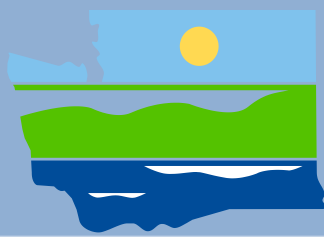


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Guidelines for Aquatic Herbicide Use under NPDES Permitting in Washington



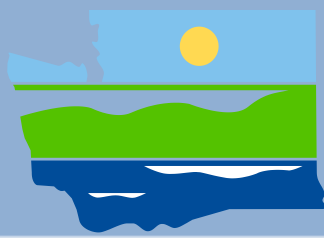
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**Aquatic Plant
& Algae
Management
Permit**



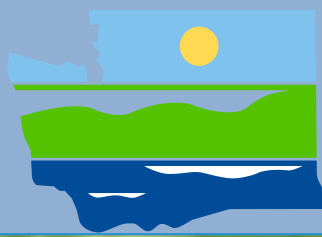
**Aquatic
Noxious Weed
Management
Permit**



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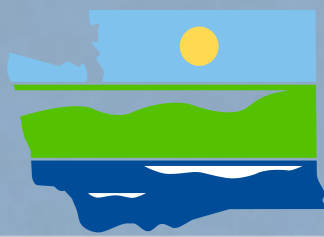


Aquatic Noxious Weed Management Permit



Only allows indirect
Application to water
through treatment of
emergent plants.

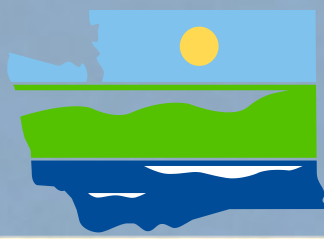
Indirect application
occurs through drift or
dripping from treated
plants.



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Aquatic Plant and Algae Management General Permit

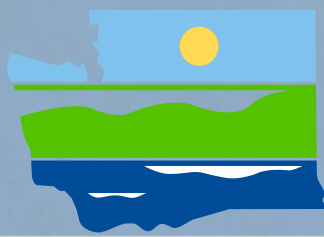


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Photo Courtesy of Doug Dorling

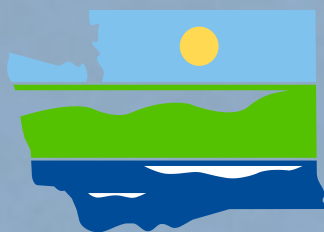
The Aquatic Plant and Algae
Management (APAM)
Permit allows in-water
application of herbicides to
treat noxious weeds and
native nuisance plants.



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The APAM Permit conditions the use of algacides, adjuvants, nutrient inactivation products, dyes, shading products and water clarification products.





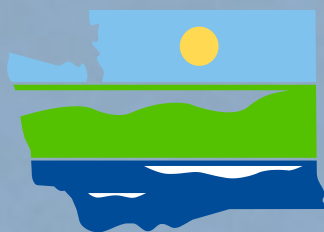
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Who Needs An Ecology Permit?



The person who is in charge of the day to day operations that cause a discharge (e.g. commercial pesticide applicator).

The local entity or individual that is sponsoring a project.



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Aquatic Pesticide Applicators License

Aquatic labeled pesticides are classified as restricted use pesticides in WA.

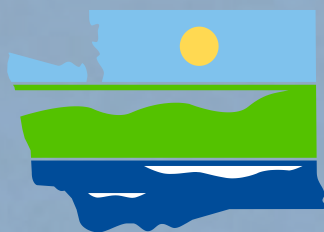
Operating under the APAM Permit requires a pesticide applicator license with the aquatic endorsement.

Two options:

- 1) Hire a commercial aquatic pesticide applicator.
- 2) Obtain your own pesticide applicator license with aquatic endorsement.

Licensing information and testing can be obtained through WSDA.

