

Freshwater Algae Control and Aquatic Invasive Plant Management Programs

Joey Teresi (he/him), MS

WSEHA/WSPHA AEC – October 15, 2026

DEPARTMENT OF ECOLOGY
State of Washington

Freshwater Algae Control Program



What are freshwater algae?

- Diverse group of plant-like organisms that benefit aquatic ecosystems
- Primary producers at bottom of the food chain
- Excess algae growth (blooms) can become a nuisance
- Some types ("blue-green algae" or **cyanobacteria**) can be harmful



Filamentous green algae (not toxic)



Source: https://pubs.usgs.gov/of/2015/1164/ofr20151164.pdf

Why are cyanobacteria an issue?









- Can produce toxins harmful to humans and animals
  - *Not all strains can produce toxins, and the strains that can may not always produce them*
  - *Only lab tests can confirm*
- Causes environmental, recreational, and public health issues
- Cyanobacteria can form open water (planktonic) scums/ blooms or bottom-dwelling (benthic) mats

What is Ecology doing to help?

- Freshwater algae control grant funding



DEPARTMENT OF ECOLOGY
State of Washington

Freshwater Algae Control Grant Program
State Fiscal Year 2028 Funding Guidelines

Water Quality Program

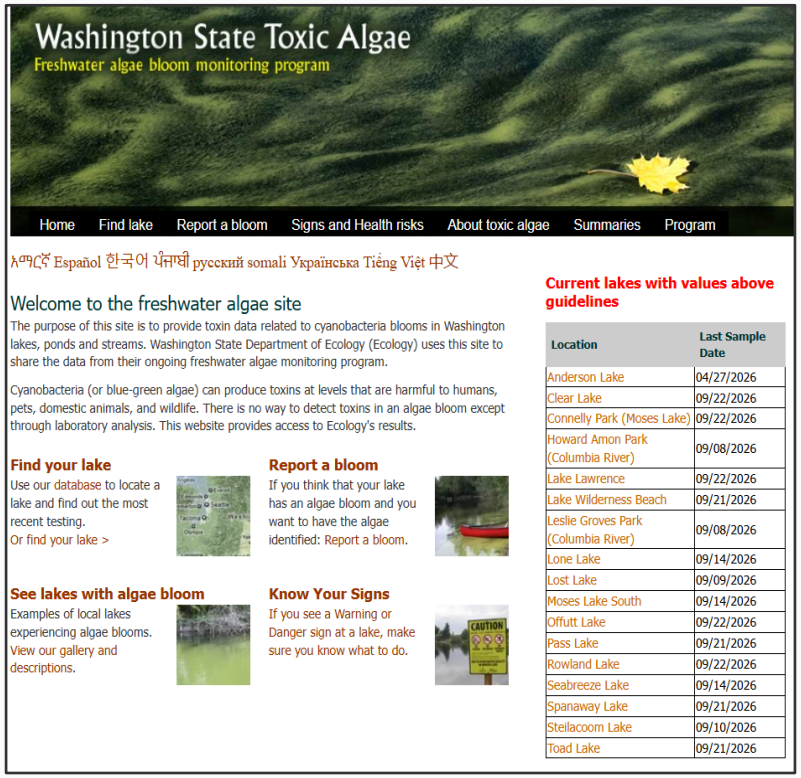
Washington State Department of Ecology
Olympia, Washington

Publication No. 26-10-065
Page 1

SFY 2028 Freshwater Algae Control Funding Guidelines
September 2026

Link: https://apps.ecology.wa.gov/publications/SummaryPages/2610065.html

- Statewide toxic algae testing



Washington State Toxic Algae
Freshwater algae bloom monitoring program

Home | Find lake | Report a bloom | Signs and Health risks | About toxic algae | Summaries | Program

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Welcome to the freshwater algae site

The purpose of this site is to provide toxin data related to cyanobacteria blooms in Washington lakes, ponds and streams. Washington State Department of Ecology (Ecology) uses this site to share the data from their ongoing freshwater algae monitoring program.

Cyanobacteria (or blue-green algae) can produce toxins at levels that are harmful to humans, pets, domestic animals, and wildlife. There is no way to detect toxins in an algae bloom except through laboratory analysis. This website provides access to Ecology's results.

Find your lake
Use our database to locate a lake and find out the most recent testing.
Or find your lake >

Report a bloom
If you think that your lake has an algae bloom and you want to have the algae identified: Report a bloom.

See lakes with algae bloom
Examples of local lakes experiencing algae blooms.
View our gallery and descriptions.

Know Your Signs
If you see a Warning or Danger sign at a lake, make sure you know what to do.

