City of Stuart

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March 11, 2019

Dr. Ann Hodgson
U.S. Army Corps of Engineers Jacksonville District
P.O. Box 4970
Jacksonville, FL 32232-0019

Re: City of Stuart comments for the Lake Okeechobee System Operating Manual

Dear Dr. Hodgson:

On behalf of the City of Stuart, Florida, we thank you for the opportunity to share our thoughts and to provide the United States Army Corps of Engineers with recommendations for consideration during this scoping period. Included with this letter, you will find both detailed comments and questions relating to the Jacksonville District's infrastructural operations and policy management of Lake Okeechobee water resources.

As a coastal community whose health, welfare, and economic vitality thrive on safe, clean water; we know this planning process will have profound implications for our residents and businesses well into the future. We are equally anxious to participate in upcoming workshops and discussions developing more adaptive and viable solutions for the next regulation schedule.

The City of Stuart has been an epicenter of environmental, ecological, and economic impacts stemming from Lake Okeechobee discharge events. While we have utilized every available resource to address this issue at our local level, our efforts are not enough to curb the magnitude of destructive, nutrient-laden, freshwater discharges. It stands to reason that the City should play a pivotal role in determining future USACE operational guidance for the Lake Okeechobee System Operating Manual, including those facilities managed by the SFWMD when not utilized by the Corps for flood control operations.

We are hopeful as a representative body of the most adversely impacted community downstream from Lake Okeechobee, the Army Corps will consider our comments with the utmost regard.

Sincerely,

Rebecca S. Bruner
Mayor

Eula R. Clarke
Vice Mayor

Kelli Glass Leighton
Commissioner

Mike Meier
Commissioner

Merritt Matheson
Commissioner

March 11, 2019

Detailed Comments from the City of Stuart City Commission to the U.S. Army Corps of Engineers for the National Environmental Policy Act Assessment of the 2022 Lake Okeechobee System Operating Manual

1. Prioritize health and human safety protections as paramount to irrigation and other water supply needs of any special interest or industry.

The chief priority for the City of Stuart in this public input process is to eliminate discharges to the Saint Lucie River and to ensure that human health and safety are prioritized over any other element of flood control or water supply. We acknowledge the physical constraints of the imperfect infrastructural system by which the USACE manages lake operations, but we also trust that history will vindicate our contention that lake management has not always reflected stated priorities. A comprehensive review of even the most recent 20 years of Lake Okeechobee management will demonstrate that the concept of "shared adversity" among affected communities is relative. The City of Stuart, like other municipalities east and west of the lake, has suffered inexorably from direct and indirect impacts of freshwater discharges. During this same period, sugarcane fields were provided priority consideration in all matters of water resource management – particularly with respect to both extreme high and low stage events. This is unacceptable by any democratic standard and we request that in the process of developing the future Lake Okeechobee System Operating Manual, the U.S. Army Corps of Engineers consistently weigh impacts to human health and safety against the special interests of agricultural yields and profits.

2. Formally recognize and incorporate into discharge guidance protocols, human health and environmental impacts of Harmful Algal Blooms.

Although the USACE is mandated by Congress to manage flood control around Lake Okeechobee, a great deal of deference is nevertheless provided to executive agencies acting in the capacity upon which Congress has delegated. Both the original series of Flood Control Acts (FCA), and the authorization of the Central and South Florida Project (C&SF) in 1948, were devised by Congress in response to natural disasters and with the intent to protect Florida's emerging "cash crop" – sugarcane. In 1972, Congress approved the Clean Water Act (CWA) in response to the environmental degradation proliferated by the discharging of point source pollutants into natural waterbodies of the United States. In later review, the FCA was amended through Water Resource Development Acts (WRDA) designed to expand and expound upon various aspects of water resource management – providing recreational and environmental protections.

