

WEST PALM BEACH

MEMORANDUM

TO: Melissa Nasuti (Melissa.A.Nasuti@usace.army.mil)
Erica Skolte (Erica.A.Skolte@usace.army.mil)

FROM: City of West Palm Beach

CC: Major General Scott Spellmon (Scott.A.Spellmon@usace.army.mil)
Lt. Colonel Todd Polk (Todd.F.Polk@usace.army.mil)
Colonel Andrew D. Kelly (Andrew.D.Kelly@usace.army.mil)
Ryan Fisher (Justine.L.Howard@usace.army.mil)
Major General Diana Holland (Diana.M.Holland2@usace.army.mil)
Lt. Colonel Jennifer A. Reynolds (Jennifer.A.Reynolds@usace.army.mil)



Mayor's Office

Keith A. James
Mayor

July 30, 2020

Via U.S. Mail & Email

2020LORSHABEAComments@usace.army.mil

Major General Scott Spellmon
Department of the Army
Headquarters, USACOE
441 G Street, NW
Washington, DC 20314-1000

and

Colonel Andrew D. Kelly
Department of the Army
Jacksonville District, USACOE
701 San Marco Boulevard
Jacksonville, FL 32207-8175
Andrew.D.Kelly@usace.army.mil

Re: **City of West Palm Beach's Request for Extension of Time and Comments**
2020 Planned Deviation to the Water Control Plan for Lake Okeechobee and
Everglades Agricultural Area (LORS 2008) Glades, Hendry, Martin, Okee-
chobee and Palm Beach Counties

Dear Sirs,

The City of West Palm Beach, Florida (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 and will remain a reliable source of drinking water for the foreseeable future.

On July 1, 2020, the U.S. Army Corps of Engineers (Corps) released a Notice of Availability pursuant to the National Environmental Policy Act (NEPA) and Corps Regulation 33 Code of Federal Regulation (CFR) 230.11 of the 2020 Planned Deviation to the Water Control Plan for Lake Okeechobee and Everglades Agricultural Area (LORS 2008) Glades, Hendry, Martin, Okeechobee, and Palm Beach Counties to address harmful algal blooms (HABs) (2020 Proposed Deviation) and the Draft Revised Supplemental Environmental Assessment (Supplemental EA) and the Proposed Finding of No Significant Impact (Revised FONSI) prepared

in support of the 2020 Proposed Deviation. A deadline of July 30, 2020 was established for public comment.

The current Lake Okeechobee Regulation Schedule represents a delicate balance of many factors. It was developed after careful consideration of each of those factors after many years of study and public input. LORS 2008 represents an extremely complex program and any change to this regulation schedule like the 2020 Proposed Deviation will upset this balance.

The 2020 Proposed Deviation, Supplemental EA and Revised FONSI were posted to the Corps' Jacksonville District web site on July 2, 2020 without any advance warning. The Corps did not formally or informally engage or coordinate with the City prior to developing the 2020 Proposed Deviation. Rather, the Corps conceived this strategy behind closed doors without public meetings or notifications and without soliciting public input from stakeholders or affected parties. This approach is unacceptable for a resource as important to the region as Lake Okeechobee.

The Corps then compounded these problems by establishing an unrealistically short period of time for public comment. The Corps has only given the public 30-days to review and comment on a 1,953-page document, including appendices. Significantly, among this material was a completely new modeling analysis using the Lake Okeechobee Operations (LOOPS) Model, which the Corps is relying on for several critical conclusions contained in the Supplemental EA. Copies of the model files were not posted to the website along with Supplemental EA and the Revised FONSI or otherwise made available to the general public. The City was only able to obtain a copy of this model on July 24, after directly contacting the Corps' project manager. This process does not allow the City adequate time to assess the impact of the 2020 Proposed Deviation on its water supply system and its citizens. **Therefore, the City requests that the Corps extend the public comment deadline by 60-days to September 28, 2020.**

In the event the Corps declines to extend the public comment deadline, the City hereby submits the following comments and attachments with regards to the 2020 Proposed Deviation, the Supplemental EA and the Revised FONSI. Given the short amount of time and other problems noted above, the City was unable to devote the time required to properly address this material. These comments represent the best the City was able to do given the unreasonable time constraints imposed by the Corps.

The City notes that the Corps previously posted an Environmental Assessment (Original EA) and Proposed Finding of No Significant Impact FONSI (Original FONSI) on August 6, 2019 in connection with the 2019 Planned Deviation to the Water Control Plan for Lake Okeechobee and Everglades Agricultural Area (LORS 2008) Glades, Hendry, Martin, Okeechobee and Palm Beach Counties to HABs (2019 Proposed Deviation). Although, the Supplemental EA and Revised FONSI modified some of these prior documents, the City still believes they form the basis for the 2020 Proposed Deviation. Therefore, the City hereby incorporates by reference its September 20, 2019 comments and all attached and referenced material regarding the 2019 Proposed Deviation, the Original EA and the Original FONSI as if set forth in their

entirety in this letter. The City believes its previous letter and attachments are already part of the Corps' record regarding the 2020 Proposed Deviation, as they are included in an appendix to the Supplemental EA.

A. The Corps Lacks Authority to Implement the 2020 Proposed Deviation

According to Section 1.1 of the Supplemental EA, the 2020 Proposed Deviation is a Congressionally authorized purpose of the Central and Southern Florida (C&SF) Project. However, as the Supplemental EA points out the Congressionally authorized purposes of the C&SF Project are described in House Document 643, 80th Congress, Second Session as authorized by the Flood Control Act of 1948, Public Law 80-858 and the Flood Control Act of 1954, Public Law 83-780. The control of HABs is not a Congressionally authorized purpose according to these governing statutes. As recognized in Section 7-01 of the *Water Control Plan for Lake Okeechobee and Everglades Agricultural Area (ACOE 2008)*, the authorized project purposes are “flood control; navigation; water supply for agricultural irrigation, municipalities and industry, the Everglades National Park, regional groundwater control, salinity control; enhancement of fish and wildlife; and recreation.” HAB control is not among these project purposes.

The fact that HAB control is not an authorized purpose is confirmed by Section 1109 of the Water Resource Development Act of 2018, Public Law 115-270, which directs the Secretary to “implement a 5-year harmful algal bloom technology development demonstration program” and “support research that will identify and develop improved strategies for early detection, prevention, and management techniques and procedures to reduce the occurrence and effects of harmful algal blooms in the Nation’s water resources” and that technologies identified “have the ability to scale up to meet the needs of harmful algal-bloom related events.” If Congress had already authorized the operation of the C&SF Project for the purpose of controlling HABs under the statutes cited in the Supplemental EA, then the authorization to conduct 5-year harmful algal bloom technology development demonstration program would not be needed. The fact that Congress specifically authorized such a program persuasively argues the HAB control is not currently authorized by Congress and the Corps does not have legal authority to implement the 2020 Proposed Deviation.

Additionally, contrary to the Supplemental EA, the Corps does not have the legal authority under the Water Resources Development Act of 1992, Public Law 102-580 to modify the C&SF Project to add control of HABs as an authorized purpose, as suggested in Section 1.1 of the Supplemental EA. Section 309(1) of the Water Resources Development Act of 1992 only authorizes the Chief of Engineers to review House Document 643 and other pertinent reports, “with a view to determining whether modifications to the existing project are advisable at the time....” Clearly, the statute intends that the Corps seek Congressional approval for modifications to the project once the Chief of Engineers has completed his or her review, as was the case with the approval of the Comprehensive Everglades Restoration Program (CERP) by the Water Resource Development Act of 2000, Public Law 106-541.

Again, even assuming the Water Resources Development Act of 1992 authorizes the Corps to bypass the U.S. Congress to implement modifications to the C&SF Project without first seeking Congressional approval, Section 309(l) mandates that such modification only be made with “particular reference to modifying the project or its operations for improving the quality of the environment, improving protection of the aquifer, and improving the integrity, capability and conservation of urban water supplies affected by the project or operation.” As indicated below, the 2020 Proposed Deviation will reduce and not improve the integrity, capability and conservation of urban water supplies such as the one managed by the City. Consequently, the Water Resource Development Act of 1992 does not authorize the Corps to implement the Proposed Deviation.

The Supplemental EA adds an additional argument in support of the Corps’ legal authority to implement the 2020 proposed Deviation that was not presented in the Original EA. Section 1.1 of the Supplemental EA now contends the Corps has authority to consider water quality¹ in its operation of the C&SF Project under Section 203 of the Flood Control Act of 1968, Public Law 90-483, which approved House Document 369, 90th Congress, 2d Session specifically as follows:

Although the report does not make recommendations specifically for water quality control, the problems associated with water use are of particular concern and the maintenance of optimum and desirable water quality is a prime objective in the operation of the project. Engineering and operation methods to evaluate and minimize the concentration of pesticides, herbicides, and nutrients and their effects on fish and wildlife in the conservation areas, Lake Okeechobee, and in the Everglades National Park will be employed to the maximum practicable extent. Water quality control is a vital function in proper water resource management and will be incorporated in this areas in cooperation with affected State and Federal agencies.

The Corps is now relying on this statute and House Document 369 as legal authority for the 2020 Proposed Deviation.

However, this new argument lacks merit. The quotation from House Document 369 is completely taken out of context. According to the House Document, the specific purpose of the plan of improvement recommended by the report was to increase net water supply in the areas served by Lake Okeechobee and the three Everglades Water Conservation Areas.

