



General Rules to Controlling Invasive Species

An invasive species is a non-native plant or animal that adversely affects the habitats they invade economically, environmentally, and/or ecologically.

Plants that are invasive generally have one or more of the following traits: fast growth, rapid reproduction, high dispersal ability or adaptability. Many invasive species are also aided by land use practices that are detrimental to native species. Due to these traits invasive species can be very difficult to remove. The number one rule is to try to eradicate them as soon as their growth is noticed. The earlier that you begin the fight against invasive species the higher the probability of getting rid of them.

Eradication techniques

The techniques that we recommend are digging, cutting, covering and native plant replacements. We also suggest throwing the plants in the garbage to avoid the spreading of seeds and rhizomes. Herbicides can also be used. Generally, we discourage herbicide use. If you chose to use herbicides avoid products that are not approved to be used near water bodies.

Digging: Digging refers to digging out the entire plant. Many invasive plants like knotweed spread through rhizomes. Rhizomes are root like, often horizontal, subterranean stems that typically produce roots below ground and shoots above. Rhizomes will often spread and can spread more then 20 feet away from plant. The benefit in digging is that you disable the plants ability to grow new shoots.

Cutting: Cutting involves cutting the stems of plants, which will weaken their root systems. This on its own will not kill them but it will help to control them. Cutting often works well in conjunction with digging. Cut the plant every two weeks throughout the summer, then in the fall when the ground becomes soft dig up as much of its roots as possible.

Covering: For best results use a heavy-duty, non-woven geotextile fabric. Install the fabric after mowing or cutting down the invasive plants. Spread the fabric over the entire area, but not too tight or plants can punch through. Place bricks or rocks on the fabric to keep it in place. Monitor the area and stomp down any growth. Covering works best on level terrain that does not get flooded. Keep covered for about one year. Sheet mulching is also an efficient technique.*

Planting: Many native plants have the ability to compete with invasive species. To give these plants the best chance of re-vegetating an area, first cut down the existing invasive species and try to dig out as many roots as possible.

Below are a number of informational sheets about invasive species that are known to be in the Devils Lake watershed. Please feel free to contact District staff for further recommendations on removal or treatment.

Devils Lake Water Improvement District, PO Box 974, Lincoln City, Oregon, 97367,
541-994-5330, Lake.Manager@dlwid.org, www.DLWID.org

*Sheet mulch - A non mechanical landscaping technique that is used to kill current plant growth. It involves applying layers of cardboard to suppress weed growth, then a substantial layer of mulch (2-5 inches).



Invasive

- Common Name (s): Brazilian Elodea
- Scientific Name: *Egeria densa*
- Growth Form: Submersed, rooted to the ground or floating
- Height: When rooted can grow 20 feet or up to surface of the water
- Reproduction: Seed
- Planting Zone: Aquatic species
- Removal Guidance: Mechanical harvesting.





Common Name (s): Creeping Jenny
Moneywort

Scientific Name: *Lysimachia nummularia*

Growth Form: Ground cover, spreading vine

Height: Ground level

Sun Exposure: Full sun to part shade

Reproduction: Seed

Planting Zone: Moist to wet

Removal Guidance: Creeping Jenny spreads quickly along the ground and develops knotted root systems that are difficult to remove. Similar to other spreading vines the earlier you catch Creeping Jenny the less chance it will have to create these strong root systems. It is possible to eradicate by hand but requires for all the roots to be pulled.



Lysimachia nummularia (exotic)
creeping jenny, moneywort
Douglas Co., Lost Creek, Man Umpqua
photo by Mireia A. Thore, Jan 6, 1980 (COP confirmed)
© 1998 OSU, courtesy of Oregon Flora Project



Lysimachia nummularia (exotic)
creeping jenny, moneywort
Benton Co., Porter Lake, west side of, near junction of Smith Loop and Hurburt Road, S of Corvallis, 44.44771° N, -123.24528° W
collected 7/1/2008 by P. Gouffard
© 2008 Gerald D. Carr, courtesy of Oregon Flora Project



Invasive

| | |
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| Common Name(s): | English Ivy |
| Scientific Name: | <i>Hedera helix</i> |
| Growth Form: | Climbing vine |
| Height: | Low lying but will climb up trees |
| Sun Exposure: | Sun to shade |
| Reproduction: | Seed and stolon |
| Planting Zone: | Dry to moist |

Removal Guidance: English Ivy spreads along the ground and will climb trees, which can kill the tree. Due to ivy's ability to spread, eradication can be difficult. For best results pull out the entire vine. For climbing vines, remove the entire vine that is in the ground, then cut out a three foot section of the vine that has attached to the tree. By removing at least three feet the climbing vine will lose its food source and die.