With lessons learned, emerging dangers posed by cyanobacteria led Congress to pass measures in 1998 designed to research and mitigate Harmful Algal Blooms (HAB) while continuing to amend prior law. This extensive legislative history illustrates a continued Congressional desire to safeguard human health and safety from various threats, while revising the institutional parameters by which agencies manage projects in order to improve public transparency and oversight. To diminish the USACE's core mission to the narrow parameters of "flood control" is both disingenuous to Congressional intent, and amnesic to agency deference provided by judicial law. The City of Stuart is hopeful the Army Corps will concur, and incorporate considerations of the proven dangers presented by HAB's into future lake management guidance protocols.

3. Lower acceptable minimum lake level band to eliminate necessity of discharges to the Saint Lucie River.

As Congress has now mandated a biennial review of the Comprehensive Everglades Restoration Plan (CERP), we believe it was furthermore, the intent of Congress to promulgate greater oversight of Corps functions. In addition, as the Integrated Delivery Schedule moves forward with newly authorized or completed restoration projects, particularly those of the Central Everglades Planning Project (CEPP), changes to the regulation schedule must be considered more frequently in order to provide relief to negatively impacted communities.

An examination of Corps guidance on acceptable lake thresholds validates that "extreme high stage" events have occurred at a far more frequent rate than those of "extreme low stage." Consequently, during most years' managed recessions, more voluminous discharges to the coastal estuaries have yielded an exponentially detrimental impact to these threatened ecosystems. In example, seven of the nine years between 1991 and 1999 resulted in high lake stages, having a profound, irreversible effect on Lake Okeechobee and the coastal estuaries alike.[1] This was a direct byproduct of lake level management, which has been largely reliant on limited meteorology, coupled with an overabundance of concern for potential drought conditions. Little has changed since.

We believe that the consequences of maintaining this status quo far exceed those of managing risk associated with potential drought in a tropical climate. Without lowering the lake's acceptable low level band, prior to the annual wet-season period, the increased frequency at which "extreme high stage" events occur, will further necessitate damaging freshwater discharges – and such conditioning can only be characterized as environmental desolation.

4. Better attune lake level management to parallel more statistically probable rainfall trends while improving use of existing storage.

The City does not simply recommend that water levels in the lake be brought lower during the dry season without respect for the challenge in predicting weather from season to season. We recognize that Lake Okeechobee water management is about balancing a complex system of both measurable and unpredictable variables. However, if we look at the destructive 2016 summer for the Saint Lucie River, even with consideration of historic rainfall trends, much of that environmental crisis may well have been averted for the estuary had less rigid operative protocols dictated Corps operations.

Between June and August of 2015, water level in Lake Okeechobee steadily dropped to 12 feet and was not manually recessed to a lower level prior to the start of wet season. In the next 2 month-period, historic rainfall events raised the lake to nearly 15 feet. By February of 2016, another period of significant rainfall brought the lake level well above 16 feet, increasing the urgency for high-flow releases. Irrespective of this statistically-divergent weather pattern, the critical need for high-flow discharges would not have been necessary had the lake been allowed to go lower than 12 feet earlier in the year.

[1] *See* USACE Final Supplemental Environmental Impact Statement (2007), Appendix F, Periodic Managed Recessions, at 765. https://www.saj.usace.army.mil/Portals/44/docs/h2omgmt/LORSdocs/ACOE_STATEMENT_APPENDICES_A-G.pdf

