



SKAGIT COUNTY PUBLIC WORKS DEPARTMENT

1800 Continental Place, Mount Vernon, WA 98273-5625
(360) 416-1400 FAX (360) 416-1405

Request for Proposals for Aquatic Vegetation Management

Lake Management District No. 1 (Big Lake)

Summary

Skagit County Public Works is seeking professional services from a qualified contractor for the purpose of aquatic plant management for Lake Management District No. 1 (Big Lake). The contract period will be for two (2) year from 2025 to 2027. The County's needs are outlined in the following request for proposals (RFP).

Timeframe

The County will adhere to the following timeframe for selection of firm:

- | | |
|-----------------------------------|--------------------------------------|
| • Issue RFP | Monday, March 10, 2025 |
| • Deadline for Proposal Submittal | Monday, March 31, 2025, by 4:00 p.m. |
| • Selection of Firm | Tuesday, April 7, 2025 |

Submittal Criteria

All proposals should be labeled "RFP LMD 1 Aquatic Plant Management" and preferably sent by email to Evan Emrick at evane@co.skagit.wa.us.

Otherwise, proposals can be mailed to:

Skagit County Public Works
Attn: Evan Emrick
1800 Continental Place
Mount Vernon, WA 98273-5625

All proposals must be received by 4:00 p.m. on Monday, March 31, 2025. Proposals will be limited to a maximum of twelve (12) pages, including cover letter and graphics. This page limit does not include the below requested copy of a Final Report.

You must be a contractor on the MRSC Roster to submit an RFP for this project.

Interested firms should submit the following:

- Statement of Qualifications
- Summary of approach to complete the Scope of Work (SOW)
- Cost Proposal

The proposal must contain the following information:

- The names of individuals who will be providing aquatic plant management for this project, and their areas of expertise.
- Specific experience and/or relevant certifications/licenses of all individuals relative to this proposed project.

- A proposed outline detailing tasks, team composition, methods, equipment used, products and project schedule.
- A proposed budget based on the costs associated with the tasks outlined in this RFP.
- A description of any fines or penalties issued to the firm, or any individual working on the project, concerning permit and/or regulatory violations associated with aquatic plant management activities within the past ten (10) years.
- A minimum of three (3) project references. Include project name, date(s), description of project, and a contact name and telephone number.
- An example of an aquatic plant management Final Report (including maps) prepared within the last three (3) years. Report should cover a project similar in scope to the task outlined in this RFP.
- An example of a map using BioBase technology, showing aquatic plant densities.

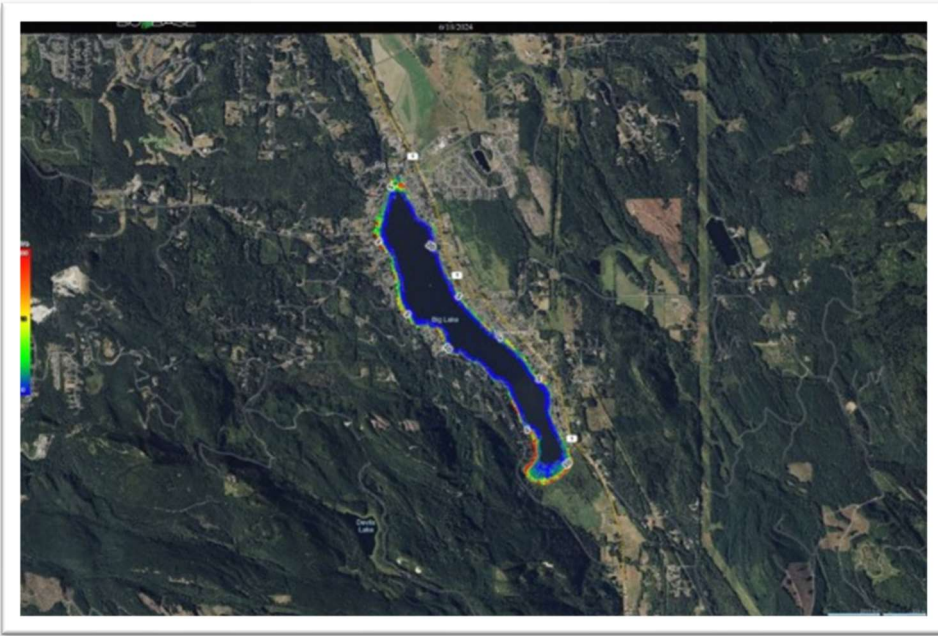
Terms and Conditions

The selected firm will be required to enter into a Professional Services Agreement with Skagit County Public Works. In addition to demonstrating skills and abilities to conduct aquatic vegetation surveys and produce associated maps, the successful candidate must:

- Carry a Washington State Business License.
- Provide proof of comprehensive or commercial general liability, professional liability, and automobile liability insurance coverage in the amount of \$1,000,000 per incident for the duration of the contract. Additionally, certificate of insurance should name Skagit County as an additional insured that will be secured for the above by endorsement.
- Provide current Washington State Department of Agriculture Commercial Applicators License with Aquatic Endorsement.

Background

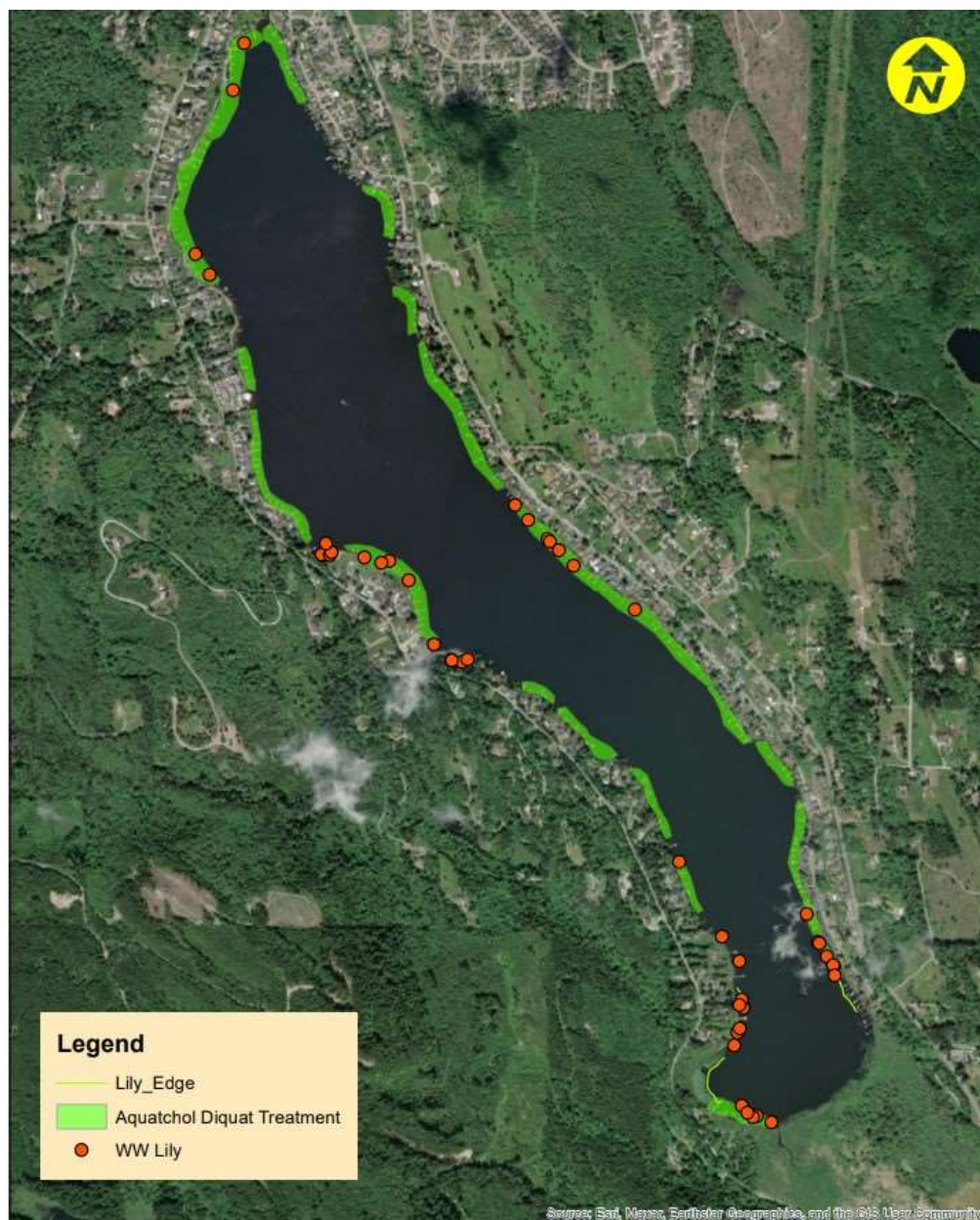
Big Lake is 520 acres in surface area. Maximum depth is 25 feet. Average depth is 14 feet. There are 7.6 miles of shoreline. Water discharges from Big Lake through Nookachamps Creek on the northern shore, eventually ending up in the Skagit River. The largest inflow, Lake Creek, discharges from Lake McMurray through a large wetland complex that abuts the southern end of Big Lake. The wetlands at the northern and southern ends of Big Lake serve as valuable habitat to fish and wildlife and is heavily utilized for recreation by the public and by shoreline property owners and their guests. There is a Washington Department of Fish and Wildlife public boat launch located on the western shore, which provides access for fishing, water-skiing, boating, swimming, and wildlife viewing. Over 90% of the Big Lake shoreline is comprised of residential development.



