

Aquatic Noxious Weeds

Aquatic noxious freshwater weeds are very similar to the noxious weeds that are found on land. They can be annual or perennial. They can reproduce from seeds or tubers. Some can be more shade tolerant than others. The management and control is very similar to land weeds.

Aquatic plants are divided into native and non-native, invasive and non-invasive plants just like land weeds. Non-native, invasive aquatic plants evolved in other parts of the world and were brought to this region without the natural enemies that evolved with them. Aquatic plants were originally introduced to the area by humans, either by accident or by design, as ornamental plants (purple loosestrife, giant hogweed), aquarium plants (Eurasian watermilfoil, Brazilian elodea, fanwort), or water garden plants (parrot feather, milfoil). They “escaped” into other areas through floods, by people discarding aquarium plants or by being deliberately planted. These plants tend to be naturally hardy and able to withstand tough growing conditions. When these plants are introduced to Washington’s waters, they often thrive. In summary, aquatic noxious, invasive, non-native plants out-compete our less robust native plants, form single-species stands and reduce the habitat for fish, waterfowl, and aquatic mammals and invertebrates.

There are beneficial aquatic plants (this includes native plants) that are very important to the ecosystems found in lakes and streams. They provide food and habitat for fish and wildlife, stabilize shorelines and contribute to nutrient cycling. Beneficial plants can also get out of hand due to excessive inputs of nutrients, such as nitrogen or phosphorus.

Usually aquatic weeds can be placed into four broad categories: emersed, submersed, floating, and algae. Descriptions of these categories according to the *2007 Pacific Northwest Weed Management Handbook* are:

Emersed - rooted or anchored in the substratum (one layer upon another, i.e. soil under water in this case) with most of the leaf stem tissue above the water surface and not lowering or rising with the water level. Examples: cattail, tules, and yellow waterlily

Submersed - adapted to grow with all or most of their vegetative tissue below the water surface. Examples: pondweeds, coontail, and elodea

Floating - either free-floating or anchored to the substratum and produce most of their leaf stem tissue or thalli at or above the water surface. Leaves or thalli rise or lower with the water level. Examples: duckweeds, azolla, and white waterlily.

Algae - most algae are also submersed and free-floating. However, some may be anchored by holdfasts to the substratum, rocks, old stumps, etc. Algae do not have true roots, stems, or elaves and are frequently called “pond scums” or slime.

What is the State of Washington doing to control aquatic noxious weeds? There is an extensive monitoring program in effect that is watching some potential problematic aquatic weeds found in the different ponds, lakes, and streams within the state. Several wetland and aquatic plants and seeds are prohibited for sale and quarantined from the state. Control falls under the jurisdiction of the local Noxious Weeds Control Board. Until recently these local boards have concentrated on controlling

land weeds and some of the counties do not have the time or resources to also control the aquatic weeds.

The aquatic noxious weeds are classified just as their land noxious counterparts are on the state's Noxious Weed list as Class A, B, or C weed. This list is quite extensive, especially for the western portion of the state. Spokane County Noxious Weed Board has listed the aquatic noxious weeds found here as Class B Designates: "Class B Designates weeds are species that are designated for control in certain regions of the state where they are not yet widespread. Preventing infestations in these areas is a high priority." The aquatic plants listed in this classification are the following:

Egeria densa (Brazilian elodea)—underwater in lakes & rivers; popular aquarium plant (may be sold under the name Anacharis)

Nymphoides peltata (yellow floating heart)—floating-leaved, rooted in shallow water; common garden ornamental; forms oxygen robbing mats

Lythrum salicaria (purple loosestrife)—emergent on banks of rivers, lakes, streams, wetlands; garden ornamental; replaces native plants which wildlife depends on for ground cover, food or nesting material

Myriophyllum aquaticum (parrotfeather)—mostly emergent in lakes, rivers, ditches; popular aquatic garden plant; shades out the algae that serves as part of the aquatic food web; provides choice mosquito larvae habitat

Ludwigia hexapetala (water primrose)—floating mats with emergent stems in shallow water; ornamental aquatic plant; very aggressive and invasive forming extensive mats that effects water flow and shoreline activity

Tamarix ramosissima (saltcedar)—wet areas; replaces native riparian vegetation; absorbs large amounts of water lowering ground water levels and drying up springs and marshes



Egeria densa



Lythrum salicaria



Ludwigia hexapetala



Nymphoides peltata



Myriophyllum aquaticum



Tamarix ramosissima

All the above plants are prohibited from sale within the State of Washington, but that doesn't mean that they can not be obtained within the state because you can buy Brazilian elodea under another name in the pet store and order aquatic plants over the internet.

Aquatic noxious weeds can have a tremendous negative effect on our environment due to the increased demand on our limited water resources because of the expanding population. In addition,

downstream residents and resources are impacted by the quality and quantity of water flowing out of a lake. It is very important when introducing aquatic plants or managing aquatic plants to get permission from the various state and federal agencies whose responsibility it is to manage these resources. Some of these state governmental agencies are:

Washington State Department of Ecology
Washington State Department of Fish and Wildlife
Washington State Noxious Weed Control Board

It is very interesting to go to this site to see the aquatic plants located in the different area lakes:
<http://www.ecy.wa.gov/apps/watersheds/aquaticplants/searchresults.asp?searchterm=spokane>

Always properly dispose of aquarium or pond plants to insure that they do not make their way into our ponds and lakes, streams and rivers, or wetland and riparian areas.

Resources:

PNW Weed Management Handbook

Spokane County Noxious Weed Control Board <http://www.spokanecounty.org/weedboard>

Washington State Department of Ecology <http://www.ecy.wa.gov/programs/eap/lakes/aquaticplants/>

Washington Department of Fish and Wildlife <http://wdfw.wa.gov/hab/aquaplnt/aquaplnt.htm>

Washington State Noxious Weed Control Board <http://www.nwcb.wa.gov/>