



MARTIN COUNTY

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December 7, 2020

Submitted via email: Lisa.E.Aley@usace.army.mil

Lisa Aley
Department of the Army
Jacksonville District Corps of Engineers

Re: LOSOM – Conceptual Plan Evaluation - St. Lucie Estuary

Dear Ms. Aley,

The Martin County Board of County Commissioners (the County) appreciates the opportunity to provide comments to the U.S. Army Corps of Engineers (USACE) concerning the 2020 Lake Okeechobee System Operating Manual (LOSOM) Conceptual Plan Evaluation for the St. Lucie Estuary. Following the December 1st LOSOM Joint Environmental/Plan Formulation Sub-Team Meeting, stakeholders were asked to review the Pareto Analysis output of 27,000 potential Lake Okeechobee schedules and provide a written evaluation and presentation in less than 5 working days. It is our understanding that the USACE required a 5-day turn-around because its internal schedule requires fast action by the Project Delivery Team (PDT) and as a convenience for the upcoming holidays. This time frame seems too rapid for the USACE to thoroughly consider the stakeholders' responses.

As stated in many other comments within the LOSOM / NEPA process, preventing Harmful Algal Blooms (HABs) and the associated harm to the St. Lucie River and Estuary (SLE) and nearshore coral reefs from excessive nutrient and freshwater pollution from Lake discharges are of vital importance to the County and the 161,000 residents and water dependent businesses that we represent. Within the LOSOM process, Martin County is concerned with *preventing critical damages* to these marine and estuarine ecosystems caused by forced discharges from Lake Okeechobee and the associated pollution within those discharges. Other responses within this process appear to be concerned with *improvements or benefits* from Lake Okeechobee water elevation management or the “benefits” of sending freshwater discharges to the SLE without regard to the pollution within those discharges. Under NEPA, however, the objective is to promote efforts and alternatives which will not cause or contribute harm to the environment. The objective should not be how much of a proposed activity could in some scenarios benefit the environment. That is more akin to a CERP planning function.

In this specific LOSOM effort, the USACE should not ignore pollution within these discharges by focusing on how much fresh water from all sources could “restore” or maintain indicator species as if there was no pollution within the non-saline Lake water. Nevertheless, this effort asks the stakeholders to

do just that, ignore what is contained within the discharges and assume that there can be only benefits from the discharges. Martin County maintains that zero discharges to the SLE is prudent, attainable, and critical to preventing future harm and allowing the ecosystem to restore itself from the damages done to the SLE from past forced releases from the Lake.

Furthermore, the parameters within which the USACE has asked stakeholders to comment, do not provide the County an option to submit a schedule that meets the NEPA standard of not causing harm. Thus, within the only parameters that stakeholders can comment, the County has determined that some schedules would seem to allow a smaller reduction in benefit to other stakeholder interests, but would also result in significant reduction to the sustained harm that the SLE has been subjected to for years from Lake discharges.

As the LOSOM Pareto Analysis utilizes 62 performance metrics, many with overlapping and/or inter-related parameters, the utility of the analysis tool remains unclear. Information related to the “acceptable” range for each of the metrics would be a useful first step. It is understood that some parameters may be more subjective than others, but certain parameters are required to fall within a given range for safety considerations, etc. For example, the Baseline Condition results in some periods when Lake stages are greater or equal to 17.25 feet. Is this acceptable from an engineering safety considerations perspective? Understanding the “guardrails” for critical performance metrics will be a necessary part of the discussion related to which scenarios should be evaluated further. Likewise, it is critical to understand the nuances of purported “improvements” between one scenario and another.

Based on the limited information and constraints inherent in the Pareto Analysis approach, the County is focused on scenarios that (a) minimize releases from S308 and (b) maximize the number of days the estuary experiences optimal flow conditions (i.e. 150 to 1400 cfs). Utilizing this approach, the County determined that schedule 21352 inflicts the least amount of harm to the SLE out of the 27,000 options provided by USACE. The model run with the highest index for days spent in the SLE optimal flow range is Pindex 22430, and the model run with the lowest total S308 regulatory flow is Pindex 21352. The County continues to evaluate the Pareto Analysis results and is in the process of developing a script to quantitatively evaluate effects of the various scenarios on all 62 performance metrics within the group of 4C-1 scenarios. To date, the County has identified several scenarios that show “improved” overall performance (see Table 1), with similar or lower releases from S308, than Conceptual Plan 21772 that the USACE provided as an example during the December 1, 2020 meeting.

Pindex	S308_reg_flow	SLE_Optimal	Notes
21352	10.37	938	Least amount of discharges from S308
22430	19.36	953	Maximum time in SLE Optimal range
20612	15.09	951	Sorted by all SLE Performance Measures
20576	19.65	936	Sorted by all 62 Performance Measures
20601	30.68	934	Sorted by all 62 Performance Measures

Concerns remain regarding the SLE Low Flow (<150 cfs) conditions utilized by the USACE analysis team. It should be noted that the minimum groundwater flow to SLE was computed by the South Florida Water Management District (SFWMD), based on measurements during the 2008 drought (i.e. the basis for the RECOVER modeling analysis). This minimum groundwater flow was determined to be 150 cfs. Therefore, it remains unclear how the LOSOM Pareto Analysis indicates that discharges into the estuary fall below 150 cfs, and that this minimum groundwater flow is controllable as part of LOSOM (see page 8 of “Conceptual Plan Analysis – SLE” provided by the USACE on November 30, 2020). The technical basis for flows less than the SLE Low Flow (<150 cfs) should be provided. It should also be noted that the USACE did not provide any metrics related to potential health hazards and/or environmental impacts

associated with HABs within SLE waters, which was reported to be an objective of the LOSOM process.

Additionally, as indicated by Florida Department of Environmental Protection on the December 1, 2020 LOSOM Joint Environmental/Plan Form Sub-Team Meeting: St. Lucie Estuary Evaluation, the Lake discharges have been shown to have a demonstrable adverse impact on coral reef habitat offshore of St. Lucie Inlet. On October 27, 2020, the County provided the USACE with a detailed assessment, based on 5 years of monthly offshore salinity data along the coral reef tract, that illustrated the direct quantitative link between freshwater releases and adverse impacts to the reef tract. The County has not received any feedback from the USACE regarding concerns related to impacts to offshore corals, including potential impacts to habitat associated with endangered coral species.

The County looks forward to continuing to work with the USACE throughout the Conceptual Plan Evaluation and associated LOSOM process and appreciates the opportunity to provide feedback. Should you or your colleagues have any questions or concerns, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Jim Gorton".

Jim Gorton

jgorton@martin.fl.us

Public Works Director

Martin County Board of County Commissioners