

# LAKE MANAGEMENT DISTRICT FOR LONG LAKE

## Frequently-Asked Questions



### THE PROBLEM

#### Where do Long Lake's water quality issues come from?

The sources of Long Lake's water quality problems are primarily from excess phosphorus in the Lake. Phosphorus is a key nutrient in plant and algae growth and an excess of it causes algae blooms and increased plant growth. The sources of this phosphorus come from the historical lake sediments (legacy phosphorus), aquatic plants, soils around the Lake and decades of land uses near the Lake and within the watershed (fertilizers, failing septic systems, impervious surfaces etc.).

#### What are the problems created by expanding aquatic plants?

Aquatic plants grow towards the surface of the lake to get sunlight. As these weeds near the surface in significant quantities they can ensnare the arms and legs of swimmers, impede water skiers and become entangled in boat propellers and engine components. At the same time the prolific production of plants in Long Lake have grown very dense and when aquatic plant density is too great it reduces the quality of aquatic habitat for fish and other organisms. Additionally, these weeds, as they go through the natural growth cycle, pump additional phosphorus into the water, which fuel more weed growth and increase the probability of toxic algae blooms.



#### What are the problems with algae blooms?

Blue-green algae blooms can be extremely toxic to pets and humans, especially children. These blooms can cause rashes and other skin irritation, respiratory problems, nervous system reactions and other health concerns. These algae can be harmful if it comes in contact with the skin or ingested, but also, in certain cases, some of the toxins can become airborne that can be inhaled through breathing. Blue-green algae blooms have led to deaths of many dogs and other pets around the region and anecdotally, in Long Lake itself. Long Lake has been closed by the Kitsap Public Health District on numerous occasions due to these blooms.



## POSSIBLE ACTIONS

### **How can these issues be addressed? Is there a one-time fix like dredging?**

Through state funding from 2006-2010, a lake maintenance program in Long Lake focused on reducing the availability of phosphorous. This is accomplished by treating the lake with alum. Alum is a salt that is often used in cooking, purification of drinking water and in lakes to inactivate phosphorus. Aluminum in alum, when placed in the water, chemically binds with phosphorous making it too heavy to float causing the alum “floc” containing the phosphorous to sink to the bottom of the lake. This does two things, it denies algae and aquatic plants the excess nutrients, which impedes their growth and creates a barrier in the sediment of the lake preventing phosphorous from percolating from the lake bottom back up into the water column.

Dredging was attempted in Long Lake in the 1980’s, with no success. As dredging does not address the excess phosphorus issue, the aquatic weeds quickly returned. Additionally, the regulations regarding dredging have become much more restrictive since the 1980’s, with multiple threatened salmon species using Long Lake as critical habitat. Another dredging would cost-prohibitive for any private lake management district or local government to permit, execute and monitor, if even possible to get approved by state and federal agencies.

### **Are alum treatments safe for humans, pets, fish and wildlife?**

Yes. Alum additions to lakes, reservoirs and inflowing streams have occurred over the past five decades beginning as early as 1968 and are becoming a more commonplace lake management technique with over 180 peer review scientific journal articles and several hundred technical reports documenting the use, advantages and disadvantages of alum for phosphorus control in lakes. Alum, when applied according to the guidelines as outlined in the technical specifications as endorsed by North American Lake Management Society (NALMS) will be safe and effective. Alum is the most widely used



technique to inactivate sediment phosphorus and reduce internal phosphorus loading in lakes. There were 150 recorded alum treatments to lakes by 2005 and most of these occurred in the United States. Alum treatments have increased over the past four decades, such that the procedure is now considered to be routine and one of the most commonly used and successful methods of lake treatment. Alum is not a herbicide or toxic chemical and aluminum (the active chemical in alum) is one of the most abundant chemicals occurring naturally on earth, in fact, it is the third most abundant metal in the earth’s crust. It is safe with no known health impacts to humans, pets, fish or wildlife.

## FUNDING

### **Since Washington State Department of Natural Resources owns the Lake, why aren't they paying for the maintenance?**

The State owns Long Lake and many others statewide. While the state is not responsible to ensure recreational or other beneficial uses of its lakes, the state does provide grant funding with a matching money requirement to control algae. Through boat license fees, the state provides funding to an Algae Control Program that jurisdictions can apply for up to \$50,000 every two years. To access this funding a local jurisdiction must have a Lake Management District in place to act as match for the funding. Without a Lake Management District, this funding is inaccessible to Kitsap County. Additionally, the State has already provided Kitsap County \$970,000 to treat the lake from 2006-2010. This is substantially greater than any single state investment in any local lake maintenance statewide, and the only 100% grant given by the state to date. That funding was to conduct a demonstration project on how the lake could be managed to reduce the water quality issues and algae blooms. The demonstration was successful and the proposed scope of work for the Long Lake Management District uses these proven methods.

### **Since the Lake is used by citizens around Kitsap and we already pay stormwater fees, why doesn't the County pay for the maintenance?**

Per state law, stormwater management fees cannot be spent on efforts within the lake or other water bodies. They may only be used for upland improvements such as storm system maintenance, culvert replacements, rain gardens and other activities related to stormwater management. Even with this restriction, Kitsap County has invested heavily in addressing water quality issues in the surrounding watershed. The Public Works Stormwater Division and the Kitsap Public Health District have used over a \$1,000,000 in stormwater management fees and grants in the last 10 years improving/reducing stormwater discharges into the Lake and fixing failing drainfields within the watershed that provided extra nutrients for algae and aquatic plant species. These efforts have drastically reduced the discharge of phosphorus and other plant and algae nutrients into the Lake.