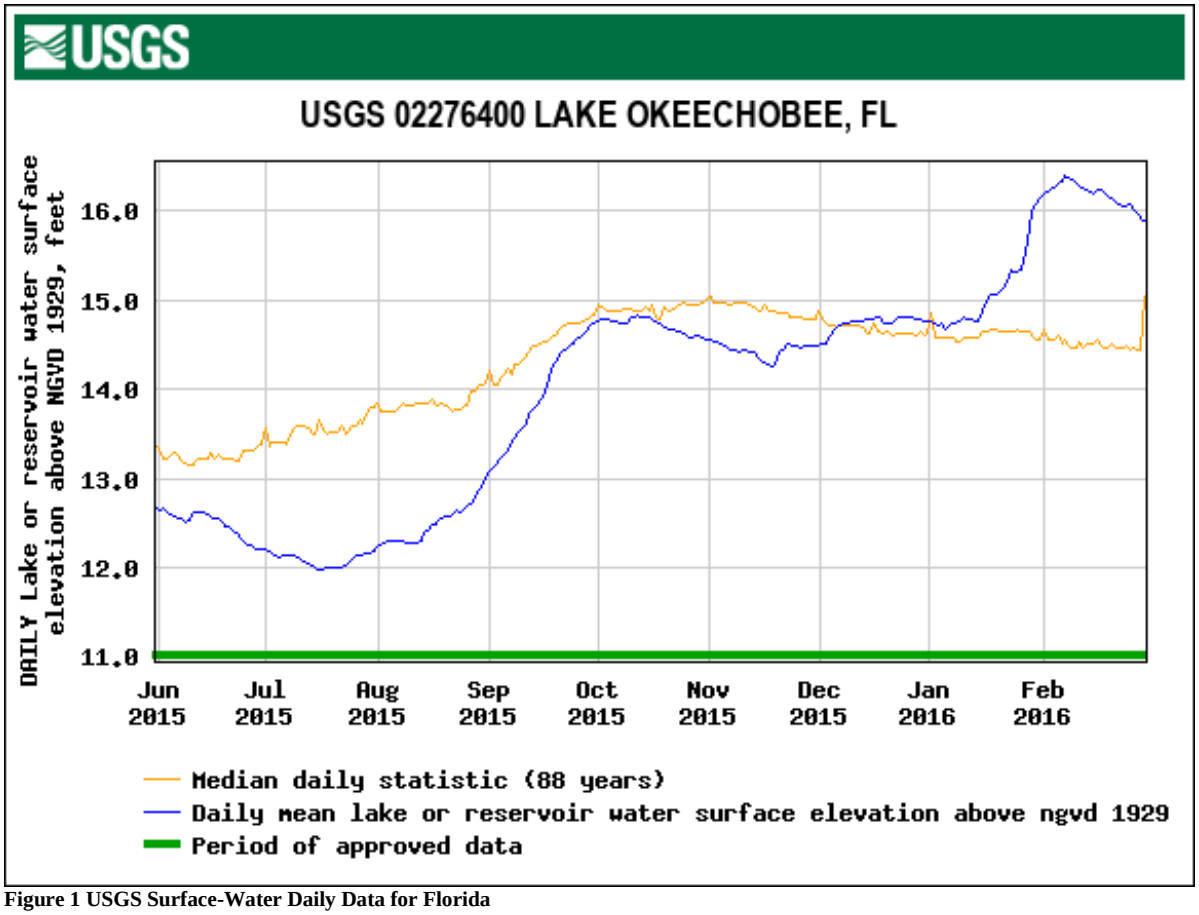

Figure 1 USGS Surface-Water Daily Data for Florida
https://waterdata.usgs.gov/fl/nwis/dv?

Conversely, the effects of significant, longer-term drought have been neither as frequent nor as damaging to the environment as extended rainfall events; and although harmful to a degree, are not entirely without environmental benefit.[2] The concern of a potentially significant drought period should not inhibit the Corps from aiming for a lower (e.g. 11 foot) benchmark by the start of the wet season. Moreover, the effects of evapotranspiration are diminished when rainfall is persistent, making both reliability of natural restoration impacts, and human management of "extreme high stage" events more difficult and problematic than those of "extreme low stage."

A better overall system of managed recession should not only include the use of pulsed releases[3], but also a more proactive cycle of consistent, regular flows to the Caloosahatchee - or other sources of water retention in varying times of the year. Maintaining lake levels based on monthly and annual rainfall probability would certainly reflect a need to have shorter, more varied periodic recessions. Furthermore, better use of existing storage could be implemented. In doing so, this broader timeframe for releases would better reflect periods of natural rainfall and runoff; and would only necessitate discharges to the locations that actually need additional freshwater. We fully believe that the lake levels can be managed in such a manner that significantly reduces negative impacts to the St. Lucie River by eliminating the need to discharge to it.

