

# **Aquatic Weeds Management Fund Grant Guidelines**

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DEPARTMENT OF  
**ECOLOGY**  
State of Washington

Revised September 2012  
Publication no. 94-52

## Publication and Contact Information

This report is available on the Department of Ecology's website at <https://fortress.wa.gov/ecy/publications/summarypages/9452.html>

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Plant drawings are from *A Citizen's Manual for Developing Integrated Vegetation Management Plans*.

*If you need this document in a format for the visually impaired, call the Water Quality Program at 360-407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*

# **Aquatic Weeds Management Fund Grant Guidelines**

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*by:*

*Kathy Hamel*

*Revised September 2012 by Lizbeth Seebacher*

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Washington State Department of Ecology  
Olympia, Washington

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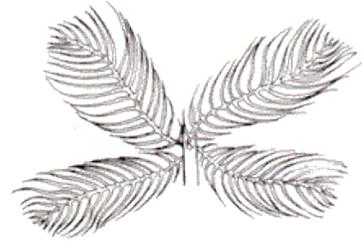
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# Chapter 1

## The Aquatic Weeds Management Fund

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### What is the Aquatic Weeds Fund and Program?

In 1991, the Washington State Legislature established the Freshwater Aquatic Weeds Management Program. This program includes elements for public education, technical assistance, and grants. (See Appendix A for enabling legislation.)

The Aquatic Weeds Management Fund (AWMF) provides financial and technical assistance to local and state governments, tribes, and special purpose districts to reduce the propagation of freshwater aquatic invasive plants and to manage the problems these invasive plants cause. An annual three-dollar license fee assessed to the owners of boat trailers provides funding.

### What is a freshwater aquatic invasive plant?

A freshwater aquatic invasive plant is any emergent, submersed, partially submersed, or floating-leaved, vascular aquatic plant in a lake, river, or stream that adversely affects fish populations, reduces habitat for desirable aquatic plant and wildlife species, and/or decreases public recreational opportunities. A freshwater invasive plant is further defined to include only those species that are classified by the U.S. Fish and Wildlife Service as obligate or facultative wetland species. Obligate wetland species occur in wetlands greater than 99 percent of the time. Facultative wetland species occur in wetlands 67 to 99 percent of the time. Eurasian watermilfoil (*Myriophyllum spicatum*), Brazilian elodea (*Egeria densa*), and parrotfeather (*Myriophyllum aquaticum*) are examples of obligate wetland species. Purple loosestrife (*Lythrum salicaria*) is an example of a facultative wetland species.

This definition of a freshwater invasive plant allows maximum flexibility to provide technical assistance or public education materials for all aquatic weed problems. Ecology will target AWMF grants to projects involving non-native invasive aquatic species like Eurasian watermilfoil that are listed on the state noxious weed list and/or the Washington Department of Agriculture quarantine list. Projects dealing with submersed species like Eurasian watermilfoil generally receive funding priority over projects dealing with emergent plants like purple loosestrife.

### Who can apply?

Ecology accepts applications for AWMF grants from cities, counties, state agencies, tribes, and special purpose districts to fund projects to prevent, remove, reduce, or manage excessive freshwater aquatic weeds.

## How much money is available?

Funding amounts depend on the number of boat trailers registered during any given year. Some of the funds are used for technical assistance and public education programs. Ecology sets aside about \$100,000 of the funds available each year for grants for early infestation projects on a first-come, first-served basis. The remaining funds are available on a competitive basis during the annual funding cycle.

## How are the guidelines organized?

The AWMF Program Guidelines describe the funding process in chronological order, starting with general information, then application assistance, and finally guidance for financial management once a grant is awarded. Applicants for grants are encouraged to read these guidelines before applying for funds.

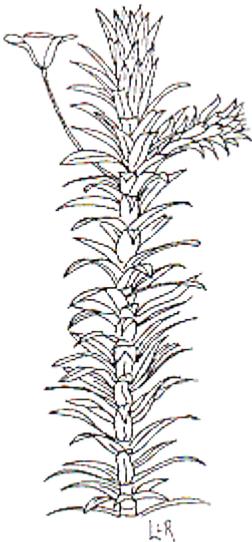
You can obtain more copies of the guidelines, application forms, and further information about the AWMF Program from:

Lizbeth Seebacher  
Financial Management Section  
Water Quality Program  
Department of Ecology  
P.O. Box 47600  
Olympia, WA 98504-7600  
Telephone: 360-407-6938; E-mail address: [Lizbeth.Seebacher@ecy.wa.gov](mailto:Lizbeth.Seebacher@ecy.wa.gov)

Or from Ecology's website at [www.ecy.wa.gov/programs/wq/plants/grants/index.html](http://www.ecy.wa.gov/programs/wq/plants/grants/index.html)

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### Invasive Aquatic Plant Information



*Brazilian elodea is a difficult plant to control. It is a South American species that has been widely sold as an aquarium plant. Brazilian elodea infests some western Washington lakes and we believe that it was introduced by people dumping aquarium contents. It may also be spread on boat trailers. It has a similar, but more robust appearance than native elodea.*

# Chapter 2

## How the Aquatic Weeds Management Fund Works

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### The annual funding cycle

The AWMF has a yearly funding cycle for general aquatic weed management projects. The annual application period begins October 1 and closes on or about November 15 of each year. A new grant time frame of a maximum of two years will be implemented beginning FY2014 to coincide with the state biennium. Ecology issues a public announcement about the funding cycle and the amount of money available about 30 days prior to the start of the application period. Funds for *early infestation projects* are available year round.

Ecology evaluates grant applications according to criteria established in these guidelines. Ecology publishes a list of projects proposed for funding roughly two months after the application deadline.

Once Ecology makes grant offers, it generally takes three to six months to negotiate a final grant agreement. Applicants have up to six months from the date of the offer letter to negotiate an agreement.

Ecology expects those who receive grants to proceed in a timely manner. Aquatic vegetation management plans and now implementation projects must be completed within two years. New monitoring grants will become available in FY2015 to allow monitoring of implementation projects that are not able to complete the monitoring of an implementation project in the new two-year time frame.

### Early infestation projects

Financial assistance from the AWMF is available on a year-round basis for *early infestation projects*. The goal of these projects is the eradication or containment of *new invasions* of non-native, freshwater, aquatic weeds.

Ecology reserves about \$100,000 each year for early infestation projects.

### Local match requirements

Ecology requires grant recipients to provide matching funds for AWMF grants. The percentage of match varies according to project type. Ecology funds general aquatic plant projects at 75 percent state share and 25 percent local share. Pilot projects and early infestation projects are funded at 87.5 percent state share and 12.5 percent local share.

For all projects, recipients can meet the match requirement using any combination of cash, interlocal costs, or in-kind contributions.

## **Opportunities for using AWMF money**

The AWMF provides grants for the following:

- Activities intended to prevent, reduce, or manage excessive growth of freshwater, aquatic weeds.
- Development of public education programs relating to the management of freshwater aquatic weeds.
- Demonstration or pilot projects (applied research).

Ecology limits projects to the following:

Lakes, rivers, and streams with publicly provided seasonal or year-round boat launching ramps (except for hydrilla projects), or lakes designated by the Washington Department of Fish and Wildlife for fly fishing only. Projects in wetlands not associated with a lake or stream are not eligible for funding under this program.

## **Definition of a boat ramp**

Boat launching ramps must allow access to the water body by a wheeled boat trailer. Canoe or kayak put-in areas are not considered to be boat launching ramps. Seasonal access may be provided by a Fish and Wildlife boat launch or similar public access.

## **Maximum grant amounts**

Ecology limits the size of grants.

- The maximum grant for aquatic weed management is \$75,000 (\$100,000 total eligible project cost).
- Planning grants are limited to \$30,000 (\$40,000 total eligible project cost).
- The maximum grant for an early infestation project is \$50,000.

## **Maximum grant amounts per grant recipient**

Ecology also limits the amount of funds available to each grant recipient during each funding cycle.

The maximum grant amount per grant recipient per funding cycle is \$75,000 for general aquatic weed management projects and \$75,000 for early infestation projects.

*For Example: In any one year, a grant recipient could receive two early infestation grants – one for \$50,000 and another for \$25,000 or three early infestation grants – each*

*grant for \$25,000, or similar combinations adding up to \$75,000. In addition to receiving up to \$75,000 for early infestation projects, the same grant recipient could also receive up to \$75,000 in state funds for general aquatic weed management projects.*

## **What types of projects does Ecology fund?**

Ecology provides Aquatic Weeds Management Fund grants for only freshwater weed management projects. Examples of projects include the development of integrated aquatic vegetation management plans, implementation of these plans (plant control activities), education/information projects, aquatic plant mapping and inventory, pilot and demonstration projects, evaluation of implementation effectiveness, and follow-up monitoring. Ecology will give funding priority to projects dealing with invasive, non-native, freshwater aquatic plant species. Projects with submersed species (example Eurasian watermilfoil) will receive funding priority over projects managing emergent species (example purple loosestrife).