The dominate species present in the lake was *Elodea canadensis* or American Waterweed. *Elodea* was present in most of the survey areas where aquatic plant growth was detected. Other species noted were *Potamogeton praelongus* or White Stemmed Pondweed was also observed off the south shoreline.

The HEAT map on the following page shows the location of detected aquatic plant communities. The blue areas indicate that no vegetation is present at the time of survey, green to yellow areas in the color ramp shown on the left side of the image are in the mid-range growth filling the lower part of the water column, where red areas are present the entire water column is filled with vegetation.

The primary noxious weed problems observed were *Nymphaea odorata* or White-Water Lily and *Iris pseudacorus* or Yellow Flag Iris. The map on the following page shows the extent of these two species presences around the margins of the lake. The proposed treatment map is shown here. This was submitted to the Skagit County Noxious Weed Board for approval and as received we scheduled treatment.



Scope of Work:

The proposed project aims to control invasive aquatic plants such as Eurasian Milfoil, Brazilian elodea, and fragrant water lilies, and nuisance native aquatic plants along residential shorelines. A pre-treatment survey should be conducted in May/June to identify and map new or expanded Milfoil and Brazilian elodea, and the densities and problem areas of nuisance native aquatic weed growth using the BioBase mapping technology. Milfoil growth can be specifically targeted with a systemic herbicide or controlled with contact herbicides in conjunction with native aquatic weed control. The degree of nuisance native aquatic weed control will be determined by the pre-treatment surveys in June. Per permit restrictions, only thirty percent (30%) of the Big Lake littoral zone can be treated with a contact herbicide to control nuisance native aquatic plants. Aquathol K has proven to be effective at controlling some of the most problematic nuisance native aquatic weeds in small areas with high sedimentation but should only be used as the budget allows. Targeted control of noxious water lilies should only occur when wind conditions are minimal (below 10 mph). Yellow flag iris and purple loosestrife, if present,

will also be targeted for control, but only with permission from property owners. Big Lake experiences a lot of wind and wave action from boating which can impact aquatic herbicide applications so it's important to encourage boaters to reduce boat use during treatment applications by posting the notice for the 24-hour limited boat-use request and lake use restrictions at the boat launch. The Contractor will be responsible for securing the Aquatic Plant and Algae Management National Pollutant Discharge Elimination System (NPDES) General Permits for Big Lake from Ecology and adhering to all applicable laws, rules, and regulations concerning aquatic herbicide application related to the project work.

Regarding algal bloom management, a general scope of work would work to create a phosphorous management plan and include:

1. Create a bathymetric map using BioBase technology to calculate the exact volume of water and conditions of the lake sediments.
2. Collect sediment samples for level 2 fractionation, and sediment samples for level 3 fractionation in order to calculate the pounds of mobile phosphorus stored in the lake sediments that need to be targeted.
3. Collect baseline water quality data including total and free reactive phosphorus, nitrogen, pH, hardness, dissolved oxygen and temperature from at least three sampling stations are the surface and at depth.
4. Repeat this in the spring after the lake stratifies.