The Everglades National Park, the agricultural and urban areas and all other users of water within the central and southern Florida area require water to supply demands during periods of deficient rainfall. Sufficient water will not be

¹ Apparently, the Corps considers “water quality” to be synonymous with the control of HABs, which is the purpose of the 2020 Proposed Deviation. However, the Corps does not make a convincing case in either the Original EA or the Supplemental EA that is the case.

available to meet all project demands at all times. The magnitude of these demands has increased far beyond those anticipated at the inception of the Central and Southern Florida Project. Until recently, water delivered to the park consisted primarily of that which was in excess of desirable scheduled storage in the water conservation areas of the existing project. The drought of 1961-65 showed conclusively that such dependence could ultimately be disastrous to the park. The problem, therefore, is one of augmenting the existing supplies and making the best use of the available supplies in the interests of all users. **The plan of improvement recommended in this report is predicated on increased conservation and utilization of the available surface water supplies. The essential elements of the plan consist of storing and diverting, to the maximum extent practicable, waters which otherwise would be lost to the sea. It is a plan that reduces wastages of water by storing it in Lake Okeechobee, the most effective storage area, and by back pumping excess runoff of the lower east coast area, which now goes to the sea, into the water conservation areas for later beneficial use.**

(Emphasis added). The purpose of these documents was not to authorize the Corps to decrease net water for the purpose of improving water quality, much less controlling HABs, which are not even mentioned in the document. In fact, the 2020 Proposed Deviation is the antithesis of this statute and House Document as it calls for enhanced discharges from Lake Okeechobee as a means of controlling HABs rather than the Congressionally authorized purpose of storing additional water in Lake Okeechobee to meet water supply needs. Thus, the statute and House Document fail to provide legal authority for the operating protocol set forth in the 2020 Proposed Deviation.

Even assuming arguendo that the language cited by the Corps in Section 1.1 of the Supplemental EA somehow authorizes the Corps to modify the operation of Lake Okeechobee to address water quality concerns, it still would not support the 2020 Proposed Deviation. First, the provision cited by the Corps would only authorize the modification of operations to minimize concentration of pesticides, herbicides and nutrients and their effects on fish and wildlife. There is no specific mention in this paragraph of the modification of operations to minimize HABs. Second, the Corps' intent in adopting the 2020 Proposed Deviation is to address potential health concerns caused by HABs. This is made clear in Section 1.3 of Supplemental EA.

The U.S. Army Corps of Engineers' (Corps) intent with the proposed deviation is to reduce the risk of exacerbating potential health concerns associated with algal blooms in Lake Okeechobee, the St. Lucie and Caloosahatchee estuaries while not impacting other project purposes. Potential health concerns associated with the harmful algal blooms (HABs) could be increased by releasing water from Lake Okeechobee when HABs are occurring in the lake, by transferring blooms to the estuaries, or when HABs are occurring in

the estuaries, by increasing nutrient loads and contributing to optimal salinity conditions for blooms to flourish.

(Emphasis added). The language in the House Document makes no mention of modifying the operation of Lake Okeechobee to address potential human health concerns. Finally, the provision cited by the Corps is limited to operations that would reduce adverse water quality impacts to fish and wildlife in Lake Okeechobee, the Water Conservation Areas (WCAs) and Everglades National Park. There is no mention in this paragraph regarding the modification of Lake Okeechobee operations to reduce adverse water quality impacts in the St. Lucie and Caloosahatchee estuaries, which is express purpose of the 2020 Proposed Deviation.

Finally, there is a Water Resource Development Act of 2020 working its way through Congress at the moment. Several amendments to the bill were recently offered by a Florida house member in House Committee meeting held earlier this month to add control of HABs as an authorized project purpose of the C&SF Project. However, all these amendments were rejected. If the existing law already authorized the Corps to operate the C&SF Project so as to control HABs, these amendments would be unnecessary. The fact these amendments are being discussed in Congress is proof positive that the Corps lacks authority to implement the 2020 Proposed Deviation based on existing law.

In conclusion, the Corps does not possess the legal authority to implement the 2020 Proposed Deviation absent a new specific authorization from Congress.

B. The 2020 Proposed Deviation Would Grant the Corps Unbridled Discretion to Ignore the Existing LORS 2008 Regulation Schedule

1. Operational Strategy

The intent of the 2020 Proposed Deviation is to reduce the risk of exacerbating potential health concerns associated with algal blooms in Lake Okeechobee, the St. Lucie and Caloosahatchee estuaries by making advanced releases to the estuaries and to the south in excess of what is authorized under LORS 2008. The Supplemental EA does not prescribe a duration for the advanced releases. Once the 2020 Proposed Deviation is implemented, it will continue until LORS 2008 is replaced by a new water control plan (Lake Okeechobee System Operations Manual (LOSOM) anticipated in 2022) or is voluntarily terminated by the Corps. However, according to the Supplemental EA, nothing would prevent the Corps from re-initiating these advance discharges, which makes any termination ephemeral at best.

The operational strategy for these advanced releases is described in Appendix A to the Supplemental EA (Operational Strategy). The heart of this Operational Strategy is contained in Section 6 of Appendix A. According to **Section 6-a**, advanced releases could occur under any of these following conditions.:

- If a HAB is currently in Lake Okeechobee, C-43, C-44, the Caloosahatchee Estuary or the St. Lucie Estuary;
- If the State of Florida declares a state of emergency due to HABs on Lake Okeechobee, C-43, C-44, the Caloosahatchee Estuary or the St. Lucie Estuary;
- If a HAB is anticipated to occur on Lake Okeechobee, C-43, C-44, the Caloosahatchee Estuary or the St. Lucie Estuary; or
- If a HAB has occurred and caused impacts to public safety or the environment during the last 12 months in Lake Okeechobee, C-43, C-44, the Caloosahatchee Estuary or the St. Lucie Estuary.

According to **Section 6-b**, operations under the advanced releases could include:

- Manage water to reduce risk of transporting a HAB from Lake Okeechobee to the estuaries.
- Manage water to reduce risk of exacerbating a HAB in the estuaries.
- Manage water in anticipation of HAB operations by making long-term, low volume releases before a HAB event and not during (**subject to consideration in Section 6-c**).

(Emphasis added). Please note that the Operational Strategy does not contain a Section 6-c. **Therefore, the Supplemental EA does not provide any guidance as to how the Corps will conduct HAB operations in anticipation of a HAB event!** This is but one example of the unbridled discretion the 2020 Proposed Deviation would grant the Corps.

According to **Section 6-d**, advanced releases to the south would occur, when LORS 2008 Part C does not recommend releases south and HAB conditions are in effect (as defined in Section 6-a). Advanced releases to the south would be done only when in the Low Baseflow and Beneficial Use Sub-bands and only if conditions would allow. Allowable conditions would include when all downstream WCAs are less than 0.25 foot above their top zone on their respective regulation schedules. When these conditions are met, then advanced releases south up to the maximum practicable could be made up to the capacity of the Miami River, the North New River and Hillsboro Canals² to deliver water south while still providing the authorized flood control, and treatment capacity in the Stormwater Treatment Areas (STAs) to meet downstream water quality standards. If advanced releases south would cause any of the WCAs to rise more rapidly than is ecologically preferable, then advanced releases may not be sent south from the lake. However, it is not anticipated that advanced releases sent south will be held back during HAB operations.

According to **Section 6-e**, advanced releases to the Caloosahatchee and St. Lucie Estuaries would occur, when LORS 2008 Part D recommends releases of 650 cfs (450/200 cfs at S-79-S-80) and HAB conditions are in effect (as defined in Section 6-a). Advanced releases would be limited up to 2000 cfs measured at S-79 and up to 730 measured at S-80. Advanced releases

² Advanced releases for HAB operations will not be made out of C-10A and to tide to the Lake Worth Lagoon via C-51.

within the Beneficial Use Sub-band would be cut back if lake levels fell within 0.25 feet of the WSM Band in order to reduce the risk of falling into this band. In addition, when lake stages are below the ideal ecological low stage of 12 feet as defined in the 2005 Okeechobee Conceptual Ecological Model, advanced releases would only be made if the lake was rising rapidly (greater than 0.15 feet per week).

According to **Section 6-f**, advanced releases made and releases held back will be tracked for 10 months (between 1 February and 1 December) as part of what the Supplemental EA calls a “Water Bank for HAB Operations” (Water Bank). According to the Supplemental EA, the volumes of releases that are recommended by LORS 2008 but are not made (reduced releases) will be banked as a “deposit” and will have a positive volume. Releases made that exceed those called for under LORS Part D guidance will be banked as a “withdrawal” or “loan” and have a negative volume. Values will be summed for the total bank amount which can either be positive or negative at any time during the HAB tracking period. The goal will always be to get to a zero discharge by 1 December.

Each year a “credit limit” will be established when the advanced releases are initiated based upon conditions and forecasts in order to set some guidelines for operations that year. This credit limit would limit the total volume of advanced releases made in the spring/early summer before defaulting back to LORS. This limit aims to find a balance between releasing enough to hold back in summer but not releasing too much so as to impact water supply if drier than expected conditions occur later on. However, a specific amount is not prescribed in the Corps’ Operational Strategy.

2. Lake of Critical Definitions and Standards Effectively Grants the Corps Unbridled Discretion to Ignore LORS 2008 Regulation Schedule

The 2020 Proposed Deviation lacks critical definitions and standards that provide clear guidance as to when, for what length of time and as to how much water the Corps could release from Lake Okeechobee because of HABs. This deprives the City of the ability to reasonably account for these releases in its water supply planning. Also, since these releases can occur any time between 1 February and 1 December, the 2020 Proposed Deviation may cause abrupt and negative hydrologic changes to our water supply. Finally, even the duration of the Proposed Deviation is uncertain.

The most problematic aspects of the Proposed Deviation are the definition of HABs, the four trigger points that would allow the Corps to make releases from Lake Okeechobee that are not currently authorized under LORS 2008, the lack of a volume limit on discharges to the south and uncertainties regarding the so-called “Water Bank.”

The cornerstone of the 2020 Proposed Deviation is the existing, past or future presence of HABs. Consequently, the definition of a HAB is of particular importance. The term HAB is defined in Section 2 of Supplemental EA Appendix A as “freshwater blue/green algae blooms

causing adverse environmental, economic or health effects.” In Section 1.3 of the Supplemental EA, the Corps acknowledges that most algae are not harmful, even when they form “blooms.” According to the Supplemental EA, HABs only occur when certain algae that produce toxins form blooms.