**Previously Funded Projects:** Ecology considers AWMF to be seed money helping to pay for new projects that will be continued with local funds. Ecology also wants to make the money go as far as possible. Accordingly, lower funding priority will be given to projects that have previously received state grants.

## **What types of projects cannot be funded?**

Activities not eligible for AWMF funds include: The development of Phase I Lake Restoration Plans, algae control projects, implementation of source controls, dredging projects, and activities or education efforts relating to marine or estuarine plants. These types of projects may be eligible for financial assistance under other state and federal grant and loan programs administered by Ecology. These funding sources include the Centennial Clean Water Fund, the Washington State Water Pollution Control Revolving Fund Program (SRF Loans), and the Clean Water Act, Section 319, Nonpoint Source Program. Contact Ecology if you are not certain about the eligibility of your proposed project.

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# Chapter 3

## Funding Requirements

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### General project requirements

Applicants must demonstrate that their projects will prevent, eradicate, contain, or control excessive growth of freshwater invasive plants in lakes, rivers, or streams. Ecology will give funding priority to projects with invasive, non-native, freshwater plant species. Projects with submersed species like Eurasian watermilfoil are considered higher priority for funding than projects with emergent species such as purple loosestrife.

Eligible activities include, but are not limited to, the following projects:

- Prevention projects include public education/information activities, and survey and mapping of aquatic plants.
- Eradication, containment and control projects include the development and implementation of integrated aquatic plant management plans, and monitoring and evaluation of implementation activities.
- Demonstration projects display new, emerging, or accepted but unfamiliar aquatic weed control technologies to a region-wide or statewide audience.

Applicants proposing or receiving grants for these types of projects will receive grants up to 75 percent of eligible costs.

- Pilot projects involve innovative aquatic weed control technologies that have statewide or regional significance. A project that uses a newly developed biological control for Eurasian watermilfoil management would be considered to be a pilot project. Pilot projects may also consist of a trial of several conventional control techniques or combinations to see what works best for a particular weed species or situation with the least environmental impact. Applied research projects are considered to be pilot projects.

Ecology will attempt to fund at least one high-priority pilot project during each funding cycle. Applicants with pilot projects may receive grants of up to 87.5 percent of total eligible costs.

To find out how to apply for general aquatic plant projects, see Chapter IV – *How to Apply for General AWMF Projects*.

### Planning comes first

Planning involves the identification of problems and evaluation of cost-effective alternatives for managing aquatic invasives. To be eligible for AWMF implementation grants, applicants must complete and submit to Ecology an *Integrated Aquatic Vegetation Management Plan* for the

targeted water body. An integrated plan considers all aquatic invasive plant management options and chooses one or a combination of options for implementation.

Applicants must have an Ecology-approved plan in place prior to the grant application period. Appendix C lists the minimum requirements of an Integrated Aquatic Plant Management Plan. Ecology's *A Citizens Manual for Developing Integrated Vegetation Management Plans* provides more detailed guidance for developing a plan. This manual is available on the Internet in a PDF format at: <https://fortress.wa.gov/ecy/publications/summarypages/93093.html>, and in an html format at: [www.ecy.wa.gov/programs/wq/plants/management/manual/index.html](http://www.ecy.wa.gov/programs/wq/plants/management/manual/index.html).

Special situations:

- Early infestation projects: Ecology does not require a complete Integrated Aquatic Vegetation Management Plan for early infestation projects.
- Freshwater emergent species: Site-specific integrated aquatic plant management plans are not required for emergent species. Ecology requires that projects dealing with the control of freshwater emergent species such as purple loosestrife be conducted under the Washington Department of Agriculture's state-wide integrated aquatic vegetation management plan for noxious emergent vegetation ([www.ecy.wa.gov/programs/wq/pesticides/final\\_pesticide\\_permits/noxious/Noxious%20Emergent%20IPM.pdf](http://www.ecy.wa.gov/programs/wq/pesticides/final_pesticide_permits/noxious/Noxious%20Emergent%20IPM.pdf)).

## What are early infestation projects?

An early infestation is a situation in which an invasive, non-native, freshwater, aquatic weed is discovered in its pioneer stages of growth in a lake, river, or stream. Freshwater aquatic species considered to be non-native and invasive include, but are not limited to, Eurasian watermilfoil (*Myriophyllum spicatum*), parrotfeather milfoil (*Myriophyllum aquaticum*), Brazilian elodea (*Egeria densa*), fanwort (*Cabomba caroliniana*), hydrilla (*Hydrilla verticillata*), and purple loosestrife (*Lythrum salicaria*). These plants have caused and continue to cause problems in Washington State and in other parts of North America by their aggressive, invasive growth habits.

The early infestation set-aside enables Ecology to assist public bodies in responding to early infestations of invasive, non-native, freshwater weeds when *immediate corrective action is likely to effectively achieve eradication or containment*. Because it is essential to proceed more quickly than the annual funding cycle allows, applications for early infestation projects may be submitted at any time.

*Ecology awards grants of up to 87.5 percent of total eligible costs to applicants with early infestation projects. To find out how to apply for early infestation funds, see Chapter 5 – How to Apply for Early Infestation Projects.*

# Chapter 4

## How to Apply for General AWMF Projects

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### Application for General AWMF Projects

The AWMF has a yearly funding cycle for general aquatic weed management projects. Ecology accepts applications for these projects during the annual funding cycle that opens October 1 and closes on November 15.

Eligible applicants should request an application packet from Ecology or download an application at <http://www.ecy.wa.gov/programs/wq/plants/grants/index.html>.

The grant application consists of two parts. Part one requests the applicant to provide general information including funds requested and the project location. Part two requests the applicant to provide detailed information about the project. Ecology uses part two of the application to evaluate the project.

The applicant should submit one printed copy and one electronic copy of the application for evaluation purposes. The printed copy of the application must have an original signature of a person authorized to sign on behalf of the applicant. Ecology must receive these applications by the application deadline. The deadline is close of business by the date specified in the application packet (generally November 15). The applicant must deliver the applications (by hand, mail, or package delivery service) to Ecology's headquarters building in Lacey. Ecology cannot accept applications by fax or email. Applications must not be delivered to the regional offices.

Our mailing address is:

Lizbeth Seebacher  
Water Quality Program  
Department of Ecology  
P.O. Box 47600  
Olympia, WA 98504-7600

If you plan to hand deliver or FedEx your application, our location is:

Water Quality Program  
Department of Ecology  
300 Desmond Drive  
Lacey, WA

See Appendix G for driving directions to the Ecology Headquarters Building.

## The project proposal

The project proposal should answer the following questions or include the following elements:

1. Does this project implement an integrated aquatic vegetation management plan? If the applicant has received plan approval from Ecology, please indicate the date that Ecology accepted the plan.
2. What water body or water bodies are being targeted for action? Where is the water body (or water bodies) located in relation to other infestations of this plant? Do the plants in this water body pose a threat of infestation to other nearby water bodies? The applicant must include a map of the targeted water body with the application.
3. What invasive, non-native, freshwater aquatic plant or plants is causing (or has the potential to cause) problems in the water body?
4. How is this aquatic plant or plants impacting the targeted water body or water bodies—or what is the potential of the plant to impact the targeted water body or water bodies; and how will this project benefit the public?

*Impacted uses could include loss of, or impacts to, recreation (swimming, boating, fishing, hunting), fisheries, wildlife, and waterfowl uses, commercial uses like power generation, irrigation and water supply, and aesthetics.*

*Applicants can describe public benefits by discussing the numbers of swimmers using the public swimming beaches, the number and types of public boat access points, the number and type of organized activities such as sailing races, water-skiing events, number of fishing days, etc. Public benefits may also include a commitment by the applicant that information about the project will be distributed to others.*

5. Describe the project goals. What will you accomplish by undertaking this project?
6. How will the project goals be achieved? Discuss specific methods to be used and describe how the project will be accomplished.
7. Does this project have statewide or regional significance?

*Examples of statewide significant projects include public education projects with a regional or statewide target audience, projects that demonstrate new aquatic weed management techniques (pilot projects), projects that commit to disseminating information about the project or project methods to a regional or statewide audience (demonstration projects), and projects conducted in water bodies of statewide significance.*

8. Who are the key personnel that will perform the project?

*Key personnel can include experienced staff and key citizen or volunteer personnel who will assist with and/or provide input to the project.*

9. Do you have local citizen support for the project—especially support of citizens who live on, use, or have an interest in managing aquatic plants in the water body? Establishment of a continuing funding source such as a lakes association or lake management district,

publication of newsletters, public meetings, having volunteers willing to devote time to the project, are all examples of local interest.

10. What is the long-term commitment to this project? Are applicants and/or lake or river residents prepared to continue implementation of long-term objectives without grant support?
11. Explain why you think that project will be successful. How will you evaluate success?
12. Provide a detailed project budget and a timeline for project completion.