Current lakes with values above guidelines

Location	Last Sample Date
Anderson Lake	04/27/2026
Clear Lake	09/22/2026
Connelly Park (Moses Lake)	09/22/2026
Howard Amon Park (Columbia River)	09/08/2026
Lake Lawrence	09/22/2026
Lake Wilderness Beach	09/21/2026
Leslie Groves Park (Columbia River)	09/08/2026
Lone Lake	09/14/2026
Lost Lake	09/09/2026
Moses Lake South	09/14/2026
Offutt Lake	09/22/2026
Pass Lake	09/21/2026
Rowland Lake	09/22/2026
Seabreeze Lake	09/14/2026
Spanaway Lake	09/21/2026
Steilacoom Lake	09/10/2026
Toad Lake	09/21/2026

Link: https://www.nwtoxicalgae.org/Default.aspx

Freshwater Algae Control grant funding

- **How much? How often?**
  - ~$100k-$200k/year
  - $50k max/grant
  - No match requirement
  - Projects last up to 3 years
- **What gets funded?**
  - Lake management planning
  - Cyanobacteria control and management activities
  - Research projects
  - Education/outreach
- **Who is eligible?**
  - Cities
  - Counties
  - Special purpose districts
  - State agencies
  - Tribes
- **Current funding opportunity?**
  - **Applications open: 10/15/26**
  - **Applications close: 12/17/26**
  - **Link: Freshwater algae control grant program**

Toxic Algae Testing Program





- Partnership with King County Environmental Lab
  - Cyanobacteria ID
  - Cyanotoxin testing
    - Expanded analysis for health and environmental investigations
  - Website and database management

- Program is open to local health jurisdictions, water body managers, and lake residents during the growing season. Ecology approval is required.

General Sampling Process

After algal bloom is reported and Ecology approves the request:



- Request sample bottle kit from lab: algaetoxinbottles@kingcounty.gov
- For additional questions, contact Ecology: toxicalgae@ecy.wa.gov
- Stay informed: sign up for weekly email notifications

Final results are posted to www.nwtoxicalgae.org

Washington State Toxic Algae

Freshwater algae bloom monitoring program

Home | Find lake | Report a bloom | Signs and Health risks | About toxic algae | Summaries | Program

Detailed search for your lake

This database contains the most current toxicity data available. All instances of values above the recreational guidelines are kept as up to date as possible, but values below the guidelines may be somewhat delayed in entry.Since there is a lag time from the date of sample to the date of analysis, be sure to check the sample date when looking at data or before you use the lake. Remember to use caution and avoid scums. "When in doubt, stay out!"

Your local jurisdiction may have more specific information about your lake. Questions? Contact toxicalgae at Department of Ecology.

If a lake is not listed, it has not been tested for toxic algae through the Ecology program.

The pins on the map represent the center of small lakes, regardless of where the sample was taken. To find more precise location information, download the toxin data and click the "view scum info" link. That is where specific sampling location information will be if it was provided. On larger lakes, (such as Lake Washington, Moses Lake and Potholes) pins represent the location of the sample if provided.

County
--All Counties--

WRIA
--All WRIAs--

Site
--All sites--

Toxin
--All toxins--

Minimum Toxin Concentration

Maximum Toxin Concentration

Start Date (MM/DD/YYYY)

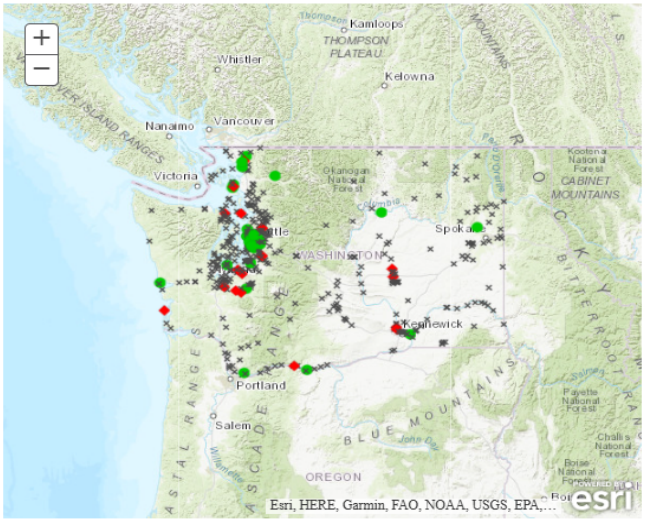
End Date (MM/DD/YYYY)

Lab Sample Number

Plot Map
Clear Selections

Get data
Get Toxins
Get Phytoplankton

Map Legend: ◆Exceeded state recreation guideline ●Within state recreation guideline
× No data is available for the past 4 weeks.



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Toxin:

County	WRIA Number	Site	Collect Date	Parameter	Toxin Conc. (µg/L)	MDL (µg/L)	Above State Guideline	Additional Information	Sample Location	Ecology Tracking Number
Grant	41	Moses Lake	09/16/2024	Microcystin	1.370	0.300	No	View	Connelly Park	MOSEGRAN115_24_306
Grant	41	Moses Lake	07/08/2024	Microcystin	0.600	0.150	No	No	WDFW North Launch	MOSEGRAN115_24_059
Grant	41	Moses Lake	09/12/2023	Microcystin	2.080	0.300	No	No	Connelly Park boat launch	MOSEGRAN115_23_274
Grant	41	Moses Lake	09/11/2023	Microcystin	<MDL	0.300	No	No	Neppel Landing fishing pier	MOSEGRAN115_23_275
Grant	41	Moses Lake	11/14/2022	Microcystin	0.286	0.150	No	View	Blue Heron Park boat launc	MOSEGRAN115_22_466
Grant	41	Moses Lake	10/25/2022	Anatoxin-a	<MDL	0.010	No	View	Pelican horn east shore	MOSEGRAN115_22_442
Grant	41	Moses Lake	10/25/2022	Cylindrospermopsin	<MDL	0.025	No	View	Pelican horn east shore	MOSEGRAN115_22_442
Grant	41	Moses Lake	10/25/2022	Microcystin	330.000	0.150	Yes	View	Pelican horn east shore	MOSEGRAN115_22_442

