater flows to Everglades National Park and Florida Bay. To ensure that the hydrologic benefits of the reservoir are realized simultaneously with meeting the Water Quality Based Effluent Limits (WQBEL), it is important that the Corps of Engineers incorporate into the Reservoir planning documents the water quality assurances included in the March 2018 Florida Department of Environmental Protection Secretarial Order. We greatly appreciate your expedited review of this critical restoration project so that a Post Authorization Change Report (PACR) can be included in the 2018 Water Resources Development Act (WRDA) for Congressional authorization and the benefits of this project realized as quickly as possible. The undersigned organizations and many others have remained engaged through the rigorous schedule of public meetings and information sessions that have taken place since the initiation of this planning project in October of 2017. We thank you for the opportunity to comment and look forward to additional opportunities to provide input during the federal review process.	
Diana Umpierre Sierra Club	Subject: Sierra Club Comments for USACE on Developing the EIS for EAASR SUBJ: Comments on USACE's development of an Environmental Impact Statement (EIS) for the SFWMD's EAA storage reservoir study On behalf of the Sierra Club, we would like to provide a copy of comments and questions that we previously provided to SFWMD while they were developing their Tentatively Selected Plan (TSP) for the EAA Storage Reservoir and associated Central Everglades Planning Project Post Authorization Change Report (PACR). These are missing from the PACR, the Integrated Feasibility Study, and the Draft Environmental Impact Statement (FS/DEIS) that SFWMD submitted to Assistant Secretary of the Army for Civil Works on March 26, 2018. This information is missing and is not addressed in the PACR's Appendix C where comments and letters from other stakeholders were included and addressed. Since our input is missing, we are concerned that other stakeholder input might also be missing. * Nov 22, 2017 Letter with our written scoping comments on the EAA storage reservoir	1. The TSP provides minor beneficial effects to nearshore Florida Bay specifically an increase in annual overland flows at Transect 23. 2. The TSP delivers an average annual flow of 370,000 acre-feet of new water south to the Everglades. 3. The CERP Goal for reduction in damaging discharges from Lake Okeechobee to the Northern Estuaries is 80%. The TSP: a. provides a 40% reduction in high-flow discharge events lasting

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	* Feb 9, 2018 Letter with questions prompted after SFWMD presentation to the Governing Board on February 8, 2018 * Re-submission of February 9, 2018 letter questions and February 22 and 29 questions which remained unanswered. We look forward to reviewing and providing additional comments once the draft Environmental Impact Statement is available for public input. Dr. Mr. Albert, On behalf of the Sierra Club, we would like to submit the following comments and questions as part of the scoping of the Evergaldes Agricultural Area (EAA) Reservoir Project. **Background** The EAA Reservoir is an integral part of the Comprehensive Evergaldes Restoration Plan (CERP), which will help solve Florida's ongoing water crisis while restoring the globally unique and invaluable Everglades ecosystem. Florida's coastal waters have long been on the brink of ecological collapse. Billions of gallons of water continue to be discharged from Lake Okeechobee to the St. Lucie and Caloosahatchee estuaries, wasting valuable freshwater needed elsewhere and that is vital to Florida's environment and economy. The extreme freshwater discharges have upset the natural salinity balance in the estuaries needed for oyster, seagrasses, and other aquatic species to survive. The discharges have also carried high levels of nutrients and sediments, causing and contributing to harmful algae blooms, smothering native vegetation, and harming fish and coastal birds. The estuaries' famously clearn coastal waters have turned dark brown and green, driving away tourists, damaging local businesses, and reducing home values. Scientists have even detected harmful bacteria in some areas, making the water dangerous for contact with people, pets, and livestock. At the same time, insufficient freshwater flow to the Southern Evergaldes caused a substantial seagrass die-off in Florida Bay in 2015 that resulted in the loss of more than 50,000 acres of seagrasses in Everglades National Park. The once blue waters looked like pea soup and negatively affected recreational and commercial fishing as well as other water-related activities that bring tourists to the Florida Keys. If this situation persists and is not addressed as quickly as possible, the prediction for Florida Bay is an even deeper collapse. Increasing storage throughout the Everglades watershed is key to getting the water right on the north and souther end of the ecosystem. With storage projects west and north of Lake Okeechobee already in the planning pase, and given these ongoing emergency	longer more than 60 days in the Caloosahatchee Estuary b. Provides a 55% reduction in high-flow discharge events lasting longer more than 42 days in the St. Lucie Estuary c. Provides a 55% reduction in discharge volumes from Lake Okeechobee to the Northern estuaries with authorized projects d. Provides a 63% reduction in discharge events from Lake Okeechobee to the Northern estuaries with authorized projects e. Improves the salinity conditions in the St. Lucie Estuary by reducing the number of Lake Okeechobee events that exceed the preferred salinity envelope by 39% f. Improves the salinity conditions in the Caloosahatchee Estuary by reducing the number of Lake Okeechobee events that exceed the preferred salinity envelope by 45% 4. Early screening outcomes identified a high potential for this project to meet or exceed the CERP Goals in sending water to the central Everglades. The screening analysis compared the Pre-CERP Baseline (USACE 2005) with the CERPA scenario, the updated model scenario from the RECOVER 2005 Initial CERP Update effort (RECOVER 2005), to establish the CERP Goal for flow to the central portion of the Everglades. This analysis identified the CERP Goal flow target of approximately 300,000 ac-ft of new water on an average annual basis over the 36-year modeled simulation period (1965-2000) available from RECOVER. This

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	conditions, the Sierra Club strongly supports advancing the EAA Reservoir project to provide relief to the ecosystem as envisioned by CERP in 2000. Our comments and questions below are based on out understanding of the limited information presented thus far via public meetings, which have included substantial repeated information and were held in less than a 1-month period between October 23 and November 16, 2017. **Project Objectives, Scope and Study Area** We agree with the District's dual project objectives of reducing high-volume freshwater discharges to the northern estuaries and identifying storage, treatment, and conveyance south of Lake Okeechobee to increase freshwater flows to the Everglades and Florida Bay. Working toward these goals contemporaneously will lead to a more holistic solution that benefits the entire Greater Everglades, versus segmenting into smaller regions and failing to consider system-wide impacts. That said, it must be recognized in the project planning process and in the weights assigned to project evaluation criteria and benefits, that SB 10 was introduced and passed in recognition that high-volume freshwater discharges to the St. Lucie and Caloosahatchee estuaries are an emergency and a disaster that must be resolved. Therefore, project alternatives should be weighted accordingly to ensure reduction of these high-volume discharges as much as possible. To achieve this goal, the planning process must include identifying adequate land acreage for stormwater treatment to ensure the maximum possible reduction of discharges. We urge the District to expand the project study area to include all areas that are adversely affected by high-volume lake discharges as well as all areas that will benefit from this project, or clarify if these are already included. The study area for the EAA Reservoir Project, as outlined by the District in its October 23, 2017 meeting, does not appear to include most of areas that are known to be adversely affected by high-volume lake discharges in Martin and St. Lucie Counties, including Hutchinson Island (slide 10 of meeting presentation). A similar omission was noted along the Caloosahatchee and its estuary. The District should be consistent with the study area identified for the Central Everglades Planning Project (CEPP) to ensure that the entire range of the ecosystem from Lake Okeechobee to Florida Bay, is included in the scope of work and project benefits analysis. https://www.sfwmd.gov/sites/default/files/documents/pres_2017_1023_eaa_res_scoping_meeting.pdf It is also critical to include the economic and ecologic impacts of high-volume Lake Okeechobee discharges to the northern estuaries. Ignoring these would prejudice the	CERP Goal flow target, based on a 36-year period of record, became the updated target for continued plan formulation work. The TSP approaches the CERP Goal based on the 36-year period of record. 5. The CERP Goal for reduction in damaging discharges to the Northern Estuaries is 80%. The performance measure for the Northern Estuaries is a reduction in the number of high flow events. 6. The number of high flow events reduced by the FWO (CEPP) and the CEPP PACR and the % difference in the number of those events the CEPP PACR provides over the FWO (CEPP) can be found in Table 6-4 of the report. 7. The operational flexibility used in C240A is implemented by dividing the reservoir into two operational zones. These zones are the bottom one-third of the storage volume and the upper two-thirds of the storage volume. The bottom one-third of the reservoir storage volume only releases water to the environment (downstream Everglades). When the reservoir is in the upper two-thirds of the storage volume, releases are made from the reservoir to both the environment (downstream Everglades) and to maintain canal elevations in the Miami and North New River basins of the Everglades Agricultural Area. 8. Please submit a formal public records request to obtain this information. 9. The SFWMD held coordination meetings with the Miccosukee Tribe of Indians of Flor-