## How are projects evaluated?

As Ecology reviews each project proposal, we look for projects that prevent the establishment of invasive, non-native, freshwater aquatic plants, or provide for the management of these plants.

Funding priorities are:

1. Projects dealing with submersed freshwater weeds that are listed on the State Noxious Weed list or the Washington Department of Agriculture quarantine list receive priority over projects dealing with emergent or nuisance weed problems. Ecology gives priority to Class A submersed weed projects over Class B or Class C submersed weeds projects. The State Noxious Weed Control Board classifies noxious weeds. See [www.nwcb.wa.gov/nwcb\\_nox.htm](http://www.nwcb.wa.gov/nwcb_nox.htm) for Washington's most recent noxious weed list.
2. Ecology gives priority to applicants with Ecology-approved integrated aquatic plant management plans for submersed species over other projects.
3. Reviewers will give high priority to high quality pilot or education projects.
4. Ecology will give lower priority to projects dealing with noxious emergent wetland species like purple loosestrife over projects dealing with submersed species.
5. Applicants that have already received previous Aquatic Weeds funding for their implementation project will have a lower funding priority over applicants who have not received previous implementation funding.
6. Ecology gives the lower priority to funding projects involving freshwater nuisance species (native aquatic plants that are considered a nuisance).

In part two of the application, each applicant is asked to provide a project overview and describe the specific results that the project will achieve if it is funded. The applicant must demonstrate this by showing that they have a sound understanding of the problem, that they have staff with skills required to successfully complete the project, and that they will be able to assess whether or not the proposed results were achieved.

## How does the selection process work?

**Eligibility review:** Ecology will not accept any additional or revised project information after the application deadline, but may request clarification of budget or eligibility information. After the close of the application period, Ecology staff review the applications to determine if the proposed projects meet general eligibility criteria. They may contact applicants or other federal, state, or local agencies to clarify or verify information contained in or referenced in an application. If a proposed project does not appear to meet general eligibility criteria, applicants will be notified of their potential disqualification. Applicants will have two weeks from

notification to submit a request for reconsideration with an explanation to demonstrate that their project meets eligibility criteria.

**Project proposal evaluation:** Aquatic plant and water quality specialists from Ecology regional and headquarters offices review and evaluate AWMF grant applications. The information contained in the grant application is the basis on which the project is reviewed and evaluated. If Ecology funds the project, the scope of work in the grant agreement will be based on information from the application. Ecology may withdraw the funding offer if the applicant proposes major changes to the scope of work during the negotiation process. Ecology will offer funding to applicants for high-priority projects based on the availability of funds. *Generally, the demand for funds exceeds the dollars available.*

**Funding list:** Ecology develops a final offer list after staff review of all eligible applications. Ecology's Water Quality Program Manager approves and issues the list approximately two months after the application deadline. Ecology sends a grant offer letter to the applicant within 15 days of the date of the funding list. The letter identifies any special grant conditions and the project manager responsible for negotiating the grant agreement. Grant offers are effective for one year from the date of the offer letter. Ecology considers a recipient who is unable to negotiate a signed grant agreement during this time to have declined the grant offer.

# Chapter 5

## How to Apply for Early Infestation Projects

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### How to apply

Ecology sets aside approximately \$100,000 each year for early infestation grants. Ecology awards grants to applications that meet selection criteria on a first-come-first-served basis until the annual allocation of funds is expended.

If an applicant discovers pioneering colonies of an invasive non-native plant, the applicant should notify the Water Quality Program at (360) 407-7489 or (360) 407-6562 and indicate an interest in obtaining funding. Ecology staff determines the stage of infestation through documentation provided by the applicant and/or by a site visit by Ecology, local weed board staff, or other qualified people.

The size, density, and age of the infestation will determine whether it can be successfully contained. For funding purposes, the density and extent of infestation are characterized as light, moderate, or heavy.

**Light infestation** is defined as scattered areas of plant growth in limited areas along the shoreline. The total plant coverage of light infestations is three acres or less in area. Containment operations are generally more successful when the total acreage of the infested areas is less than three acres.

**Moderate infestation** is defined as locally abundant growth in areas along the shoreline. The total acreage of moderate infestations is greater than three acres. *Moderate infestations may be beyond the scope of early infestation projects.*

**Heavy infestation** is defined as dense growth in most areas along the shoreline. Heavy infestations cover much of the suitable habitat for aquatic plants. *Heavy infestations are beyond the scope of early infestation projects.*

### Potential for reinfestation

Ecology offers early infestation grants where eradication or containment has a likelihood of success. A water body downstream of an existing infestation or surrounded by infested water bodies may not be a good candidate for an early infestation grant.

## How are early infestation projects evaluated?

If the infestation is considered containable by Ecology, Ecology asks the applicant to submit an early infestation application. The grant application consists of two parts. One part asks for general information about the applicant and the project; the other part asks the applicant to provide a detailed project description.

Ecology staff evaluates each early infestation application and determines whether to offer funding. The Water Quality Program Manager sends a grant offer letter to applicants with high-priority projects. This letter identifies the project manager responsible for negotiating the grant agreement and working with the applicant.

Ecology may provide written authorization for a public body to commence work on a project in advance of a signed executed agreement (see Prior Authorization – Chapter VI).

## Applicant responsibilities

Because invasive plants are not easily controlled, undertaking an early infestation project involves an ongoing commitment from the project sponsor. *Ecology provides funds as initial impetus to the project; the early infestation grant program cannot be used as an ongoing source of funds.* Once the plant is initially contained, the project sponsor is responsible for continuing the monitoring, surveillance, and control of the problem plant. Ecology recommends that the following tasks be included in the scope of work of an early infestation project:

- Effective and rapid initial containment of the invading plant.
- Evaluation of the treatment effectiveness, including evaluation the following growing season.
- Establishment of a local long-term action plan and local funding to continue prevention and/or control activities.

## The project proposal

The project proposal should answer the following questions or include the following elements:

1. A project overview/summary that includes the actions to be taken to contain/eradicate the plant.
2. What water body or water bodies are being targeted for action and what is the plant species of concern? Where is the water body (or water bodies) located in relation to other infestations of this plant? Do the plants in this water body pose a threat of infestation to other nearby water bodies?

*Points to consider include: Is the water body upstream of any other connected water bodies or are there nearby uninfested systems? Are there fishing and boating activities in the water body that may lead to increased chances of dispersing the plants?*

3. What impacts may the invasive plant have on public use and water-based recreation if it is not contained?

*Will the presence of this plant interfere with commercial or domestic water supplies? What impacts will there be on public parks, boat launches, campgrounds, etc?*

4. What degree of environmental and economic damage may be caused by not containing this invasive plant?

*Environmental damage may be caused by loss of critical habitat/food sources for fish, waterfowl, and/or wildlife, especially rare, threatened, or endangered species. What percentage of the water body could potentially be infested by the invading weed?*

5. How committed are you to continue the project after the initial infestation is contained?

*Project sponsors must commit to either an existing long-term commitment of financial and human resources to continue the containment effort, or include in the project proposal an element to establish long-term commitment and funding for this project.*

6. Do you have local citizen support for the project—especially support of those citizens that live on, use, or have an interest in managing the aquatic plants in the targeted water body?
7. Who are the key people that will carry out this project?

*Key people can include experienced staff, consultants, contractors, and key citizens or volunteer personnel who will assist with and/or provide input to the project.*

8. What methods do you propose using to eradicate or contain the pioneer infestation?
9. Provide a detailed project budget and a timeline for project completion.

Ecology awards grants of up to 87.5 percent of total eligible costs to applicants with early infestation projects. The local match may consist of any combination of cash, grants, or in-kind contributions.

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# Chapter 6

## Developing a Grant Agreement

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### Developing and signing agreements

Ecology notifies the recipient by telephone and letter when a project has been identified on a final offer list. The Ecology project manager develops a draft grant agreement based on the scope of work in the grant application. The project manager and the recipient confer by phone or in a work session to resolve concerns and to refine the draft scope of work and to discuss the grant requirements and the budget. Both parties finalize the grant agreement after they concur on the appropriate scope of work, schedule, eligible costs, and other details. *There is always a requirement for a final project report in AWMF grant agreements and Ecology encourages educational activities. If the proposed project uses aquatic herbicides, Ecology requires monitoring to comply with the National Pollutant Elimination Discharge System (NPDES) permit.*

### Prior authorization

Ecology recognizes that under certain circumstances, a grant recipient may need to commence work on a project in advance of a signed and executed grant agreement. Circumstances associated with early infestation projects may require immediate action. In addition, various projects may be required to meet certain environmental conditions or may be bound through permit requirements to proceed by a certain date. Under such circumstances and by written request of the applicant, Ecology may provide the applicant written authorization to incur expenses that could be grant eligible.

