

Big Lake Clean Water Update: Balancing Algae, Weeds, and Our Watershed

ARTICLE SUMMARY:

Big Lake improved significantly in 2026: clearer water and much less severe blue-green algae allowing continued lake use all summer, following about **\$285,000 of treatment for phosphorus**.

However:

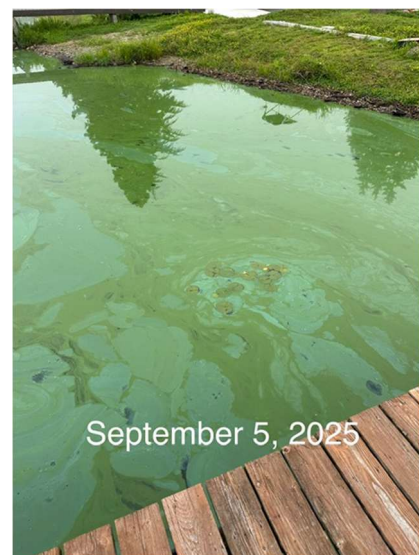
- Some algae blooms still occurred because treatment started late in the season and treatment was less than 10% of what is required to completely resolve the algae.
- **Weed growth increased** because lake-wide chemical weed treatment was paused to avoid releasing more phosphorus nutrients into the lake.
- The plan is to **treat phosphorus earlier in spring 2027** and continue doing so over multiple years.
- Restoring **Lake Creek flow** is another major focus because flow has reportedly declined ~50% over the past decade.
- **More funding is essential:** comprehensive phosphorus treatment is estimated at **\$3–5 million**.
- Community fundraising will resume in 2027 while pursuing county, state and federal funding.
- Longer-term options include watershed improvements and potential changes to the **Lake Management District assessment**.

Bottom line: 2026 was a promising first step, but the document below presents Big Lake restoration as a **multi-year, multi-million-dollar effort requiring continued treatment and community funding/support**.

ARTICLE

Reminders of What We Are Fighting Against

The photos below show conditions from previous seasons. These are the severe algae conditions our lake-management efforts are intended to prevent from becoming a regular part of Big Lake summers.



1. Why Minor Algae Blooms Still Happened This Year

In 2026, Big Lake was treated with a specialized phosphorus-binding material containing lanthanum. The treatment binds with dissolved phosphorus, an important nutrient for algae growth, and helps keep that phosphorus unavailable in the water column.

The treatment was applied in mid-June. By then, the water had already started warming and early-season algae had begun using available nutrients. The treatment can bind dissolved phosphorus, but it cannot remove phosphorus that has already been taken up by actively growing algae. As a result, some minor algae blooms were anticipated even with treatment.

Big Lake is a large, complex natural system with a substantial phosphorus load. Based on the estimates provided for the project, a more comprehensive phosphorus treatment would cost approximately \$3 million to \$5 million. Those funds were not available in 2026, so the approach was to begin with a smaller treatment and continue the work over multiple years. Approximately \$285,000 of lanthanum treatment was applied in 2026.

Our Goal for 2027: Shift the next application to early spring in late April or early May. Treating earlier is intended to bind available phosphorus before the lake warms and before significant algae growth begins. Some 2026 funds will carry over, but continued fundraising will be needed in 2027 and future years as we work toward long-term control.

Without continued action, nutrient conditions could worsen over time, increasing the risk of severe algae blooms, reduced lake usability, and negative impacts on the Big Lake community.

2. Why Treatment Was Targeted to Specific Areas of the Lake

Some property owners have asked why treatment was concentrated in certain areas rather than along individual shorelines. We worked with Aquatechnex as the technical expert in developing the treatment plan. Their team sampled the lake for phosphorus concentrations and used those results to determine where the available treatment material could be applied most effectively.

\$285,695 was spent on treatment material (equal to about two semi-truck loads), labor and equipment, which was applied by multiple boats over approximately a day and a half.

Phosphorus treatment is fundamentally different from localized weed treatment. The target is phosphorus in the water column and lake sediments, which can occur at different concentrations throughout the lake. For that reason, application locations were based on phosphorus sampling and the treatment plan rather than on the location of individual waterfront properties. The whole lake was treated but because the product is sprayed from a boat, they were required to stay away from docks to avoid damage to private property.

3. Why We Paused Lake-Wide Weed Treatment in 2026

We know the additional weed growth made swimming, boating, and shoreline use more difficult for many families. The decision not to conduct a lake-wide chemical weed treatment was intended to avoid adding another source of nutrient stress while the lake's phosphorus and algae conditions were being addressed.

Aquatic plants and algae compete for nutrients. Rooted aquatic vegetation takes up nutrients, including phosphorus, that might otherwise be available to algae.