Project Tasks

The contractor will be responsible for the following project tasks:

Task 1: Aquatic Vegetation Surveys

1.1 Pre-Treatment Survey

- Notify Skagit County staff in writing no less than three (3) workdays in advance of the survey date. The Contractor shall be prepared to accommodate County staff or LMD1 Advisory Committee members during survey operations.
- Conduct one (1) pre-treatment aquatic vegetation survey May or June to identify invasive aquatic plants and map the density and distribution of aquatic vegetation throughout the lake littoral zone. Surveys should include surface observation, rake-toss technique along transects, GPS coordinates, and sonar BioBase mapping technology to accurately map plant densities.
- Communicate the survey results to County staff, including recommended actions and estimated costs that may serve as the basis for developing a task assignment for additional work under this contract.

1.2 Post-Treatment Survey/s

- Notify Skagit County staff in writing no less than three (3) workdays in advance of the survey date. The Contractor shall be prepared to accommodate County staff and/or at least one (1) Lake Management District Advisory Committee member during all survey operations.
- Only if determined necessary, approved by County Staff and Advisory Committee, and budget allows, Contractor will conduct one (1) brief post-treatment observational survey late-July (no more than three (3) weeks following treatments) to determine any lake areas that may require a secondary spot treatment.
- Conduct at least one (1) post-treatment aquatic vegetation survey mid-September to evaluate the effectiveness of aquatic herbicide treatments and to look for any new invasive aquatic plant growth.

- Email the survey results to County staff, including recommended actions and estimated costs that may serve as the basis for developing a task assignment for additional work under this contract.

1.3 Aquatic Plant Control Maps

- Produce maps illustrating the treatment area, invasive aquatic plant species, and aquatic plant densities pre- and post- treatments, using BioBase or equivalent sonar mapping. Project specifications and Federal Geographic Data Committee standard metadata must be provided for all maps.

Task 2: Aquatic Plant Management

2.1 Aquatic Plant and Algae Management General Permit

- The Contractor is responsible for applying, obtaining, and complying with the Aquatic Plant and Algae Management General Permit for Big Lake from the Washington State Department of Ecology and providing a copy of the permit and pesticide application records to the County staff.
- All contractor personnel applying the aquatic herbicide shall be approved as a Washington State Licensed aquatic herbicide applicator(s).

2.2 Public Notification

- Comply with all State and local public notification requirements for herbicide treatments and provide the County with copies of all notifications.
- Post the “limited boat-use” request at the public boat launch to reduce boating activity for twenty-four (24) hours to provide more effective plant control.
- Visibly post notices on docks, along the shorelines, and boat launches per permit requirements before applying herbicides.
- Adhere to permit requirements for removing notices and staples after herbicide treatments are applied.

2.3 Herbicide Treatments:

- The first treatment should occur no later than July depending on lake and weather conditions.
- The secondary treatment, if approved by the LMD1 Advisory Committee and county staff, should occur no later than August, depending on lake and weather conditions.
- Apply aquatic herbicides in accordance with the label specifications and permit requirements.
- Take precautionary measures and protect from harm existing populations of any state-listed sensitive plants located near the treatment sites.

Task 3: Algae Mapping and Sampling

- Create a bathymetric map using BioBase technology to calculate the exact volume of water and conditions of the lake sediments.
- Collect sediment samples for level 2 fractionation, and sediment samples for level 3 fractionation in order to calculate the pounds of mobile phosphorus stored in the lake sediments that need to be targeted.
- Collect baseline water quality data including total and free reactive phosphorus, nitrogen, pH, hardness, dissolved oxygen and temperature from at least three sampling stations are the surface and at depth.