Recreational Guidance for Cyanotoxins

Washington State Recreational Guidance for Microcystins, Anatoxin-a, Cylindrospermopsin and Saxitoxin



Washington State Department of HEALTH

DOH 333-279 June 2025

To request this document in another format, call 1-800-525-0127. Deaf or hard of hearing customers, please call 711 (Washington Relay) or email doh.information@doh.wa.gov.

Link: https://doh.wa.gov/sites/default/files/2025-08/333-279-GuidanceFreshwaterToxins.pdf

Figure 1: Two-tiered approach to managing Washington water bodies with cyanobacterial blooms.

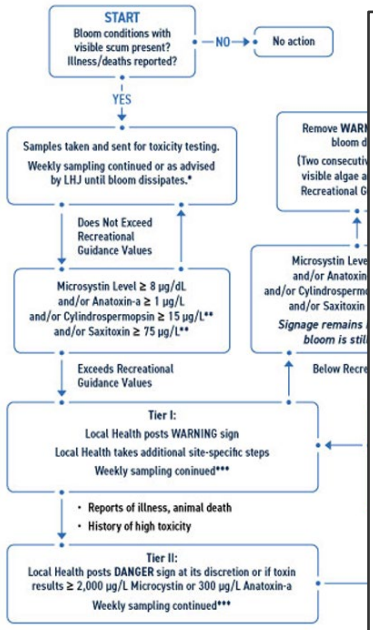
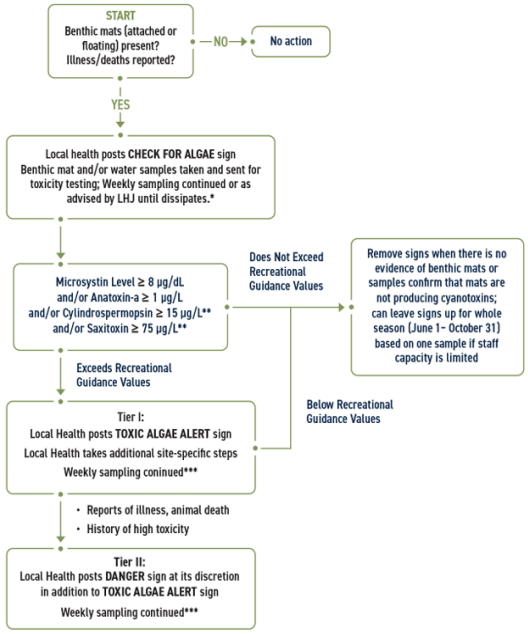
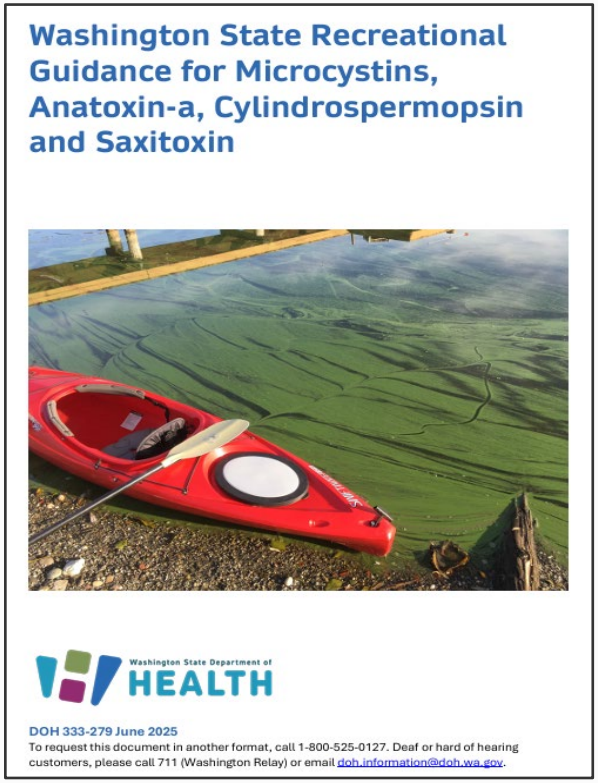


Figure 2: Advisory approach to managing benthic cyanobacteria in Washington water bodies



Recreational Guidance for Cyanotoxins


Washington State Recreational Guidance for Microcystins, Anatoxin-a, Cylindrospermopsin and Saxitoxin

Washington State Department of HEALTH

DOH 333-279 June 2025

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Cyanotoxin	Washington State Recreational Guideline	EPA Recreational Guideline
Microcystins	8 µg/L	8 µg/L
Anatoxin-a	1 µg/L	Not Applicable
Cylindrospermopsin	15 µg/L	15 µg/L
Saxitoxin	75 µg/L	Not Applicable

µg/L = micrograms per liter
EPA = Environmental Protection Agency

Department of Health HABs Resources

- Toxic algae signage











- Animal safety signage







Link: https://doh.wa.gov/community-and-environment/contaminants/cyanobacteria/resources

Aquatic Invasive Plant Management Program



Importance of aquatic plants

- Aquatic plants provide many benefits to aquatic ecosystems:
  - Maintain clear water and compete with algae for nutrients
  - Stabilize shorelines and prevent erosion
  - Provide a source of food and habitat for fish, birds, amphibians, and invertebrates





What are aquatic invasive plants and why are they a concern?