The Supplemental EA does not provide adequate criteria to determine when an algal bloom constitutes an HAB or a non-harmful algal bloom. There is no requirement that the Corps confirm the presence of blue-green algae in the bloom or the production of toxins. Also, the definition provides no guidance as to when a freshwater blue-green algal bloom becomes large enough or persistent enough to become an HAB. By definition a freshwater blue green algal bloom becomes an HAB, if it causes adverse environmental, economic or health effects. However, as presently written, an algal bloom of de minimis size or impact would be defined as an HAB, if it causes adverse environmental, economic or health effect to a single aquatic organism. Additionally, the definition contains no information regarding the persistence of an algal bloom before it is defined as an HAB. As presently written an algal bloom that persists a few hours or a few days before dissipating could be defined as an HAB. With such an open-ended definition, the Corps could literally trigger the deviation on the basis of a small bloom that dissipates within a few hours or a day.

The lack of a credible definition is further compounded by the four trigger points in the 2020 Proposed Deviation. First, the deviation doesn’t specifically indicate how HABs will be detected beyond stating the Corps will use the latest scientific tools to predict potential and/or actual HABs in these water bodies, including satellite imagery and monitoring by the South Florida Water Management District (SFWMD) or the Florida Department of Environmental Protection (FDEP). However, absolutely no evidence is provided in the Supplemental EA as to the effectiveness of these tools in detecting algal blooms and clearly none of these tools can possibly determine whether an algal bloom is causing adverse environmental, economic or health effects.

Second, there are no tools identified in the Supplemental EA that are capable of forecasting when an algal bloom will occur. The Corps acknowledges this in Section 1.3 of the Supplemental EA and its representatives confirmed this fact during the Webinar held on July 21. The Corps states that although HABs are most common in Florida during the wet season, they can occur at any time. The Corps goes on to state, “in general, there are a number of physical, chemical, and biotic factors that influence formation of HABs, however no single factor has been identified as a root cause for fresh water HAB events.”

Third, algal blooms may occur in the Caloosahatchee and St. Lucie Estuary even when no water is being discharged from Lake Okeechobee, as was the case in recent years. Nonetheless, as presently written, the presence of HABs in these waterbodies would trigger the advanced releases regardless of whether the HABs were caused by the discharge of water from the lake. Under those circumstances, releasing additional water to the estuaries or south to the WCAs would be of no benefit.

Fourth, the Corps can implement the 2020 Proposed Deviation even when there are no actual or anticipated HABs in Lake Okeechobee, C-43 or C-44 canals, the Caloosahatchee Estuary or the St. Lucie Estuary, as long as HABs had occurred in one of those water bodies in the past 12 months. This last trigger essentially gives the Corps a blank check to continue operating under the proposed deviation despite the absence of any actual or anticipated algal blooms. **This error is compounded by the fact the Section 6-c of Appendix A, Operational Strategy that is supposed to provide guidance in these circumstances is missing from the document!**

Unlike discharges to the Caloosahatchee and St. Lucie Estuaries, the Operational Strategy in Appendix A of the Supplemental EA does not place any volume limits on discharges to the south. According to Section 6-d, once discharges to the WCAs are deemed allowable, they will be made up to the maximum practicable capacity of the Miami River, the North New River and the Hillsboro canals to deliver water south while still providing authorized flood control. That capacity is not quantified. Since the allowable volume is not quantified, there are no limits on these discharges as is the case with the discharges to the Caloosahatchee and St. Lucie Estuary. Thus, the Corps could theoretically reduce the stage in Lake Okeechobee to the point that it would no longer be capable of providing regional water to the City and other utilities along the Lower East Coast. Also, how will the Corps ensure while discharging water down these three watercourses to the maximum extent practical that they will still provide their authorized flood control is unknown. If these water bodies are filled to the brim and the area were to receive an unexpected amount of rain, it seems likely there would be a period of time when they would not provide flood control to the neighboring communities even if the Corps were to immediately terminate the discharges. The lack of specificity regarding the southern discharge option is an open invitation to drain Lake Okeechobee without regard to flooding concerns in the southern communities.

Finally, the Corps' main method of ensuring that 2020 Proposed Deviation will not adversely impact the Congressionally authorized water supply purposes of the C&SF Project is the so-called Water Bank. On paper it sounds perfectly reasonable. The Corps will balance any discharges in excess of LORS 2008 with reduced discharges so that by 1 December everything nicely balances. However, the hydrologic system is not a banking account because unexpected credits and deposits can occur based on rainfall. As the Corps recognizes in Appendix B of the Supplemental EA, the biggest risk with the Water Bank approach is when the deviation is done in years prior to droughts where advanced releases cannot be made up by 1 December. Supposedly this risk will be mitigated through establishment of a credit limit at the start of the year that would find a balance between releasing enough to hold back in summer, but not releasing too much so as to impact water supply. But unfortunately the Operational Strategy does not prescribe a specific credit limit like any good bank or credit card company. This leaves the Corps with unfettered discretion to set a limit that would allow it overdraw its account. Whether done deliberately or by accident, major droughts like recessions and depressions are rarely accurately predicted.

In sum, these deficiencies give the Corps unfettered discretion to make releases from Lake Okeechobee, the events that would trigger such releases are arbitrary and capricious, the quantity that the Corps could discharge to the south is virtually unlimited and the Water Bank is inherently incapable of balancing the books.

C. The LOOPS Modeling Does Provide Adequate Assurances that the 2020 Proposed Deviation Will Not Harm the Approved Purposes of the C&SF Project

1. Introduction

The biggest difference between the Original EA and the Supplemental EA is the LOOPS Modeling that was performed by the Corps. The results of this modeling are summarized in Appendix B to the Supplemental EA. This Model, which was developed by SFWMD staff, was modified by the Corps for purposes of this analysis. The Model was used to test the Corps' Water Bank concept, to evaluate differences in Lake Okeechobee stage between LORS 2008 and the 2020 Proposed Deviation and to evaluate differences in environmental impacts between LORS 2008 and the 2020 Proposed Deviation in Lake Okeechobee, the Caloosahatchee Estuary and the St. Lucie Estuary. Based on this modeling, the Corps concluded there will be little or no impact to water supply or environmental conditions as a result of the 2020 Proposed Deviation and that the Water Bank was a valid concept.

As mentioned above, the Corps did not provide the LOOPS Model files to the general public. The City's consultant obtained a copy of the model files directly from the Corps on July 24. Although, the City's consultant did not have sufficient time to thoroughly evaluate the Model results, it was able to reach certain basic conclusions, which are summarized in the report *Potential Impacts of the ACOE's 2020 Planned Deviation to the Water Control Plan for Lake Okeechobee and Everglades Agricultural Area (LORS 2008) – Water Supply and Hydrologic Review: City of West Palm Beach (Collective Water Resources, LLC 2020)* (Collective Water Report), a copy of which is attached. The primary findings concerning the LOOPS Modeling are summarized herein.

2. The LOOPS Modeling Was Not Run in Accordance with its Operating Protocols and Constraints.

a. General

The LOOPS Model is a hydrologic simulation tool developed by SFWMD that provides rapid screening-level testing of operational rules for Lake Okeechobee, including regulation schedules, water shortage plans and protocols for defining release amounts when the regulation schedule guidance only provides ranges of flows.

The LOOPS Model contains a "Read-Me File," which describes the limitations and operational constraints of the model, as follows:

- The LOOPS Model was constructed by SFWMD staff to aid SFWMD staff with the testing of alternative operating strategies. The LOOPS Model was not developed to be a user-friendly model that could be readily usable by anyone with a basic understanding of the south Florida water control system. **Although available to the public, the LOOPS Model should be used in facilitated sessions with knowledgeable SFWMD staff who thoroughly understand the model and are competent with using it.**
- **It is easy to misuse the LOOPS Model.** The tool does not generate warnings when users select inappropriate inputs. Users are strongly cautioned to use good judgment when testing alternative scenarios. **Full examination of the routing results and time-series results should be performed to ensure results are meaningful.**
- The LOOPS Model performs 46-year continuous simulations (daily time-step) of the hydrology and operations of the water management system including: Lake Okeechobee, the Lake Okeechobee Service Area, the Caloosahatchee and St. Lucie watersheds and estuaries. **The time-series of Lake releases south, to the WCAs via STA-3/4 and C-51 via L-8 are assumed to be the same as the SFWMM simulation that is used as the basis for the LOOPS Model data set.** Input parameters/multipliers and conveyance limits are available to adjust these time series.
- The strength of the LOOPS Model is with its ability to quickly test the performance of alternative operating scenarios to screen ideas and perform sensitivity tests. Similar output is expected from the associated South Florida Water Management Model (SFWMD, aka 2x2) or Regional Simulation Model – Basins (RSMBN) Model; however, **it is a good idea to perform a more-comprehensive simulation with one of the regional-scale water management models to confirm the output from the LOOPS Model if operating protocols are to be implemented.**

(Emphasis added).

- b. There is No Evidence the LOOPS Modeling Was Performed by a Person Competent in Using the Model or was Developed in a Facilitated Session with Knowledgeable SFWMD Staff*

No evidence was presented in the Supplemental EA that the LOOPS Modeling was performed by a person competent in using the model or developed in a facilitated session with knowledgeable SFWMD staff. In fact, during the Webinar hosted by the Corps on July 21, 2020, it was mentioned by the Corps that the LOOPS Modeling was completed in a matter of weeks or possibly days – primarily during the 2019 Christmas holiday. It is extremely questionable that such a complicated modeling exercise could have been completed in such a short time. Other than during the Webinar, the Corps did not identify the person responsible for setting up and running the model and the Corps still has not provided information concerning this individual's experience using the LOOPS Model. The Corps' failure to follow the specified protocol for running the LOOPS Model suggests that these model runs cannot be relied upon for the conclusions reached by the Corps in the Supplemental EA.

- c. *There is No Evidence that the Corps Conducted a Full Examination of the Routing Results and Time Series Results to Ensure that the Results are Meaningful*

As the SFWMD “Read-Me File” emphasizes, “It is easy to misuse the LOOPS Model.” That is why the authors recommend a full examination of the modeling results to ensure that the results are accurate, reliable and meaningful. No evidence exists in the Supplemental EA that such an examination of the model results was carried out. It appears the model results were used by the Corps without any quality control assurance or peer review.

