



Mayor's Office

**Keith A. James**  
**Mayor**

August 27, 2020

**VIA EMAIL**

**tedwards@sfwmd.gov**

Toni Edwards  
Senior Scientist  
Applied Sciences Bureau/Coastal Ecosystems Section  
South Florida Water Management District  
3301 Gun Club Road  
West Palm Beach, Florida 33406

RE: City of West Palm Beach  
EAA Reservoir Reservation Rulemaking Comments

Dear Ms. Edwards,

The City of West Palm Beach respectfully submits the following comments in response to the South Florida Water Management District's (SFWMD) ongoing rulemaking efforts for the adoption of a water reservation for the Everglades Agricultural Area (EAA) Reservoir.

The City is the largest municipality in Palm Beach County with more than 110,000 residents. The City also operates a public water supply system that provides clean, safe, and cost-effective potable water to approximately 150,000 residents of the City, the Town of Palm Beach, and the Town of South Palm Beach. The City is dedicated to ensuring that its water supply will be protected from environmental harm. Additionally, the City is committed to protecting environmentally sensitive features. The City utilizes a portion of its permitted water supply to maintain water stages in Grassy Waters Preserve to preserve this unique remnant of the Everglades. Grassy Waters Preserve is an ecologically critical wetland habitat for various threatened and endangered species including the endangered Everglades Snail Kite. The City is also the principal source of water supply during the dry season to maintain the Minimum Flows and Levels (MFL) established by SFWMD for the Northwest Fork of the Loxahatchee River, a federally designated Wild and Scenic River.

In order to ensure a safe, reliable, and environmentally sustainable water supply source remains available for the public and for the environment, the City directly relies upon surface water from the Central and Southern Florida Project (C&SF Project). Given that this water supply is so essential to the City, both from a public health and safety and environmental perspective, we must remain vigilant when there is uncertainty regarding when and in what quantity water will be made available through the regional system. The City supports projects like the EAA Reservoir Project and other Comprehensive Everglades Restoration Plan (CERP) projects that are intended to restore the Everglades and increase water supply for municipal and other water needs. It is in the context

of addressing these concerns, that we offer the following comments regarding the draft rule language and technical documentation for the EAA Reservoir water reservation.

The draft rule would reserve “all surface water released, via operation, from the EAA Reservoir that is directed to the Lower East Coast Everglades Waterbodies through Structures S-624, S-625, and S 626...” It is difficult, if not impossible, for stakeholders to evaluate the practical effect of this proposed reservation. First, the reservation language itself does not provide a specific quantity of water that is reserved. Section 373.223(4), Florida Statutes, which governs the establishment of water reservations, provides that SFWMD “may reserve from use by permit applicants, water **in such locations and quantities, and for such seasons of the year**, as in its judgment may be required **for the protection of fish and wildlife or the public health and safety**.” The proposed reservation does not specify a specific quantity of water, and since it purports to reserve water from a reservoir which has not been constructed, which will capture and release unknown quantities of water, and for which an operation plan has not been established, the proposed reservation does not appear to meet this legal requirement.

The importance of this issue is highlighted by another statutory provision. Namely, Section 373.223(4) provides, “...all presently existing legal uses of water shall be protected so long as such use is not contrary to the public interest.” According to this provision, a water reservation may not reserve the quantity of water required for all presently existing legal uses. However, if the water reservation does not identify the quantity of water that is being reserved from this project, it is impossible for the District to carry out its statutory obligation to protect the current existing legal users of the C&SF Project from the proposed reservation. Thus, existing legal users like the City are left in the dark as to status of their permitted allocation. This is a critical flaw that can only be solved by quantifying the reservation so that the City and other legal users will know that their water rights are protected.

There is not only significant uncertainty regarding the actual quantities and timing of water availability and operation of the EAA Reservoir, but also additional uncertainty regarding the timing and quantity of water availability throughout the C&SF, in significant part due to uncertainty regarding the future operation of Lake Okeechobee. As you know, Lake Okeechobee is currently operating under the LORS 2008 operating schedule. LORS 2008 itself was intended to be an interim operating schedule to facilitate necessary repairs to the Herbert Hoover Dike. The U.S. Army Corps of Engineers (Corps) is currently developing a revised Lake Okeechobee operating schedule, LOSOM, which would not take effect until 2022 or later. The new operating schedule that will result from the LOSOM development process will almost certainly have significant implications for the way the EAA Reservoir itself may be operated. Given these layers of unknowns, the City is concerned that adopting the reservation as currently proposed could have unintended or unanticipated consequences by the time the EAA Reservoir is constructed and operational.