Task 4: Project Reports: A final report shall be submitted electronically no later than December 15 of each year, to Skagit County Public Works staff. The report will summarize pre- and post- treatment plant

densities, areas treated, the type and amount of herbicide used, treatment results, and recommendations for the following year. The report will include:

- Map showing pre-treatment plant densities of submersed aquatic plants, including sonar.
- Map detailing the treatment areas and the aquatic plant species targeted.
- Map showing post-treatment plant density of submersed aquatic plants, including sonar.
- Estimated acreage treated for each targeted aquatic plant species.
- Map and sampling work for water quality and algae growth.
- A description of methods, herbicides, and equipment used.
- An assessment of the overall efficacy of the herbicide treatment.
- A copy of all permits and pesticide application records.
- Recommended treatment actions including aquatic plant species targeted for control, recommended herbicides, acreage to be controlled, and estimated costs for continued management.

Task 5: Communications

- Maintain active communication with Skagit County staff (email preferred), Lake Management District Advisory Committee, and shoreline property owners.
- Provide a brief written description of the work accomplished on all invoices. Include copies of all publications and written materials along with the related invoices.
- Attend at least one (1) Lake Management District Advisory Committee meeting each year to discuss aquatic plant management issues and concerns, treatment results from the prior year and make recommendations for the subsequent year.

Annual Estimated Schedule of Work (2-Year Contract)*

Date	Task
May/June	Pre-Treatment Aquatic Vegetation Survey
June	Apply herbicide treatments as determined necessary by County Staff and Advisory Committee
July	Brief Mid-Summer Post-Treatment Observational Survey
August	Secondary treatment/s, if approved by the LMD1 Advisory Committee, no later than August 7, or shortly after, depending on the weather
Mid-September	Post-Treatment Aquatic Vegetation Survey mid-September
December 15	Annual Project Report Due no later than January 15
January or February	Attend the annual LMD1 advisory committee meeting

**Skagit County Public Works reserves the right to modify the annual schedule of work.*

Selection Criteria

The proposals will be evaluated by the Lake Management District No. 1 (LMD1) Advisory Committee and Skagit County Public Works staff based on the following criteria:

- Qualifications of firm
- Past work performance
- Scope of work approach
- Cost

Project Cost Estimates

Note: For consistency, please use this format for cost estimates. Unit prices for all items, all extensions, and total amount of bid shall be shown. The total contract amount and tasks shall depend on available funding and the scope of work approved by the LMD 1 Advisory Committee. The actual treatment quantity will depend on pre-treatment survey results and available budget.

Item #	Description	Quantity	Unit	Unit Price (including sales tax)	Total Amount (including sales tax)
1	Pre-treatment aquatic vegetation survey and mapping via BioBase or equivalent.	1	Per Survey	\$	\$
2	Brief post-treatment observational survey to determine degree of secondary treatment if needed and if approved	1	Per Survey	\$	\$
3	Post-treatment aquatic vegetation survey and mapping via BioBase or equivalent to analyze success of treatments and to look for new infestations	1	Per Survey	\$	\$
4	Washington State Department of Ecology's Aquatic Plant and Algae Management NPDES General Permit	1	Per Permit	\$	\$
5	Annual project report (electronic)	1	Per Report	\$	\$
6	Public meetings and communications	1	Per Meeting	\$	\$
7	Public treatment notifications mailed to property owners	338	Per Notice	\$	\$
8	Public treatment notifications posted on docks, shorelines, and public boat launch	338	Per Notice	\$	\$
9	Limited boat use notice posted at the public boat launch	1	Per Notice	\$	\$
10	Water lilies, yellow flag iris, and purple loosestrife control with triclopyr or something equivalent (specify the herbicide that would be applied)	4	Per Acre	\$	\$
11	Submersed nuisance native aquatic weed control with Diquat, or something equivalent (specify the herbicide that would be applied)	40	Per Acre	\$	\$
12	Submersed nuisance native aquatic weed control – in areas with aquatic plant species that are difficult to control and high sedimentation areas (specify the herbicide(s) that would be applied)	40	Per Acre	\$	\$
13	Secondary aquatic weed control may be required between 25 to 40 acres if approved by the LMD1 Advisory Board- (specify the herbicide that would be applied)	40	Per Acre	\$	\$
14	Noxious aquatic weed control (specify the herbicide(s) that would be applied)	15	Per Acre	\$	\$
15	Algae Management Plan	1	Per Report	\$	\$
TOTAL BID (Including Washington State Sales Tax @ 8.6%):					\$