Additionally, the LOOPS Model is a complicated spreadsheet model. It includes the use of macros, or essentially the code that powers the model. According to Appendix B to the Supplemental EA, the Corps modified LOOPS Model code to simulate the Corps proposed “Water Bank” concept. There is absolutely no documentation of these changes or evidence that the changes were reviewed and approved by the SFWMD authors. In fact, Appendix B only includes a reference to a 2006 technical publication describing the model.

In sum, if the LOOPS Model is easy to misuse in its unaltered original condition, then errors are even more likely when undocumented changes are made to the model. Given these circumstances, it appears the use of this model to justify the conclusions reached in the Supplement EA is even more problematic than envisioned by the authors.

- e. *The LOOPS Model is Not Capable of Simulating Releases to the South or Impacts to Water Supply on the Lower East Coast*

The SFWMD “Read-Me File” indicates that the LOOPS Model can only simulate the hydrology and operations of Lake Okeechobee, the Lake Okeechobee Service Area, the Caloosahatchee and St. Lucie watersheds and estuaries. Releases south to the WCAs and C-51 via L-8 are assumed to be the same as the SFWMM simulation that is used as the basis for the LOOPS Model data set. In other words, the Model cannot simulate the proposed releases to the south and the impact of 2020 Proposed Deviation on water supplies along the Lower East Coast.

Under the proposed Operational Protocol, the Corps may make releases south of Lake Okeechobee that would not be allowed under LORS 2008 up to the maximum practical capacity of the Miami River, the North New River and the Hillsboro Canals. Appendix B to the Supplemental EA suggests that these releases were accurately assessed in the LOOPS Model. However, the LOOPS Model is incapable of simulating releases to these watercourses. Instead, in all the model runs the Corps assumed that the releases to the south would be limited to a maximum of 60,000 acre-feet/year. However, no such volumetric limitation appears in the Supplemental EA. In fact, in recent years, water has been discharged south in excess of 400,000 acre-feet/year. Because of this limitation, the Corp’s analysis using the LOOPS Model does not accurately capture the effects of the 2020 Proposed Deviation and should be disregarded.

Additionally, the Corps relies on the LOOPS Model to conclude that the 2020 Proposed Deviation will not cause an adverse impact to water supply along the Lower East Coast. However, again the Model is incapable of simulating releases to the C-51 via the L-8 or releases to the WCAs. Since these releases provide the surface water used by the City for its public water supply and the groundwater recharge used by other utilities, the Corps' analysis using the LOOPS Model again does not accurately capture the effects of the 2020 Deviation and should be disregarded.

- f. The LOOPS Model Cannot Be Used to Assess the Environmental Impact of the 2020 Proposed Deviation on Environmental Conditions in the Caloosahatchee and St. Lucie Estuaries*

In Appendix B of the Supplemental EA, the Corps uses the LOOPS Model to assess the environmental impact of the 2020 Proposed Deviation on the Caloosahatchee and St. Lucie Estuaries using the 2007 RECOVER criteria. Based on this analysis the Corps concludes that impacts to these estuaries would be no different than what would be experienced under LORS 2008.

However, this is a misuse of the model. According to the SFWMD "Read-Me File," the Model only provides rapid screening level testing of operating rules for Lake Okeechobee, including regulation schedules, water shortage plans and protocols for defining release amounts when the regulation schedule guidance only provides ranges of flow. SFWMD does not indicate the model can be used to assess compliance with RECOVER criteria. Thus, the Corps has extended the LOOPS Model beyond its limits to evaluate the environmental impact of the 2020 Proposed Deviation on the Caloosahatchee and St. Lucie Estuaries and the results should be disregarded.

- g. The Corps Failed to Verify the Results of the LOOPS Model Using One of the Regional-Scale Water Management Models*

The SFWMD "Read-Me File" indicates that when the LOOPS Model is used to implement operating protocols such as the 2020 Proposed Deviation, that the results should be verified using one of the regional-scale water management models such as the South Florida Water Management Model (SFWMM, aka 2x2) or Regional Simulation Model – Basins (RSMBN). There is no evidence in the Supplemental EA that these regional models were run to verify the LOOPS Model results. Thus, the results should be discarded.

- h. Conclusion*

In sum, given these general deficiencies, one cannot rely on the conclusions and results presented in Appendix B to a reasonable degree of engineering or modeling certainty.

3. *The LOOPS Model Contains Specific Errors that Render the Results Inaccurate, Incomplete or Unreliable.*

Based on the Collective Water Report, the LOOPS Model achieved the “net zero” discharge on 1 December required for successful operation of the Corps’ Water Bank on only 5 out of the 46 years of the simulation. Thus, it appears that the “net zero” discharge concept may be difficult, if not impossible to achieve in most years. Since the “Water Bank” is the linchpin of the Corps’ case that the 2020 Planned Deviation will not cause adverse environmental impacts or adverse impacts to the water supply function of Lake Okeechobee, it appears the Supplemental EA does not support the Corps’ proposed action.

The Corps used a historical period of record in the LOOPS modeling that ended in 2010, which is not representative of South Florida’s current hydrology. It is well accepted that because of climate change and other factors that historic hydrology, which is more than 10 years old, is most likely not representative of current and future conditions. This period of record is of particular concern to the City since it has experienced severe droughts and unusual rainfall conditions after 2010.

No rationale was provided for the selection of the drought scenarios discussed in Appendix B. There is no explanation of the severity of each drought and why these drought years were selected. For example, 2003 was the second lowest annual rainfall experienced by the City in 30 years (37 inches) and it was not considered by the Corps and 2006, which is the lowest annual rainfall experienced by the City in 30 years (24 inches) was only partially analyzed by the Corps. Also, since the period of record in the Model ends in 2010, the droughts and other water supply issues encountered by the City in 2009-10, 2011 and 2018 are not reflected in the Corps’ analyses.

D. There is No Scientific Evidence that the 2020 Proposed Deviation Will Have a Beneficial Impact on HABs in Lake Okeechobee and the St. Lucie and Caloosahatchee Estuaries

The Corps’ intent with the 2020 Proposed Deviation is to improve the ecological health of Lake Okeechobee and the St. Lucie and Caloosahatchee estuaries with minimal or no impact to the competing project purposes. In order to assess whether the 2020 Proposed Deviation achieves this goal, the City retained Janicki Environmental, Inc. to evaluate the water quality and ecological impacts of the 2020 Proposed Deviation. The report *Potential impacts of the Army Corps of Engineers 2020 Planned Deviation to the Water Control Plan for Lake Okeechobee and Everglades Agricultural Area: Water Quality and Ecological Impacts (Janicki Environmental 2020)*. (“Janicki Report”), a copy of which is attached.

According to the Janicki Report, the primary outcome of the 2020 Proposed Deviation will be a reduction in the probability of delivery of lake water that increases the likelihood of HABs in the Caloosahatchee and St. Lucie estuaries. The most direct way releases might increase

the likelihood of downstream HABs occurs when lake waters that are released contain HABs. Thus, a clear understanding of how the revised release schedule might influence the likelihood of HABs within the lake is needed. However, the Supplemental EA does not present any analyses addressing this question nor does it consider previous research that addresses this question. The Janicki Report identifies some of the prior research and modeling tools the Corps should have considered in addressing this issue. The Janicki Report concludes the Supplemental EA provides little reassurance that the 2020 Proposed Deviation will protect the water quality of Lake Okeechobee.

Also, according to the Janicki Report, the 2020 Proposed Deviation and Supplemental EA does not consider the effects of the modified releases on the Caloosahatchee and St. Lucie Rivers. For example, the Janicki Report points out that the effects of the 2020 Proposed Deviation on these watercourses is hydrodynamic in nature. The Supplemental EA admits that the 2020 Proposed Deviation will decrease tidal flushing and will increase vertical and horizontal stratification of the water column. Both the reduced tidal flushing and stratification can significantly increase the probability of HAB formation conditions for *Microcystis aeruginosa*. Additionally, the blue green algae from Lake Okeechobee are freshwater species that when exposed to higher salinities in the rivers will die, releasing whatever nutrients that are bound up while actively growing and reproducing. Research has shown that the nutrients that are released will be quickly taken up by algae that are more salinity tolerant and, which could be harmful. Lastly, the 2020 Proposed Deviation can have dramatic effects on how nutrient loading is manifested in the rivers. Thus, it is possible the 2020 Proposed Deviation will make things worse in these two rivers with regards to HAB production.

Finally, although the Supplemental EA attempts to address the environmental impact of the 2020 Proposed Deviation on the environmental health of the two estuaries, the Janicki Report finds that the Corps analysis is inadequate. The Supplemental EA focused on the response in salinity in the two estuaries to the 2020 Proposed Deviation. The Supplemental EA identified critical salinity conditions necessary to support both oyster populations and seagrass coverage. What the Supplemental EA failed to address is the effect of the 2020 Proposed Deviation on the frequency and duration of the critical salinities in the estuaries. Also, the timing of the critical salinities is important (i.e., many of the biological communities in the estuaries are acclimated not only to a salinity condition but to the specific time of the year when the condition occurs).

E. The 2020 Proposed Deviation Could Negatively Impact Water Quality and Fish and Wildlife

1. Caloosahatchee and St. Lucie Rivers

The Janicki Report points out the 2020 Proposed Deviation could negatively impact water quality and environmental conditions in the Caloosahatchee and St. Lucie Rivers. It is widely known that both rivers do not meet state water quality standards and have been deemed impaired by the FDEP for nutrients and dissolved oxygen. Also, FDEP has established nutrient

Total Maximum Daily Loads (“TMDLs”) for both rivers [Chapter 62-304.800, Florida Administrative Code (F.A.C.) – Caloosahatchee River Basin and Chapter 62-304.705, F.A.C. – St. Lucie River Basin]. To address these TMDLs, FDEP has developed Basin Management Action Plans (“BMAPs”) for both rivers.