<http://agr.wa.gov/pestfert/docs/form4375.pdf>



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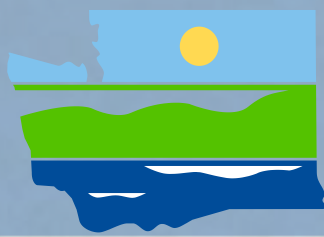
Cost of Permit



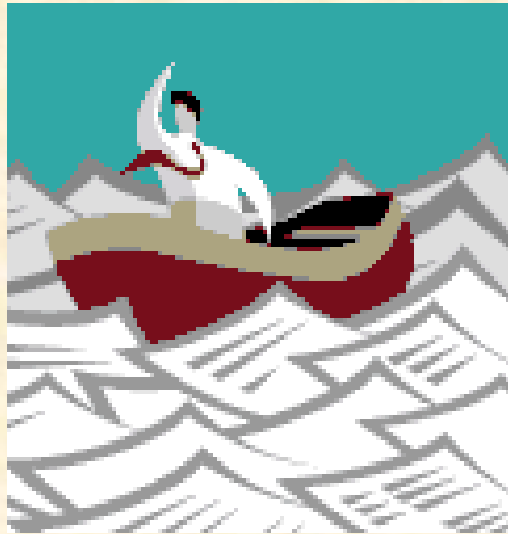
Current permit cost is \$496 annually.

A Permittee must request termination of permit coverage.

The Permittee will continue to incur an annual permit fee unless termination of permit coverage is requested.

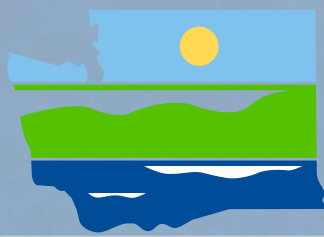


How Many Permit Coverages Do I Need?



Applicators must obtain separate permit coverage for each water body that they plan to treat. Each coverage requires a ***sponsor***.

In water bodies with multiple sponsors or multiple permit coverages, applicators must obtain separate permit coverages for each location within the water body (e.g., Lake Washington).



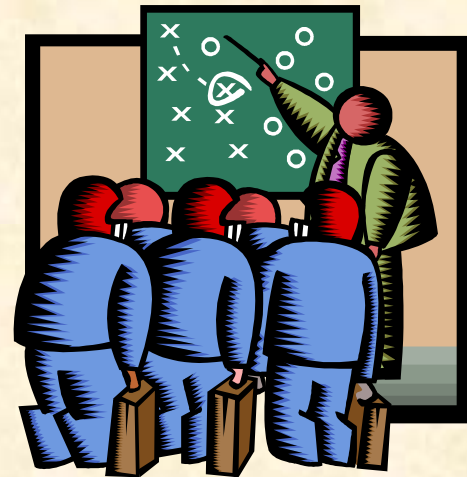
Discharge Management Plan (DMP)

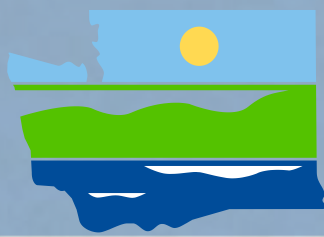
A DMP is required when the total treatment area for each coverage is equal to or greater than five acres

A DMP is not required when:

- a. The total treatment area for each coverage is less than five acres.
- b. Treating only for ditchbank or roadside vegetation.
- c. Treating under experimental use permits where the sole purpose is for research and development.

Projects exempt from the DMP requirement must still submit a SEPA checklist.





DMP Cont.

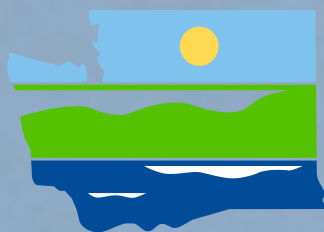
Components of the DMP:

- Water body information
- Problem statement
- Management goals
- Surveillance and Monitoring
- Action threshold
- Management alternatives
- Action plan
- Public involvement

SEPA, IPM, EIS, IAVMP



DMP



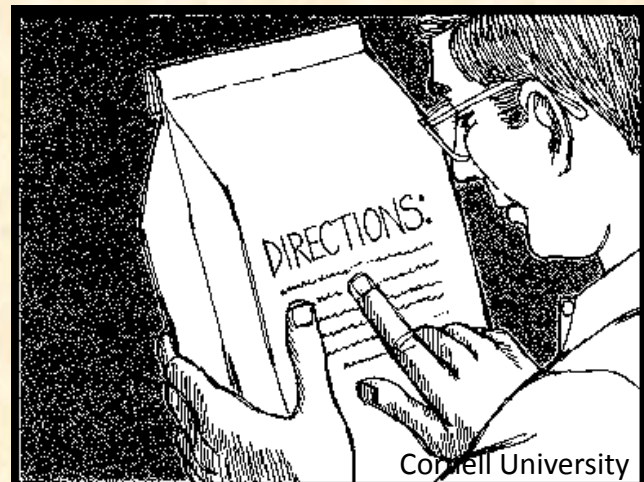
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Permit Defines Allowable Discharges of:

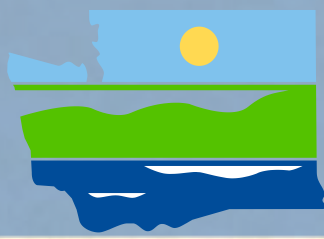
- Herbicides (13)
- Adjuvants approved for aquatic use (26)
- Nutrient inactivation products
- Marker dyes, shading products and water clarification products



University of Florida



Cornell University

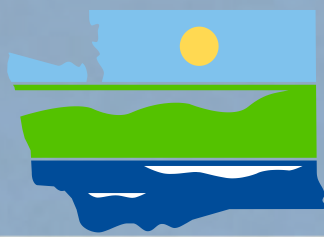


Permit Restrictions

Lists specific restrictions for applications of herbicides, algaecides, nutrient inactivation products, shading products and water clarification products:

- WDFW timing windows
- Water use restrictions and advisories (e.g. swimming)
- Treatment limitations
- Other: Such as drinking water restrictions and use in salmon bearing streams.



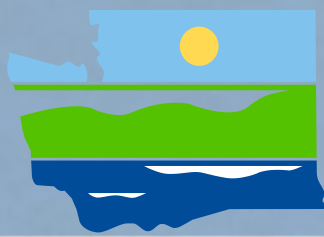


Eradication

Eradication projects target only state-listed noxious weeds or quarantine-list weeds.

The goal is the complete and permanent removal of these species from the entire water body.

Littoral zone limitations do not apply to eradication of noxious weeds or weeds on the quarantine list.



Control

Ecology limits direct herbicide application to a percentage of the *littoral zone* for most control *treatments to preserve native plant habitat*.

Aquatic noxious weed control

- 100% of class A, B and selected C listed noxious weeds

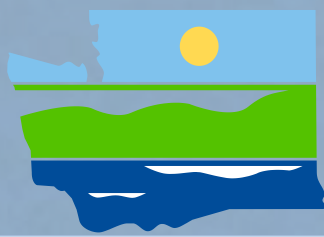
Aquatic nuisance plant control

- control of native plants
- Percent of littoral zone allowed for treatment is dependent upon water body size

Roadside and ditch bank plant control

- state and local agencies may intentionally apply herbicides to 100 percent of the plants within the *right of way*.
- Private lots may treat 100% of noxious weeds and 40% of native nuisance plants.