Ecology will not release funds until a grant agreement is signed. Costs incurred prior to the effective date of the written notification of prior authorization from Ecology (the prior authorization date) will be the sole responsibility of the public body. Until the recipient signs a grant agreement, it must assume responsibility for costs incurred as there is no guarantee by Ecology that a grant will be awarded. Any work performed by the public body that is not consistent with the conditions specified in Ecology's prior authorization letter, and all other applicable criteria, will not be eligible for grant funds.

### Important dates in agreements

The grant agreement becomes effective on the date that Ecology's Water Quality Program Manager signs the agreement, unless otherwise stated in the agreement. Any costs incurred before this *effective date* are not eligible for reimbursement unless prior authorization has been obtained in writing from Ecology. If the recipient does not begin work on the funded project within four months of the effective date (or another mutually acceptable start date), Ecology reserves the right to terminate the agreement.

The *expiration date* is the date the grant is no longer in effect. Both parties negotiate this date as part of the grant agreement. The recipient should complete all required work before this date. Costs incurred after the expiration date are not eligible for reimbursement unless this expiration date is extended by an amendment. Recipients must complete all projects within two years from the date of the offer letter.

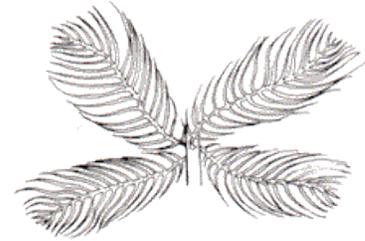
## **Amendments to agreements**

All modifications and changes to grant agreements and scopes of work must be established in writing as amendments to the agreement. These changes may only be made through a formal or letter amendment as described in Administrative Requirements for Ecology Grants and Loans, available on the internet at <https://fortress.wa.gov/ecy/publications/summarypages/9118.html>, or from your project manager.

# Chapter 7

## General Guidance

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### Local match requirements

The recipient must match state grant funds with local funds. Local match may be cash, a grant or loan from another source, or in-kind contributions such as local volunteer time or donated materials. The cost of goods and services provided to a recipient by another eligible local government under the terms of an interlocal agreement is also eligible for local match. Please refer to the Administrative Requirements for Ecology Grants and Loans.

The percentage of match varies according to project type:

- General aquatic plant projects, including planning projects, will be funded at 75 percent state share and 25 percent local share.
- Pilot projects and early infestation projects will be funded at 87.5 percent state share and 12.5 percent local share.

For all projects, the match can be any combination of cash, in-kind contributions, or interlocal costs (considered a form of in-kind).

### In-kind contributions

In-kind contributions must meet the requirements explained in Administrative Requirements for Ecology Grants and Loans. In addition, in-kind contributions are subject to the following limits:

- In-kind contributions must relate directly to the activity being funded.
- In-kind contributions are limited to time, material, or real or personal property donated to the grant recipient to fulfill project requirements.
- Volunteer time may be donated at Ecology's accepted in-kind rate (\$15.00 per hour).
- Volunteer time from individuals receiving compensation through the grant does not count as an in-kind contribution.
- The recipient must fully document in-kind contributions.

### Interlocal agreements

Contributions from another public body may be eligible for grant participation if there is a signed interlocal agreement. The recipient may use salaries and benefits paid by the contributing public body as cash match to the grant. All indirect rates associated with the contributed salaries and benefits and other costs are ineligible for grant participation. By signing the grant agreement, the recipient certifies that all negotiated Interlocal Cost Agreements and Interlocal Agreements are consistent with the grant agreement terms and conditions and Chapter 39.34 RCW, Interlocal

Cooperation Act. To be eligible, interlocal costs must meet the conditions specified in *Administrative Requirements for Ecology Grants and Loans*.

## **Procuring goods and services**

The grant recipient is responsible for the procurement of goods and services in a manner consistent with all applicable federal, state, and local laws, orders, regulations, and permits including those related to discrimination, labor, job safety, and the state regulation for minority- and women-owned business. Ecology requirements for procurement are contained in *Administrative Requirements for Ecology Grants and Loans*. By signing the grant agreement, the recipient certifies that they procured all consulting and personal services in accordance with Chapter 39.80 RCW, *Contracts for Architectural and Engineering Services*, and other applicable state laws and regulations. Recipients must submit a copy of any final signed consultant/engineering contract to the project manager. The project manager will review the contract for eligibility and consistency with the grant requirements.

## **Public awareness**

Ecology encourages recipients to inform the public about the project and the participation of Ecology in the project through project signs, the media, or other public announcements. Announcements usually include the goals of the project, total cost, and the involvement of Ecology.

## **Appeals process**

Once both parties sign the grant agreement and work begins, the recipient may appeal a written decision by an Ecology project manager through a formal appeals process. The recipient must file an appeal in writing with the Ecology Water Quality Program Manager within 30 days from the date of Ecology's final written decision on the issue. The Water Quality Program Manager will appoint an appeals panel and the members of the panel will address the issue. Ecology's appeal determination is final and conclusive. The recipient must file any appeal of Ecology's final determination in the Superior Court of Thurston County.

Following a final decision of a dispute, Ecology and the recipient shall proceed with the project in accordance with the decision rendered. Administrative or legal costs and other expenses incurred as part of an appeal will not be eligible for reimbursement under the grant.

The project manager can provide further details of the appeal process.

# Chapter 8

## Financial Management and Administration of Grants

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Grant recipients must comply with all applicable federal, state, and local statutes, ordinances, orders, regulations, and permits including those related to discrimination, labor, job safety, and applicable provisions of the state or federal regulations for minority and women owned businesses. Recipients must also secure any necessary permits required by authorities having jurisdiction over the project and must provide documentation to Ecology upon request.

Ecology requires all grant recipients to maintain accounting records in accordance with generally accepted government accounting standards. These standards include those contained in the most recent editions of the United State General Accounting Office publication, *Standards for Audit of Government Organizations, Programs, Activities, and Functions*, and Ecology's *Administrative Requirements for Ecology Grants and Loans*. In addition, Ecology requires grant recipients to maintain an accounting system which can track project expenditures separately from general local government expenses.

Ecology may conduct periodic administrative reviews of funded projects to evaluate a recipient's records and accounting systems. These reviews are intended to verify that eligible and ineligible costs have been documented for audit and that recipients are in compliance with applicable state statutes, regulations, and requirements (including special grant conditions).

### Grant disbursements and payments

Ecology disburses payments as costs are incurred. Recipients will submit requests for payment at least annually, but not more than monthly, except in exceptional circumstances.

### Payment requests and progress reports

All payment requests must follow the procedures described in *Administrative Requirements for Ecology Grants and Loans*. Payment request forms are available online or from Ecology's project manager.

Recipients must submit an annual progress report, unless otherwise established in the grant agreement. In addition to a description of the progress being made, progress reports should describe any problem, delay, or adverse condition that will affect the objectives, time schedule, or tasks. The recipient should include a statement of the corrective taken or proposed, and they should identify any Ecology assistance that may be needed.

## **Payment holds or termination**

If a recipient does not satisfy all conditions contained in the agreement, Ecology may withhold payment, decrease the agreement by an amount proportionate to the incomplete work, or terminate the agreement. Following termination, Ecology may require the recipient to repay all or a portion of the funds disbursed.

Termination may also result in a financial settlement, reflected in an amendment to the grant agreement. In such a settlement, the recipient must demonstrate to Ecology's satisfaction that they accomplished a specific portion of the project's agreed upon scope of work. The Water Quality Program Manager must issue a written notice of termination at least five working days prior to the effective date of the termination.

# Glossary

## The Aquatic Weeds Management Fund

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<b>Applicant</b>	A project sponsor – must be a city, county, state agency, conservation district, tribe, or special purpose district. Lake management districts are not considered to be special purpose districts.
<b>Contain</b>	To confine a freshwater weed to an identified area of infestation.
<b>Control</b>	To manage the problems caused by aquatic weeds.
<b>Early infestation</b>	A new introduction of an invasive, non-native freshwater plant.
<b>Early infestation project</b>	A project to eradicate or contain a new invasion of a non-native, invasive freshwater plant. Grants for early infestation projects are available year-round and provide immediate financial assistance to local or state governments.
<b>Effective date</b>	The date on which a grant agreement becomes effective, which is the date it is signed by the Water Quality Program Manager, unless otherwise stated in the agreement.
<b>Eligible cost</b>	The portion of the cost of activities that can be financed under the provisions of these guidelines.
<b>Eradicate</b>	To eliminate a freshwater weed within an area of infestation.
<b>Freshwater</b>	Any non-marine or non-estuarine surface water.
<b>Freshwater weed</b>	Any emergent, submersed, partially submersed, or floating-leaved, vascular aquatic plant in a lake, river, or stream that adversely affects fish populations, reduces habitat for desirable aquatic plant and wildlife species, or decreases public recreational opportunities. As of January 2002, a freshwater weed is further defined to include only those species that are classified by the U.S. Fish and Wildlife Service as obligate or facultative wetland species. Examples of plants that are obligate or facultative wetland species include, but are not limited to: Eurasian watermilfoil ( <i>Myriophyllum spicatum</i> ), Brazilian elodea ( <i>Egeria densa</i> ), parrotfeather ( <i>Myriophyllum aquaticum</i> ), and purple loosestrife ( <i>Lythrum salicaria</i> ).
<b>Grant agreement</b>	A contractual arrangement between a public body and Ecology that includes an approved scope of work, total project cost, set grant

percentage, eligible costs, budget, and a schedule for project completion (in addition to other requirements).