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	evaluation and decisions against the estuaries by underestimating benefits to the northern estuaries and come up with deep reservoir that will likely be deemed to have insufficient benefits to outweigh the costs. We have serious concerns over the limited scope of calculating ecosystem benefits as the project advances. At the October 31, 2017 meeting, staff shared that while they embrace increasing southern flows to the Greater Everglades as a project objective, time constraints may prevent staff from fully analyzing flows to Florida Bay and Everglades National Park. Leaving these ecosystem benefits out of calculated benefits would be a disservice to the project, the Everglades, and the Florida Keys. The District adopted CEPP as its guiding principle in developing the modeling for the EAA Storage Reservoir project, which seems appropriate as the EAA Reservoir is intended to be authorized as a Post Authorization Change Report to CEPP. However, in order to stay consisten with CEPP, reservoir planning should incorporate and adopt the CEPP purpose and need, which is: "to improve the quanitity, quality, timing, and distribution of water flows to the Northern Estuaries, central Evergaldes (Water Conservation Area 3 [WCA 3] and Evergaldes National Park [ENP], and Florida Bay while increasing the water supply for municipal and agricultural users." (CEPP PIR, pg. ES-1). As such, we strongly urge the District to ensure that ecological benefits to Everglades National Park and Florida Bay are included in ongoing EAA Reservoir analysis. **Process and NEPA Compliance** Among the constraints presented at public meetings is the need for compliance with the National Environmental Policy Act (NEPA). We agree that compliance with all requirements of NEPA, as well as other applicable federal laws, is critical for this process. Section 203 of the Water Resources Development Act (WRDA) of 1986, under which this project is being developed, requires the Secretary of the Army, prior to recommending the project for approval, to determine if the study, and the process under which the study was developed, comply with all Federal laws and regulation applicable to feasibility studies of water resources development projects. To accomplish this objective, we urge the District to work in close partnership and consultation with the US Army Corps of Engineers to identify, outline, and make publicly available all federal compliance requirements to ensure that they are met in a timely manner. We sure the district to provide meaningful and accessible NEPA-compliant public participation to those that stand to benefit the most, as well as be impacted, by this project. While it has been appropriate to schedule some of these meetings in West Palm Beach and Clewiston, the District must also provide just and equitable public participation opportunities within other parts of the project study area, in particular Miami-Dade/ Monroe region which faces longer traffic-congested commutes. Since one of the	ida and the Seminole Tribe of Florida to provide updates on the project. Formal Government to Government consultation must be initiated by the lead Federal Agency and will occur during the USACE review of the CEPP PACR submitted under Section 203. 10. A) The Governing Board provided concurrence on submitting the CEPP PACR to the ASA(CW) by March 30, 2018. The GB was provided a draft copy of the CEPP PACR prior to the March 8th meeting. The final CEPP PACR was posted to the EAA Reservoir website on March 26, 2018. B) The draft report underwent an Agency Technical Review (ATR) and an Independent External Peer Review between February 9, 2018 and March 27, 2018. 11. Deep Injection Wells were not included as part of the CEPP or CEPP PACR. Additional questions submitted on February 26, 2018 ➢ The Governing Board provided concurrence on submitting the CEPP PACR to the ASA(CW) on March 30, 2018. The GB was provided a copy of the draft report prior to the March 8, 2018 meeting. ➢ The agencies and entities invited to participate in the ATR included: SFWMD, FDEP, USACE, USEPA, FDOT, NOAA, USFWS, FWC, USNPS, USDA, Martin County, Palm Beach County, Broward County, Miami-Dade County, Lee County, Hendry County, Belle Glade, and Clewiston. The ATR began February 9, 2018 and comments were due by February 23, 2018.

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	objectives of this project is to benefit the southernmost region of the Everglades ecosystem, residents and other stakeholders in that area should be given equitable opportunity for public engagement. That kind of engagement is not possible via web-casted meetings or via the structure of District governing board meetings. We ask for the District to provide information on how the planning process is identifying and addressing environmental justice concerns per NEPA requirements and guidance. **Priorities and Assurances** As EAA Reservoir planning advances, Sierra Club wants to ensure that the project provides maximum benefits throughout the Everglades ecosystem with particular emphasis on the following issues: **Water Quality** Meeting state and federal water quality standards is paramount for this and all other CERP projects. The District must make public the results of District modeling so that stakeholders are able to analyze and understand how the project configuration alternatives will aximize storage and conveyance south while meeting water quality standards to ensure that clean water is delivered to the Southern Everglades and Florida Bay. **Water for the Natural System** Per legislative guidelines set forth in SB10, and in compliance with CERP goals, we understand the reservoir will achieve at least 240,000 acre feet of water storage. It is paramount that this amount of water is the minimum amount dedicated for the natural system. This volume of water, and more, is needed for Everglades National Park and Florida Bay. Accordingly, alternatives that provide greater quantities of water storage with the necessary water quality treatment should also be evaluated. **Maintain Progress** Both state and federal agencies have committed to keeping the Central Everglades Project on track, particularly PPA South components that will bring direct benefits to Everglades National Park. Maintaining forward momentum on CEP, additional bridging of Tamiami Trail, construction completion and operation of Mod Waters, C-111 South Dade, and C-111 Spreader Canal, are all critical to achieve the ecosystem benefits envisioned by the Florida Legislature in SB10. **Assessment of Needed Land** As alternative development and modeling move forward, the critically important issue of the acreage required to achieve all project goals needs to be resolved. We ask the District to not limit its evaluation of alternatives to lands currently in state ownership, but instead to focus its evaluation on alternatives that provide the greatest environmental benefits and to move quickly to identify how much additional land will be needed to develop cost	➢ All the modeling output files were posted on the EAA Reservoir website. The Draft EIS and SFWMD Section 203 Report should address all other comments and questions, however, if they do not, please contact us at EAAReservoir@usace.army.mil or at EAAreservoir@sfwmd.gov

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	effective project alternatives that achieve the storage, conveyance and water quality goals outlined by the Florida Legislature and CERP. We ask the District to run modeling for the EAA Reservoir that takes into account ALL state-owned land within the EAA that may be used for land swaps, as well as additional lands that may need to be purchased from willing sellers to meet all project objectives in a cost-effective manner. Based on the initial modeling provided by the District, we believe that the District has failed to include enough land to construct a reservoir that would provide meaningful benefits to the estuaries as well as provide meaningful conveyance and treatment of water through the EAA and into the Everglades. Instead, the District has proposed to only model reservoir alternatives on the existing footprints of parcels A-1, A-2 and lands just west of A-2. As a result, the proposed reservoir alternatives are much deeper than originally envisioned by CERP, provide less effective STAs, are likely cost-prohibitive, and offer less ecological benefits. **Conveyance Capacity** The EAA Reservoir Project requires conveyance improvements from Lake Okeechobee to the site of the reservoir. To maximize effectiveness and benefits, we recommend the District evaluate cost-effective alternatives that increase the amount of freshwater that can be treated and sent south. This should include alternatives that not only smooth existing canal profiles, but also expand them beyond thir current footsteps. A common excuse for not sending more Lake Okeechobee water south is insufficient outlet capacity and canal conceyance capacity. To address these limitations, the following features should be evaluated in order to allow for greater capacity and maximize the benefits of the EAA Reservoir project: - New outlet(s) from Lake Okeechobee to increase the outlet capacity to thr south, which would also help reduce the risk of Herbert Hoover Dike (HHD) failure. - New canal(s) to send Lake Okeechobee water to the EAA reservoir, including during periods of high water in the EAA. - Hydraulic connection to the western basin, the C-139 Basin in Hendry County, since STA-5/6 often dries out and has excess water treatment capacity, and the west side of WCA-3A often needs more water. **Reservoir Water Depth** We question the cost feasibility, safety and ecological benefits of constructing the deeper reservoir options proposed by the District. One of the options calls for a reservoir that would hold at least 24 feet of water, an amount that is significantly higher than ever envisioned by CERP.	

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	The reservoir dimensions proposed would need very high and wide berms. The design of the reservoir must be cost-effective for federal approval and configurations deeper than 12 feet might not be efficient enough to qualify. We ask the District to take advantage of the work that led to the 2006 Revised Draft Integrated Project Implementation Report (PIR) and Environmental Impact Statement (EIS) for the Everglades Agricultural Area (EAA) Storage Reservoirs project, which had recommended a 12-ft reservoir providing 360,000 ac-ft of water storage. http://141.232.10.32/pm/projects/proj_08_eaa_phase_1.aspx **Presentation of Results for Wetter Years** We ask the District to be more forthcoming and clearly present modeling results for wetter years, which are the years when high-volume discharges to northern estuaries are more likely. Instead, as we understand it, the data presented at public meetings includes graphs with only average monthly flows within the model period of record, when the project might send 300,000 acre-feet per year to the south, mainly during dry season. Evaluating project alternatives based on average conditions will underestimate project benefits. **Other Comments and Questions** We ask for clarification on the specific uses of land outside of effective acreage for storage and treatment. The District should not terminate the US Sugar Option Agreement mentioned in SB 10 until all lands needed for this project are acquired. Has soil subsidence issues within the EAA been factored into project alternatives? We ask for clarification on how applicable federal and state water quality standards were factored into the DMSTA modeling to determine compliance with the strictest applicable standards. The readme.txt file provided by the District with the DMSTA screening results dated November 7, 2017 states the evaluation was performed to achieve 13 ppb or less, of presumably phosphorus. Why 13 ppb and not 10 ppb? The District should put on hold the bidding and sale of the larger tracts on the District's land surplus database in order to maximize opportunities for willing land owners to swap lands that could be used for the EAA Reservoir project. When the District conducted its comprehensive land assessment in 2013, the analysis, and hence its recommendations, did not include opportunities to use some of those District lands for purposes of land swaps to benefit the future EAA reservoir project envisioned by CERP. **Submitted Feb 9, 2018 – No response received** The SFWMD presentation to the Governing Board on February 8, 2018 has prompted a number of questions for which we would greatly appreciate answers, preferably in writing/ email. Our full understanding of the District's position depends on receiving	