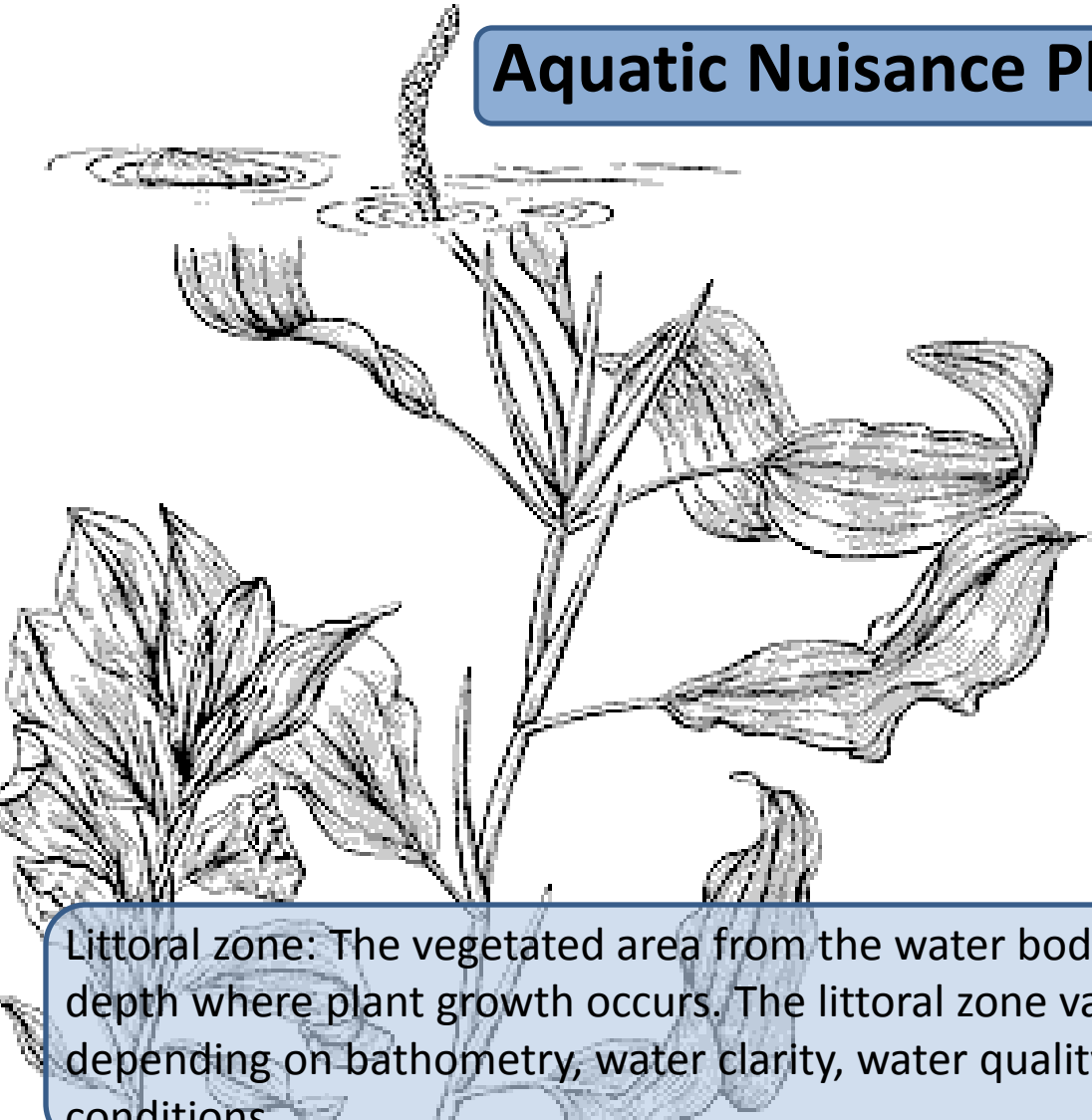


Aquatic Nuisance Plant Control

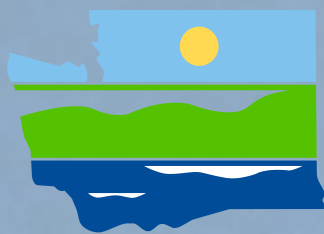
Lake Lucerne (16 acres) – Permittee may apply herbicide to no more than 60% of the littoral zone.

Pipe Lake (52 acres) - Permittee may apply herbicide to no more than 50% of the littoral zone.

Lake Wilderness (67 acres) - Permittee may apply herbicide to no more than 50% of the littoral zone.



Littoral zone: The vegetated area from the water body's edge to the maximum water depth where plant growth occurs. The littoral zone varies between water bodies depending on bathymetry, water clarity, water quality, and other environmental conditions.



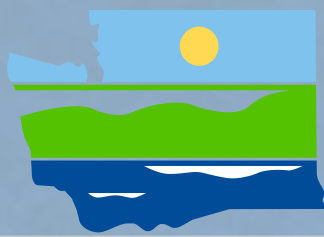
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Aquatic Nuisance Plant Control

(1) No more than 25 feet on either side of a dock or no more than an area 50 feet wide per lot for individual treatments targeting submersed and floating-leaved plants. Treatment of the vegetated area may extend up to 25 feet beyond the end of the dock. On individual lots with no docks, treatment of the vegetated area can extend up to 50 feet from the shore.

(2) No more than 40 percent of emergent shoreline plants such as cattails and bulrush on individual lots for individual treatments.