The Supplemental EA does not address how the 2020 Proposed Deviation will affect the ability of the stakeholders in each these of basins to achieve their respective TMDLs.³ The phosphorus concentrations in the waters released from the lake will vary based on lake levels and the timing and magnitude of these releases will differ from the current condition. Additionally, the changes in lake levels have the potential to increase internal loading in Lake Okeechobee due to the variation in lake levels. The Supplemental EA provides no assurances that the changes in nutrient loading will not preclude achieving the TMDL in either river.

2. Fish and Wildlife

The Janicki Report points out that the Supplemental EA did not consider any direct effects on fish and wildlife in the lake and in the receiving waterbodies.⁴ For example, with regards to snail kites in the project area, the effect of rapid changes in lake levels may reduce suitability of nesting substrates (nest collapses in cattails) or dewatering of the area around the nest allowing predation. The Supplemental EA states that any impacts on the fish and wildlife associated with Water Control Area 3A would be avoided without demonstrating how this will be achieved. Finally, the Supplemental EA acknowledges the potential usage and occurrence of threatened and endangered species and/or critical habitat within the study area; however, with the exception of snail kites, there are no analyses that can support the supposition that the habitats of other threatened or endangered species will remain unharmed with the implementation of the 2020 Proposed Deviation.

F. The Proposed Deviation Will Adversely Impact Public Health, Safety and Welfare

1. The Proposed Deviation will Significantly Reduce the Amount of Water Available for Public Water Supply Systems

One of the major purposes of the CS&F Project is to provide water to the water utilities in southeast Florida. Major canals drain southward from Lake Okeechobee provide needed water deliveries to manage groundwater levels in the WCAs, recharge wellfields, supply water users and prevent saltwater intrusion into the surficial aquifer system. The 2020 Proposed Deviation will impact this water supply by authorizing increased releases to the Caloosahatchee and St. Lucie Estuaries and to areas south of Lake Okeechobee during the dry season that would not be allowed under LORS 2008. These increased releases will reduce water deliveries to the southeast Florida and decrease the water level in Lake Okeechobee at the start

³ The Supplemental EA attempts to address the impact of the 2020 Proposed Deviation on the Caloosahatchee and St. Lucie Estuaries through LOOPS Modeling. However, for the reasons stated above, this modeling is not adequately reliable to provide assurances that the 2020 Proposed Deviation will not cause harmful effects.

⁴ *Id.*

of the wet season to possibly within the Water Shortage Management Band. That makes water shortages more likely and increases the risk of salt water intrusion.

Although the Supplemental EA Operational Strategy requires discharges to the Caloosahatchee and St. Lucie Estuaries to be cut back if lake levels fall within 0.25 feet of the Water Shortage Management Band, there is no such limitation with regards to releases to the south. In that instance the releases would continue up to the maximum conveyance capacity of the Miami River, the North New River and Hillsboro Canals until it is determined that such releases would cause any of the WCAs to rise more rapidly than ecologically preferable. However, the Operational Strategy says “it is not anticipated that that advanced releases sent south will be held back during HAB operations.”

Additionally, the LOOPS Modeling provides no assurance that water levels in Lake Okeechobee will not fall to within the Water Shortage Management Band. The reliability and accuracy of this modeling effort is addressed above. However, it is important to point out that in all the scenarios that were run using this model, discharges to the south were limited to 60,000 acre/feet per year. This limitation does not comport with the language of the Operational Strategy and is inconsistent with practices over the past few years, when there have been discharges to the south as high as 400,000 acre/feet per year.

In the *Utilities of Concern in the Lower East Coast Regional and Lake Okeechobee Service Area (SFWMD 2007)*, the SFWMD identified all the public water supply systems that either draw water directly from Lake Okeechobee, the C-43 or local surface waters to meet their needs and systems in the Lower East Coast Region, which are dependent on water deliveries from Lake Okeechobee to recharge wellfields and impede the movement of saltwater inland during dry times. In total, these public water supply systems supply water to over 6 million persons.

Out of all of these public water systems, the report identifies a number of utilities of concern during drought conditions. These utilities of concern were divided into three categories: Coastal Utilities at Risk, Coastal Utilities of Concern and Surface Water Utilities of Concern. The Coastal Utilities at Risk include utilities with wellfields near the saltwater interface, which do not have a western wellfield, have not developed alternative sources of water and have limited ability to meet water needs through interconnects. At the time, the report identified 14 Coastal Utilities at Risk in Palm Beach, Broward, Miami-Dade and Monroe Counties. The Coastal Utilities of Concern have wellfields near the saltwater interface, but either have a western wellfield, and/or an alternative source that is not threatened by saltwater intrusion. At the time, the report identified 16 Coastal Utilities of Concern in Palm Beach, Broward and Miami-Dade Counties. Finally, the Surface Water Utilities of Concern include those public water systems that take water directly from Lake Okeechobee or are dependent on surface water deliveries from the lake. At the time, the report identified 7 Surface Water Utilities of Concern.

The City of West Palm Beach operates the largest water utility identified at risk in the 2007 SFWMD Report. The City supplies potable water to 150,000 customers within West Palm

Beach, the Town of Palm Beach and the Town of South Palm Beach. The City receives the majority of its water supply (98% or more on average) from Lake Okeechobee via the SFWMD's L-8 and L-8 Tieback Canals, beginning at Culvert 10A. Flow from Lake Okeechobee is conveyed into the City's system via the L-8 and L-8 Tieback Canals at the City's Control 2 Pump Station. From there the water enters the City's M-Canal through Control Structure 3, crossing Grassy Waters Preserve through Control Structure 4 and from there eastward to Lake Mangonia. Water from Lake Mangonia travels through a canal into the main body of Clear Lake and then into the east lobe of Clear Lake, where the intake to the City's water treatment plant is located.

In 2016 the SFWMD began operation of the L-8 Reservoir System. Since that time the hydrologic data shows a complementary relationship between the L-8 Reservoir System and the Control 2 Pump Station. Under this relationship, when Control 2 is not pumping flow passes south to the L-8 Canal to assist with many objectives, some of which are related to CERP. During the times the City needs water and is available in the L-8 Canal, flow reverses and passes north into the L-8 Tieback Canal to assist with water supply for the City. The relationship between the L-8 Reservoir and the Control 2 Pump Station assumes the seasonable releases of LORS 2008 as a foundational protocol.

The City retained Collective Water Resources, LLC to assess the impact of the 2020 Proposed Deviation on its water supply. According to the Collective Water Report, Collective Water ran a series of sensitivity analyses to determine the potential impact of the 2020 Proposed Deviation on the City's ability to pump water eastward for water supply needs via Control 2. A range of flow reduction scenarios were simulated to examine four potential discharges scenarios as described in the Supplemental EA. The results of those simulations are reported in Table 1.

Further analysis was conducted using scenario 4. This scenario was selected as an example of a moderate impact of the 2020 Proposed Deviation on the City's water supply. According to Collective Water Resource's analysis, the 2020 Proposed Deviation would generally decrease flows to the L-8 Reservoir during the wet season. This decrease would affect inflows to the L-8 Reservoir System and the many critical objectives related to its operation, as well as decreasing the City's ability to receive quantities of water from the L-8 Reservoir during drought.

Collective Water Resources then analyzed the potential impact of a drought against the 2020 Proposed Deviation. Its analysis indicated the City would have essentially run out of surface water, if the 2009-2010 drought was superimposed against the 2020 Proposed Deviation under scenario 4.⁵ Although the City has reserve supplies (groundwater or emergency interconnects), those sources may also be limited by the impact of the 2020 Proposed Deviation and the drought conditions. Thus, in the City's case, the 2020 Proposed Deviation would lead to a public health and safety emergency under moderate to severe droughts such as has been

⁵ As indicated above, the 2009-2010 drought was outside the period of record of the Corp's LOOPS modeling and therefore was not one of the droughts analyzed by the Corps using that model.

experienced in the past, as documented in the *2000-2001 Drought in South Florida Report (SFWMD 2001)*.

2. *The Proposed Water Bank Will Not Work*

In the Supplemental EA, the Corps contends that the Proposed Deviation will not impact water users any differently than they are currently impacted under LORS 2008. This would be accomplished through what the Corps calls a “Water Bank” for HAB operations. The volumes of releases that are called for in LORS 2008, but are not made will be banked as a “deposit.” Releases that exceed those called for in LORS 2008 will be banked as a “withdrawal” or “loan.” The banking period is the 10 months between 1 February and 1 December. This time period was chosen to coincide with the beginning of the endangered everglades snail kite nesting period, for which Lake Okeechobee is considered a critical habitat.

The goal of this bank will be to always get to a zero balance by 1 December. However, this goal may be more aspirational than real as conditions out of the Corps’ control may impact the water bank such as “large rainfall or tropical events, drought, La Niña, or El Niño, or environmental concerns.” In fact, the LOOPS modeling performed by the Corps in support of the Supplemental EA shows that Water Bank would have only balanced 6 times out of the 46-year period of record, **or in other words the Water Bank only works 13% of the time!** In layman’s term, any bank that only operates in the black 13% of the time would not remain in business for long.

The conclusion reached in the LOOPS Modeling is borne out by the Collective Water Report. According to that report, South Florida is experiencing increased variability in hydrology. This variability not only indicates that droughts are becoming more common, but also flooding is increasing in frequency and intensity. Also, the time of year when droughts and flooding occur is changing as well. According to the Collective Water Report, the data from 1991 to 2018 indicates that South Florida is experiencing more intense and frequent storm events during what typically would be the dry season.

The Collective Water Report also specifically looked at the feasibility of the Corps’ Water Bank approach by examining water flow through Culvert 10A from Lake Okeechobee for the period of record (2000-2019).⁶ During this period, the peak flow occurred in January 2003 (555 cfs). Peak annual inflows at Culvert 10A have generally decreased since LORS 2008 was implemented. However, since 2009, peak annual flows have routinely occurred during the dry season (and the majority during January). This analysis also suggested that despite allowing for higher flows through Culvert 10A in the dry season (almost a 10% increase at times), it was nearly impossible to match the historical average inflows for Culvert 10A for the period of record. The upper range of the dry season discharges needs to be carefully constrained to maintain safe conditions in the L-8 Canal and many of the connecting secondary and tertiary

⁶ As pointed out above, the period of record analyzed in the Corps’ LOOPS Modeling stopped in 2010. Therefore, the Corps did not analyze the potential impact of the 2020 Proposed Deviation on the City’s water supply during the past 10 years.

canals. This canal balance issue confirms the Corps' own LOOPS Modeling, that it is nearly impossible to attain the "net zero" discharge assumption for the water bank.