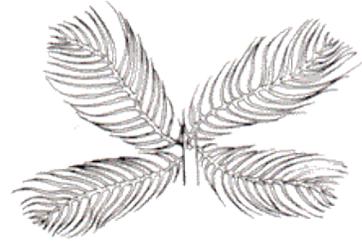
<b>In-direct costs</b>	Costs that benefit more than one activity of the recipient and that may not be directly assigned to a particular project objective. Some portion of these costs may be eligible for reimbursement. Please refer to <i>Administrative Guidelines for Ecology Grants and Loans</i> .
<b>In-kind contributions</b>	The value of non-cash contributions provided by a public body or any other approved parties. Non-cash contributions can be in the form of charges for personal services, real property, non-expendable personal property, and the value of goods and services directly benefiting and specifically identifiable to the project.
<b>Invasive, non-native, aquatic plant</b>	Invasive non-native freshwater plants include, but are not limited to: <i>Myriophyllum spicatum</i> , <i>Egeria densa</i> , <i>Lythrum salicaria</i> , <i>Cabomba caroliniana</i> , <i>Hydrilla verticillata</i> , and <i>Myriophyllum aquaticum</i> .
<b>Integrated Aquatic Plant Management Plan</b>	A vegetation management plan that considers all weed management options and selects one or a combination of options for implementation. See Appendix C
<b>Lake restoration</b>	Any action taken to prevent lake deterioration or return a lake system to an unimpaired state or condition.
<b>Local share or match</b>	The portion of the project costs not covered by an AWMF grant, including actual cash outlays by the public body and others and non-cash (in-kind) contributions.
<b>Non-native</b>	Any freshwater or wetland plant species not indigenous to Washington State.
<b>Noxious weed</b>	Any weed listed on the Washington State Noxious Weed list (16.750 WAC)
<b>Offer list</b>	List of projects prioritized for receiving financial assistance from the AWMF.
<b>Pioneer colony</b>	One or more plants (or groups of plants) of an invasive non-native aquatic plant species to invade a previously uninfested lake, river, or stream.
<b>Prevent</b>	To deter the spread of invasive, non-native freshwater weeds.
<b>Prior authorization to incur costs</b>	A written agreement between Ecology and the grant recipient authorizing the recipient to begin incurring costs related to a grant for which there is not yet a signed agreement.

<b>Prior authorization date</b>	The date specified in a letter from Ecology authorizing the recipient to begin incurring costs related to a grant for which there is not yet a signed agreement.
<b>Project</b>	An aquatic plant management activity for which a grant is awarded by Ecology.
<b>Project expiration date</b>	The last date that costs can be incurred and be considered grant eligible. All items identified in the scope of work must be completed by this date. Costs incurred after the expiration date will not be considered eligible.
<b>Project manager</b>	Ecology management assigns a project manager to each grant project. The project manager provides technical assistance, helps negotiate the grant agreement with the recipient, and manages the communications and administration of the grant agreement.
<b>Public boat launch</b>	A publicly provided seasonal or year-round boat launching ramp. Boat launching ramps must allow access to the water body by a wheeled boat trailer. Canoe or kayak put-in areas are not considered to be boat launching ramps. Seasonal access may be provided by a Department of Fish and Wildlife boat launch or similar such access.
<b>Public body</b>	The state of Washington or any state agency, county, city, or town, conservation district, special purpose district, and tribe.
<b>Scope of work</b>	A detailed description of the project, including measurable objectives useful for determining successful completion. The scope of work is negotiated between Ecology and the grant recipient.
<b>Total project cost</b>	The sum of all costs associated with an aquatic plant management project including costs that are not eligible for grant funding.
<b>Total eligible project cost</b>	The sum of all costs associated with an aquatic plant management project that have been determined to be eligible for grant funding.
<b>Water body</b>	Open freshwater lakes, rivers, or streams.
<b>Wetlands</b>	The transition zone between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. Wetlands must have one or more of the following attributes: (1) at least periodically, the land predominately supports hydrophytic plants (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated water or covered by shallow water at some time during each year.

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# Appendix A Enabling Statutes

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## Chapter 43.21A

### DEPARTMENT OF ECOLOGY

#### Sections

43.21A.650 Freshwater aquatic weeds account

43.21A.660 Freshwater aquatic weeds management program

43.21A.662 Freshwater aquatic weeds management program – advisory committee

**43.21A.650 Freshwater aquatic weeds account.** The freshwater aquatic weeds account is hereby created in the state treasury. Expenditures from this account may only be used as provided in RCW 43.21A.660. Moneys in the account may be spent only after appropriation. [1991 c 302 2]

**Findings----1991 c 302:** "The legislature hereby finds that Eurasian water milfoil and other freshwater aquatic weeds can adversely affect fish populations, reduce habitat for desirable plant and wildlife species, and decrease public recreational opportunities. The legislature further finds that the spread of freshwater aquatic weeds is a statewide problem and requires a coordinated response among state agencies, local governments, and the public. It is therefore the intent of the legislature to establish a funding source to reduce the propagation of Eurasian water milfoil and other freshwater aquatic weeds and to manage the problems created by such freshwater aquatic plants." [1991 c 302 1.]

**Effective date----1991 c 302:** See note following RCW 46.16.670

**43.21A.660 Freshwater aquatic weeds management program.** Funds in the freshwater aquatic weeds account may be appropriated to the department of ecology to develop a freshwater aquatic weeds management program. Funds shall be expended as follows:

- (1) No less than two-thirds of the appropriated funds shall be issued as grants to (a) cities, counties, tribes, special purpose districts and state agencies to prevent, remove, reduce, or manage excessive freshwater aquatic weeds; (b) fund demonstration or pilot projects consistent with the purposes of this section; and (c) fund hydrilla eradication activities in waters of the state. Except for hydrilla eradication activities, such grants shall only be issued for lakes, rivers, or streams with a public boat launching ramp or which are designated by the department of fish and wildlife for fly-fishing. The department shall give preference to projects having matching funds or in-kind services and

- (2) No more than one-third of the appropriated funds shall be expended to: (a) Develop public education programs relating to preventing the propagation and spread of freshwater aquatic weeds; and (b) Provide technical assistance to local governments and citizen groups.

[1996 c 190 § 1; 1991 c 302 § 4.] [1991 c 302 4.]

**Findings----**1991 c 302: See note following RCW 43.21A.650

**Effective date----**1991 c 302: See note following RCW 46.16.670

RCW 43.21A.662 Freshwater aquatic weeds management program – Advisory committee

- (1) The department shall appoint an advisory committee to oversee the freshwater aquatic weeds management program.
- (2) The advisory committee shall include representatives from the following groups:
- (a) Recreational boaters interested in freshwater aquatic weed management;
  - (b) Residents adjacent to lakes, rivers, or streams with public boat launch facilities;
  - (c) Local governments;
  - (d) Scientific specialists;
  - (e) Pesticide registrants, as defined in \* RCW 15.58.030 (34);
  - (f) Certified pesticide applicators, as defined in \*\* RCW 17.21.020 (5), who specialize in the used of aquatic pesticides; and
  - (g) If \*\*\* chapter ..., Laws of 1999 (Senate Bill No. 5315) is enacted by June 30, 1999, the aquatic nuisance species coordinating committee.
- (3) The advisory committee shall review and provide recommendations to the department on freshwater aquatic weeds management program activities and budget and establish criteria for grants funded from the freshwater aquatic weeds account.

**Reviser’s Note:**

\* (1) RCW 15.58.030 was amended by 2000 c 96 § 1, changing subsection (34) to subsection (35).

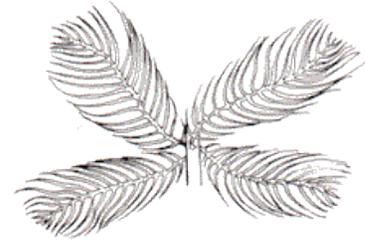
\*\* (2) RCW 17.21.020 was amended by 2001 c 333 § 1, changing subsection (5) to subsection (6), effective July 1, 2002.

\*\*\* (3) Senate Bill No. 5315 (1999) was not enacted into law by June 30, 1999.