- Any non-native species of emergent, submersed, partially submersed, free-floating, or floating-leaved aquatic plant that can:
  - adversely affect fish populations,
  - reduce habitat for desirable plant and wildlife species,
  - and/or decrease public recreational opportunities



Flowering rush (*Butomus umbellatus*)



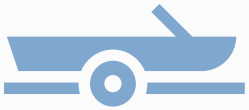
Eurasian watermilfoil (*Myriophyllum spicatum*)



Fragrant waterlily (*Nymphaea odorata*)

Aquatic Invasive Plants / Aquatic Noxious Weeds

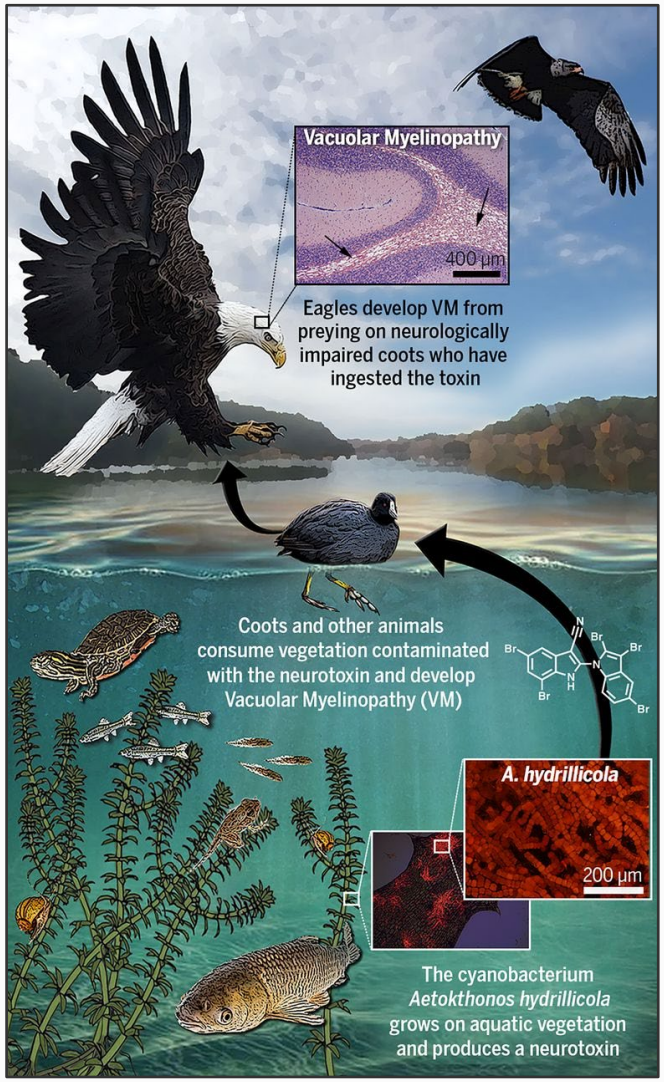


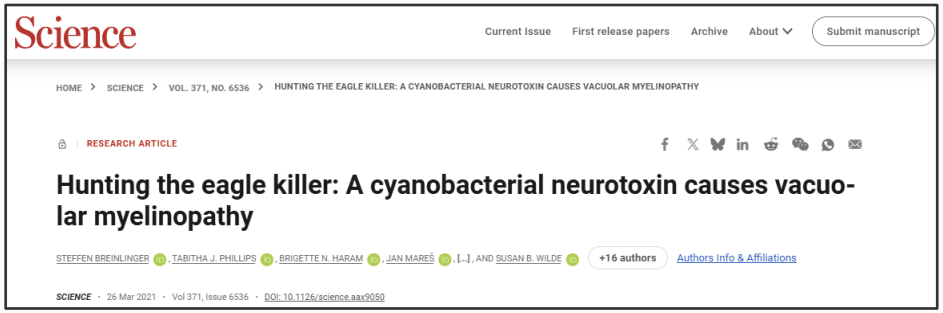


- Aquatic invasive plants are listed on the:
  - **Noxious Weed List**
    - WA State Noxious Weed Control Board
  - **Quarantine List**
    - WA State Department of Agriculture

- Classes of Noxious Weeds:
  - **Class A** – Listed for eradication in the state
  - **Class B** – Locally abundant; goal is to control and prevent spreading elsewhere in the state
  - **Class C** – Widespread in the state and eradication is not feasible