Finally, relying on weekly meetings to make decisions regarding discharges is also likely an inappropriate mechanism given unreliability of drought predictions – among other concerns. According to the Collective Water Report, data from the National Weather Service Climate Prediction Center (2004-Current) identified many times when drought predictions over the past 9 years have been incorrect for the West Palm Beach area, including all years since 2009 (except for 2016). Among those times was May 21, 2009 and June 4, 2009. The early summer drought of 2009 represented one of the most severe droughts the City has experienced in recent years. However, on June 4, 2009, the National Weather Service predicted no drought for the West Palm Beach area.

In sum, the "Water Bank" concept proposed by the Corps will not work and most importantly will not limit the impact of the 2020 Proposed Deviation on the City's water system to the same impact it currently experiences under LORS 2008.

G. The Proposed Deviation Could Cause Increased Coastal Flooding

The 2020 Proposed Deviation will have the unintended consequence of increasing the risk of flooding in secondary and tertiary canal systems in the West Palm Beach area during the dry season. According to the Collective Water Report, the Corps did not simulate or work with stakeholders to evaluate or adjust operations within the various secondary canal systems. According to the Supplemental EA, no secondary or tertiary canal systems were evaluated as part of the Proposed Deviation. However, virtually all these canal systems are currently operated with the seasonality of LORS 2008 as a foundational assumption. Further, because the Corps decision to pursue a Supplemental EA rather than an Environmental Impact Statement (EIS) and the shortened comment period, the various stakeholders that operate secondary and tertiary canal systems have not had the opportunity to evaluate any shift in the seasonality of discharges under the 2020 Proposed Deviation on their canal systems.

Since South Florida is experiencing higher variability across the entire hydrologic spectrum, it is also anticipated that South Florida will experience more intense and frequent storm events during the dry season. This would increase the risk of flooding since the Corps would be discharging more water during the dry season and the secondary and tertiary canals would be close to capacity with an unadjusted operational protocol linked to LORS 2008.

H. The 2020 Proposed Deviation Could Result in Increased Significant Environmental Harm to MFL Water Bodies⁷

1. General

The overall goal of Chapter 373, Florida Statutes is to ensure the sustainability of water resources in Florida. Chapter 373 provides water management districts like SFWMD with several tools to carry out this responsibility, including authority to establish minimum flows and levels (“MFLs”). MFLs are either flows in surface watercourses or minimum water levels in an aquifer or surface water body at which further withdrawals would be significantly harmful to the water resources and ecology of the area. See §373.042, Fla. Stat. Significant harm is defined by SFWMD in Rule 40E-8.021(31), Florida Administrative Code, as the temporary loss of water resource functions, which results from a change in surface or groundwater hydrology that take more than 2 years to recover.

Section 373.0421, Florida Statutes requires water management districts to adopt and implement a recovery or prevention strategy for water bodies with flows or levels that are below, or are projected to fall within 20 years below the adopted MFL criteria. Prevention strategies are developed when MFL criteria are not currently violated but are projected to be violated within 20 years of the establishment of the MFL. Recovery strategies are developed when MFL criteria are currently violated.

Between 2001 and 2006, MFLs were adopted for several water bodies that may be impacted by the 2020 Proposed Deviation, including Lake Okeechobee, the St. Lucie River, the Caloosahatchee River, the Northwest Fork of the Loxahatchee River and the Biscayne aquifer. Simultaneously with the adoption of these MFLs a prevention/recovery strategy was adopted for Lake Okeechobee, a recovery strategy was adopted for the Northwest Fork of the Loxahatchee River and a prevention strategy was adopted for the Biscayne aquifer.

2. Lake Okeechobee

In 2001 an MFL of 11 feet NGVD was adopted for Lake Okeechobee. See 40E-8.221(1), F.A.C. The MFL criterion was based on the relationship between water levels in the lake and the lake’s ability to 1) protect the coastal portion of the surficial aquifer system against salt-water intrusion, 2) supply water to Everglades National Park, 3) provide littoral zone habitat for fish and wildlife, and 4) ensure navigational and recreational access. Consideration was also given to the lake’s function as a storage area for supplying water to adjacent areas such

⁷ The Supplemental EA attempts to address the impact of the 2020 Proposed Deviation on MFLs for Lake Okeechobee, Caloosahatchee River and St. Lucie River through LOOPS Modeling. However, for the reasons stated above, this modeling is not adequately reliable to provide assurances that the 2020 Proposed Deviation will not cause harmful effects. Also, the LOOPS modeling did not address the MFLs for the Northwest Fork of the Loxahatchee River and the Biscayne Aquifer, which rely on water from Lake Okeechobee to achieve recovery and/or prevention.

as the Everglades Agricultural Area, the Seminole Tribe of Florida reservations and the Lake Okeechobee Service Area.

An MFL exceedance occurs when the water level in Lake Okeechobee falls below 11 feet NGVD for more than 80 consecutive or non-consecutive days during an 18-month period. The 18-month period over which MFL compliance is assessed starts following the first day the lake falls below 11 feet NGVD and cannot include more than one wet season (May 31 through October 31) on any given calendar year. An MFL violation occurs when an exceedance occurs more than once every 6 years.

An analysis was conducted in 2000 to determine if the Lake Okeechobee MFL criterion could be expected to be violated. *See Lower East Coast Water Supply Plan (SFWMD 2018)*. The South Florida Water Management Model was used to evaluate the MFL criterion. Under the assumptions of the then regulation schedule adopted by the Corps for Lake Okeechobee in July 2000, it was determined that the MFL criterion would not be violated and existing as well as projected users would have a 1-in-10-year drought level of certainty. Therefore, SFWMD adopted a prevention strategy for the lake.

However, that all changed with implementation of LORS 2008, which resulted in a lowering of water levels in Lake Okeechobee. As a result, MFL violations were projected to occur. Consequently, in 2008, SFWMD changed the prevention strategy to a recovery strategy consisting of four components: Environmental enhancement projects to be implemented during extreme low lake stages; regulatory constraints on the consumptive use of lake water; increased water shortage restrictions for water users depending on the regional system like the City; and, capital projects that improve storage capacity both within and adjacent to the lake. *See Lower East Coast Water Supply Plan (SFWMD 2018)*. It was assumed this recovery strategy would halt further significant harm to Lake Okeechobee until the Herbert Hoover Dike rehabilitation was completed in 2022 and the change in the regulation schedule would be expected to return the lake to an MFL prevention strategy.

However, the 2020 Proposed Deviation will now result in a further lowering of water levels in Lake Okeechobee beyond what was contemplated by LORS 2008. It is no longer certain the existing recovery strategy will be adequate to prevent increased significant harm to those factors the MFL criterion was designed to protect including: 1) protection of the coastal portion of the surficial aquifer system against saltwater intrusion, 2) the provision of water to Everglades National Park, 3) preservation of littoral zone habitat for fish and wildlife, and 4) maintenance of navigational and recreational access. Since the Supplemental EA did not effectively evaluate the impact of the 2020 Proposed Deviation on the MFL or the adequacy of the existing recovery strategy to counter those impacts, it must be assumed that the 2020 Proposed Deviation will cause further significant harm to those critical features. Furthermore, according to the 2020 Proposed Deviation, this situation could remain in place until LOSOM 2022 is adopted three years later. Finally, it should be pointed out that this 2020 Proposed Deviation is the first change to the Lake Okeechobee regulation schedule in the nearly 20 years that the MFL has been in place, which was not coordinated with SFWMD.

3. *St. Lucie River*

An MFL was established by the SFWMD for the St. Lucie River and Estuary in 2002. Rule 40E-8.341, F.A.C. states monthly flows to the St. Lucie Estuary should not fall below 28 cfs at the Gordy Road Structure to the St. Lucie River North Fork for two consecutive months during a 365-day period for two consecutive months. Clearly this MFL is intended to preserve the freshwater-salinity interface in the river.

Simultaneously with the adoption of this MFL, the SFWMD determined the river was in prevention and established a prevention strategy. According to Rule 40E-8.421(5)(a), the prevention strategy is to manage discharges to the St. Lucie River and Estuary within the operational protocol of the Ten Mile Creek Project, scheduled to be completed by 2004. Flow targets will be consistent with the CERP performance requirements for Indian River Lagoon.

As pointed out in the Janicki Report, the 2020 Proposed Deviation will change the magnitude, timing and manner of freshwater releases from Lake Okeechobee to the St. Lucie River. These changes can have significant effects on the temporal and spatial distributions of salinity in the river. The Supplemental EA fails to effectively address the impact of the 2020 Proposed Deviation on the MFL or the prevention strategy for the St. Lucie River, as described above. The documents prepared by the SFWMD in support of the MFL and prevention strategy provide tools that allow assessment of the impact of the 2020 Proposed Deviation on the MFL. There appears to have been no effort to apply these tools to support the 2020 Proposed Deviation. Consequently, the Supplemental EA provides little assurance that the MFL in the St. Lucie River will be met or that the prevention strategy remains viable.

4. *Caloosahatchee River*

An MFL for the Caloosahatchee River was first established by the SFWMD in 2003. It was amended in 2018. The amended MFL appears in Rule 40E-8.221(2), F.A.C., which states that the MFL for the Caloosahatchee River is the 30-day moving average flow of 400 cfs at S-79. This MFL is also intended to preserve the freshwater-salinity interface in the river.