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	responses to these and perhaps subsequent questions. For now, the questions are the following: 1. What was meant by the statement that the Tentative Selected Plan (TSP) delivers only "near-shore benefits to Florida Bay"? Can you be more specific on where within the Florida Bay will these benefits be delivered and what they will be? 2. A presentation slide stated the TSP delivers ~ 370 kac-ft of new water flows (average annual), but the SFWMD press release says ~300 kac-ft. What is the actual approximate number based on the model outputs? Please specify the graphs/charts when responding. 3. What was meant by the statement that the TSP "approaches" CERP goals for reducing damaging discharges; what exactly does "approaches" mean quantitatively? 4. Will the TSP deliver the CERP goal for clean water conveyed south to Everglades National Park and Florida Bay? What is that CERP goal and where it is documented? We made a similar request on or about December 8, 2017 and received a response from the District that there were no responsive records. 5. What are the CERP goals for the 3 performance measures related to discharges to the northern estuaries mentioned in the presentation? a. % reduction of high-discharge events lasting more than 60 days b. % reduction of discharge volumes c. % reduction of Lake O events that exceed preferred salinity 6. For the percentages related to reducing damaging discharges, how much of those percentages are benefits from CEP vs from CEP+EAA Storage Reservoir? What is the percentage of reductions above what CEP was already scheduled to achieve? 7. C240A was categorized as "multi-purpose" to add extra benefits for the same cost. What was meant by "a multi-purpose reservoir"? Is water supply for agriculture included in this TSP? If yes, how much? In the "Next Steps" slide, can you elaborate on what was meant by "identify water protected for the natural system"? 8. C240A was categorized as "multi-purpose" to add extra benefits for the same cost. What was meant by "a multi-purpose reservoir"? Is water supply for agriculture included in this TSP? If yes, how much? In the "Next Steps" slide, can you elaborate on what was meant by "identify water protected for the natural system"?	

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	9. How is the District communicating with the Miccosukee Tribe and the Seminole Tribe in regards to this specific project, the EAA storage reservoir? 10. Regarding reports, final reports and comment periods: a. What will the Governing Board be voting upon on March 8, 2018? Will the Governing Board have seen something other than what was presented on Feb. 8 before that vote? If so, when will public see what the Governing Board will vote upon? b. SFWMD staff stated that the "draft" plan will be shared with government agencies and entities (fed/state/local). What are the opportunities for these agencies to respond to/comment on the draft report/plan? What are the opportunities for other stakeholders and the general public to respond to/comment on the report? I. Did the failure to produce and/or make public a draft report on January 30 impact any comment period? II. Upon which date does (or did) the state agency review begin? What is the comment period for stakeholders and the general public? III. Upon which date will the NEPA comment period begin? **11.** Has the SFWMD rejected the use of Deep Injection Wells as part of its plan to reduce Lake Okeechobee discharges to the northern estuaries? If not, what are your plans to use deep injection wells? **Submitted Feb 22, 2018 – No response received** On Nov 22, 2017, by a deadline provided by SFWMD for written scoping comments for the EAA storage reservoir, Sierra Club submitted comments via email. Attached/ Below is the email and letter. I am re-forwarding this information because the District has not yet acknowledged receipt. We want to make sure that our comment letter was received and it will be included in the draft CEPP PACR/ FS/ EIS that agencies will be reviewing, including District responses to our questions. We are concerned that our letter has not been taken into account. This is because on December 8, 2017, we submitted a public records request that asked for "copies of all stakeholder public comments that the SFWMD has received from May 1, 2017 to December 8, 2017, including electronic mail, in-person submissions, and regular mail, regarding the proposed EAA Reservoir pursuant to Chapter 2017-10 of Laws of FL (SB10).". What we received seemed limited and it did NOT include our own letter submitted to the District on Nov 22. Hopefully, our letter was the only public comment omitted from our request.	

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	PLEASE, CAN YOU CONFIRM THAT OUR LETTER HAS BEEN INCLUDED IN THE DRAFT CEPP PACR/ FS & EIS THAT WILL BE SENT TO THE GOVT AGENCY TECHNICAL REVIEW THAT WILL BE CONDUCTED? **Submitted Feb 26, 2018 – No response received** In addition to the attached questions sent on Feb 9, we have the following additional questions: >> It was mentioned that District staff will seek GB authorization to submit the Post Authorization Change Report (PACR) to ASA. What specificically will the GB be "authorizing" in their March GB mtg? Will you be sharing with GB members a draft copy of the PACR report, including its appendices/ annexes before their March mtg? If no, what will you be providing so they make an informed decision outside of information on Powerpoint slides? >> It was mentioned that District staff will seek GB authorization to submit the Post Authorization Change Report (PACR) to ASA. What specificically will the GB be "authorizing" in their March GB mtg? Will you be sharing with GB members a draft copy of the PACR report, including its appendices/ annexes before their March mtg? If no, what will you be providing so they make an informed decision outside of information on Powerpoint slides? >> Are the model run output files used to calculate the quantitative benefits of the proposed C240 alternative that were presented at the NAS committee meeting last week on your FTP public site? I looked but only saw the files from an earlier run, posted on Jan 30, 2018. Among others, I'm trying to ascertain if these are model run files that provide the backup data for the estimated increase of flows of approximately 370,000 ac-ft (average annual).	
W. Ray Scott Florida Department of Agriculture and Consumer Services	Subject: EAA Storage Reservoir PACR Scoping Comments May 1, 2018 The Florida Department of Agriculture and Consumer Services (FDACS) appreciates the opportunity to provide comments on the Environmental Impact Statement (EIS) the United States Corps of Engineers (USACE) is preparing in accordance with the National Environmental Policy Act (NEPA) on the South Floruda Water Management (SWFMD) Section 203 Tentatively Selected Plan (TSP) for a Post Authorization Change Report (PACR) to modify the Central Evergaldes Planning Project (CEPP) eatures specific to New Water Project Partnership Agreement (PPA). We are submitting the following comments for consideration.	Thank you for your recommendations.

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	Our review focused on aspects of the SFWMD CEPP New Water PPA PACR which may impact private agricultural lands and agricultural operations. The comments provided are specific to the topics addressed below and do not constitue a review of the entire PACR and its supporting appendices. **1.Water Supply**. We are pleased to see the significant reduction in water shortage cutbacks shown in the PACR through use of the EAA reservoir to meet irrigation needs in the service area. The Corps needs to be explicit in making this operational requirement a formal part of the operation manual section associated with the reservoir. **2.Flood Protection**. Agricultural flood protection is another major concern for FDACS. Based on a quick review of the model output readily available, it appears that the current level of service will be maintained. The EAA reservoir project in the 1999 plan approved by Congress was one of the only two projects that included the enhancement of flood protection as a a projecr purpose. The conveyance enahncements in this plan coupled with the new inflow pump station for the reservoir would allow some enhancement to be achieved through purely operational means and it would seem this should be part of the analysis. The ability to reduce peak stage in both the Miami and North New River Canals could greatly reduce the need for flood control pumping at S-2 and S-3 while providing improved flood protection for the farms and cities near the lake. **3.Schedule**. The schedule shown in the PACR needs to coney a realistic time frame in keeping with the constrained schedule provided in the CEPP report and the actual federal funds that have been made for Comprehensive Everglades Restoration Plan (CERP) projects since. **4.Project Dependencies**. The project dependencies and sequencing of CEPP and non-CEPP projects is a major concern for FDACS since the success of all projects without negative impacts to both developed and undeveloped lands relies on proper sequencing to address water quality, construction prerequisites, operational options, and seepage control. Based on our review, it is not clear to us that the carefully thought out sequencing included in CEPP has been followed. **5.Operational Changed Availible Under Excisting CERP.** Several areas show improved environmental performance that seems to be realted to operational changed that are not dependent on changed to the size of the A-2 reservoir. It specifically mentions changed to the upper bands of the Lake Okeechobee schedule and modifications to south Dade operations to achieve more benefits for Florida Bay. These changes, and potentially others, that are not dependent of the additional storage in A-2 should be included in the EIS analysos so it is clear that all the outcomes shown in the PACR are not related solely to the additional storage being proposed and are available under the existing CERp authorization.	

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PRIVATE CITIZENS		
Shaun G. MacKenzie, P.E.	Subject: CERP Comment I support the proposed project.	Your support for the project is noted.
Howard Snoweisss	Subject: Curtailing discharges from Lake Okeechobee I am writing to express my support of the Army Corps purchasing the land that is required in order to move the water south. As a resident of Stuart, who lives along the St. Lucie inlet, my family and I can attest to the importance of this project. Please move ahead with the land purchase and encourage congress to approve the plan.	Your support for the project is noted.
David Preston	Subject: EAA Reservoir Comments I am in full support of the EAA Reservoir project as described in CERP. Water storage south of Lake O is arguably the heart of CERP, and without it we are looking at a +/-$20b Everglades Restoration plan that doesn't accomplish its goal and sacrifices the quality of life, environment, economies, and public health of our coastal communities. We cannot afford to kick the can down the road another day on this critical project and its much needed benefits to both the parched Everglades and coastal communities drowning in billions of gallons of polluted fresh water from Lake O on nearly an annual basis. The drinking water supply for 8 million FL residents is also at risk. I urge the ACOE and SFWMD to continue forward with the project, but am very concerned that the footprint was artificially constrained to appease the sugar industry, and that the benefits described by the SFWMD will not be realized. If these benefits are not realized, our taxpayer money has clearly not been well spent. Please leave no stone unturned in maximizing this once in a lifetime opportunity, and ensure that the benefits as described in the SFWMD's proposal are ENSURED. Thank you.	Your support for the project is noted.
Micheal Conner	Subject: EAA Reservoir Effectiveness I feel that the project as is will not provide the needed relief from Lake Okeechobee discharges to either the St. Lucie River or the Caloosahatchee River. A 50 to 60 percent reduction is not going to spare these failing estuaries. I live in Stuart and the damage wrought by the past three or four discharge events have killed too much grass and marine organisms, and the public health threat is unacceptable. The amount of water that the EAA project will send south to Florida Bay is inadequate as well. Specifically, the project footprint does not allow for enough water cleansing. A 24 foot deep reservoir is not what we envisioned. The A2 and A1 land will not get this job	Benefits of the recommend plan are discussed in section 6.0 of the SFWMD Section 203 main report. Water quality was a planning constraint in the SFWMD study and was analyzed and reported in the SFWMD Section 203 Report, Annex A in the following locations: Water quality - Section5, 5.2.9 Table 5.2-2, Appendix C.2.1, C.2.2, Annex F, modeling including DMSTA - Appendix A, Annex A-2 Hydrologic modeling Also refer to Timing of Sending Treated Flows South, Figure 6-6, pg. 6-17