Ecosystem health and public health





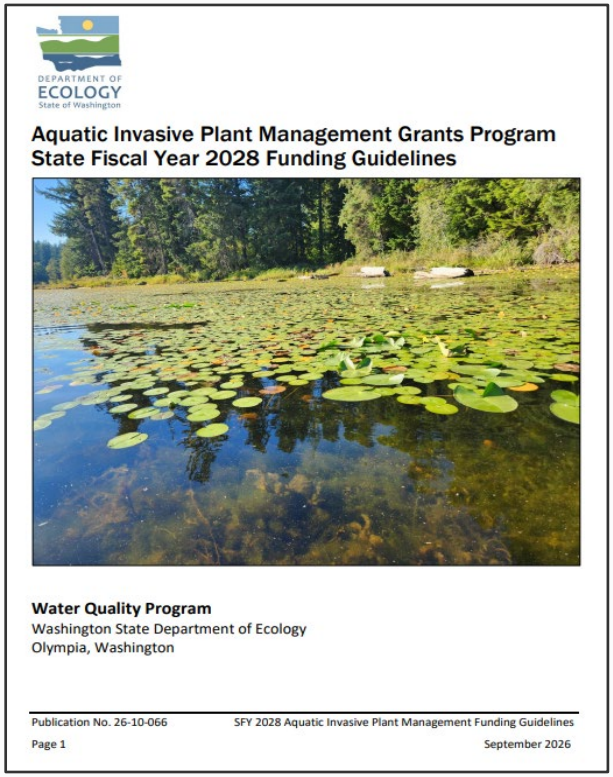
Link: https://doi.org/10.1126/science.aax9050



Hydrilla verticillata

What is Ecology doing to help?

- Aquatic invasive plant grant funding


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State of Washington

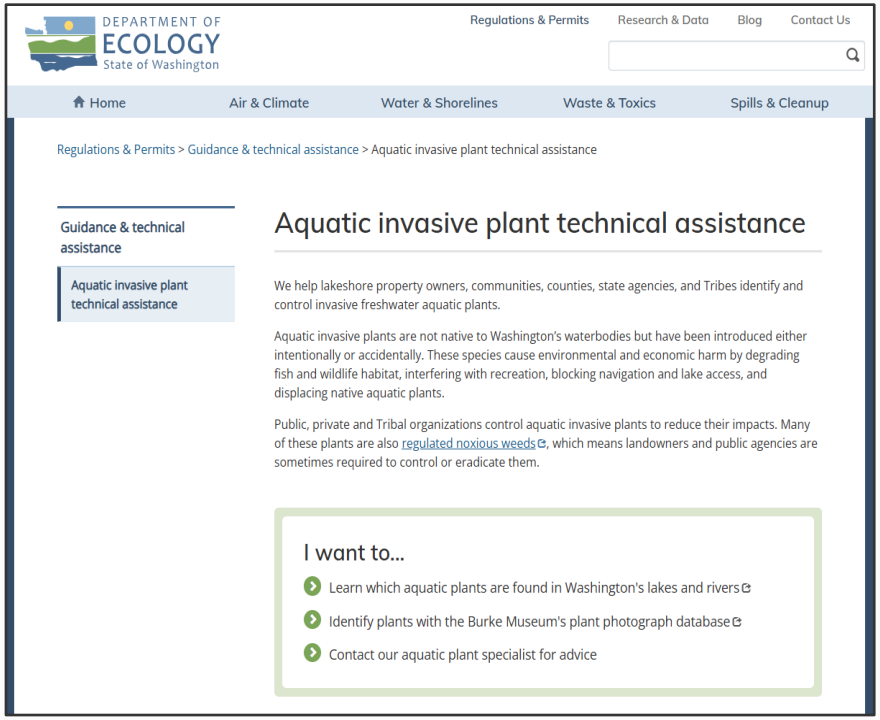
Aquatic Invasive Plant Management Grants Program
State Fiscal Year 2028 Funding Guidelines

Water Quality Program
Washington State Department of Ecology
Olympia, Washington

Publication No. 26-10-066 SFY 2028 Aquatic Invasive Plant Management Funding Guidelines
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Link: https://apps.ecology.wa.gov/publications/SummaryPages/2610066.html