[2] See USACE Final Environmental Impact Statement, Lake Okeechobee Regulation Schedule, November 2007, at 166. https://www.saj.usace.army.mil/Portals/44/docs/h2omgmt/LORSdocs/ACOE_STATEMENT_APPENDICES_A-G.pdf

[3] *See* USACE Central and Southern Florida Project and Flood Control and Other Purposes, Master Water Control Manual Lake Okeechobee and Everglades Agricultural Area, Volume 3, June 1996, at 174. ftp://ftp.sfwmd.gov/pub/hehmke/AsBuilts/Other%20Reports/MWCM%20Vol%203%20Lake%20O.pdf

5. Improve cooperation and collaboration with SFWMD on water resource management.

In 2008, the EPA codified its Water Transfer Rule providing a means for federal agencies like the USACE to discharge polluted waters without a National Pollutant Discharge Elimination System (NPDES) permit. The EPA based this on an interpretation in the Clean Water Act (CWA) that Congress intended to leave primary oversight of water transfers to state authorities in cooperation with federal authorities.[4] Later, in February of 2018, the U.S. Supreme Court denied a petition of *writ of certiorari* in a landmark case concerning the rule change. This action consequently affirmed the U.S. 2nd Circuit Court's application of the *Chevron*[5] two-step framework for judicial review - sustaining EPA's opinion. The framework of this ruling and the EPA's interpretation of the CWA is premised on the idea that State's maintain functional (management) autonomy over their lands and ecosystem; and are chiefly responsible for the context in which water transfers occur. But the history of water transfers stemming from Lake Okeechobee into the St. Lucie Canal, and thereby into the Saint Lucie River, is almost entirely a federal narrative due to existing laws on flood control.

As evidenced and maintained in countless historical and scientific publications, the Saint Lucie River has no need of freshwater from Lake Okeechobee. These discharges serve no environmental or ecological benefit to the estuary. And although saltwater intrusion remains an ever-present concern along coastal regions, the need to address this in the Florida Bay and in municipal communities further south vastly outweigh the marginal concerns in Stuart and along the St. Lucie River. As an alternative, the Corps should work with SFWMD in prioritizing the consideration of other environmental impacts to the estuarial systems as a consequence of discharge events. Such considerations should include ecological damage from Harmful Algal Blooms and hypoxia, the short and long term health effects of microcystin, and ecosystem non-revitalization spurred by incessant freshwater discharges.

6. Final Comments

The City of Stuart thanks the USACE for its commitment to enhancing public transparency and local collaboration in this process. We believe that the lessons learned, particularly in the last 20 years have provided enough evidentiary findings to support the requests and recommendations we have made within the parameters of this policymaking process.

We also recognize that there have been many financial, infrastructural, and policy barriers to restoring the Everglades and any natural flow of water south. It is unfortunate that the SFWMD under a previous regime in the State squandered an opportunity to purchase and repurpose hundreds-of-thousands of acre-feet of land from private landowners. This potential surficial storage was determined to be more necessary than previously identified as the use of Aquifer Storage and Recovery wells proved too problematic in the porous geology of the area south of the lake.[6] As a result of this lost endeavor, we are now more reliant than ever on existing and newly authorized projects within the CERP. Similarly, we are more dependent than ever on the Corps' delicate care and management of lake levels.

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[4] *See* U.S. Federal Register / Vol. 73, No. 115 / Friday, June 13, 2008 / Rules and Regulations, at 33703. https://www.govinfo.gov/content/pkg/FR-2008-06-13/pdf/E8-13360.pdf

[5] *See* Chevron U.S.A., Inc. v. NRDC, 467 U.S. 837 (1984); Primary Holding – A government agency must conform to any clear legislative statements when interpreting and applying a law, but courts will provide agency discretion in ambiguous situations so long as there is a reasonable nexus of interpretation.