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	done. The SFWMD did not put enough effort into acquiring land, as was directed by Senate Bill 10. As I understand it, during dry times, the agricultural industry will be granted the right to tap the EAA reservoir for irrigation. That is ludicrous. The sugar industry fought against this project tooth and nail. They should not be given a drop of that water. I am disappointed that we must wait 8 or more years for something that won't do the job.	Implementation sequencing, figure 6-10, 6-11 on pg. 6-54. Water supply for existing legal users was stated as another purpose of this study in the executive summary of the SFWMD report.
Cindy McDonough	Subject: EAA Reservoir I am sending you my comments on the proposed EAA reservoir for Lake Okeechobee, Florida. I am very concerned about 2 major problems with the proposed reservoir. First, it is way too small to substantially reduce toxic water flowing to the Gulf of Mexico or the Atlantic. No modeling appears to have been done to see if it will even work! Reducing toxic flow by barely half is simply not enough to help the estuaries and the everglades to recover. The toxicity of these flows gets worse every year and this project hardly changes this. Second, the proposed timetable is outrageously and inexplicably slow. We built the Hoover Dam in only 5 years! There will be nothing left to save given this protracted schedule!! I hope the Army Corp of Engineers looks very thoroughly at these issues and requires a larger reservoir that will cut toxic flows more substantially-by 75% at least!	As part of the Section 203 process, the Corps cannot at this point add additional analysis or alternatives to the report. The Corps is evaluating the section 203 report to ensure it has addressed applicable federal laws required for water resource projects, as well as the feasibility of the report. The study area or affected area is the same that was considered for the authorized CEPP project. This is outlined in the SFWMD Section 203 Report Section 1.5 of the main report. Your concern about the projects lengthy implementation time frame is noted for the record.
Robert Gibbons	Subject: Enlarge Reservoir We need to totally eliminate discharges from Lake O into the St. Lucie and Loxahatchee estuaries. Thus, the Reservoir and wetland filters need to be much larger than current proposal. Use state-owned land even if that requires cancelling agricultural leases and/or revive eminent domain. There are far more businesses, livelihoods, families and economics negatively impacted from the discharges than there are farmers & agri-workers in the EAA. Those in the EAA impacted by expanded reservoir should be assisted in relocation & job training.	As part of the Section 203 process, the Corps cannot at this point add additional analysis or alternatives to the report, as is suggested in your comment regarding assistance to relocating and job training of displaced agricultural workers from the EAA.

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
Robert Gibbons	Subject: Reservoir should be at least TWICE as large as & deeper than currently proposed. We need the discharges stopped 100%, except for emergencies after hurricanes. There are many more businesses and livelihoods at risk on both coasts than are employed in the Everglades Agri-Area. I recommend relocating farming families who may be impacted and assisting them with new job training, etc.	Please see response to Mr. Robert Gibbon's first comment.
Scott Rexroat Treble Hook	Subject: Everglades Agricultural Area Best I can explain…. Welcome to Florida! Watch out for deadly sharks, snakes, and Gators. Know worries! Most of the Florida Black Bears, and most all of the Panthers have been forever lost to uncontrolled Devil-lopers and greased poly-contritions. And that's just the tip of the wastewater treatment pond they call the 4th largest lake in the USA, LAKE OCHEECHOBEE!	Thank you for your comment
Shirley Harris	Subject: Florida Dike I think you should NEVER have built the dike in the first place. It has caused problems for years and now people live all around Lake Okeechobee. You have created a monster problem and now want money to fix it. You should take the funds to fix your problems out of your budget.	Thank you for your comment.
Mike D. Brown	Subject: Lake O Reservoir I want you to stop sending Lake O waters into the IRL and into the Gulf and never send it there again. I want you to send lake O water through marshes to clean contaminants out of the water and down into the Everglades. I want you to begin doing this as quickly as possible. Thank you.	The Corps and SFWMD are working towards reducing discharges to the estuaries and sending water south to the Everglades through the ongoing CERP projects. The plan proposed by the SFWMD section 203 study entitled if approved by the Corps would be recommended as a project for Congress to consider authorizing a change to the Central Everglades Planning Project (one such grouping of CERP projects)
John Lumley	Subject: Lake Okeechobee Water The real solution is Emminent Domain by the state and open a corridor for Lake O water to head to Florida bay as it did in the past.	Thank you for your invitation. The Corps and SFWMD are working within their means and applicable laws to achieve restoration to the Everglades.

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	The sugar and agricultural companies have blocked the natural flow to Florida Bay from Lake O. I invite u to come and fly with me and look at the problem from the air. Free. I have a flight school and fly over the area constantly. The Corps of Engineers has a history of BAD Plans including the Kissimmee River debacle of years past. Open up a path to Florida Bay as it is a logical solution. I imagine Palm Beach Commissioners or other political hacks own the land u want to put the reservoir on! Lots of MONEY to be made from selling the fill dug out for the reservoir as well. More of the same. DO IT RIGHT THIS TIME. Restore the water flow to Florida bay.	
John Lumley	Subject: Reservoir Planning Let's do the math. How many cubic feet of dirt will be dug out of the 10,100 acre by 23 feet deep? Are you going to sell the dirt to pay for the machinery and labor to dig this big hole? The past price for a situation like this is fifty cents .50 cents per yard paid to the land owner and the excavation company comes, digs, takes the dirt and pays the owner. Check with Clyde Dawson at Indiantown, FL as he has done this with the State for new highway construction fill. However, the real solution is to let the water flow South to the Florida Bay the way Nature made it. Open a channel South of the lake to allow water to flow South. It appears that the Sugar Companies have tremendous political sway in Washington due to their large donations and Lobbyists. Big sugar, Big money= Everglades and Mother Nature suffers. The Big Sugar is paying for prime time ads regarding their NON pollution of the water which is hard to believe with the crop spraying and chemicals applied as fertilizers, etc. I fly for a living and have to deal with the HUGE clouds of smoke while they burn the sugar cane and other growing lands. You have to see to believe. Big sugar blames the property owners that are in Orlando and along the Kissimmee River for the pollution they are spewing off their farmland. Somebody needs to fight for the Everglades and restore the natural flow of water to Florida Bay.	The Corps and SFWMD are working within their means and applicable laws to achieve restoration to the Everglades.
Jay Defrank	Subject: Request for public input on EAA Reservoir Plan This email is in response to the Army Corps' request for public input. We live on Hutchinson Island in Stuart. We know first hand the damages discharges from Lake	Your support for the project is noted.

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	Okeechobee do to our waterways, our overall environment, our economy and our quality of life. It is crucial to those of us who live along St Lucie Inlet and the Indian River Lagoon that the EAA reservoir plan delivers what it promises: 370,000 acre-feet of clean water sent south to Florida Bay, and not discharged into our rivers. Thank you.	
Patricia Noonan	Subject: Reservoir Plan Even though it is not enough to clean up the water that surrounds our homes here, I want to voice my support for the reservoir plan. We still will get discharges into the St. Lucie River, the oysters will still die and have to be reintroduced regularly, and we still will get warnings to stay out of the water in certain areas. But it is a start and something that we can build upon in the future.	Your support for the project is noted.
Richard Persson	Subject: Reservoir Important consideration should be given to the sportsmen in the reservoir. A littoral area should be included in the plans in order for fish to spawn, and a boat ramp should be included in any plans. Any reservoir can serve a dual purpose such as water storage, and a good sustainable fishery can be maintained. This will also bring a boost to the economy in the area.	As part of the Section 203 process, the Corps cannot at this point add additional analysis or alternatives to the SFWMD report, as is suggested by your comment to add littoral areas to reservoir. Recreational opportunities and public access were considered in the development of the project and are discussed in Section 6.1.5 of the SFWMD Section 203 report. A boat ramp is included in the reservoir as part of the recreation plan for public access. However, littoral areas are not feasible to implement in reservoirs for a few reasons; (1) dam safety concerns, (2) impacts to littoral zones by fluctuations in water depths, and (3) resulting impacts to wildlife utilizing the littoral areas (such has nesting birds) as a result of the fluctuating water levels. A number of recreational activities will be available to the public in the proposed stormwater treatment area such as fishing, hunting, wildlife viewing, hiking, etc.
David Kapell	Subject: SFWMD proposal for EAA storage reservoir I support this plan, as opposed to doing nothing at all, which is what has been happening for far too long. However, I do not believe the project is good enough. It is just better than nothing. The SFWMD is in the pocket of the sugar industry, which does not want any reduction in their farming. The SGWMD asserts that they could not build a larger reservoir, because	Your support for the project is noted.