There are also multiple hurdles that must be overcome for the EAA Reservoir to be funded, designed, constructed, and begin operations. It is unknown when each of these steps will occur, and at this point there is no guarantee the reservoir will be constructed, or if it will ultimately take the form in which it is currently anticipated. Given all the uncertainties involved, we request that any reservation rule language incorporate a provision requiring that the reservation rule sunset

within 5 years of adoption so that it may be reevaluated and readopted when more concrete information is available. This would provide assurance that prior to actual operation of the EAA Reservoir, a proper evaluation of its impacts and the quantity and timing of any water reservation can be performed by SFWMD and other stakeholders.

We are also concerned that the reservation as proposed does not appear to take into account the objectives of CERP and the project purpose of the EAA Reservoir. When CERP was authorized in the Water Resources Development Act (WRDA) of 2000, it was intended to both restore the Everglades ecosystem and provide for South Florida's water supply and flood protection needs. Likewise, the EAA Reservoir Project's purpose is to improve water supply for users and to improve deliveries of water for the natural system. Despite these requirements, it appears the Project as contemplated by the reservation would only reserve water for protection of fish and wildlife, without consideration of making additional water available for supply purposes as contemplated by WRDA 2000 and the authorization for the EAA Reservoir. As explained above, Section 373.223(4), Florida Statutes provides that water reservations serve a dual purpose of protection of fish and wildlife and protection of public health and safety. Given that water from the C&SF system is a critical lifeline for the people of Southeast Florida, and particularly the City, in assuring that sufficient water supplies are available for the health and safety of its citizens and customers in the region, the reservation must identify the quantity of water reserved for fish and wildlife and the quantity of water reserved for public health and safety through public supply.

The reservation analysis also does not appear to take into account potentially detrimental impacts to fish and wildlife in other areas as a result of the proposed reservation. As explained above, the City operates its water supply system in part to provide water to help meet the MFL established by SFWMD for the protection of the Northwest Fork of the Loxahatchee River and to protect Grassy Waters Preserve. Depending on the operation of the regional system and the EAA Reservoir, the proposed reservation could have unintended adverse impacts on the ability to provide protection of other critical environmental resources, like the Loxahatchee River.

It is also critical to assure that a proper Savings Clause analysis is performed in support of the reservation. Under WRDA 2000, the objective of providing for water supply is addressed in part through the Savings Clause requirement of Section 601(h)(5), which requires all existing legal users of water be protected:

Until a new source of water supply of comparable quantity and quality as that available on the date of enactment of this Act is available to replace the water to be lost as a result of implementation of the Plan, the Secretary and the non-Federal sponsor shall not eliminate or transfer existing legal sources of water, including those for ... urban water supply.

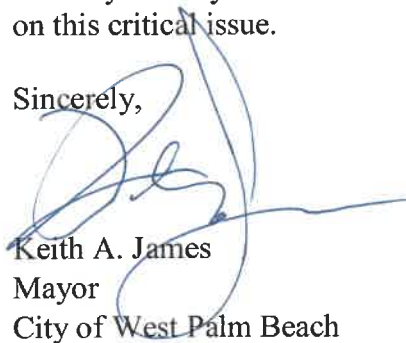
Florida law likewise requires SFWMD as the local sponsor of CERP projects to assure "that the quantity of water available to existing legal users shall not be diminished by implementation of project components so as to adversely impact existing legal users." § 373.1501(5)(d), Fla. Stat. Though we understand that an analysis of water supply availability was previously performed in association with the prior Post Authorization Change Report and Environmental Impact Statement prepared regarding the EAA Reservoir, given the uncertainty regarding future operation of the

C&SF Project and the requirements of the Savings Clause, it is important that any analysis of potential impact to existing legal users be done in a manner which is based on the existing legal use baseline established in WRDA 2000 and Section 373.1501(5)(d), and consider the most up to date information regarding potential impacts on water supply. However, it appears that the prior analysis was performed based on the LORS 2008 operating schedule, which will no longer be in effect by the time the EAA Reservoir would be operational, and not on the year 2000 baseline established in WRDA 2000. We would request that SFWMD conduct a proper Savings Clause analysis prior to adoption of any reservation.

In support of these comments, the City has retained GMAwater, LLC to conduct a technical review of the materials and analysis released by SFWMD concerning the proposed reservation. A technical memorandum prepared by GMAwater summarizing its evaluation is attached for your consideration.

Thank you for your consideration of these comments, and we look forward to working with you on this critical issue.