[6] *See* Regional Model Production Scenario Report: Aquifer Storage and Recovery Regional Modeling Study. January 2014, at 52. http://141.232.10.32/pm/projects/project_docs/pdp_asr_combined/012014_asr_prod_scenario_report/asr_d 13r_main_report.pdf

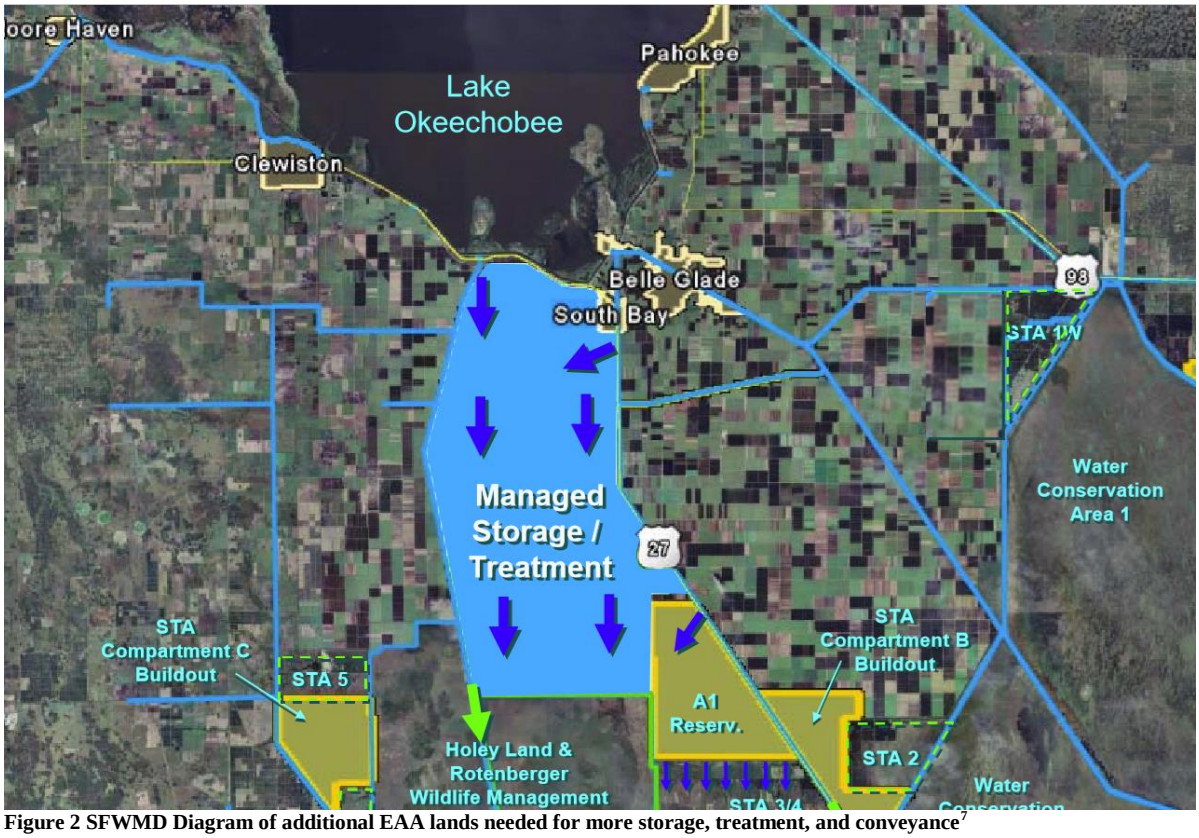

Figure 2 SFWMD Diagram of additional EAA lands needed for more storage, treatment, and conveyance[7]

Although the ideas and recommendations presented in this public commentary are not exclusive to the City, we believe the way forward must include more innovative and adaptive solutions to provide the best stewardship for all ecologies and environments surrounding the lake. The status quo is simply not acceptable for our residents and larger community. Countless volunteers, scientists, engineers, and other public leaders have spent years promoting the scientific and engineering solutions required to address the myriad of environmental challenges plaguing the region. It is simply our hope that in reflection upon the many decades of policy and operational changes, the Army Corps will change guiding protocols in a manner this is reflective of this communities resolve.