# Appendix B

## Eligible and Ineligible Project Costs

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### Eligible costs

- Annual meeting or conference registration fees where the attendee is making a formal presentation about the grant project or where the Ecology project manager has given approval.
- Environmental checklists, assessments, and impact statements necessary to satisfy project requirements for the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA).
- Equipment and/or tools. Equipment should be identified in the grant agreement.
- Implementation of aquatic plant management activities.
- Indirect costs – eligible at a rate of up to 25 percent, or as defined in the most recent edition of *Administrative Requirements for Ecology Grants and Loans*.
- Light refreshments for advisory group meetings when specified in the grant agreement.
- Monitoring/sampling equipment when specified in the grant agreement.
- Planning.
- Project management and administration.
- Public participation and public awareness directly related to the project.
- Sales tax.
- Time of steering committee members at steering committee meetings. Other interested public attending the meeting **cannot** be counted for in-kind contributions.
- Training recipient staff to develop skills specific and necessary to the funded project and where the training is identified in the grant agreement.

## **Ineligible costs**

- Activities that other state and federal agencies are required to perform.
- Activities other than those identified in the grant agreement.
- Fees for permits
- Fines and penalties due to violations of, or failures to comply with federal, state, or local laws.
- Lobbying or expenses associated with lobbying.
- Office furnishings or equipment.
- Ordinary operating expenses of state or local government, such as salaries and expenses of a mayor, city council member, city attorney, etc.
- Personal injury compensation or damages rising out of the project whether determined by adjudication, arbitration, negotiation, or other means.
- Time of volunteers attending public meetings about the project.
- Training unrelated to the project.
- Scientific research unrelated to a specific activity.
- Other items as determined by Ecology.

# Appendix C

## Minimum Requirements for an Integrated Aquatic Vegetation Management Plan

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Please also see *A Citizen's Manual for Developing Integrated Aquatic Vegetation Management Plans* (Ecology Publication 93-93) on the web at:

[www.ecy.wa.gov/programs/wq/plants/management/manual/index.html](http://www.ecy.wa.gov/programs/wq/plants/management/manual/index.html)

Ecology recommends that Integrated Aquatic Vegetation Management Plans go through the State Environmental Policy Act (SEPA) process.

### **Minimum standards for the development of integrated aquatic plant management plans**

In addition to the minimum standards for the plan, this section provides links to web sources for information, examples, and guidance to help people develop an integrated aquatic plant management plan that will be approvable by Ecology.

### **Public and community involvement**

The heart of developing an integrated aquatic plant management plan is involving the community and the public throughout the plan development process. Plans are most often developed by a local government staff person, an aquatic plant consultant, or a water body resident in conjunction with a core of interested and involved parties that make up a steering committee that meets on a periodic schedule.

Once an aquatic plant problem has been recognized, all affected parties need to be invited to comment on or participate in the planning effort. Groups that may have an interest in plan development are those directly affected by the noxious weed(s) or those agency staff that regulate the use of the management methods used to control the noxious weeds. Most often the “sparkplugs” who initiate the planning effort are water front residents and to a lesser extent local governments. Interested parties may include:

- Residents or property owners around the water body.
- Special user groups (e.g., bass anglers, Ducks Unlimited).
- Local government.
- State and federal agencies (e.g., State Department of Ecology).
- Native American tribes.
- Water-related businesses (e.g., resorts, tackle and bait shops, dive shops).
- Elected officials.
- Environmental groups (e.g., Audubon).

Once the planning effort begins, obtain and document support or acceptance from interested parties, particularly large landholders and permitting agencies. Have a section in the plan or in the appendix to the plan that documents public involvement including copies of notices and invitations that have gone out to interested parties and records of meetings that have been held such as attendance sheets or meeting minutes.

Each group needs to solicit public input for plan development. At a minimum, the group should hold one public meeting to discuss the draft management plan and receive feedback. Some groups who have developed plans have sent out questionnaires or survey forms to water body residents and interested parties to receive feedback and gather ideas about levels of concerns with aquatic plants and potential control methods. This input can help with the development of a lake plan. Other groups provide plan and implementation updates to the residents and interested parties via community newsletters or websites. Plans should be revised according to this feedback.

If the groups hold more than one public meeting, here are times during plan development when holding public meetings are helpful:

- At the formative stages.
- When plant control alternatives have been developed, but before a recommended plant control alternative has been selected.
- After selecting an alternative, but before implementation.
- During implementation, as necessary.
- During evaluation and surveillance phases, as necessary.

## **Develop a problem statement**

The first step in plan development, after a steering committee is formed, is to develop a problem statement by listing the type and location of noxious weeds that are causing problems or have the potential to cause problems in the water body. List the beneficial uses that these plants are disrupting or have the potential to disrupt in the lake and explain what problems the plant may cause if unmanaged.

Example: Here is the problem statement from the Spring Lake Plan

Spring Lake is located 6 miles East of Renton on the southern ridge of the Cedar River valley. Lakes Spring, Desire, and Shady are all within the Peterson Creek sub-basin of the Cedar River Watershed. King County's Spring Lake/Lake Desire park comprises approximately 373 acres, spanning from the southeastern corner of Lake Desire to the southwest shore of Spring Lake. These lakes drain into the Cedar River and its extremely valuable salmon habitat, and provide Regionally significant wetland and aquatic habitat (King County, 1993). The park bordering Spring Lake includes a rare peat fen and a rocky knoll with montane vegetation. It is a wildlife refuge and popular hiking area. Lakes Desire, Shady, and Spring each have public boat launches and are popular boating, fishing, and swimming destinations. Residents of the Spring Lake watershed are very proud of their setting and are active recreational users. Both the Spring Lake and Lake Desire community clubs are active in social and environmental issues. Nearby Shady Lake recently created its own Lake Utility District to install sewer lines.

Due to prolific growth of several species of dense, invasive aquatic noxious weeds, Spring Lake is in danger of losing its aesthetic beauty, its wildlife habitat, and its recreational attributes. If left untreated, the worst of these weeds, Eurasian water milfoil (*Myriophyllum spicatum*), will blanket the lake in a short time, preventing most recreational uses and eliminating badly needed wildlife habitat. There will be long-term financial and recreational loss and the loss of conservation areas, all affecting watershed residents and other members of the public who use the lake. Increasing development in the area is likely to increase the number of people using the lake in coming years, which accelerates the magnitude of the loss of beneficial uses to the community.

The shallow shoreline area provides an excellent habitat for aquatic plants. In the past few years aggressive, non-native Eurasian water milfoil (milfoil) has invaded the lake and is colonizing much of the near-shore aquatic habitat. The dense submersed growth of milfoil has begun to cause a significant deterioration in the quality of the lake and its value to the community. The boat launch area has dense patches of milfoil, which can spread to other lakes by fragments on boat trailers. Lake Desire and Shady Lake are threatened with new introductions if milfoil in Spring Lake is not controlled because of the high probability of transport by boat trailers to these nearby systems.

Milfoil is the most significant submersed invasive threat but other noxious weeds have also invaded Spring Lake. These include fragrant water lily (*Nymphaea odorata*), purple loosestrife (*Lythrum salicaria*), and yellow flag iris (*Iris pseudacorus*). All of these species are considered noxious weeds as listed in WAC 16-750. None of the native aquatic plants in the system are a management issue at this time. The native plants provide important benefits to the aquatic system and are not impeding any of the recreational uses of the lake. Removing the noxious invaders will halt the degradation of the system and allow the dynamic natural equilibrium to be maintained.

Unfortunately, these invasive plants concentrate in the near shore zone which is also that portion of the lake that is valued and utilized most by lake residents and visitors. Dense weed growth poses a threat to swimmers, and the portion of the lake where people can fish is shrinking. Both milfoil and fragrant water lilies foul fishing gear, motors, and oars. It is no longer possible to troll through large portions of the lake. As a group these invasive plants:

- Pose a safety hazard to swimmers and boaters by entanglement.
- Snag fishing lines and hooks, eventually preventing shoreline fishing.
- Crowd out native plants, creating monocultures lacking in biodiversity.
- Significantly reduce fish and wildlife habitat, thereby weakening the local ecosystem as well as degrading wildlife and wildlife viewing opportunities.
- Pose a threat to adjoining ecosystems.

The Spring Lake community has documented three decades of neighborhood funded efforts to control invasive weeds. They have not been able to meet the current challenge of controlling such widespread infestations or of preventing re-infestation. Immediate action is necessary to control Eurasian water milfoil and other invasive weeds. If left unchecked, the lake will soon become heavily infested with aquatic weeds, severely degrading the lake ecosystem and making them even harder to eradicate. The community recognizes that after initial control efforts, opportunity for re-infestation must be prevented.

## **Define management goals**

Once the group has drafted a problem statement, the next step is to develop specific management goals. Management goals define what is to be achieved in response to the aquatic plant problems. Defining goals helps in selecting the best management methods. Management efforts should cover at least five years. As managers of waters of the state, the goals must be protective of all of the characteristic uses of the lake. “Characteristic uses” of waters of the state are defined in the Water Quality Standards for Surface Waters of the State of Washington, Chapter 173-201A WAC. The characteristic uses protected for lakes include:

1. Fish and shellfish: Salmon and steelhead migration, rearing, spawning, and harvesting. Other fish migration, rearing, spawning, and harvesting. Clam and mussel rearing, spawning, and harvesting. Crayfish rearing, spawning, and harvesting.
2. Primary contact recreation, i.e., activities where a person would have direct contact with water including, but not limited to, diving, swimming, and water skiing.
3. Domestic, industrial, and agricultural water supply.
4. Stock watering.
5. Wildlife habitat.
6. Harvesting (such as crayfish, plants, etc.).
7. Commerce and navigation.
8. Boating.
9. Aesthetic values.