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	nobody was willing to see any land. This is a specious argument, since the sugar industry uses public land in addition to private land. In order to build a larger reservoir, it is only necessary is to restrict their use of public land for farming. We would not have to purchase any land. The SFWMD is misleading the public for the benefit of their friends in the sugar industry.	
Carmen Guido	Subject: Reservoir Are we really solving the problem or supporting the bribes our politicians are receiving. Seems like 10 years ago I voted to correct this problem but all I read about is the money given by big sugar to certain politicians.	The Corps and the SFWMD are working within our means and applicable laws to restore freshwater flows to the Everglades and reduce flows to the northern estuaries.
Andrew C. 'Jack' Diehls lll	Subject: Lake O Reservoir This is a multi faceted problem, but the reservoir is at least one step in the right direction. I hope it can be done, along with so many other things need to save this amazing little corner of God's creation with it's fragile waterways.	Your support for the project is noted.
William Lain	Subject: Reservoir I view the proposed reservoir as a very positive step in the right direction. It is not a complete perfect solution but it appears to be a substantial part of one. History shows it may not be best to effect what we think is a perfect solution all at once anyway. We once thought draining Okeechobee through the Saint Lucie and Caloosahatchee was a great idea. Given where we are now the proposed reservoir appears to be a very good experiment.	Your support for the project is noted.
Frank Taube	Subject: Lake O Discharges My wife and I fully support the efforts of the Army Corps efforts to reduce the discharges from Lake Okeechobee and improve clean water flow to the everglades. We believe the people that work for the Corps have invested their life's work to improve the environment and human interaction with it to protect our planet. And your plan to build a retaining lake to settle and filter the water to direct it to where it is needed in the everglades is supported by my wife and me. We have the opportunity to see the Atlantic just north of the St Lucie inlet and can see the vast improvement of the water quality with the reduced discharges in 2018. The ocean is blue again and the fish have begun to return. If we can reduce the number of discharges in a wet season the water quality will improve greatly. If we build this basin and give the water a place to go, it will return Florida to its natural state.	Your support for the project is noted.
Joanne Heroy-Giller	Subject: A vote of support for SFWMD March 26th plan	Your support for the project is noted.

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	Plz. make this happen to help protect our vital Caloosahatchee! Thank you for your consideration.	
David J. Carlson DVM	Subject: EAA Reservoir I am a practicing veterinarian who has been living on the North Fork of the St. Lucie River for over 15 years. I also work as a volunteer for the Florida Oceanographic Society testing water in the river on a weekly basis. The dramatic decline in sea grass, marine life and water quality that occurs when Lake Okeechobee is discharged east and west is profound. The proposed 10,100 acre reservoir and 6,500 acre STA are a step in the right direction to curtail necessary discharges to the estuaries. The South Florida Water Management has done extensive modeling on this plan and I have confidence in their science, however, I believe there needs to be some accountability and an expanded plan should it be needed if reality does not match the model. I am disappointed more public land is not being taken out of production and used to increase the size of the reservoir and decrease the depth. The goal of this project must be to convey, store, and clean water to move south and not comingled with agricultural demands for flood control and irrigation. The foundation of my background started in the dairy industry. I believe that agriculture and the environment can coexist but history has proven many mistakes have been made and we need to rectify these and future negative impacts to save the planet. Animal sentinels are shouting alerts as we discover sickness and death in places like the Indian River Lagoon and even the ocean. Protecting people and animals from lethal cyanotoxins must be given a high priority. The water from Lake Okeechobee is needed south of the lake and must be cleansed of its harmful nutrients. The proposed project as well as other storage and cleaning efforts around the lake will have a huge impact towards reaching the goal of a more balanced ecosystem.	As part of the Section 203 process, the Corps cannot at this point add additional analysis or alternatives to the report. The project area is the same as it was for the authorized CEPP. The Corps and the SFWMD are working within our means and applicable laws to restore freshwater flows to the Everglades and reduce flows to the northern estuaries. CERP is being implemented as part of an adaptive management approach that recommends changes to plan and project implementations to further improve performance towards ecosystem restoration goals based on science-based monitoring feedback.
Damon Hickey	Subject: Lake Okeechobee reservoir My wife and I were privileged on a recent visit to southwest Florida to take a short cruise with the Sanibel-Captiva Conservation Foundation (SCCF) into some of the oxbows along the Caloosahatchee River, in order to understand better the ecology of the river and its relationship to Lake Okeechobee. As a result of what we learned, we are writing in support of the construction of the proposed Lake Okeechobee reservoir, in order to reduce harmful discharges into the Caloosahatchee River. As you know, excessive amounts of fresh water flowing into the river severely impact the coastal and marine environment downstream, and while the reservoir may not be the perfect solution, it is a big step in the right direction. We strongly support its construction.	Your support for the project is noted.

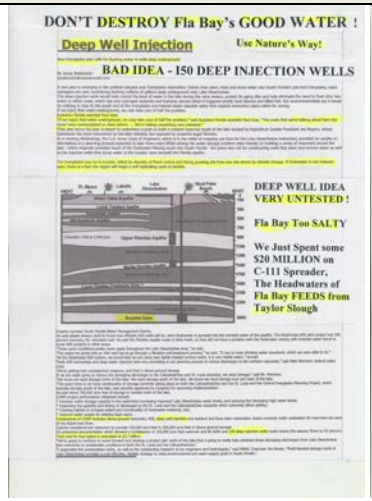
COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
Andrea Stewart	Subject: Reservoir Let's be clear about the 7 - 9 year wait for ANY reservoir to be built --- if the Lake O discharges continue, even on a limited basis, there will not be any living creatures left in our beautiful waters. We MUST STOP DUMPING algae ridden, harmful run-off, etc. into ANY estuary, river, canal, etc. I believe the reservoir needs to be larger in order to almost eliminate the need for harmful discharges that kill the beauty of our environment. This has taken far too long to resolve. Our waters are a precious natural resource; let's save our home.	As part of the Section 203 process, the Corps cannot at this point add additional analysis or alternatives to the report, as is suggested. The project area is the same as it was for the authorized CEPP. The Corps and the SFWMD are working within our means and applicable laws to restore freshwater flows to the Everglades and reduce flows to the northern estuaries.
Abe Levy	Subject: EAA Reservoir I am writing to support strongly the construction of the EAA reservoir. While I would prefer a much larger and shallower wetland, rather than an over 20-feet deep reservoir, I am grateful for this very modest step in the right direction of moving water southward from Lake Okeechobee into an EAA and from there southward into the Everglades. Thank you for anything you can do to expedite the construction of this reservoir. **RESPONDER: WILLIAM MITSCH** Subject: Re: EAA Reservoir Abe and Pat, I am less enthusiastic because water quality plan is inadequate and swept under rug just to encumber $2 billion. I am writing piece now for ACOE request on behalf of Friends of Everglades. Might be able to show you draft by Friday. When do you comment? Can u wait till then? Bill	Your support for the project is noted.
Bill Goodman	Subject: Everglades Agricultural Area (EAA) Storage Reservoir The EAA sounds like a good start toward resolving the water problems surrounding Lake O and the harmful discharges into the Caloosahatchee River basin.	Your support for the project is noted.
Sharon Smith Purdy	Subject: Lake O Discharge Please, please, please, approve the plan to change the runoff from Lake O....there are so many negative, environmental impacts occurring with current status quo. All who have the influence and power to make a change must make that change happen now!	Your support for the project is noted.

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	Please be part of the solution. Happy Earth Day...May we all learn to better respect this planet....	
Jim I. Kelley	Subject: Lake O I spend about 4 months a year on Sanibel and do a lot of fishing. I believe that the water coming from Lake Okeechobee is hurting the water quality and fishing in our area. It seems to me that our government is supporting higher sugar prices for US citizens and helping to create a bad situation for our water quality in FL. I also believe that there are a lot of environmentalists who for some reason believe that the water from Lake O is too dirty to be sent through the everglades but not too dirty to send to us. The everglades needs more fresh water we need less. The natural flow of water would be to allow it to go through the everglades. The only reasons that we are getting too much fresh water and the everglades is not getting enough are created by special interests and bad government. The best two solutions would be to stop creating advantages for the Big Sugar industry and allow the fresh water overflow from Lake O to go naturally through the everglades. I know that that is an over simplification but it is the truth. If there is anything that the Corps can do to help solve this man made bad situation it would be greatly appreciated.	The Corps and the SFWMD are working within our means and applicable laws to restore freshwater flows to the Everglades and reduce flows to the northern estuaries.
Donald Minor	Subject: Lake Ockeeb Hope youse all vote to let ponds to catch water discharges from lake start. It would be nice to have this as first step in many need to keep fowl water out of St Lucie River waters and let area recover from prolong harmful discharges. Looking forward to return to natural flow to Everglades. thanks Don Minor Stuart fl.	Thanks for your comment.
Ginger Goepper	Subject: Protect our Florida Environmental from Harmful Pollutants I am writing to support the Army Corp of Engineers' efforts to protect Florida's environment from the harmful pollutants in Okeechobee Lake discharges: * 23-foot-deep, 10,100-acre reservoir to store up to 78.2 billion gallons of excess lake water * 6,500-acre man-made marsh to clean the water When used in conjunction with other existing and planned projects, I believe this will reduce the number of damaging discharge events from Lake Okeechobee to the St. Lucie and Caloosahatchee rivers by 63 percent and send an average of about 120.6 billion gallons of clean water south to the Everglades and Florida Bay.	Your support for the project is noted.
Mary Shabbott	Subject: Protect What Little Florida Has Left	Your support for the project is noted.