[7] *See* SFWMD PowerPoint (2008) available at:
http://my.sfwmd.gov/portal/page/portal/common/newsr/rog_pres_gov_board_meeting_briefing_063008.pdf

Questions from the City of Stuart City Commission to the U.S. Army Corps of Engineers for the National Environmental Policy Act Assessment of the 2022 Lake Okeechobee System Operating Manual

1. **In the case of an extended drought period where Lake Okeechobee levels drop below (<11 feet NGVD 29), otherwise known as "extreme low stage," what water resources and infrastructure north of and around the Lake are available (or will be available by 2022) to recharge and/or mitigate this supply concern?**

2. **Does the USACE concur that Johnson's seagrass has been adversely impacted by freshwater discharges and associated Harmful Algal Blooms (HAB) from Lake Okeechobee irrespective of any existing preferred alternative discharge schedule?**

3. **Will the USACE include into its evaluation of threatened and endangered species segment of the environmental impact assessment, new considerations of the now adversely effected Johnson's seagrass and those endangered species not yet listed in the federal registry?**

4. **Will the USACE include into its environmental impact assessment, considerations of human health, environmental, ecological, and economic impacts prompted by toxic harmful algal blooms before, during, and after discharge periods?**

5. **If Harmful Algal Blooms (HAB) are present over a significant portion of Lake Okeechobee, how will the USACE balance the water supply needs of agricultural irrigation with the health and safety of the general public impacted through points of discharge?**

6. **What is the maximum rate of flow (cfs) the Corps can achieve utilizing all discharge points within Lake Okeechobee while excluding those to the Saint Lucie River?**

7. **If Lake Okeechobee loses between 4 and 5 feet of water level each year to evapotranspiration, how does the USACE adapt and assimilate this knowledge into its operational plan for lake-level targets throughout the year?**

8. **Will the USACE include climatology and rainfall data from the most recent 30 year period into its environmental impact assessment (i.e. statistical / probability distribution models) of a significant rainfall event compared to a significant drought event?**

9. **Does the USACE believe the long-term (or permanent) impacts from historic "extreme low stage" events have more adversely affected the lake and estuarial systems' environment and ecology than those of "extreme high stage" events?**

10. **Has the USACE included a regression analysis into the development of prior and current operational guidance for lake management, and if not, how does the Corps identify appropriate performance measures? Will similar modeling be utilized in defining performance measures for the 2022 LOSOM?**

11. **Does the USACE have a method of acquiring medical statistics in and around the greater Lake Okeechobee region concerning human health symptoms believed to be linked to waterborne and airborne cyanobacteria / microcystin? If not, does the Corps have the authority and capability of acquiring this information for the purpose of effectively evaluating consequences of discharge events?**

12. **What percentage of agricultural lands within the Everglades Agricultural Area (EAA) provides independent retention and treatment of runoff as opposed to runoff into publicly managed stormwater treatment and water conservation areas?**

13. **As enhancement of recreational opportunities is reflected in its operational mandate from Congress, does the USACE evaluate the economic costs to sports fishing in Lake Okeechobee and throughout the estuarial systems equitably?**

14. **Does the USACE have a viable means of dredging navigational areas in the lake to support navigation even during low stage events?**

15. **Which of the following mission parameters does the USACE consider paramount within the scope of its Congressional mandate in regulating Lake Okeechobee: flood control, irrigation, environmental protection, recreational opportunities, or human health and safety?**

16. **If a Harmful Algal Bloom in Lake Okeechobee is declared to be a State of Emergency, how will this impact the USACE operation of the lake and potential managed recessions? Would there be a different consideration if a HAB rises to the level of a declared federal emergency?**

17. **Has the USACE ever approved or advised the SFWMD accordingly on the back-pumping of agricultural lands within the EAA during an ongoing managed recession in the lake?**

18. **Will the USACE reconsider its performance measures as to what amount of discharges from Lake Okeechobee irreparably harm the environment and ecosystem of the coastal estuaries?**

19. **If endangered species within the Saint Lucie River are approved to be added to the federal registry, how would the USACE balance the amount of pollutants discharged into the estuary as opposed to those into the Everglades?**

20. **What does the USACE consider to be its primary mission with the management of Lake Okeechobee and the Herbert Hoover Dike?**