- Aquatic plant monitoring and technical assistance



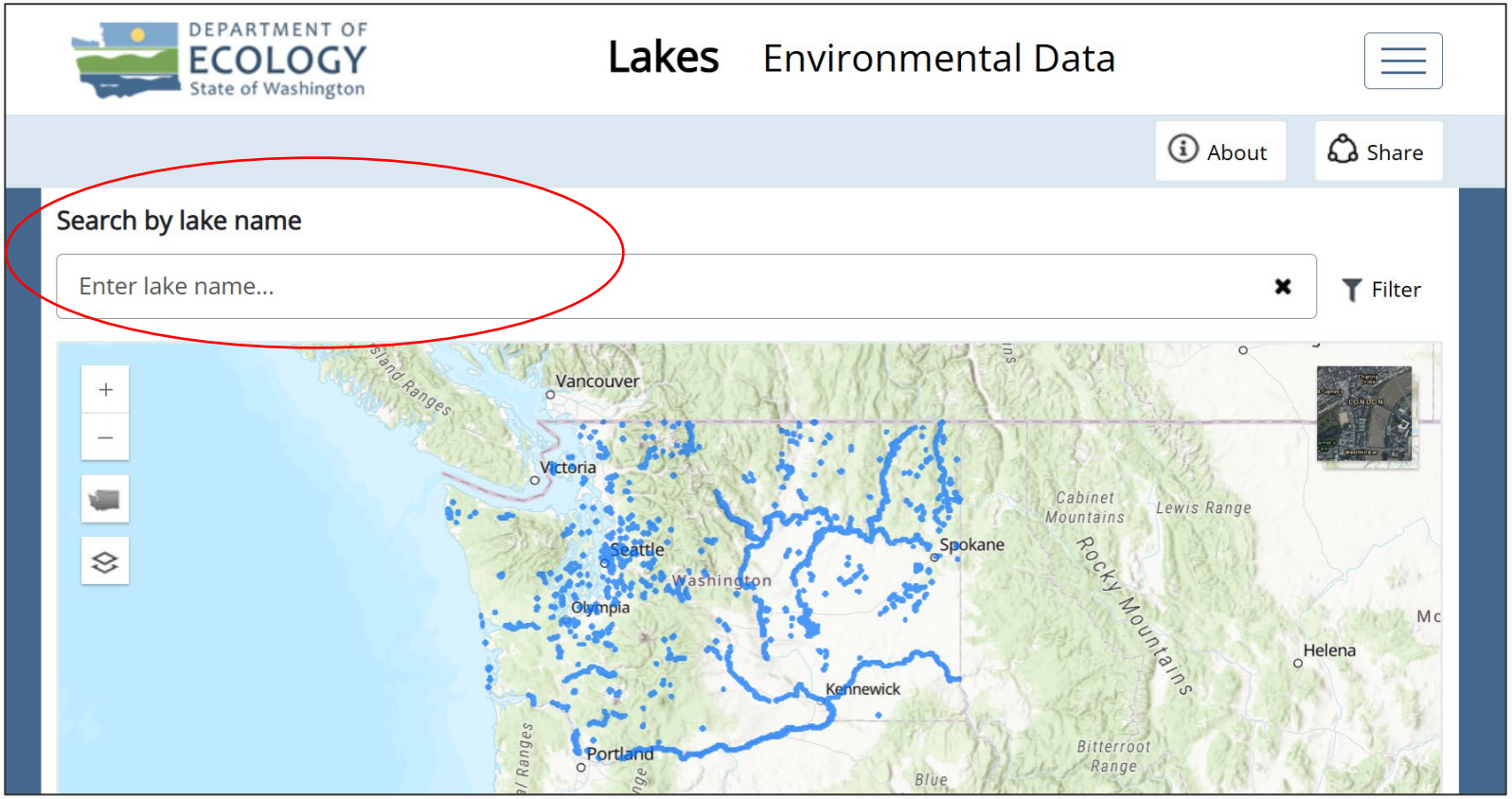
Link: https://ecology.wa.gov/regulations-permits/guidance-technical-assistance/aquatic-invasive-plant-technical-assistance

Aquatic Invasive Plant Management grant funding

- **How much? How often?**
  - ~$400k-$500k/year
  - Award caps vary by project
  - No match requirement
  - Projects last up to 3 years
- **What gets funded?**
  - Aquatic vegetation management planning
  - AIP management activities
  - Early infestation projects
  - Research projects
  - Education/outreach
- **Who is eligible?**
  - Cities
  - Counties
  - Special purpose districts
  - State agencies
  - Tribes
- **Current funding opportunity?**
  - **Applications open: 10/15/26**
  - **Applications close: 12/17/26**
  - **Link:** Aquatic invasive plant management grants program

