July 13, 2021

**Via Email: LakeOComments@usace.army.mil**

E. Timothy Gysan, PE, PMP
Senior Project Manager, Programs and Project Management Division
U.S. Army Corps Engineers, Jacksonville District
701 San Marco Boulevard
Jacksonville, Florida 32207

Re: **City of West Palm Beach's Comments on Iteration 2 Alternatives for the U.S. Army Corps of Engineers' Lake Okeechobee System Operating Manual**

Dear Mr. Gysan,

At this time, the City of West Palm Beach (City) is not able to recommend any of the Iteration 2 Lake Okeechobee System Operating Manual (LOSOM) alternatives that are currently under consideration by the U.S. Army Corps of Engineers (USACE).

As communicated to the Acting Assistant Secretary of the Army for Civil Works in June 2021 by City Mayor Keith A. James and others, including Representatives Frankel, Diaz-Balart, Steube and Webster, additional time is needed to review, understand and evaluate the results of the complex regional modeling being performed as part of LOSOM. While some data and information were provided to the LOSOM Project Delivery Team (PDT) and stakeholders on June 9, 2021, data and information related to the batch model simulations performed during the development of the Iteration 2 alternatives were only recently provided on July 6, 2021.

This lack of information is particularly concerning to the City, since no meaningful evaluation of the Northern Palm Beach (NPB) area, where the City's water supply system is located and which includes the Loxhatchee River minimum flow and level (MFL), was presented or provided. Also, on July 2, when the City's consultants attempted to obtain critical modeling information regarding this area from the USACE and the South Florida Water Management District (District) regarding this area they were advised they would have to obtain this information from the District, despite the fact that similar information was directly provided by the USACE to two other PDT members. When the City contacted the District to obtain this information, it was forced to submit a public records request to the District and was charged a fee for the data. This slowed the process down. Finally, it is noted that newly developed modeling tools are being used for the LOSOM project in the NPB area; these tools were and are still being fully developed while the project is moving for-

ward. Cumulatively, this has left the City unable to offer detailed comments, suggestions and recommendations regarding these alternatives.

Based on the City's preliminary review, the Iteration 2 Alternatives appear to suffer several critical flaws. The No Action 2025 Scenario (NA25) does not include the full Integrated Delivery Schedule (IDS) - large Comprehensive Everglades Restoration Projects (CERP) projects, specifically those involving storage and flows (A2 Stormwater Treatment Area, ASR and the Loxahatchee River Watershed Restoration Project), are not included in the modeling. None of these are water supply projects and therefore LOSOM does not address the state's obligation in this area. The significant ecological benefits from these projects are not able to be assessed at this time in coordination with LOSOM.

Second, none of the Alternatives return water supply to a 1-in-10 year level of certainty, guaranteed under state law, which will result in more frequent water shortages to the public.[1] The City has been limited in its water supply from Lake Okeechobee due to the District's Restricted Allocation Area Rule put in place approximately at the same time LORS08 was enacted. The City should have its water supply returned to the level that existed before the LORS08 "interim" schedule was adopted. Therefore, the Alternatives may not comply with existing state law or the Congressionally-authorized purposes of the Central and Southern Florida Project.

Additionally, based on the City's preliminary review of Iteration 2 modeling, there appear to be deficiencies exacerbated by the rapid timeline in which the regional modeling was performed as it applies to the NPB and the City's water supply system, which are summarized below:

- The model only uses boundary conditions to simulate the City's water supply and the Loxahatchee River, which means there has not been any meaningful evaluation of the NPB.
- District staff informed the City that the City's water supply was represented by a boundary condition time series, likely from the South Florida Water Management Model (SFWMM). This run was likely based on a LORS08 schedule and water shortages and cutbacks tied to that previous run. If that is true, a LOSOM alternatives evaluation (benefits/impacts) of the City's water supply system and the City-owned Grassy Waters Preserve cannot be adequately determined by this modeling effort.
- Checking the modeling data recently received from the District, it appears that the same SFWMM ECB run was used for all boundary conditions in all LOSOM bases and alternatives.

[1] As indicated below, since the modeling did not provide an evaluation for NPB, the impact of these alternatives on the City's 1-in-10 year demand is not known.

- SFWMM ECB flows into the City's M-Canal (S2TMCL) average 63 Kac-ft/yr, while RSMBN ECB, NA25 and CC[2] flows to the City's Control 2 (CWPB2) average 47 Kac-ft/yr. This difference is not explained.
- SFWMM ECB flows to the City's lakes average 34 Kac-ft/yr, while RSMBN ECB, NA25 and CC flows are assumed SFWMM boundary condition values. Again, this difference is not explained.
- District informed the City that flows to Lainhart are from a boundary condition time series from a LECSR-NP simulation (not yet identified by District staff) from 1965-2005. From 2006-2016 a long -term average was then applied to the Lainhart boundary condition, which may dampen drought years like 2007 and 2011 after the LECSR-NP 1965-2005 period of record ended. Again, this run would have been based on a LORS08 schedule; therefore, LOSOM effects on the Loxahatchee MFL cannot be adequately determined by this modeling effort.
- It appears pre-2008 LIDAR data was used in the RSM modeling. The old LIDAR (pre-2008) was extremely low quality on the western side of Palm Beach County. In many locations it was off by several feet. That is why the District assisted in procuring the 2016 LIDAR. We don't understand why the more accurate data set was not used.

The LOSOM team has shared that several model "fixes" are needed due to unintended consequences of changing conditions in the L8 (one of the City's major water supply sources) and C51. Since Baseline and Alternative model performance results have not been provided for the NPB area, the City needs time to review and verify model data, assumptions, and results for Iteration 2 to ascertain if the modeling evaluation to date can be used to adequately address the LOSOM project effects in the NPB area and on the City's system.

Given these deficiencies and uncertainties, it is apparent that the current modeling information provided, to the PDT cannot meaningfully assess the impact of any of the alternatives on the City's water supply against the NA25. So what does the City need to do to address this issue? Obviously, it could use the current modeling, with appropriate fixes, to determine how the various runs are impacting the City in terms of water demands not being met, including frequency, severity and duration components. But to do this, the LOSOM modelers would need to collaboratively work with the City's consultants to explain the model and the terms used. An example of the need for more collaboration pertains to the model output. This is critical because in the transition from Iteration 1 to Iteration 2, modeling output tags were mixed up for areas important to the City's source water (i.e., C10A) and using the tags that "look" correct would have led to an incorrect evaluation of the data. The City also urges the LOSOM team to create a centralized data repository to share the same modeling information with all PDT members, members of the public, and other stakeholders to expedite data requests and review.

[2] The City's consultants selected Alternative CC to examine as part of its preliminary analysis.

In light of all these problems, the City again strongly urges the USACE to take additional time to develop Alternatives that realistically assess impacts to NPB and the City's water supply system and to work collaboratively with the City's consultants to ensure that the water supply of the 120,000 persons served by the City is properly evaluated and that important environmental features such as Grassy Waters Preserve and the Loxahatchee River are accurately assessed.

Sincerely,

Poonam K. Kalkat, PhD
Director of Public Utilities
City of West Palm Beach

cc: Lisa Aley, U.S. Army Corps of Engineers
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