Example: Here are the management goals from the Spring Lake Plan:

The overarching management goal is to control noxious aquatic weeds in Spring Lake in a manner that allows sustainable native plant and animal communities to thrive, maintains acceptable water quality conditions, and facilitates recreational enjoyment of the lake.

There are four main strategies to ensure success in meeting this goal:

1. Involve the community in each phase of management process.
2. Use the best available science to identify and understand likely effects of management actions on aquatic and terrestrial ecosystems prior to implementation.
3. Review the effectiveness of management actions.
4. Adjust the management strategy as necessary to achieve the overall goal.

Specific details related to the implementation of management objectives are covered in subsequent sections of this plan.

## **List and discuss water body and watershed characteristics**

A lake or river is a dynamic, living system that extends beyond its shores to include surrounding lands whose waters drain into the water body. A watershed is the surface drainage area that contributes water to a lake, river, or other body of water. Activities occurring in the watershed affect the health of the water body. Because of this, lake groups should be aware of activities occurring in the watershed that could potentially affect the water body.

Ecology uses a system of "Watershed Resource Inventory Areas" or "WRIAs" to refer to the state's major watershed basins. The water body will be included in a WRIA, but the water body watershed will likely encompass a much smaller area. The plan should provide data for the water body watershed. WRIA and some on-line environmental information are available at:

[www.ecy.wa.gov/programs/eap/env-info.html](http://www.ecy.wa.gov/programs/eap/env-info.html) or [www.ecy.wa.gov/watershed/index.html](http://www.ecy.wa.gov/watershed/index.html)

### **Watershed characteristics to include in the plan are:**

- The location and size of the watershed.
- The land use activities occurring within the watershed (rural, single family, residential, industrial, commercial, urban, suburban, etc.).
- Stream and wetland locations.
- Nonpoint nutrient source locations (actual or potential). Sources may include dairies, hobby farms, residential runoff, septic systems, stormwater runoff, etc.

### **Water body characteristics**

Water body maps and information for many of Washington's lakes are available at [www.ecy.wa.gov/programs/eap/lakes/wq/lake\\_list.html](http://www.ecy.wa.gov/programs/eap/lakes/wq/lake_list.html). You can also obtain water body maps from the Trails.com website at <http://www.trails.com> or you can check with your local government. Many cities and counties have some data on the water bodies within their

jurisdictions. Or you can search Ecology's aquatic plant database for plant species information at: [www.ecy.wa.gov/programs/eap/lakes/aquaticplants/index.html](http://www.ecy.wa.gov/programs/eap/lakes/aquaticplants/index.html).

The Washington Department of Fish and Wildlife (WDFW) maintain a number of databases that contain information on important fish and wildlife species that should be considered in land use decisions and activities. Use of this information in the earliest planning stages can help minimize project conflicts and delays due to fish and wildlife issues. Maps are available from:

<http://wdfw.wa.gov/habitat/>. Information about salmon use of water bodies is available from WDFW's SalmonScape website at: <http://wdfw.wa.gov/mapping/salmonscape/index.html>.

### **Water body characteristics to include in the plan are:**

- The location, size, depth (bathymetry), and the shape of the water body (include a water body map with depth contours).
- The water source(s), such as streams and stormwater inlets.
- The flushing rate of the water body (if known).
- Information about water body inlets and outlets including flow rates during the summer (if known). Information about downstream plants or animals that may be impacted by any management activities in the water body should be included.
- The water quality of the water body – evaluate historical and any recent water quality data (if there is existing data).
- Status on the 303 (d) list, including the parameters that the water body is listed for. See the list at: [www.ecy.wa.gov/programs/wq/303d/](http://www.ecy.wa.gov/programs/wq/303d/).
- Water withdrawals: Information about water intakes for potable/domestic/municipal water use, irrigation, or stock watering (most herbicides have water use prohibitions). Ecology regional offices keep a database of water right holders, but the best way to determine who is using the water is by asking the water body residents. Many water rights are no longer being used and Ecology's database is out of date. Sometimes people using the water have no legal rights to do so, but are doing so anyway.
- Aquatic plants present in and along the shorelines of the water body.
- Problem algae present in the water body. Discuss any problems that the water body is experiencing with algal populations.
- Shoreline use of the water body (residential, rural, industrial, and including the number of residences along the water body etc.).
- A general characterization of the sediment types found in the water body (organic, silt, sand, gravel, flocculent), etc..
- The fisheries: Contact the local Fish and Wildlife office for a list of fish from the water body and include this information in the plan. If salmon are present, discuss species, migration patterns, and timing of the runs through the water body. Determine whether there are fish rearing and spawning areas that should remain undisturbed by plant management activities.
- Wetland areas: Describe the type and quality of any wetlands and indicate their location on a map (often the local government will have this information under their Shoreline Master Program).
- Wildlife: Include a list of birds, mammals, amphibians, and reptiles that are present or use the water body. Determine whether there are waterfowl nesting areas that should remain

undisturbed by plant management activities. Sources for this information can include WDFW, local residents' knowledge, local government, etc..

- Rare plants: Contact the Department of Natural Resource Natural Heritage Program (DNR) to determine whether rare plants are present in the water body. See their website at: [http://www.dnr.wa.gov/ResearchScience/Topics/NaturalHeritage/Pages/amp\\_nh.aspx](http://www.dnr.wa.gov/ResearchScience/Topics/NaturalHeritage/Pages/amp_nh.aspx). A letter from DNR concerning the presence or absence of rare plants must be attached to this plan for it to be approved by Ecology.
- Endangered species: Check with WDFW to determine if there are rare fish, amphibians, or other species that could be potentially impacted by management efforts. If present, determine when and where this species uses the water body and develop mitigation measures to minimize noxious weed management impacts on this species.
- Describe any other unique characteristic(s) of this water body that were not covered in the other categories.

The reason for providing this information is to help design a site-specific program that allows for the eradication of noxious weeds and minimizes the impact of the management methods on non-target organisms, water quality, and protects water rights.

## **List beneficial and recreational uses of the water body and develop a beneficial use map**

**Identify present water body uses such as:**

- Conservancy areas including habitats that are integral to the lake ecosystem (nesting areas, rare plants or animals, fish rearing habitat, etc.).
- Water skiing areas.
- Boating and boat access areas (launches, ramps).
- Beach and swimming areas (public and private).
- Fishing areas.
- Parks, picnic areas, nature trails, scenic overlooks.
- Inlets and outlets.
- Drinking/domestic water or irrigation withdrawals or stock watering sites.

Include a water body map(s) with these uses delineated on the map.

## **Survey and Map Aquatic Plants**

- Survey methods for aquatic plant mapping can be seen at this web link: [www.ecy.wa.gov/programs/wq/plants/management/survey.html](http://www.ecy.wa.gov/programs/wq/plants/management/survey.html).
- Ecology has surveyed many public access water bodies. Check to determine if survey information exists for the water body at: [www.ecy.wa.gov/programs/eap/lakes/aquaticplants/index.html](http://www.ecy.wa.gov/programs/eap/lakes/aquaticplants/index.html).
- . Although Ecology's information will be useful, having this information does not preclude doing an updated survey.

- There is an on-line plant identification manual and line drawings and photographs of aquatic plants at: [www.ecy.wa.gov/programs/wq/plants/plantid2/index.html](http://www.ecy.wa.gov/programs/wq/plants/plantid2/index.html).

### **Include a Species List:**

Inventory and identify all species of aquatic plants in the water body, including shoreline plants (emergents), floating-leaved plants, floated leaved-rooted plants, and submersed plants and include this information as a list of plant species. This step requires expertise in aquatic plant identification.

### **Include a map of the water body that shows:**

- Approximate locations and species of aquatic plants, including shoreline plants, floating-leaved plants, floated leaved-rooted plants, and submersed plants.
- Locations of emergent wetlands.
- Locations of threatened or endangered species of plants or animals.
- Sediment type (organic, sand, silt, gravel) etc.
- Water body depth contour lines.

### **Characterize aquatic plants**

- Characterize the problem species by describing their growth habit(s), life cycle(s), and distribution or potential distribution within the water body. Information is available for many of the noxious weed species at the following web sites: [www.ecy.wa.gov/programs/wq/plants/weeds/index.html](http://www.ecy.wa.gov/programs/wq/plants/weeds/index.html) and [www.nwcb.wa.gov/](http://www.nwcb.wa.gov/)
- Identify any unique characteristics about these species that may help determine the most appropriate management methods and timing. Example: If you are controlling curly leaf pondweed, it's best to control very early in the season before the plant sets numerous turions (over wintering structures). Timing can be important to achieve the most effective management based on plant physiology.