Large-scale plant die-off can recycle nutrients. When aquatic plants die and decompose, nutrients contained in the plant material can be released back into the lake, and decomposition can also reduce dissolved oxygen. Avoiding a broad chemical treatment reduced the amount of vegetation dying at one time.

This does not mean nuisance weeds should be ignored. Instead, the goal is to balance lake-wide water-quality management with targeted shoreline weed control.

4. Permit-Free Shoreline Weed Options for Homeowners

Homeowners can currently use certain methods to manage nuisance vegetation around their waterfronts without applying for an individual permit, subject to Washington Department of Fish and Wildlife (WDFW) rules.

Benthic Barrier Mats (Bottom Screens): Property owners can place weighted, breathable fabric mats over portions of the lakebed to block sunlight and limit weed growth. WDFW rules described in the Aquatic Plants and Fish pamphlet should be followed for allowable coverage, placement, anchoring, maintenance, and removal.

Manual Hand-Pulling and Raking: Homeowners may hand-pull aquatic vegetation or use an aquatic weed rake in accordance with WDFW rules. **Pulled plants and floating fragments should be removed from the water and disposed of on land so they do not decompose, otherwise, they will decay on the beach and the phosphorous will leach out and back into the water;** or if left to drift, they can re-root elsewhere.

For complete rules, current requirements, step-by-step guidance, and safety information, please review the official WDFW Aquatic Plants and Fish Pamphlet online:

wdfw.wa.gov/licenses/environmental/hpa/types/aquatic-plants

By combining earlier nutrient treatment with responsible, targeted shoreline weed management, our goal is to keep Big Lake clearer, healthier, and more usable throughout the summer.

5. Restore Lake Flow

Lake Creek flows from Lake McMurray and is Big Lake's main fresh water source. Over the past ~10 years there has been a reduction of flow by an estimated 50% as determined by Washington State Department of Natural Resources (DNR). Obstructions in the creek - decaying brush/logs, beaver dams, unapproved manmade blockage and out of control growth of Reed Canary Grass (RCG) have redirected the creek flow to create a large wetland area at the South end of Big Lake. Efforts are now being made by the local property owners with the oversight and assistance of labor being contributed from DNR. It will take many years to re-establish the once free flowing creek, but it will be a positive factor to our lake health.

Additionally, there are many small watershed creeks that contribute to Big Lake. Skagit County Water Quality department periodically samples these streams to determine pollutants that may be contributing to the unhealthy phosphorus levels.

Nookachamps outflow log weir (last replaced in 1980's) is showing signs of deterioration. This is something that needs to be evaluated for maintaining lake flow and lake water levels.

6. How to Fund Big Lake Restoration

Securing county and state funding is highly competitive. While we will absolutely continue to encourage the county in these efforts, we will also return to community fundraising in 2027 to ensure we have dependable resources for additional treatments.

To clarify how the process works: as a community, we cannot apply for this funding directly. Applications must be submitted through a Skagit County office, backed by letters of support and impact from our residents. Although Lake Management District (LMD) #1 of Skagit County have pursued several state grant opportunities over the past two years, none have been approved yet.

In addition to applying for Washington State Department of Ecology grants, we have provided letters of support to help the county seek federal appropriations from our congressional delegation—Representative Rick Larsen, Senator Patty Murray, and Senator Maria Cantwell. While Big Lake has not been awarded any appropriations in the past, the county will submit fresh requests to each of these offices this late autumn when the next application window opens. Hopefully they will be encouraged to include some funding to help in the restoration of Big Lake.

If anyone in our community has personal connections or channels of influence with these representatives that might help elevate our cause, please reach out to us. Your advocacy could make all the difference.

7. What's Next?

Our work is not finished. In 2027, our priorities will be to:

- Continue phosphorus-reduction (algae) efforts
- Get educated options for lake weed reduction
- Support the county in pursuit of state funding
- Continue fund raising efforts
- Improve water quality entering and leaving the lake
- Consider the impact of the existing watershed
- Reduce the impact of new development on the watershed
- Evaluate Lake Management District (LMD #1) assessment options as a potential long-term funding approach involving the broader Big Lake community.

The improvement we saw in 2026 is encouraging, but restoring and protecting Big Lake will require a multi-year effort. With continued treatment, responsible shoreline management, additional funding, and community support, we can build on this year's progress and work toward a healthier lake for the long term.

Thank you for your ongoing partnership and dedication to caring for Big Lake.

Satellite Comparisons:

August 2025 vs 2026

Aug 12, 2025



Aug 7, 2026



September 2025 vs 2026

Sept 3, 2025



Sept 6, 2026