Sincerely,



Keith A. James  
Mayor  
City of West Palm Beach

cc: Poonam K. Kalkat, Director of Public Utilities

**Date:** August 27, 2020  
**By:** Kyle D. Grandusky, P.E.  
**Subject:** Technical Review of Proposed Water Reservation for EAA Reservoir

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The office of GMAwater, LLC has been retained by the City of West Palm Beach to perform a limited review of the technical documents supporting the proposed water reservation rule for the EAA Reservoir. Specifically, the review focused on the hydrologic modeling and associated analyses made to estimate the average annual quantity of water that could be included in the proposed water reservation. Our review resulted in the following comments:

1. The draft rule language dated 8/5/2020 made available for review for 40E-10.061(3)(a), FAC states, *“All surface water released, via operation, from the EAA Reservoir that is directed to the Lower East Coast Everglades Waterbodies through Structures S-624, S-625, and S-626 (see Figure 3-6) is reserved from allocation. Model simulations of the EAA Reservoir, together with existing and planned infrastructure, and **a modified Lake Okeechobee schedule**, indicate the EAA Reservoir could convey 825,000 acre-feet of surface water on an average annual basis (see Figure 3-7).”* (bold emphasis added)

Upon review of the TECHNICAL DOCUMENT TO SUPPORT THE CENTRAL EVERGLADES PLANNING PROJECT EVERGLADES AGRICULTURAL AREA RESERVOIR WATER RESERVATION, Draft report dated 7/28/2020, by SFWMD (TECHNICAL DOCUMENT), there is no discussion of how “a modified Lake Okeechobee schedule” has been taken into consideration in the hydrologic modeling, or otherwise in any analysis of the potential average annual volume of 825,000 acre-feet that could be released from the reservoir and included in the proposed water reservation. Clarification is needed from SFWMD as to what is meant by this. Does it refer to the future operation schedule that will result from the current/ongoing Lake Okeechobee System Operation Manual (LOSOM) planning project? Or does it refer to the underlying hydrologic modeling assumptions for Lake Okeechobee operations in the simulations for the EAA Reservoir?

Note, the TECHNICAL DOCUMENT indicates the average annual quantity is based on the results of the Regional Simulation Model (RSM) Alternative C240 completed in 2018 for the Central Everglades Planning Project Post Authorization Change Report (CEPP PACR). The existing conditions baseline model utilizes the LORS08 operational schedule, and the future with EAA Reservoir model utilizes a modified version of LORS08 that promotes Lake Okeechobee discharges to the south.

2. It appears that no new or additional hydrologic modeling was completed for the proposed water reservation. As noted above, the 2018 CEPP PACR modeling is the basis for estimating

the potential average annual quantity of 825,000 acre-feet. The TECHNICAL DOCUMENT contains a very limited description of how the average annual volume and corresponding volume probability curve is calculated. Upon request to SFWMD staff for additional information on the probability calculations, an excel spreadsheet (file name: EAA\_Reservoir\_Reservation\_30Apr2020.xlsx) was provided for my review. From the spreadsheet "Readme" information, it appears the RSM operational assumptions for the EAA Reservoir are configured to first send inflows to STA 2 and STA 3/4 from the Miami and North New River Canals if the STA has capacity to receive direct canal inflows, and the EAA Reservoir is effectively bypassed. Under these assumptions, the RSM predicts an average annual outflow from the EAA Reservoir of only about 471,000 acre-feet, which is well below the 825,000 acre-feet identified by the proposed reservation. SFWMD utilized a second model known as 'DMSTA' used in conjunction with the RSM to evaluate the water quality performance of the STAs. The DMSTA model assumes most of the STA inflows are first routed through the EAA Reservoir and/or A-1 FEB prior to entering the STAs. The spreadsheet attempts to reconcile the operational differences of the two models, and make an estimate of how much flow passes through the EAA Reservoir. I have the following comments on the this spreadsheet analysis:

- a. This spreadsheet analysis and a thorough explanation of the underlying assumptions should be made part of the record for the proposed water reservation rule, and be included as part of the TECHNICAL DOCUMENT. A public workshop explaining the analysis should be held and an opportunity/additional time to provide comments on this analysis should be provided.
- b. Daily flow time series of the RSM (Alternative C240) and the DMSTA model output data results are included in the spreadsheet for select structures as deemed important by the author of the spreadsheet. The analysis concludes a *reconciled* (my terminology) average annual EAA Reservoir Release volume of 825,000 acre-feet. The figure showing the DMSTA model configuration and average annual flows & TP loads provided on sheet 'A1 Flow DMSTA' appears to show an average annual flow from the EAA Reservoir to the STAs of 387,000 acre-feet and from the A-1 FEB to the STAs of 544,000 acre-feet. When combined, assuming all flows will first be routed through the EAA Reservoir, the total is 931,000 acre-feet. SFWMD should explain why the totals are apart by more than 100,000 acre-feet (825,000 vs. 931,000).
- c. The DMSTA figure shows additional direct inflows from the Miami and North New River Canals of 88,000 and 149,000 acre-feet annually. If operated this way in actual practice, do these flows need to be part of the proposed water reservation?
- d. This spreadsheet analysis appears to lack a true mass balance/ daily routing analysis of the EAA Reservoir showing that the full 825,000 acre-feet can be captured and released by reservoir on an average annual basis, and that it's not already full at certain times when this spreadsheet assumes it will take additional water from the Miami and North new River Canals. SFWMD should include a routing analysis for these assumed operations to demonstrate the estimated probability release curve is accurate/realistic.