

## **Kitsap Lake Algae Control and Aquatic Vegetation Control, 3/7/2022**

Proposed scope of work with 2022 contract services from AquaTechnex LLC. include:

- \$80,000 - Phoslock application to entire lake with possible second application in August
- \$40,000 - Harvesting of excess aquatic vegetation
- \$2,500 - Reapply herbicide to invasive shoreline vegetation and aquatic species
- \$750 - Reapply for NPDES Permit
- \$2,000 – Water quality sampling
- \$35,000 Second Phoslock application in deep water portions of the lake
- Tax: \$14,422.50
- Total contract - \$175,000

### **Kitsap Lake Cleanup Background**



Kitsap Lake water quality and aquatic vegetation have been studied for the past two decades. The lake is fed by streams, springs, and stormwater runoff which carries nutrients into the lake. The lake has a very limited exchange of water, so pollutants tend to “hangout” in the lake and settle to the bottom. Nutrients, from accumulated sediment, support aggressive aquatic vegetation growth and feeds potentially toxic cyanobacteria algae blooms. Further, the lake attracts waterfowl whose waste contains bacteria including E-coli that further impairs water quality. Historically, these elevated bacteria levels and cyanobacteria algae blooms prompted lake contact recreation advisories and closures each year.

Mayor Wheeler and City Council identified Kitsap Lake as a priority concern and dedicated resources to improve lake quality and restore recreational opportunities to the community. In late 2018, the City met with lakefront property owners to discuss lake water quality and developed a partnership committed to lake cleanup. Baseline water quality and lake sediment testing were completed in 2019, which defined corrective actions needed. City staff completes seasonal water testing to track improvements or issues associated treatment. Kitsap Public Health tests lake water to ensure it is safe for direct contact during recreational use and fishing.

Water quality has improved significantly with no closures reported during the high use months of June through August over the past two years. This is the third year of the project using Phoslock® (an environmentally safe product) to control cyanobacteria growth in the lake. Algae blooms have occurred outside of the high use periods. By comparison with pre-project blooms, these have been smaller and shorter in duration. Continued project support will be needed over the coming years to maintain water quality and control free reactive phosphorus in the lake.

The 2022 contract modification funds continued services from AquaTechnex LLC. that included:

- Phoslock application to sequester free reactive phosphorus in the water column and lock phosphorus in the bottom sediments.

- Harvest excess aquatic vegetation in the shoreline area (littoral zone).
- Elimination of invasive shoreline vegetation species with application of Clearcast herbicide.



A case study completed with data collected by City staff showed 90% reduction of available phosphorus and increased water clarity by 3 times baseline equal to an average depth of 15 feet.



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