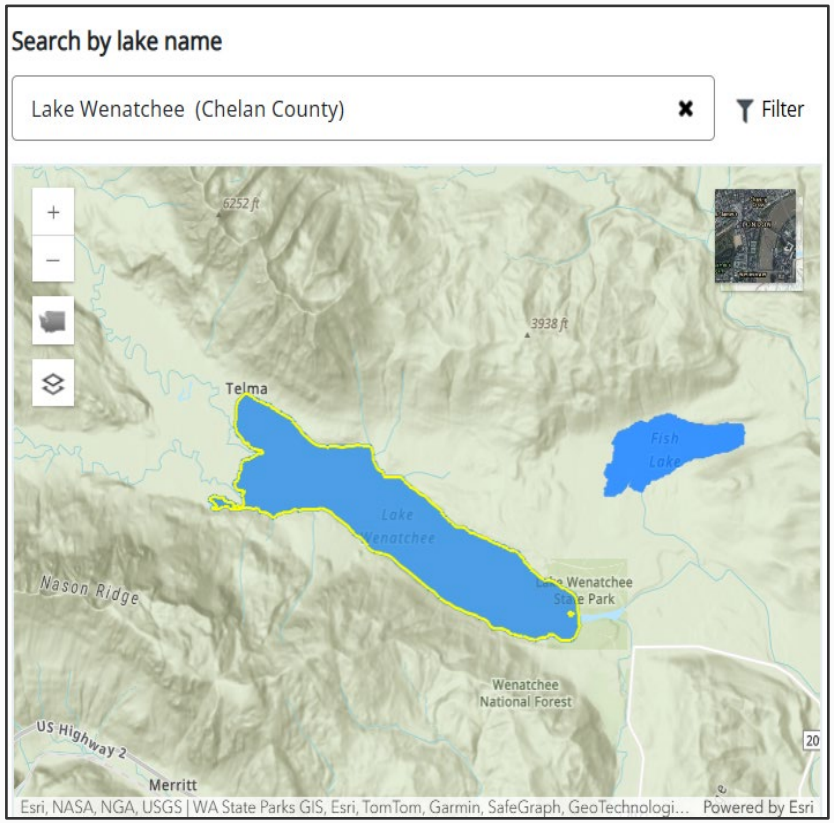
Aquatic Plant Monitoring

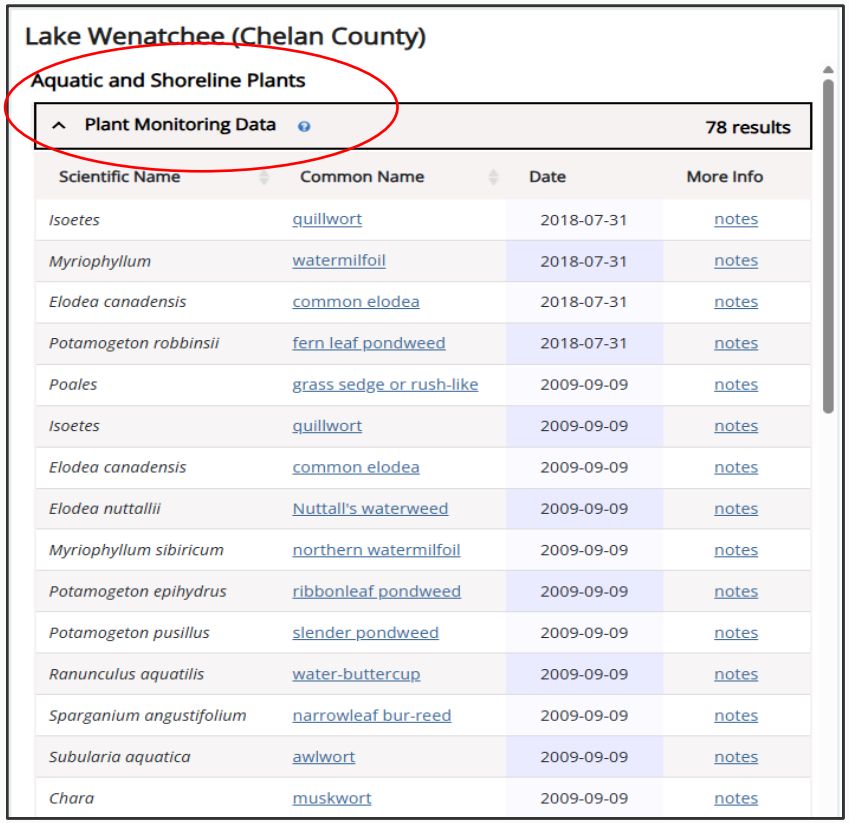
- **Lakes Database:** https://apps.ecology.wa.gov/lakes/
- Users can search by lake, county, or plant species



Aquatic Plant Monitoring

- **Lakes Database:** https://apps.ecology.wa.gov/lakes/
- Users can search by lake, county, or plant species





Lake Wenatchee (Chelan County)

Aquatic and Shoreline Plants

Plant Monitoring Data — 78 results

Scientific Name	Common Name	Date	More Info
Isoetes	quillwort	2018-07-31	notes
Myriophyllum	watermilfoil	2018-07-31	notes
Elodea canadensis	common elodea	2018-07-31	notes
Potamogeton robbinsii	fern leaf pondweed	2018-07-31	notes
Poales	grass sedge or rush-like	2009-09-09	notes
Isoetes	quillwort	2009-09-09	notes
Elodea canadensis	common elodea	2009-09-09	notes
Elodea nuttallii	Nuttall's waterweed	2009-09-09	notes
Myriophyllum sibiricum	northern watermilfoil	2009-09-09	notes
Potamogeton epihydrus	ribbonleaf pondweed	2009-09-09	notes
Potamogeton pusillus	slender pondweed	2009-09-09	notes
Ranunculus aquatilis	water-buttercup	2009-09-09	notes
Sparganium angustifolium	narrowleaf bur-reed	2009-09-09	notes
Subularia aquatica	awlwort	2009-09-09	notes
Chara	muskwort	2009-09-09	notes



DEPARTMENT OF ECOLOGY
State of Washington

Thank you!