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	I am writing to support the Army Corp of Engineers' efforts to protect Florida's environment from the harmful pollutants in Okeechobee Lake discharges: 23-foot-deep, 10,100-acre reservoir to store up to 78.2 billion gallons of excess lake water 6,500-acre man-made marsh to clean the water When used in conjunction with other existing and planned projects, I believe this will reduce the number of damaging discharge events from Lake Okeechobee to the St. Lucie and Caloosahatchee rivers by 63 percent and send an average of about 120.6 billion gallons of clean water south to the Everglades and Florida Bay.	
David A. Urich	Subject: Need for INCREASED flow from EAA Reservoir under Tamiami Trail to Taylor Slough for Fla Bay – NOW! While I am in full agreement with the SFWMD's EAA storage reservoir, there is a REAL problem with the need for INCREASED Flow to the South! Currently, while we have one bridge of a MILE in length, and a NEW 2.6 mile one under construction - there appear to be not REAL plans for INCREASED flow to the South, via Taylor Slough to Fla Bay - NOW! Most of the year, the WCAs (Water Conservation Areas) are full and not able to receive water from the new EAA storage reservoir! That will greatly impact the ability to have normal flow through the whole system. It seems that constraints to flow under the Tamiami Trail are imposed due to the Cape Sable Seaside Sparrow's nesting periods as well as some attempts to keep water from the Las Palmas 8.5 mile "agricultural" area created some time ago in the actual Everglades. Both of these issues need to be studied and corrective actions taken to insure that the NEW EAA Reservoir is able to have a meaningful flow in the entire system South of the WCAs. Otherwise, no meaningful flow will go through the Taylor Slough to Fla Bay! Rainwater alone will not restore the salinity balance needed for Fla Bay!	The Corps and the SFWMD are working within our means and applicable laws to restore freshwater flows to the Everglades and reduce flows to the northern estuaries.
David A. Urich	Subject: PULL the PLUG – SEND Water to FL Bay, NOW! In response to Chad Gillis' good News-Press article of 4/29/18 regarding DIW (/Deep Injection Wells) I have to raise my voice again to declare that DIW is just a BAD idea! The TRUE problems are CONSTRAINTS on REAL FLOW under the one mile Tamiaimi Trail Bridge and the LACK of a PLAN for an INCREASED Flow for the about to be completed NEW 2.6 mile Bridge! Because of these constraints - the WCAs (Water Conservation Areas) remain FULL in the wet season, thus backing up the WHOLE flow system! Flow is thus constrained from Lake "O" causing it to rise to dangerous levels! THAT is why massive discharges have been sent down BOTH rivers!	Thank you for your comment. This Draft EIS will focus on evaluating effects of the proposed plan identified in the SFWMD section 203 study, and will not include any additional alternatives or features.

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	Originally the SFWMD plan called for some 150 such DIW installations - this has now been reduced to a MERE 50! This REDUCED plan will cost some $330 MILLION - for planning, permitting & construction, with some $10 Million in annual operating costs! What about the geological danger of 50 such wells in such a small geological area? Could they possibly create a "Swiss Cheese" danger zone of potential collapse of the aquifer? Not to mention that the proposed DIWs are to be operated on an "as needed" basis and will thus be DRY for most of the year! Has anyone studied potential STRUCTURAL weakness due to lack of usage? Other such wells are in CONSTANT use, and are NEVER normally left DRY! They ALSO are widely spread around the State of Fla, not so MANY in one area! Most of the year, the WCAs (Water Conservation Areas) are FULL and thus will not be able to receive water from the new EAA proposed storage reservoir! That fact continues to greatly impact the whole Lake "O" system's ability to have anything resembling normal flow down to Fla Bay! It seems that constraints to REAL flow under the Tamiami Trail Bridge are imposed due to the Cape Sable Seaside Sparrow's nesting period in the wet portion of the year - as well as some attempts to keep water from the Las Palmas 8.5 mile "agricultural" area created some time ago in the actual Everglades. Yet we are about to finish a NEW 2.6 mile bridge with no apparent plan to INCREASE needed FLOW! Current Everglades restoration plans will reduce the amount of harmful Lake "O" discharges by about 61 percent, it is reported. It seems that trying to get that up to 77 percent is probable OVERKILL! The same money spent to deal with the Tamiami Trail constraints would be ELIGIBLE for FEDERAL match, and would ALSO help save Fla Bay, NOW! Instead of DISPOSAL of this good water - the SFWMD should join with the Army Corps to DEAL with the South Constraints and lack of capacity in the system, NOW! Let's SAVE this water and get it to where it is needed to SAVE FLA BAY! We have spent some $12 Million on the C-111 Spreader project, yet this essential path to Fla Bay via Taylor Slough is NOT operating at design capacity! Why NOT?? All of these complex issues need to be studied and corrective actions taken to insure that the NEW EAA Reservoir will be able to have a meaningful flow to the entire system South of the WCAs, NOW! The water that has been "going to tide" should NOT be disposed of via DIW - it is NEEDED in the system, NOW! Rainwater alone can NOT restore the salinity balance in Fla Bay!	

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	David A. Urich, Life Member of the Responsible Growth Management Coalition, Inc. and the SFL Clean Water Movement, My email is: d.urich@comcast.net and my cell is (239) 850-2413 PS: I have attached some four graphs that I have made which help show these concepts, also a file picture of myself if needed. **- ATTACHMENTS: -**  	

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	 	
Lin Childress	Subject: Reservoir to help cut Lake Okeechobee discharges To whom it may be concerned: We are adamantly in favor of building the reservoir south of Lake Okeechobee in order to reduce lake discharges into the St. Lucie River and the Caloosahatchee River. Such discharges are destroying our estuary along with all of the wildlife, destroying waterfront homes, jobs, etc. We ask for your support for this project to start and be completed as soon as possible. Thanks very much.	Your support for the project is noted.
Claudia Burns	Subject: Reservoir The proposed Lake Okeechobee reservoir has the potential to reduce harmful discharges into the Caloosahatchee River by 40 to 60 percent. Every resident of Southwest Florida, including myself, would like to see that happen. Thank you - Claudia Burns, Sanibel resident, Florida voter	Thank you for your comment.
Joseph Gilio, PWS Emeritus	Subject: Environmental Review of State's [Florida] EAA Reservoir Study Dear Ms. Auvenshine, I have attached a letter re: above subject. Much of the information developed therein was in coordination of Dr. Jay O'Laughlin, Ph.D. . That said, Dr. O'Laughlin is not a participant in this letter and as such any errors and omissions developed herein in conjunction with our original joint white paper, also attached, are all mine.	The Corps and SFWMD are committed to implementing CERP within applicable means and laws. CERP is being implemented by using adaptive management principles that requires monitoring of ecosystem restoration performance to inform the need for adjustments

COMMENTER	AGENCY/PUBLIC COMMENT SUMMARY	CORPS RESPONSE
	Original O'Laughlin and Gilio white paper on "outside the box" options for the EAA Project/STA Project To: USACE From: Joseph L. Gilio, PWS Emeritus Date : April 30, 2018 Item: Critique of SFWMD's Project G of CERP Much of this critique is under the ability of the State of Florida and its lead agency the South Florida Water Management District [SFWMD] to rectify. I verbally submitted brief remarks pertaining to these shortcomings at the public hearing of the SFWMD board on March 8, 2018. There are three shortcomings and a new chemical train concept that could be added to the design of the reservoir project, all combined potentially reducing northern estuary discharges to annual flows amendable to major possibly full recovery of the severely impacted estuaries and the input rivers. The submitted reservoir concept SFWMD's submittal to the USACE for a new reservoir of 240,000 acre-feet [AF] on 10,100 acres of A-2 parcel and 6,500 acres of storm water treatment area [STA] proposes to convey 350,000 AF/yr. of Lake Okeechobee water south into the Everglades Protection boundary [EPA] and eventually flow into the Everglades National Park [ENP] and thence Florida Bay. This concept will utilize both a new 6,500-acre STA and the adjacent functioning STA's ¾ as water treatment flowways in order to meet the 350,000 AF/ yr. objective. CERP's Goal 1 of moving 300,000 MAF lake Okeechobee water would be achieved. This objective while commendable lacks restitution of full lake volume flow into the remnant Everglades and Florida Bay. Shortcoming # 1- Lack of full volume flow from lake to Everglades Over the past decade, FEB A-1 and STA's ¾ have processed approximately 1.1 million AF/yr. of Everglades Agricultural Area [EAA] farmlands and lake communities stormwater runoff with minimal treatment of Lake Okeechobee waters. The [EAA + lakeside communities /Lake Okeechobee] ratio has been about 9/1 leading to probable future use conflicts between existing and this proposal's increased use. Alternatively, use of STA ¾ for EAA reservoir treatment may be curtailed and fall short of CERP goal 1 of moving 300,000 MAF at 10 ppb TP Annual geometric Mean [AGM] into the EPA. Shortcoming # 2 -- Lack of Full volume attainment Flow to the remnant Everglades	to improve ecosystem restoration plan performance. Planning efforts are also currently underway for the Lake Okeechobee Watershed (LOW) Project and the Western Eveglades Restoration Project (WERP). The preliminary project area, where the placement of features will be considered, covers a large portion of the Lake Okeechobee watershed north of the lake. LOW aims to improve the quantity, quality, timing and distribution of water entering Lake Okeechobee; provide for better management of lake water levels; reduce high-volume discharges to the Caloosahatchee and St. Lucie estuaries downstream of the lake; and improve system wide operational flexibility. Both of these efforts will provide opportunities for storage both north and southwest of the lake. WERP and LOW were identified in the recent Integrated Delivery Schedule (IDS) update and will focus on areas that will complement ongoing restoration efforts to the east of the lake (*i.e.* Indian River Lagoon South Project (C-44 Reservoir)), west of the lake (*i.e.* Caloosahatchee (C-34) West Basin Storage Reservoir) and south of the lake (*i.e.* Central Everglades Planning Project (CEPP)).

