Date: October 8, 2021

To: Ms. Savannah Lacey, USACOE

From: John Cassani, Calusa Waterkeeper

Topic: HAB information related to LOSOM

Sent by electronic mail.

I would like to provide some additional information in response to the ACOE meeting: LOSOM PDT Operational Guidance Workshop (Algal Bloom Operations) that occurred on September 8, 2021.

Several topic areas that did not come up or had limited information provided during the meeting included:

1. In the context public notification of risk to Harmful Algal Blooms (HAB), the Florida Department of Health requires HAB Alert signage at relevant sites at any cyanotoxin detect level by FDEP. The FDOH HAB "Alert" notice and signage was to remain in place until toxins were no longer detected at any concentration. Future LOSOM operations should reflect this state policy with respect to cyanotoxin risk exposure for both recreation and drinking water sources.

2. The use of chlorophyll a as a proxy for cyanotoxins and appropriate sampling protocols for cyanobacteria and associated toxins was discussed by members of the Blue-green Algae Task Force (BGATF) at their July 29, 2020 meeting and similarly in response to the ACOE proposal to the Task Force on November 19, 2021. Both meeting video archives can be viewed at: https://protectingfloridatogether.gov/state-action/blue-green-algae-task-force. My take on the response from the Task force was that chlorophyll a is not an appropriate proxy for cyanotoxins for a number of reasons and that a sampling protocol specific to cyanobacteria for understanding health effects should be determined rather than the generic protocols for algae sampling currently used by FDEP. I have attached the letter sent to the task force by Calusa Waterkeeper and Waterkeepers Florida with a more comprehensive explanation about our concerns for cyanotoxin proxies and sampling protocols.

3. At the September 8 meeting, there was also discussion of how Lake operations could influence coastal HAB events, particularly with respect to red tide proximal to Caloosahatchee discharges. Concerns from the PDT and public included potential discharge relationships to HAB bloom

severity and duration, and the spatial extent of the discharge impact area. As a reminder, a federal court order issued on 10-26-20 attached (Case No. 2:19-cv-14199-MIDDLEBROOKS) defined the area of impact from the Caloosahatchee and St. Lucie estuiaries and required the ACOE and USFWS to enter into formal consultation on how LORS operations including lake discharges influenced HABS and the related impacts to endangered species and their critical habitat. Please consider the court ordered impact area referred to here as a basis for optimizing LOSOM with respect to endangered species and their federally listed critical habitat.

4. I am unclear how the HAB Deviation adopted by the ACOE under LORS would be considered while optimizing LOSOM. Please clarify this concern.

5. It is also important to point out that Lake Okeechobee and a segment of the Caloosahatchee River are classified by Florida as Class I potable waterbodies. As such discharging know contaminants such as cyanotoxins from or to these waterbodies as part to the Lake regulation schedule may represent significant excursions for intended water law in Florida. The recent contamination of the West Palm Beach potable water supply by cylindrospermopsin is an example of concern.

6. As a reminder EPA issued final implementation guidance with respect to recreational risk for microcystin and cylindrospermopsin. The document titled: Final Technical Support Document: Implementing the 2019 National Clean Water Act Section 304(a) Recommended Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin, addresses many of the issues related to risk, prioritizing sampling location for cyanotoxins, exceedances to the recommended guidelines and protocols for sampling and interpreting risk-based results etc. Your consideration of this information would be appreciated when optimizing LOSOM.