

Lake Size

34 acres

Date of Application

May 2017

Project Sponsor

City of Tacoma

Project Reference

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Project Website

wapatoalum.com

Lake Wapato, WA

Lake Wapato is a shallow, 34-acre urban lake located in the City of Tacoma, WA. The poorly buffered lake (total alkalinity of below 25 mg CaCO₃/L) has a long history of poor water quality with the first closure to recreational use occurring in 1942. Problems at the lake have ranged from swimmers getting rashes, to bad odors, to heavy algae blooms, and to the toxic algae blooms that have been common in recent years. Excessive amounts of the nutrient phosphorus were the main cause of the toxic algal blooms. Internal phosphorus loading (leaching from the lakebed sediments) is significant in the lake and phosphorus is high in the sediments and available for release into the overlying water column.

HAB Aquatic Solutions successfully conducted a buffered alum application (15,932 gallons of alum and 9,470 gallons of sodium aluminate) over a three-day period in May 2017. The application produced a "floc" that settled



HAB's Application Barge Preparing to Fill at Lake Wapato

to the bottom of the lake. The floc has sites where phosphorus in the sediments become chemically bound as it leaches from the bottom. The floc effectively intercepts and binds the phosphorus, which makes it unavailable for the algae to use for growth. The goals of the project were to dramatically reduce the internal loading of phosphorus from the sediments, lower the amount of phosphorus available to algae in the water, reduce the amount of algae and associated toxins and remove any recreational restrictions at the lake. For more information visit HAB's project website at www.wapatoalum.com.