

FROM: Michael Perry, Lakes Manager, City of St Petersburg:

I wanted to send an update that wrapped up the last quarter of 2023 and provide upcoming action items with regards to Harbor Isle Lake and the City's efforts to address high nutrients and associated water quality impacts.

In the last couple months, we haven't had much activity on the lake itself. Historically we see water quality degrade during this time of year and algal blooms. Excess nutrients in the water column with rainfall changes can contribute to blooms and during routine inspections I did observe algal blooms in sections of the lake. However, No large-scale bloom, odors, or color changes were observed, and no treatments were necessary. Qualitatively, this was encouraging to see as the lake was stabilized and we did not receive any reports, other than visual, of impacts to the surrounding ecosystem and neighborhood. This contrasts with previous years where lake-wide treatment was deemed necessary to address less favorable conditions.

Quantitatively, the most recent water quality samples were taken in July of 2023 since the contract with our consultant ended. However, from this effort we are now planning the implementation of the management alternatives which are designed to mitigate the nutrient and algae issues in the lake. We will begin sampling in the coming months alongside a pre-planned alum application. Alum removes available phosphorous from the water column and generally aids in water clarity and reduces the available resources that algal blooms feed on.

Sampling will begin before the alum application to aid in trend/data analysis and determination of alum efficacy. Working with my colleagues in our Engineering Department, we plan to complete alum application this Spring and extend monitoring into the Summer. Taking the wealth of information we have acquired previously with the new sampling data, we can look at before/after results from this application and then take this into consideration with additional treatments and other alternatives. I plan to provide you with a more detailed scope on sampling once negotiations are complete. Then I can describe those water quality parameters to you as it relates to what we are looking at and explain what "water quality" can mean to you and this lake.

Some smaller changes I'd like to implement is the removal of the "ALGAL BLOOM IN PROCESS" signs. While these signs are technically correct, they do not serve much of an educational purpose. We may replace these with a simpler sign focused on awareness which still warns public of risks but is more informative and appropriate for the lake. As City Lake Manager, I am also investigating the possibility and effectiveness of ultrasonic technology which may help reduce the impacts of algal blooms. This technology sends high frequency sound pulses into the water column, which claim to interrupt the buoyancy of algal cells preventing them from photosynthesis. While this technology may not be appropriate for Harbor Isle, there is a possibility we deploy this technology in Harbor Isle to test its practical merits. This is something I am still investigating, and if something is deployed in the lake, I will make sure to notify the community before. It does not impact wildlife or macroinvertebrates in any way and the

installation is two or so low profile buoys, but I would still want to make sure the community is aware. I am always looking at cost effective ways to help the community we all live in. My focus stays with Harbor Isle Lake and your community and if there is anything additional you would like to discuss please let me know. My staff and myself are always available to meet on site as well.

Thank you,

Michael Perry, P.E.

Lakes Manager

Senior Stormwater Operations Manager

City of St. Petersburg

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