Photographed by Larry Jensen

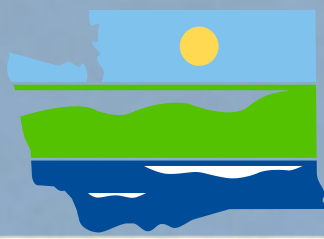


Algae Control and Nutrient Management

100% of the water body may be treated with algaecide when toxic algae is present.

Treatments of filamentous algae must follow littoral zone limitations for native nuisance plant control.

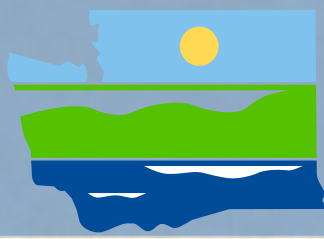
The Permittee may intentionally apply approved nutrient inactivation products to the entire water body or sections of the water body.



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To help protect habitat loss, Ecology limits the area of the treated littoral zone when treating native nuisance plants.





Role and Benefits of Maintaining a Healthy Native Plant Community

-Provide food for wildlife.

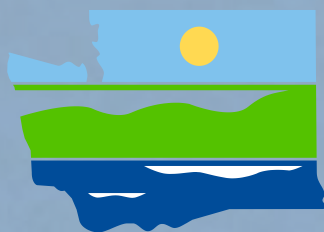
-Habitat for aquatic invertebrates.

-Shelter for young fish.

-Maintain water clarity through erosion control.

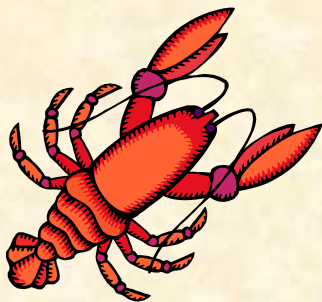
-Role in lake nutrient cycling, influence the supply of oxygen and pH.

-Healthy and diverse native plant community can be more resistant to invasive non-native species.



Permits balances beneficial uses of water body

Beneficial Uses Include:



Aquatic Life Uses

Harvesting Uses

Recreational Uses

Boating

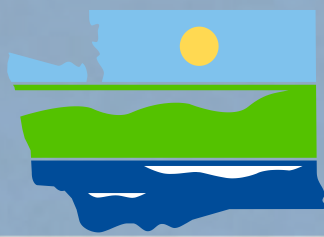
Water Supply Uses

Aesthetics

Wildlife Uses

Commerce and Navigation





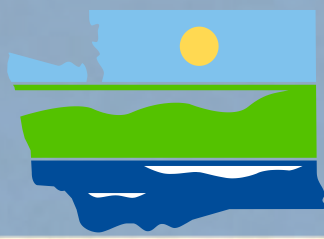
Pitfalls

Talk to water body users before treating.

Work out problems ahead of time.

For native nuisance plants a certain amount of the littoral zone is set aside in conservancy.

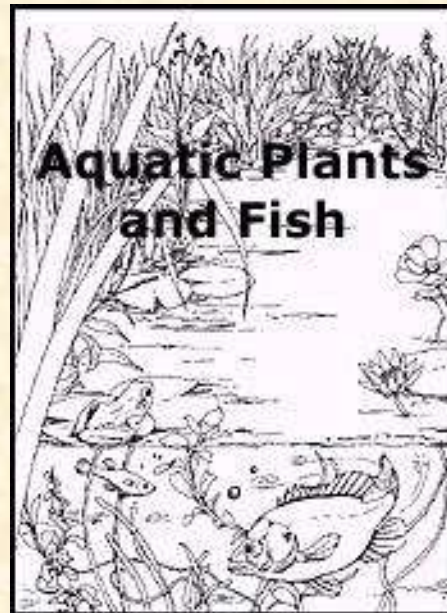


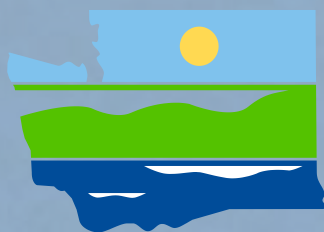


Aquatic Plant Management Activities Require a Permit

Herbicide Application- Department of Ecology Aquatic Plant and Algae Management Permit or Aquatic Noxious Weed Permit.

Physical or Mechanical Removal of Aquatic Plants – Washington Department of Fish and Wildlife Hydraulic Project Approval Permit.





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Questions?



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