### **Identify and discuss the management alternatives, their effectiveness, environmental impacts, human health risks, costs, and their applicability to the water bodies included in the plan**

Management strategies will likely involve a mix of methods. A management program could include mechanical harvesting or cutting to reduce plant biomass, treatment with herbicides, and follow-up “spot” treatments that may include a combination of methods, including hand pulling, diver dredging, or spot application of aquatic herbicides. Ensure that the strategy is specific to the water body. For example, if drawdown is not an option, explain that the water body does not have an outlet structure or dam, etc. that would allow this method.

The following website provides excellent information on aquatic plant management methods and considerations: [www.aquatics.org/pubs/madsen2.htm](http://www.aquatics.org/pubs/madsen2.htm).

A detailed description and discussion of each method can also be found on Ecology’s website. For information on:

*Manual methods* see: [www.ecy.wa.gov/programs/wq/plants/management/aqua022.html](http://www.ecy.wa.gov/programs/wq/plants/management/aqua022.html).  
*Bottom barriers* see: [www.ecy.wa.gov/programs/wq/plants/management/aqua023.html](http://www.ecy.wa.gov/programs/wq/plants/management/aqua023.html).  
*Diver dredging*, see: [www.ecy.wa.gov/programs/wq/plants/management/dredging.html](http://www.ecy.wa.gov/programs/wq/plants/management/dredging.html).  
*Sediment agitation methods* see:  
[www.ecy.wa.gov/programs/wq/plants/management/aqua029.html](http://www.ecy.wa.gov/programs/wq/plants/management/aqua029.html).  
*Mechanical cutting* see: [www.ecy.wa.gov/programs/wq/plants/management/aqua025.html](http://www.ecy.wa.gov/programs/wq/plants/management/aqua025.html).  
*Mechanical harvesting* see: [www.ecy.wa.gov/programs/wq/plants/management/aqua026.html](http://www.ecy.wa.gov/programs/wq/plants/management/aqua026.html).  
*Grass carp* see: [www.ecy.wa.gov/programs/wq/plants/management/aqua024.html](http://www.ecy.wa.gov/programs/wq/plants/management/aqua024.html).  
*Water-level drawdown* see: [www.ecy.wa.gov/programs/wq/plants/management/drawdown.html](http://www.ecy.wa.gov/programs/wq/plants/management/drawdown.html).  
*Rotovation* see:  
[www.ecy.wa.gov/programs/wq/plants/management/aqua027.html](http://www.ecy.wa.gov/programs/wq/plants/management/aqua027.html).  
*Herbicides* see:  
[www.ecy.wa.gov/programs/wq/plants/management/aqua028.html](http://www.ecy.wa.gov/programs/wq/plants/management/aqua028.html).  
 Supplemental information on Ecology's website.

Describe each method in the plan (cutting and pasting from the websites is allowable) and determine which of the following aquatic plant management methods are applicable for the water body and targeted species.

At the end of the write-up for each method, provide specific reasons for why or why not this method is applicable (or not) to your water body. (Sometimes individual homeowners may choose to do one or more of these methods around their own water-front property, where other methods may be more suitable for higher use areas.)

Here is an example from the Spring Lake Plan.

#### **Suitability of Bottom Barriers for Spring Lake**

- The Eurasian watermilfoil infestation at Spring Lake is too advanced to consider this method for large-scale eradication.
- Infested areas are too scattered or are too large to use a bottom barrier without becoming cost prohibitive.
- Barriers could be effective at the boat ramp to prevent re-infestation after initial control, or in areas that have dense milfoil and have shown resistance to the herbicide. We plan to install a bottom barrier at the boat launch to provide these benefits.
- Since there is not a swimming beach at Spring Lake, the boat launch seems the only appropriate place to install a bottom barrier to enhance the recreational potential of the lake.

**No action** – Describe the specific short- and long-term impacts associated with not controlling aquatic plants in the water body.

#### **Environmental manipulation**

- Hand pulling, raking, diver hand pulling.
- Water level drawdown.
- Bottom barriers.

### **Mechanical control methods**

- Harvesting.
- Rotovation – underwater rototilling.
- Cutting.
- Dredging.
- Sediment Agitation (beach groomers, weed rollers, etc.).

### **Biological control methods**

- Triploid grass carp.
- Host-specific organisms.
- Pathogens.

### **Chemical control methods**

- Aquatic herbicides.
- Adjuvants.

### **New technologies**

As new methodologies are developed, they need to also be considered.

## **Action thresholds for eradication projects**

Eradication versus control: With eradication projects the goal is to eliminate all target species within the water body over a period of time. The targeted species is to be removed selectively with minimal impacts as possible to non-targeted plants

For submersed species the action threshold should be zero tolerance of the plant in the water body. All plants should be eliminated each year to the greatest extent possible, understanding that it is rare to get 100 percent removal in every year. For curly leaf pondweed, the action threshold should be zero tolerance of turion production in each year.

For floating leaved species eradication may be better accomplished by setting a three to five year action goal depending on the extent of the infestation, with the goal to eventually reduce populations to zero. This is to minimize impacts to habitat.

## **Select the best combination of management methods to achieve eradication. This will become the action strategy**

- Identify the management methods that are best suited to the water body while allowing for the goal of noxious weed eradication. Identify the areas where these methods will be used, appropriate timing, and compatibility with the site. Ensure the acceptability of these methods to lake residents and the general public.
- Evaluate whether the strategy has a balanced approach between weed eradication and environmental protection. Strive to minimize impacts to non-targeted plants and animals.
- Identify permitting needs and work with the regulatory agencies to ensure that permits can be issued for the preferred management methods.
- After the methods for the water body have been selected, revisit the methods section and add information to the plan about the selected strategies to support their selection. Information

can include: herbicide toxicity data, herbicide labels, question and answer sheets, fact sheets, etc. Some of this information may be included in the plan appendixes.

- Environmental mitigations - Evaluate the compatibility of the weed control strategy with fisheries, waterfowl, wildlife, water use, rare plants, wetlands, endangered species, and the ecology of the water body. *Include a section in the plan on how to avoid or minimize these impacts.* If the water body is listed on the 303 (d) list, talk about how the actions taken will not contribute to further impairment of the water body for the parameter listed. Ensure that should this plan be legally contested all these issues are asked, discussed, and answered in the plan.
- Develop costs and a budget to implement the plan. Identify planning costs, capital costs, and operation and maintenance costs. Be realistic. As a rule, things always cost more and take longer than anticipated.
- Develop short-term and long-term funding strategies by considering fund sources such as applying for grants and loans, forming self-funding districts such as a Lake Management District, or other funding options. Noxious weed eradication projects often take many years.

## **Monitoring and evaluation of plan**

Plans are considered to be “living” adaptive documents that provide guidance rather than being “written in stone.” The plan should be reevaluated at periodic intervals. In addition, each aquatic plant management method used in the action strategy for the water body should be evaluated for efficacy each year. Ineffective methods should be reevaluated. New technologies may be developed and may be more effective than older methods. The plan needs to be flexible to accommodate new ideas.

Include an element in the plan that discusses the monitoring strategy for determining the efficacy of the management methods. The plan should include a post application evaluation of the site(s). The timing of this evaluation shall be appropriate for the management method. This evaluation shall include an estimate of the effectiveness of the method (qualitative or quantitative), any dead or dying non-targeted organisms, algae conditions, and may include any other environmental data which may be available (dissolved oxygen, pH, Secchi disk, turbidity, etc.). Success can be measured by removal of the target species.

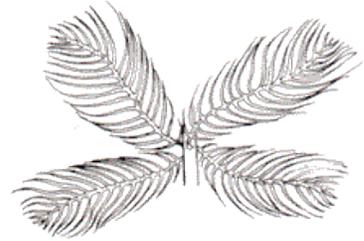
## **SEPA evaluation of the plan**

Local governments are strongly encouraged to conduct SEPA evaluation on the plan. This provides an additional opportunity for public review and comment and provides additional validity to the plan.

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## Appendix D Driving Directions

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The Ecology building includes offices of the Department of Ecology Headquarters (including the Water Quality Program), Ecology's Southwest Regional Office (including the regional Water Quality Section), the State Conservation Commission, and the U.S. Environmental Protection Agency's Washington Operations Office. The U.S. Fish and Wildlife Service is located in a nearby building.

### **From the south:**

1. Take I-5 North
2. Take exit 109 Martin Way
3. Turn right onto Martin Way
4. Proceed on Martin Way, turn right on Desmond Drive
5. Turn left to the Ecology Building

### **From the north:**

1. Take I-5 South
2. Take exit 109 Martin Way
3. Turn left onto Martin Way
4. Proceed on Martin Way, turn right on Desmond Drive
5. Turn left to the Ecology Building