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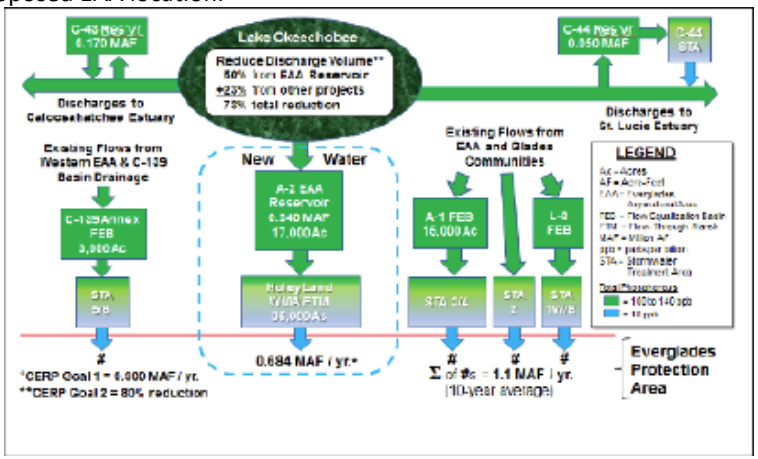
	The annual 35 yr. mean inflow water into Lake Okeechobee from north, east and west is about 2.5 MAF/yr. Assuming a 70% Everglades areal remnant, then about 1.8 MAF/yr. would approximate annual full water volume inputs into the EPA. However, past decadal inflow of 1.1 MAF and 350,000 AF [this reservoir project] equals 1.4 MAF or 0.4 MAF less than full historical inflow. And if FEB A-1 & STA ¾ prioritization conflicts occur, the EAA reservoir project may only attain about half of its goal or 200,000 AF/yr. further decreasing full volume restoration by 0.5 MAF annually. Shortcoming # 3 - State land capacity not fully realized SFWMD's concept design is intended to stop Lake Okeechobee's discharges to the Caloosahatchee River and estuary [CR&E] by 55 % volume and major discharge events by 63 %. O'Laughlin and Gilio's 2018 white paper [attached] proposed two options for expanded CERP Project G's EAA reservoir water treatment on State of Florida owned Holleyland's 35,000 ac. and Rotenberger's 25,000 ac. Both are ideally situated adjacent to SFWMD's proposed EAA location.  Using Holleyland alone for an STA would increase Lake Okeechobee's flow south into the EPA from 33% to 50% [360,000 AF to 672,000 AF] or a 66% gain with no additional land purchase. Adding other CERP & CEPP projects would increase that flow to 76% with concomitant decreases in volume and discharge events to the northern estuaries. If both tracts were combined, the 64,000-ac. treatment could increase the Lake Okeechobee flow south up to 1,20,000 AF, a 330% increase and decrease northern estuary discharges by up to 92%. At this level of discharge volume, there would be a very high probability of full northern estuary recovery.	

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	Holleyland is more amendable to timely inclusion as it lacks roughly 40 parcels of privately owned parcels within Rothenberger. Noteworthy, is that both tracts were fully functional components of the sawgrass dominated slough, island troughs of the historical Everglades and their management plans call for Everglades restoration. The outflow of the new reservoir into part of the Holleyland tract for water quality treatment to achieve federal 10 ppb TP annual geometric mean [AGM] prior to entry into the Everglades Protection area [EPA] would turn about a third of Holleyland [10,000 ac.] into an STA. The remainder 25,000 ac. [70%] could be restored to full Everglades form and function, a goal not included in CERP or CEPP. STA's have proven to have some Everglades restorative value even though water quality levels are above Federal standards.  <u>Enhancement of water quality for the concept G project through chemical trains</u> A sequential TP reduction train composed of expansion of the existing marsh at the southern edge of Lake Okeechobee, an over the top of bank adjustable weir as inflow into the Miami canal, a limestone rip rap cascade from the weir prior to canal entry, an emergent aquatic planting [EAV] on a 5/1 [H/V] edge, a 14 foot deep EAA reservoir with H/V ranges from 4/1 to 10/1 planted with EAV an submergent aquatic vegetation [SAV] , 10,000 ac. of STA designed to be removed of vegetation and sediment periodically and the remainder 25,000 ac. restored as a Flow Thru Marsh [FTM] as a mimic of its historical form and function.	

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	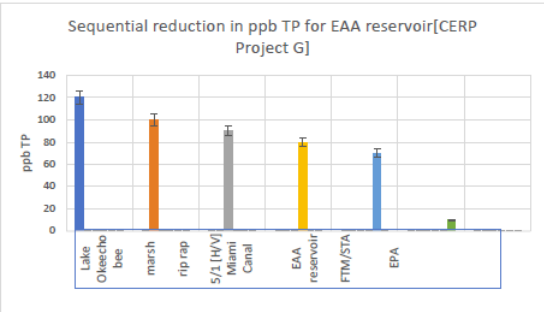 Will a 55% water volume reduction and 63% major discharge events allow northern estuarine past form and functions It is conjecture at this point in our knowledge to determine what overall volume reductions and percentage historical discharge events would either allow natural processes to oxidize the millions of tons of anaerobic muck that has settled in the CR&E and SLR&E ecosystems or whether man's intervention will be needed to restore the hard bottomed, seagrass dominated estuaries and tapegrass rivers they were prior to Lake Okeechobee discharges that started a century ago. Certainly, the greater the volume and frequency of Lake Okeechobee flow south rather than into the northern estuaries, the greater the probability of natural or man-induced restoration. Economic Impacts Various organizations both NGO's and government have estimated the economic benefits or the negative impacts from past and current discharges of Lake Okeechobee waters into the northern estuary. These economic impacts in recovery are a direct function of the volume reduction and major discharge frequencies to the northern estuaries. The greater the flow south into the EPA and its concomitant reduction to the northern estuaries, the greater the realization of full potential economic values that these norther rivers and estuaries formerly provided. Missing is a full increase of lost ecosystem values provided by seagrass and hard bottomed communities. Some of these positive and negative economic estimates are: Lost market value for residences [especially river frontage] in Martin, St. Lucie and Lee counties –estimate $ 1 Billion dollars. Lost mortgage doc stamps revenue on lower sales prices. Lost water borne activities -boating, fishing, recreational use restrictions. TCRPC estimates $1.1 Billion in total value from the Indian river Lagoon portions of St. Lucie and Martin Counties for 2014. This estimate does not include the St. Lucie River portion of these two	

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	counties. The $1.1 Billion revenue stream was severely impacted during the 1998-99, 2015-2016 Lake Okeechobee discharges. Lost seasonal rentals due to Microcystis bloom occurrences. What %volume decrease to northern estuaries is needed to eliminate toxic bloom occurrences in the receiving estuaries and rivers. Lost ecological value of the southern IRL where over 800 different fish species had been identifies as using some portion of that area for all or some of their life functions. Summary The major critique of the SFWMD's Concept G' EAA reservoir is that it will store and treat less Lake Okeechobee waters than possible in two areas: • It reduces discharges to the northern Caloosahatchee and St. Lucie River ecosystems by 55% volume when the potential for 76% even 92% reductions are possible using existing state owned Holleyland and Rotenberger tracts. • The SFWMD proposal fails to meet Goal II of full water volume south into the EPA for remnant Everglades and Florida Bay restoration. • How much economic, human & non-human health conditions and ecological restoration will be lost, quite possibly forever, if only 55% volume reduction and 63%major discharges are accomplished through implementation of Concept G reservoir as currently presented to the USACE.  Best EAA-res-analysis_1-2 1. : **"Outside the Box"1 Options for the EAA Reservoir/STA Project** by Jay O'Laughlin, Ph.D.2 and Joseph L. Gilio3, 4 January 22, 2018 (revised from January 4, 2018) • Florida Senate President Joe Negron said he wanted "state engineers to think outside the box and outside the 'footprint' they're considering for a reservoir south of Lake Okeechobee" (interview in TCPalm, December 14, 2017, emphasis added). As yet South Florida Water Management District (SFWMD) engineers have not done so. • Jay O'Laughlin, Ph.D., is Professor Emeritus and Director Emeritus, Policy Analysis Group, College of Natural Resources, University of Idaho. He lives in Hobe Sound adjacent to the Indian River Lagoon, and writes water policy analyses*	

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	for The Guardians of Martin County, a 501(c)3 organization committed to educating Martin County residents about balanced use of natural and man-made resources. Contact: jayo@uidaho.edu • Joseph L. Gilio is a Professional Wetlands Scientist Emeritus, with 40 years of experience designing and maintaining constructed wetlands and lakes achieving TMDL for total phosphorous. He lives in Palm City on the South Fork of the St. Lucie River. Contact: www.jlgilio.com • The authors acknowledge with thanks help from Gary Goforth, P.E., Ph.D., consulting water resources engineer in Stuart, Florida, with 35 years of experience including design, construction, and operation of 41,000 acres of constructed wetlands. Contact: www.garygoforth.net • For example, "Florida's Future Water Supply Depends on Improved Surface Water Management" (December 2016) and "Arguments Against the EAA Reservoir and Rebuttals" (April 2017). These documents can be read or downloaded at, respectively: http://theguardiansofmartincounty.com/wp-content/uploads/2016/12/GMC_Water_Position.pdf http://theguardiansofmartincounty.com/wp-content/uploads/2017/04/arguments-rebuttals_EAA-reservoir_JayOL_04-16-2017.pdf	
Ed Fielding Martin County Board of Commissioners	Subject: Reservoir Members of my family were school teachers in Moore Haven area during 1926 hurricane. I have had a lifetime observing the various projects of the Army Corps and so have skeptical hope as we fling out on a new mission of salvation for the Everglades. Often we do a lot of stuff (spend money) with only modest resultant benefit for the patient. We may do no better this time, but I hope we at least catalog our objectives, establishing metric to determine how we are doing and even which way we are going. A. OBJECTIVES 1. for Lake, the list to accomplish restoration would be overwhelming, but the modest list for water control as affecting the estuaries and releasing water SOUTH may be within the range of being doable.	Thank you for your comment. This Draft EIS will focus on evaluating effects of the proposed plan identified in the SFWMD section 203 study, and will not include any additional alternatives or features. The SFWMD Section 203 Report recognizes that this proposed project is an increment towards achieving ecosystem restoration goals envisioned to be addressed by full CERP implementation of 68 project components.

