M E M O R A N D U M

TO: Mayor and Council

FROM: Jorge L. Morales, P.E., CFM, Director
Watershed Protection Department

DATE: June 1, 2021

SUBJECT: Harmful Algae Pilot Program

The purpose of this memorandum is to provide you with information about changes to the harmful algae monitoring program and about a pilot project to test methods to mitigate harmful algae. Council will consider the contract for the pilot project at the June 10th Council meeting.

Given the detection of harmful algae in the off-season in several Central Texas lakes, we recommend that dog owners treat all algae as though it contains toxins and not allow their dogs to touch or ingest algae in any Central Texas waterways.

In response to the increased presence of harmful algae, the Watershed Protection is modifying its monitoring program. Last year, staff sampled water and algae weekly, taken from five sites on Lady Bird Lake, between June through November. The department is planning to expand the locations and duration of this monitoring. This expansion will include three sites on Lake Austin and three sites on Lady Bird Lake (see attached map, Figure 1), with staff visiting these locations every other week throughout the summer. We will continue monitoring throughout the year, although we may scale back the frequency in the fall or winter depending on algae and toxin presence. We will also monitor one site on Lake Walter E. Long, visiting it at least three times during the summer and fall. Initially, a summary of testing results will be available at AustinTexas.gov/Algae and then this information will be available via dashboards, which will be available on the algae website.

In addition, the June 10th Council agenda will include an item requesting authorization of $1,484,000 for a 5-year contract with SePRO Corporation for purchasing and testing the efficacy of a phosphorus-binding compound, a patented material known as Phoslock, that has been shown to mitigate the effects of harmful algal blooms.

The pilot project will consist of three applications of Phoslock by boat over 20 acres of water around Red Bud Isle over the course of nine weeks. We are planning to start the first application on June 21st. The applications should result in a decrease in the amount and/or toxicity of blue-green algae in the treated area. The SePRO contract also includes laboratory testing of the water and sediments, verifying immobilization of phosphorus. Phosphorus concentrations will be measured before the initial treatment and after each subsequent application around Red Bud Isle, allowing us to evaluate the success of the Phoslock treatment.

Until the pilot is complete, and the results are analyzed, we do not know how effective it will be at reducing risk. We recommend that Austin residents and visitors continue to treat algae in this area with caution during the pilot project.

Phoslock works by binding phosphorus both in the water and in the sediment. Once bound, the phosphorus remains in the lake sediments in a mineral form that is unavailable to the blue-green algae as a nutrient source. Phoslock consists of a lanthanum-modified bentonite clay material. It was developed by an Australian national science agency (Commonwealth Scientific and Industrial Research Organization), specifically to bind phosphorus in surface water and sediment and has been widely used in the prevention of harmful algae blooms.

Over 80 peer-reviewed publications exist on Phoslock that specifically address its efficacy, longevity, and potential impacts. Phoslock has received U.S. and Canadian NSF/ANSI Standard 60 Certification for use in drinking water. During our research, we have consulted with the U.S. Army Corps of Engineers, Texas Parks and Wildlife, Texas Commission on Environmental Quality, and LCRA. There was general agreement that there should be no ecological impact beyond the binding of the phosphorus during this pilot. To learn more about Phoslock, visit: https://www.sepro.com/aquatics/phoslock.

If you have any questions, please contact Mateo Scoggins, Program Manager III, Watershed Protection Department, at 512-974-1917.

cc: Spencer Cronk, City Manager
Rey Arellano, Assistant City Manager

Attachment: Location of HAB sampling sites

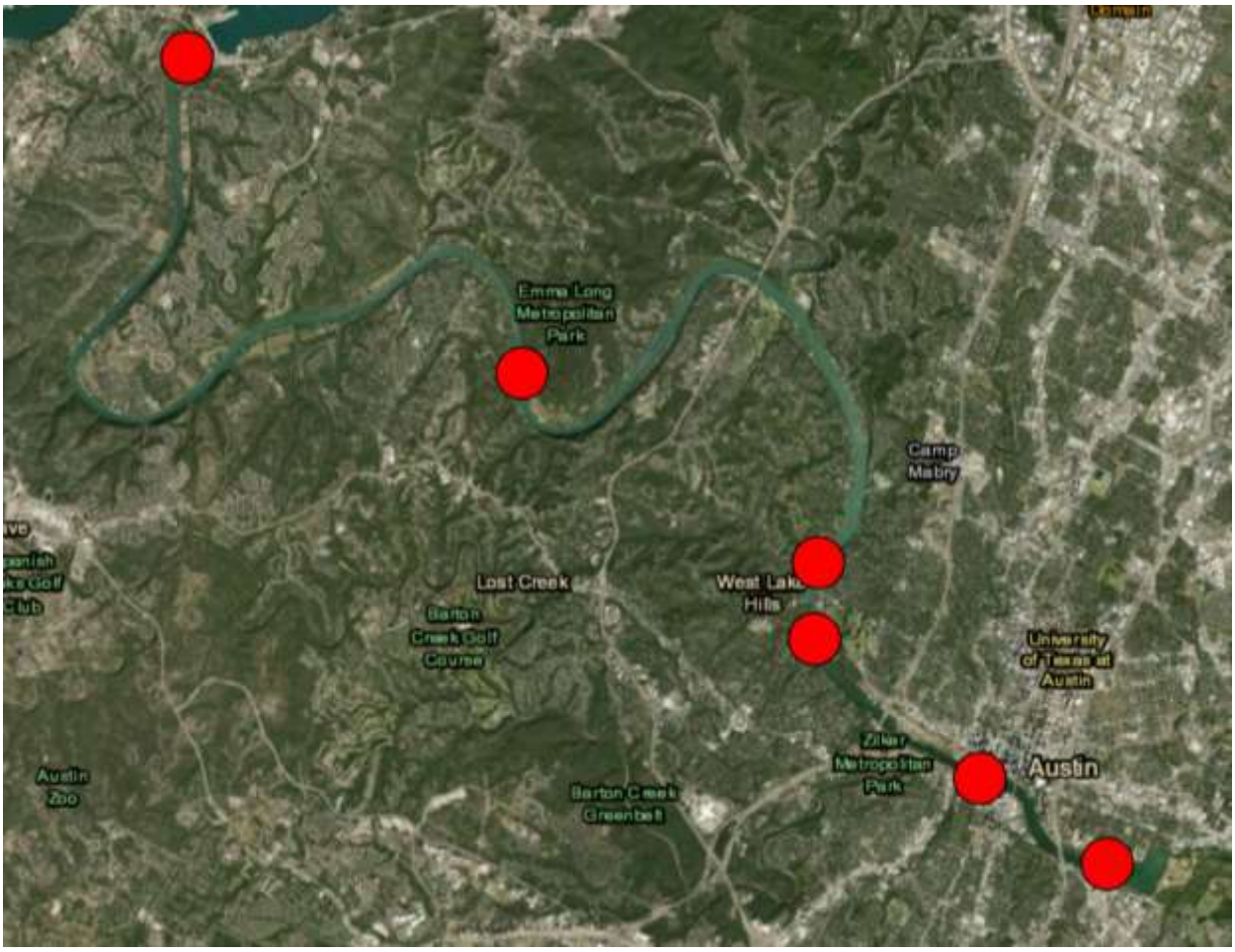

Figure 1. Location of HAB sampling sites on Lake Austin (top 3) and Lady Bird Lake (bottom 3).