Simultaneously with the adoption of the MFL, the SFWMD determined the river was in recovery. Analysis completed with the *Lower East Coast Water Supply Plan (SFWMD 2000)* showed that long-term regional storage was necessary to achieve proposed MFL criteria and that MFL violations would continue until a recovery strategy was implemented. As a result, the SFWMD adopted a recovery strategy based on construction of the CERP project known as the Caloosahatchee River (C-43) West Basin Storage Reservoir. This reservoir would allow flows to the Caloosahatchee River Estuary to be moderated through capture of surface water flows and a portion of Lake Okeechobee releases in the reservoir during wet periods and release of water from the reservoir during dry periods.

As pointed out in the Janicki Report, the 2020 Proposed Deviation will impact this recovery strategy by directing releases from Lake Okeechobee away from the Caloosahatchee River during the wet season. This would appear to impact the design purpose of the Caloosahatchee River Reservoir by reducing the amount of water available for storage during the wet season and consequently reducing the release of water from the reservoir during dry periods. However, the Supplemental EA fails to effectively address the impact of the 2020 Proposed Deviation on the MFL or the recovery strategy. Again the documents prepared by the SFWMD in support of the original MFL, the amended MFL and the recovery strategy provide tools that allow assessment of the impact of the 2020 Proposed Deviation on the MFL. There appears to have been no effort to apply these tools to support the 2020 Proposed Deviation. Consequently, the Supplemental EA provides little reassurance that the MFL in the St. Lucie River will be met or that the recovery strategy remains viable.

5. Northwest Fork of the Loxahatchee River

The Loxahatchee River is located in Martin and Palm Beach County and flows into the Atlantic Ocean through Jupiter Inlet. It is regarded as the last free-flowing river in southeastern Florida. Approximately 7.6 miles of the river's Northwest Fork were designated as Florida's first Wild and Scenic River in 1985 and a National Wild and Scenic River. To protect freshwater flows in the Northwest Fork, an MFL was adopted in 2003. The MFL criteria area minimum flow of 35 cubic feet per second over Lainhart Dam and an average salinity of less than 2 at river mile 9.2. An MFL exceedance occurs when 1) flows decline below 35 cfs for more than 20 consecutive days; or 2) salinity, expressed as 20-day rolling average, is greater than 2 at river mile 9.2. An MFL violation occurs when an exceedance occurs more than once in a 6-year period.

The MFL criteria protects the freshwater floodplain swamp of the Northwest Fork. The designation of the Northwest Fork as a National Wild and Scenic River identified the floodplain swamp and its associated cypress forest as a resource of outstanding value that needs to be protected.

The Northwest Fork of the Loxahatchee River was not meeting the MFL criteria at the time of adoption. Therefore, a recovery strategy was adopted. According to the *Lower East Coast Water Supply Plan (SFWMD 2018)* the recovery strategy includes the following components: Structural Improvements, including CERP projects that support the MFL; Operational Protocols – Providing flows from Lainhart Dam and other sources to meet the MFL (35 cfs) as well as restorative flows greater than 50 cfs; and, Regulatory Activities – SFWMD regulatory program and water shortage plans to ameliorate low-flow conditions.

The two CERP projects identified to meet the MFL are the G-160 and G-161 Structure Projects and the Loxahatchee Watershed Restoration Project. The former includes restoring the natural hydroperiod by providing additional water to the Loxahatchee Slough from Grassy Waters Preserve, a natural preserve owned and maintained by the City. The latter project involves the restoration of flows to the Northwest Fork of the Loxahatchee River through the

Pal Mar and J.W. Corbett Wildlife Management Area Hydropattern Restoration Project, the L-8 Basin Modifications, the C-51 Reservoir and L-8 flow equalization basin and flow-way features in the L-8, C-18 and Loxahatchee tributary basins. Most of these projects involve re-diverting flows from Lake Okeechobee and the L-8 Basin to provide additional water to meet the MFL.

The Supplemental EA completely fails to examine the impact of the 2020 Proposed Deviation on the MFL for the Northwest Fork of the Loxahatchee River or the adopted recovery strategy. However, this was one of the items evaluated in the Collective Water Report. Based on the analysis conducted by Collective Water, it is reasonable to deduce that the 2020 Proposed Deviation would generally decrease flows to the L-8 Reservoir System during the wet season. This decrease will affect inflows to the L-8 Canal and the many critical objectives related to its operation, as well as decreasing the City's ability to receive water from the L-8 Reservoir during drought. These reduced flows may impact the recovery strategy by affecting the SFWMD's successful operation of the G-161 Structure. Therefore, the 2020 Proposed Deviation will have a negative impact on the MFL, which is designed to protect the outstanding value of freshwater floodplain swamp habitat in the Northwest Fork. This in turn will cause harm to a National Wild and Scenic River.

4. Biscayne Aquifer

The Biscayne aquifer extends beneath Monroe, Miami-Dade, Broward and Palm Beach Counties, over an area of approximately 2.56 million acres. It is a highly permeable, wedge-shaped, unconfined aquifer more than 200 feet thick in coastal Broward County, thinning to an edge of 35 to 40 miles inland in the Everglades. The Biscayne aquifer supplies all, or a large portion, of the potable water supply systems from Palm Beach County southward, including the Florida Keys, which is primarily supplied via pipeline from mainland Miami-Dade County. Other than rainfall, the primary source of water for the Biscayne aquifer is indirect groundwater recharge from canals discharging from Lake Okeechobee.

Due to its widespread use, an MFL and prevention strategy was adopted for the Biscayne aquifer in 2001 based on analysis of the relationships between groundwater and canal water levels, and the potential for saltwater intrusion. The MFL criterion is the water level in the aquifer that results in the movement of the saltwater interface landward to the extent that groundwater quality at an established withdrawal point is insufficient to serve as a water supply source. An MFL violation occurs when water levels within the aquifer produce this degree of saltwater movement at any time.

Because of the relationship between water levels in the Biscayne aquifer and the canal system discharging water from Lake Okeechobee, the MFL is expressed as minimum water levels at 11 primary water management structures maintained by SFWMD in canals that overlie the Biscayne aquifer. To meet the MFL, canal stages cannot fall below the levels shown in Table J-2 of the 2000 Lower East Coast Regional Water Supply Plan for more than 180 days, and the average annual stage must be sufficient to allow water levels and chloride concentrations

in the aquifer to recover to levels that existed before a drought or discharge event occurred. The prevention strategy is a series of actions designed to maintain canal stages at the minimum operation levels.

The Supplemental EA completely failed to examine the impact of the 2020 Proposed Deviation on the Biscayne aquifer MFL. However, since the 2020 Proposed Deviation will lower water levels in Lake Okeechobee, it will likely have a negative impact on the availability of water in the canal system discharging to the Biscayne aquifer. Thus, the 2020 Proposed Deviation could cause a violation of the MFL and possible saltwater intrusion. This would have a devastating impact on the public water supply systems of those water utilities, who supply the potable water needs of over 6 million persons.

I. The 2020 Proposed Deviation Requires an Environmental Impact Statement

1. General

The 2020 Proposed Deviation requires an EIS under NEPA because of the significant impacts on the human environment. The Revised FONSI is not appropriate in this case.

According to 33 CFR 230.10, an EA is a document, which provides sufficient information to the Corps' district commander on the potential environmental effects of the proposed action for determining whether to prepare an EIS or FONSI. According to 33 CFR 230.11 and 40 CFR 1508.13, a FONSI may only be prepared for a proposed action that will not have a significant impact on the human environment. The Supplemental EA and the information submitted in this comment letter clearly shows that an EIS is required because the 2020 Proposed Deviation will have a significant impact on the human environment.

The Corps attempts to evade its responsibility to prepare an EIS by arguing the EA is supplemental to the LORS 2008 EIS. This is based primarily on the fact that one of items considered in that EIS was public health and safety. However, the public health and safety considered in the LORS 2008 EIS was the harm the public would suffer from a catastrophic failure of the Herbert Hoover Dike, which surrounds Lake Okeechobee. The Corps attempts to bootstrap the Revised FONSI on this issue of public health and safety by contending that the purpose of the 2020 Proposed Deviation is also public health and safety. In the case of the deviation, the public health and safety is managing the risk of HABs by making advanced discharges in violation of LORS 2008 to the Caloosahatchee and St. Lucie Estuaries and the area south of Lake Okeechobee. However, the human, societal and environmental impacts associated with protecting the public from a catastrophic discharge of water from Lake Okeechobee as a result of a failure of the surrounding dike are much different than those associated with operating Lake Okeechobee to minimize the potential human health concerns associated with HABs. Thus, Corps attempt hide behind the LORS 2008 EIS is not credible.

According to 40 CFR 1508.14, “Human Environment” shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with the environment. According to 40 CFR 1508.27, significant impact requires consideration of both context and intensity. Context means that the significance of an action must be analyzed in several contexts such as society as whole (human, national), the affected region, the affected interests and the locality. 40 CFR 1508.27(a). Intensity refers to the severity of the impact, which requires consideration of 10 factors.

2. Context

The context of the 2020 Proposed Deviation includes all of South Florida. The deviation will modify the established regulation schedule for Lake Okeechobee, which is a critical component of the CS&F Project. The authorized purposes for this project are flood control; navigation; water supply for agricultural irrigation, municipalities and industry, the Everglades National Park, regional groundwater control, salinity control; enhancement of fish and wildlife; and recreation. This project impacts the lives of over 8 million persons, the economy of the State of Florida, the environmental health of the Everglades National Park, a resource of worldwide significance and the environmental wellbeing of related water bodies that provide critical habitat to endangered and threatened species.

In considering the context of the 2020 Proposed Deviation, one must keep in mind that the Corps is proposing a major change to LORS 2008, which was adopted by the Corps only after preparation of an EIS. In fact, the adoption of every regulation schedule or major modification of a regulation schedule for Lake Okeechobee has required an EIS. In point of fact, 33 CFR 230.6(c) provides that proposed major changes to the operation and/or maintenance of a completed project, such as the CS&F Project, normally require an EIS.