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	a. Unfortunately the most effective way to address Lake levels, through significant increase of storage in the upper Okeechobee basin, has been thwarted in the LOW Project Plan. b. If our objective were to eliminate estuary discharge rather than just make unfounded and totally unsupportable claims about percentage improvement in decreased volume of releases there would be more hope. So should we get a Harvey instead of an Irma it is just a freak of nature; no lack of planning here. c. To eliminate releases to the St. Lucie estuary we need sufficient capacity to discharge to the South, clean water to meet quality standards and conveyance to move the water into areas of need and storage areas, reservoir(s), and procedures and policies to move Lake water before EAA drainage fills all the available canals. 2. To release water SOUTH: a. Conveyance, b. Sufficient water quality, c. Movement ahead of EAA drainage. 3. Accumulate in the reservoir via some cleaning process. 4. This additional water to be available for: Park, Tribes, Florida Bay, Key Biscayne, Shark River Slough, etc (i.e. the environment). B. MEASURE ACHIEVEMENT OF OBJECTIVES C. PROBLEMS 1. Reliance on outdated weather model; Harvey would have breached the dike, yet we still plan on Irma being the unique storm event; 2. With heavy rain fall still rely on releases to estuary as only outlets with sufficient capacity and lack of water quality standards. 3. EAA releases plug up pathway to getting Lake water releases into reservoir. 4. How to get clean water into reservoir? 5. How to get clean water to Park, Florida Bay, etc? 6. Establish a measuring system so we know when we are and are not meeting expectations at various points along the projected flow pathway. 7. We are not planning sufficiently for water retention in Okeechobee basin nor in chain of Lakes.	
Richard C. McGeough	Subject: Lake Okeechobee Time to Use Some COMMON SENSE 4/30/2018 COMMON SENSE Tells US that the Solutions are not Too Difficult i.e. Lake Okeechobee is polluting the ST. Lucie and Caloosahatchee Estuaries. This Polluted Water is going to end up in the Atlantic Ocean anyway, So Why not build a Pipeline from the C-44 Canal to	Thank you for your comments. The Corps and the SFWMD are working within our means and applicable laws to restore freshwater flows to

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	the ocean and send the polluted water to the ocean . If this water is Dispensed through a Christmas tree it will be Cooled and at Specific Gravity Of 1.0 will rise to the top while mixing with the 1.2 Specific Gravity ocean water. This will help in the Global Warming Problem. New York City Dumps their Garbage in the Ocean, and the Amazon River dumps at least 5 Lake O's everyday in the Ocean, so EPA should not be a Problem. As For Cleaning the Water Going to the Everglades. Lake Okeechobee is one of the Bigger Filters in the World. And Though Everyone CLEANS or Replaces Their Air Conditioner Filter, Replaces their Refridgerators/ Feezer Water Filter for Ice cubes and Drinking Water, And replaces Vacuum Cleaner Filter. NO ONE EVER CLEANS THE LAKE OKEECHOBEE FILTER. The Solution Could Be: Get One or Two Of The Humongous Fertilizer Companies To Filter All The Water Leaving Lake Okeechobee. While Doing this You Could use Maybe 4 SOLAR POWERED GPS CONTROLLED BARGES with several Propellers To Stir up The Phosphorous Sediment, and direct it South. every day 24/7 There would be less Sediment Collected until finally the Fertilizer Companies will go home. and Everyone lived Happily Ever After.	the Everglades and reduce flows to the northern estuaries.
Florence Chatowsky	Subject: St Lucie River Science and the St. Lucie An estuary is defined as a body of water having a freshwater inflow at one end that mixes with saltwater providing a low salinity gradient (brackish water) that connects with the ocean at the other end and is subject to tidal flows. It is not a bay. It is not a river. The St. Lucie River is an estuary. It had fresh water running into it from its upper north and south forks, drainage creeks, and historically above and underground sheet flow water moving in from the west. The lower salinity water of an estuary is important as a nursery for fish such as mullet, redfish, mangrove snapper, snook; also for shrimp, oysters, blue crabs, and other inshore creatures. When I moved to our home on the St. Lucie estuary 26 years ago water was being released into it from Lake Okeechobee via the St. Lucie locks in low volume pulse releases. I could tell when the water was being released because the fishing improved especially the snook bite. Snook like to feed in moving water and would swim up to the inflowing water at the locks to feed on the mullet that also move into fresh water to feed on vegetation. At the C-23 canal in Palm City that runs into the St Lucie, the fishing is always better when fresh water is flowing over t he dam. There is even a fish pier built below the dam for that reason. During the pulse releases of the early 1990's the fishing in the St. Lucie was very good. Every winter schools of bluefish, Spanish mackerel, and jacks would feed at channel marker 19 and off the Martin Memorial Hospital shore. The dark water did not bother	Thank you for your comments. The Corps and the SFWMD are working within our means and applicable laws to restore freshwater flows to the Everglades and reduce flows to the northern estuaries.

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	the fish at all. In fact, most of the fish that inhabit the St. Lucie can live in fresh water. Mullet, snook, and tarpon have been caught in Lake O. Go to Homasassa Springs and see sheepshead, redfish, tarpon, jacks, mullet all thriving in the cold fresh spring water. As long as the Lake O water was released in low to moderate volumes the fish did fine and there were enough available for both sports fishing and commercial netting. It was not until 1998 after the pulse releases were stopped, that a prolonged release of large volumes of freshwater became necessary and so stressed the estuary, that we began to see lesions on fish and oysters disappearing. When the high volume inflow diminished the lesions diminished and the oysters returned. There is a critical threshold of fresh water inflow from Lake O into the St. Lucie estuary above which its ecosystems are shocked. Is it possible to determine the critical threshold? I have heard about restoring the original flow of Lake O water south through the Everglades since my first trip to Florida in 1957 to camp in and explore the Everglades National Park. In the meantime the overflow from the lake is now dumped into the St Lucie without a management plan except to release it in large volumes dictated by rain. Are there scientists with the South Florida Management and the U.S. Corps of Engineers, in other words the state and federal governments, knowledgeable about the dynamics of estuaries that with their computer models can design an outflow plan for Lake O water to be released into the St. Lucie in a low volume steady state that does not exceed the critical threshold and allows the inflowing fresh water to blend with the salt water in a more natural manner? Is that possible? No fresh water coming into the St. Lucie estuary can have a negative effect as demonstrated during the drought years. The water became clearer but highly saline. The fishing declined and the mullet, which enter the estuary from the ocean stopped coming into it. Finger mullet move up from the ocean into lower saline waters where they feed on aquatic vegetation, algae, and mangrove detritus. Hiding in the mangroves from predators they grow to adult size. Before the drought during the pulse releases the canals and creeks of the St. Lucie would fill up with mullet and you could hear the snook feeding in them all night. Since the drought that no longer happens and only remnants of the great mullet schools are found in the Sr. Lucie now. In fact it was the mullet, glass minnows, and juvenile menhaden that grew in the brackish water luring in the predator fish that made for such good fishing years ago. In summary: the St. Lucie River is not being addressed as an estuary but as a place for large slugs of Lake O water to be dumped into in an all of none manner. Low volume pulse releases did not harm the fish or fishing, Large volumes of Lake O water in prolonged releases does harm the fish and fishing and promotes algae inflows and algae blooms. Drought and no releases of fresh water over a prolonged period causes higher	

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	than normal salinities (salt water intrusion) that can have a negative effect on estuary fish populations. While we wait for the southern flow from Lake O to be fully restored and proposed water storage areas to be developed can we do something for the St. Lucie estuary now? Will scientists and engineers working together design and implement a release system for Lake O water that provides a low volume flow of water to the St. Lucie in an effort to keep the lake at stable levels and maintain the health of the estuary instead of the current antiquated system of massive releases that shock the estuary and shock the community? Might it be accomplished at a fraction of the money allocated for Everglades Restoration? Can they do it? Is it possible?	
Keith Krueger	I want to express my opinion of the Everglades Reservoir Project. Please expedite the Project, we need to move the water south to recharge the aquifer and replenish the Everglades. I live on the treasure coast and we need to stop the damaging Lake Okeechobee water releases into the St. Lucie river and Indian River Lagoon. Please support this project. Keith Krueger	Your support for the project is noted.