### **Why can't Kitsap charge at the State boat launch and at the County Park to fund the maintenance?**

Since the Department of Fish and Wildlife owns the boat launch we cannot charge a fee per state statute. As for the park, in the past, Kitsap did charge for parking and the revenue generated barely covered the costs of charging the fee (attendant wages, enforcement).

### **Is the Lake Management District funding lumped in with other County revenues for use on other projects?**

No. Funding from District special assessments can only be spent on lake management activities included in the proposed scope of work. All funds will be deposited into a special account dedicated solely to District activities.

## LAKE MANAGEMENT DISTRICT

### How were the special assessment amounts calculated?

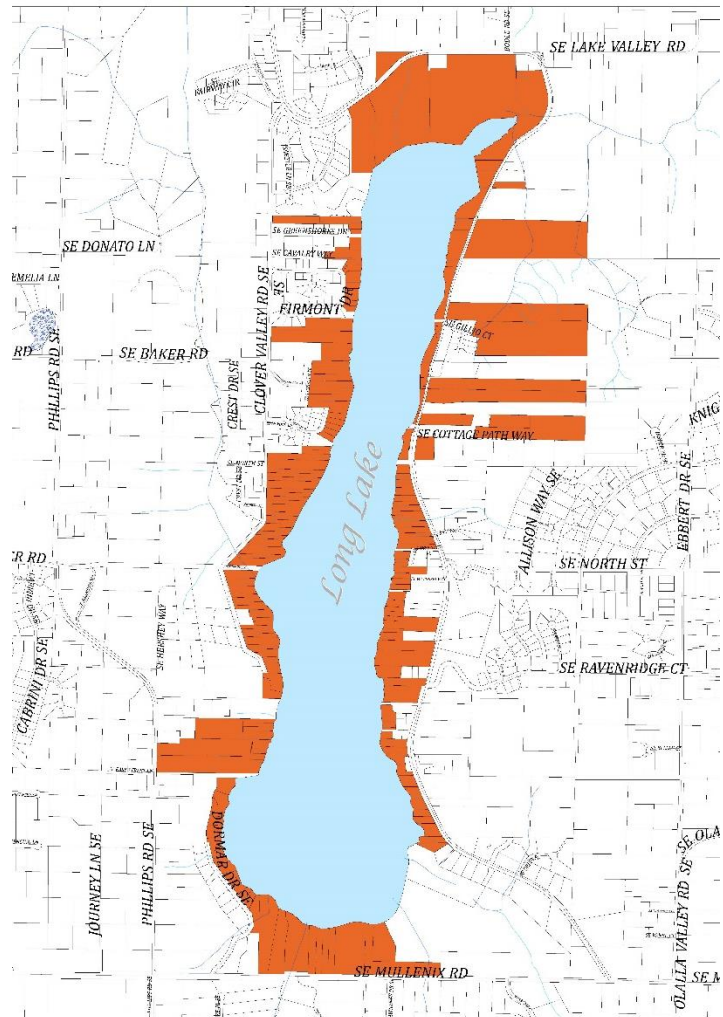
Unlike the 2014 proposal, the proposed district boundary is limited to only those properties that abut the shoreline. These properties must have an individual right to the lake (no properties with a common interest or those within reasonable proximity to the lake were included like in 2014). In this proposal, each property within the boundary is assessed the same amount \$450 per parcel. The assessment amounts were based on the benefits properties would receive from the proposed maintenance activities. These benefits are both in use of the lake and impacts of the lake health on property values. The total annual assessment collections fund the proposed scope of work for lake maintenance activities in their entirety.

### If an election is held on the proposed Lake Management District, what is the voting structure (how many votes does each property have)?

The election is held by mail with ballots sent to each property owner (not registered voters). The number of votes each property owner receives is based on the amount of the special assessment being proposed NOT the assessed value of the property. For example, a property with a \$1M home receives the same number of votes as a \$30,000 vacant shoreline property with no improvements (450 votes per property). Higher value properties are given NO additional weight in the election process.

### Will owners with multiple properties within the boundary have to pay separate assessments?

Yes. The special assessments are applied to each property owned within the boundary. For example a property owner with two lots would pay \$900 annually (\$450 multiplied by 2). This is based on each property being able to be sold separately with the potential for a home or other use developed on it. The property values of these individual properties benefit from the Lake's ongoing health.



**If approved, how will the special assessments be collected?**

If approved, the special assessments would be collected with each property’s property tax bill, possibly split equally between the April and October billings.

**Who will oversee the Lake Management District’s operations?**

If approved, Kitsap County will be responsible for oversight and contracting of all Lake Management District activities. These activities will be closely guided by the approved scope of work. Reports on its activities and expenditures will be published annually.

**Has a contractor already been chosen for lake management activities?**

No. If approved, Kitsap County would select a consultant through a competitive Request for Proposal process. While TetraTech has done significant work to date in Long Lake, they are not given any special consideration in this selection process.

**NO ACTION?**

**What if the Lake Management District fails and no maintenance is done to the Lake?**

Long Lake will continue to degrade. Native and non-native plant colonies will continue to spread, eventually making boating and swimming unsafe. Toxic algae blooms will become more common, causing more frequent Lake closures, until it becomes a normal condition in the Lake. Along with the lack of recreational use of the lake, property values in the area will be negatively affected, especially once the toxic algae blooms become a regular occurrence. No one can predict the speed in which this degradation will occur (months or years), but Long Lake will eventually become unusable and growing health hazard to the surrounding community.