3. Intensity

Upon consideration of the following factors, it is clear that the intensity of the 2020 Proposed Deviation is significant.

a. Impacts that may be both beneficial and adverse

The Supplemental EA has documented what it believes are beneficial impacts from the 2020 Proposed Deviation on controlling the proliferation of HABs in Lake Okeechobee to the St. Lucie and Caloosahatchee estuaries by modifying the releases from the Lake authorized under LORS 2008. This comment letter has documented a number of adverse impacts resulting from the 2020 Proposed Deviation. Those include negative impacts to: (1) water quality in the Caloosahatchee and St. Lucie Rivers; (2) fish and wildlife, including endangered species; (3) the City’s public water supply; (4) coastal flooding risk; (5) the operation of CERP Projects such as the L-8 Reservoir; and, (6) minimum flows and levels and prevention and recovery strategies for Lake Okeechobee, the St. Lucie River, the Caloosahatchee River, Northwest Fork of the Loxahatchee River and the Biscayne aquifer.

b. The degree to which the proposed action affects public health or safety

As stated above this will have a negative impact on public health and safety by reducing the amount of water available to the City during drought conditions and increasing the risk for coastal flooding. The analysis by Collective Water Resources indicates that if the Proposed Deviation were superimposed on the 2009 drought, a drought condition, which was not considered in the Corps' LOOPS Modeling, the City would have run out of surface water, which would create a public health emergency for its 150,000 customers.

c. Unique characteristics of the geographic area such as proximity to historical or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas

Lake Okeechobee and the areas receiving water releases from the lake represent a unique region. The geographic area encompasses all of South Florida, which is home to over 8 million persons. It contains natural systems of worldwide significance such as the Everglades Park. It contains nationally recognized wild and scenic rivers such as the Northwest Fork of the Loxahatchee River. It also contains ecologically critical wetland habitat like Grassy Waters Preserve and others too numerous to mention. It contains the geologically unique Biscayne aquifer. It contains prime farm lands. All of these unique resources will be negatively impacted by the 2020 Proposed Deviation.

d. The degree to which the effects on the quality of the human environment are likely to be highly controversial

Any change to the current regulation schedule will be highly controversial. This evidenced by the fact that the Corps received 537 letters, excluding duplicates, totaling over 1,100 pages with regards to the 2019 Proposed Deviation. The Corps' response matrix addressing these letters totaled 340 pages. Additionally, the Corps has received thousands of comments to date regarding various aspects of the on-going LOSOM process. The comments for the most part dealt with the issues raised in this comment letter, which relate to modifying the Lake Okeechobee operation schedule to address HABs and the consequences of that decision on the other congressionally authorized purposes of the CS&F Project.

e. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks

As documented in this comment letter and the Janicki Report, the degree to which the 2020 Proposed Deviation will actually be effective in reducing the likelihood of HABs in the Caloosahatchee and St. Lucie estuaries is highly uncertain. The analysis presented in the Supplemental EA was inadequate, as indicated above, and did not consider some of the prior research and modeling tools that have addressed the occurrence of HABs in Lake Okeecho-

bee, some of which indicate that the proposed variation in lake levels may increase phosphorous concentration due to internal loading, which in turn could increase the occurrence of HABs.

Another matter of uncertainty is actually how the 2020 Proposed Deviation will be implemented. As stated above, the 2020 Proposed Deviation lacks any meaningful definitions or standards that would provide guidance to the public as to when HAB discharges would be made. This makes it impossible for water utilities to plan for water shortages and the operators of secondary and tertiary canals to plan for the avoidance of coastal flooding conditions.

The only analysis the Corps has conducted of the impact of the 2020 Proposed Deviation on public water supply is the clearly inadequate LOOPS Modeling. Among its many failings, is the fact that the modeling did not assess hydrologic conditions during the most recent 10 years, which would be the most pertinent historic condition. Nonetheless, even this inadequate study showed that the Corps' attempt to mitigate impacts to public water suppliers through its Water Bank is ineffective. Thus, the 2020 Proposed Deviation represents a unique and unknown risk to the City's 150,000 water customers.

f. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration

The 2020 Proposed Deviation and Supplemental EA indicates it will be implemented most likely starting February 1, 2021 and will remain in effect for at least a year and remain in effect until replaced by LOSOM, which is anticipated to occur in 2022. Thus, there is a high likelihood that the 2020 Proposed Deviation rather than LORS 2008 will be used as the base case when developing LOSOM. There is precedent for this action insofar as the Corps used a deviation to the 2000 operation schedule for Lake Okeechobee as the base case, when developing LORS 2008.

g. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts

As explained above, the 2020 Proposed Deviation is related to the development of LOSOM. It will likely be used by the Corps in developing LOSOM. The Corps has already determined that LOSOM will significantly impact the human environment by initiating an EIS for LOSOM. So even if the 2020 Proposed Deviation were deemed individually insignificant, its relationship to LOSOM will result in cumulatively significant impact.

h. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources

As stated in this comment letter, the 2020 Proposed Deviation will adversely impact public health and safety by decreasing the quantity of water available to the City during drought and

increasing the risk of coastal flooding. There are districts, sites, highways, structures or objects listed in or eligible for listing in the National Register of Historic Places within the City that may be impacted as a result. Also, the impacts of the 2020 Proposed Deviation may cause loss or destruction of significant scientific, cultural or historical resources for the same reason.

- i. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973*

As stated in this comment letter and in the Janicki Report, the 2020 Proposed Deviation may adversely affect endangered or threatened species such as the everglades snail kite and may adversely affect endangered or threatened species that utilize Lake Okeechobee, the St. Lucie River, the Caloosahatchee River and Northwest Fork of the Loxahatchee River by impacting the attainment of the MFL established for these waterbodies. An MFL is intended to protect the water resources and ecology of the area from significant harm. In all these cases, this involves preserving critical habitat for endangered or threatened species.

- j. Whether the action threatens a violation of Federal, State or local law or requirements imposed for the protection of the environment*

We believe the 2020 Proposed Deviation violates what is known as the Savings Clause in the Water Resources Development Act of 2000, Public Law 106-541, which is applicable to the CS&F Project. This provision provides in pertinent part as follows:

(A) NO ELIMINATION OR TRANSFER. –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 the implementation of the Plan [CERP], the Secretary and the non-Federal sponsor shall not eliminate or transfer existing legal sources of water, including those for–

- (i) an agricultural or urban water supply;
- (ii) allocation or entitlement to the Seminole Indian Tribe of Florida under section 7 of the Seminole Indian Land Claims Settlement Act of 1987 (25 U.S.C. 1772e);
- (iii) The Miccosukee Tribe of Indians of Florida;
- (iv) water supply for Everglades National Park; or
- (v) water supply for fish and wildlife.

(B) MAINTENANCE OF FLOOD PROTECTION– Implementation of the Plan shall not reduce the level of service for flood protection that are–

- (i) in existence on the date of enactment of this Act; and
- (ii) in accordance with applicable law.

CERP has not yet been fully implemented and water from these projects is not yet available to the water utilities. Based on the information contained above, we believe the 2020 Proposed

Deviation has the effect of eliminating or transferring the City's existing legal source of water from Lake Okeechobee to a new, unauthorized purpose of combating HABs.

We also believe the 2020 Proposed Deviation violates Sections 373.042 and 373.0421 by impacting the attainment of MFLs established by SFWMD for Lake Okeechobee, the St. Lucie River, the Caloosahatchee River, Northwest Fork of the Loxahatchee River and the Biscayne aquifer and impeding implementation of the associated prevention and recovery schedules, as described above. This constitutes significant harm to water resources and the environment of the area.

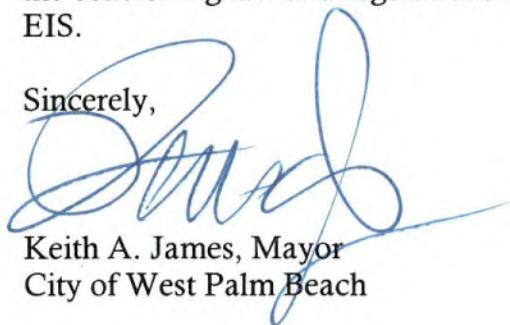
4. Conclusion

For the reasons stated above, the Revised FONSI should be rejected because the 2020 Proposed Deviation does in fact significantly affect the human environment.

J. Recommendations

In conclusion, the City respectfully requests that the Corps not implement the Planned Deviation. Instead, operating Lake Okeechobee to address HABs should be left to the current LOSOM process. However, if the Corps still wishes to proceed with the Planned Deviation, the controlling law and regulations indicate that this can only be done after preparation of an EIS.

Sincerely,



Keith A. James, Mayor
City of West Palm Beach

cc: Ryan Fisher, USACOE
Major General Diana Holland, USACOE
Lieutenant Colonel Jennifer A. Reynolds, USACOE
Lieutenant Colonel Todd Polk, USACOE
Melissa Nasuti, USACOE
Drew Bartlett, South Florida Water Management District
West Palm Beach City Commission

ATTACHMENTS

1. *Lower East Coast Regional Water Supply Plan – Planning Document (SFWMD 2000)*
2. *Lower East Coast Regional Water Supply Plan – Appendices (SFWMD 2000)*

3. *2000-2001 Drought in South Florida Report (SFWMD 2001)*
4. *Utilities of Concern in the Lower East Coast Regional and Lake Okeechobee Service Area (SFWMD 2007)*
5. *Water Control Plan for Lake Okeechobee and Everglades Agricultural Area (ACOE 2008)*
6. *Lower West Coast Water Supply Plan Update – Planning Documents/ Appendices (SFWMD 2017)*
7. *Lower East Coast Water Supply Plan Update – Planning Document (SFWMD 2018)*
8. *Lower East Coast Water Supply Plan Update – Appendices (SFWMD 2018)*
9. *Potential Impacts of the Army Corps of Engineers 2020 Planned Deviation to the Water Control Plan for Lake Okeechobee and Everglades Agricultural Area: Water Quality and Ecological Impacts and Attachments (Janicki Environmental 2020)*
10. *Potential Impacts of the ACOE’s 2020 Planned Deviation to the Water Control Plan for the Lake Okeechobee and Everglades Agricultural Area (LORS 2008) – Water Supply and Hydrologic Review (Collective Water, LLC 2020)*

The file size with all attachments was ~473 MB.

Contact the City of West Palm Beach for Attachments.