Joey Teresi (he/him), MS

Jote461@ecy.wa.gov

360-628-7516



Aquatic Plant and Algae Management General Permit

OCTOBER 15, 2026 Shawn Ultican

DEPARTMENT OF ECOLOGY
State of Washington

Aquatic Pesticide Permits

1. Irrigation System Aquatic Weed Control
2. Invasive Eelgrass Management
3. Aquatic Mosquito Control
4. Aquatic & Invasive Species Control (WDFW & WSDA)
5. Aquatic Noxious Weed Control (WSDA)
6. **Aquatic Plant & Algae Management (APAM)**

These permits incorporate both state and federal laws, and provide the regulatory framework for controlling aquatic plants, algae, animals, and insects.

Aquatic Plant and Algae Management

The APAM permit allows chemical treatments for the management of aquatic noxious weeds, native nuisance plants, algae, and controlling levels of the nutrient phosphorus.

Our aquatic pesticide permits regulate the type of products used for these activities, and provide specific monitoring, reporting, and public notification requirements.

The APAM permit was reissued in March, 2026 and will be in place until 2031.


Columbia




MERCURY







Applying for permit coverage

1. Apply online, details on the APAM permit web page.
   https://ecology.wa.gov/aquaticplants
2. Pesticide applicators or government entities can apply.
3. This process includes a 30-day public comment period.
4. It can take 45-60 days to get coverage.
5. Coverage currently costs $530 per year.

DEPARTMENT OF ECOLOGY
State of Washington

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Regulations & Permits > Permits & certifications > Aquatic pesticide permits > Aquatic plant & algae management

Permits & certifications

- Aquatic pesticide permits
- Aquatic & Invasive Species Control
- Aquatic mosquito control
- Aquatic noxious weed control
- **Aquatic plant & algae management**
- Burrowing shrimp control

Aquatic Plant & Algae Management General Permit

We issue the Aquatic Plant & Algae Management (APAM) General Permit to allow chemical treatments for the management of aquatic noxious weeds, native nuisance plants, and algae.

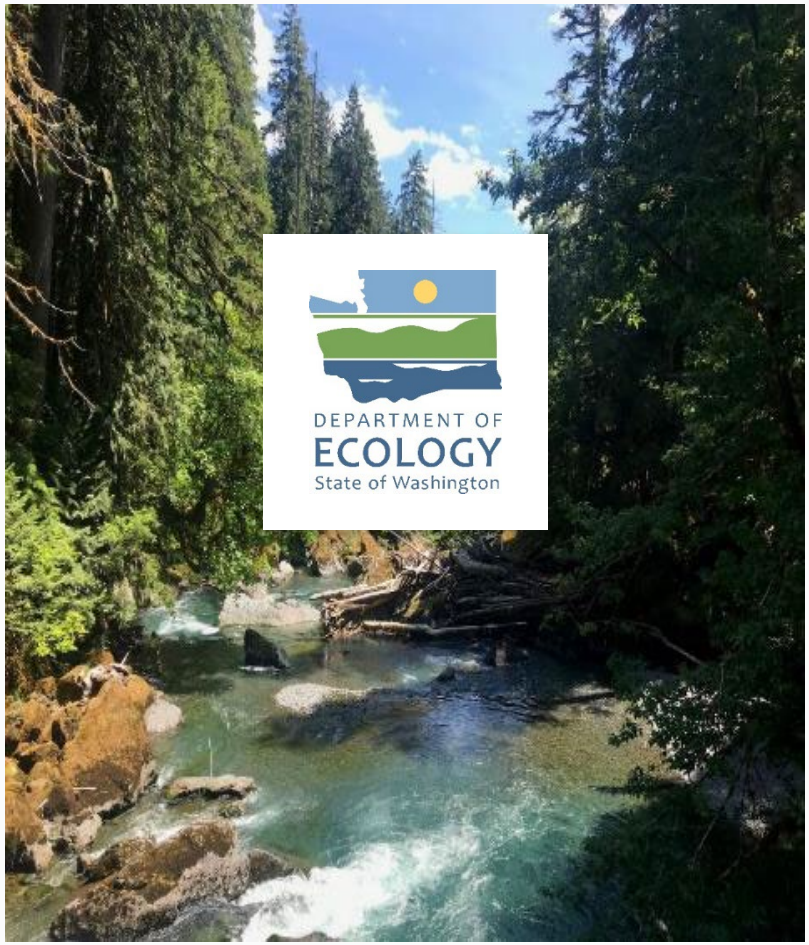
These chemicals are limited to a specific list of aquatic-labeled herbicides, algaecides, biological water clarifiers, adjuvants, marker dyes, shading products, and phosphorus sequestration products. They are permitted for use directly in fresh water (lakes, streams, and rivers) or along shorelines, roadsides, dikes/levees, and ditch banks.

The current permit went into effect March 20, 2026, and expires March 20, 2031.

Join our email list to receive email updates about this permit.

Some Recent Changes

1. Clarified treatment timing window section
2. Expanded monitoring of phosphorous control treatments
3. Added one aquatic herbicide and a phosphorus control product
    a. Triclopyr choline (Vastlan)
    b. Iron coated lanthanum (EutroSorb SI)



Thank you

Shawn Ultican
Aquatic Pesticide Permit Specialist
shawn.ultican@ecy.wa.gov
360-870-3492

APAM Permit web page:
https://ecology.wa.gov/aquaticplants