Hedera helix (exotic)
English Ivy
Lane Co., Estabale Woodlands
photo by Bruce Neil Newhouse March 1, 2003 OCP confirmed
© 2003 Bruce Newhouse, courtesy of Oregon Flora Project



Hedera helix (exotic)
English Ivy
Josephine Co., Deer Creek Center, Selma, site code: 1103; 42.2949152788° N -123.650457494° W
May 5, 2007
© 2007 Keir Morse, courtesy of Oregon Flora Project



Invasive

Common Name (s): Eurasian Water Milfoil
Scientific Name: *Myriophyllum spicatum*
Growth Form: Submersed, rooted to the lake bottom
Height: 3-10 feet
Reproduction: Fragmentation/rhizomes
Planting Zone: Aquatic species

Prevention: Eurasian Water Milfoil is able to easily transport itself on the hulls of boats. If your boat has been in a different body of water please wash it off before entering Devils Lake.





Invasive

- Common Name (s): Fragrant Water Lily
- Scientific Name: *Nymphaea odorata*
- Growth Form: Grows in shallow water, forms dense patches on the water's surface
- Height: Rooted to the lake bottom, grows in water depths of 6 feet or less
- Reproduction: Seed and rhizomes
- Planting Zone: Aquatic, does best in shallow water not greater than 6 feet
- Prevention: Fragrant Water Lily can be pulled out or mechanically harvested.





Invasive

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| Common Name(s): | Giant Knotweed |
| Scientific Name: | <i>Polygonum sachalinense</i> |
| Growth Form: | Tall hollow stems, similar to bamboo |
| Height: | 6-16 feet |
| Sun Exposure: | Full sun to part shade |
| Reproduction: | Rhizomes |
| Planting Zone: | Dry to moist |



Planting Removal: Getting rid of knotweed is not an easy task. Digging out the roots will work, but some re-growth is expected.

Another option is to cut the stems repeatedly (every 2 weeks) for about five years. This will weaken the root system and eventually kill small patches of knotweed.

Knotweed can also be covered with a non-woven heavy geotextile fabric. First cut the knotweed down. Place the fabric at least ten feet beyond the growth. Weigh the fabric down with rocks or bricks. This should be successful after 3-5 growing seasons. This method should not be used in a seasonally flooded area.

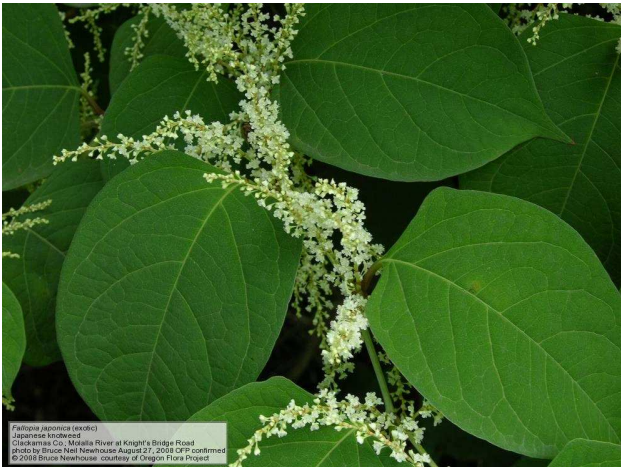


Polygonum sachalinense (exotic)
giant knotweed
Lane Co., Kinzel house, Mount Pisgah
photo by Bruce Neil Newhouse, August 7, 2002. OIP confirmed
© 2002 Bruce Newhouse, courtesy of Oregon Flora Project



Invasive

Common Name(s): Japanese Knotweed
Scientific Name: *Polygonum cuspidatum*
Growth Form: Large shrub like
Height: Low lying up to 10 feet
Sun Exposure: Full sun to part shade
Reproduction: Rhizomes
Planting Zone: Dry to moist
Planting Removal: See removal guidelines for Giant Knotweed.





Invasive

Common Name (s): Parrot Feather
Scientific Name: *Myriophyllum aquaticum*
Growth Form: Submersed, rooted to the lake bottom
Height: Grows a couple of inches to one foot above the water surface
Reproduction: Rhizomes
Planting Zone: Aquatic species

Removal Guidance: Parrot Feather is able to easily transport itself on the hulls of boats. If your boat has been in a different body of water please wash it off before entering Devils Lake.





Common Name: Purple Loosestrife
Scientific Name: *Lythrum salicaria*
Growth Form: Emergent
Height: 4-10 Feet
Sun Exposure: Full sun to part shade
Reproduction: Seed and rhizomes
Planting Zone: Moist to wet

Planting Removal: Purple loosestrife forms dense stands that can out grow native species. Young plants can be pulled by hand. Established plants must be cut and the roots removed. Generally, removing an established stand of loosestrife will require a lot of work and time. The early eradication begins the better chance of success.



Lythrum salicaria (exotic)
purple loosestrife
Lane Co., Amazon
photo by Bruce Neil Newhouse, July 26, 2004. OFP confirmed
© 2004 Bruce Newhouse, courtesy of Oregon Flora Project



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Common Name(s): Reed Canary Grass
Scientific Name: *Phalaris arundinaceae*
Growth Form: Tall grass
Height: 3-6 feet
Sun Exposure: Sun to shade
Reproduction: Seeds and rhizomes
Planting Zone: Moist to wet

Removal Guidance: Reed Canary Grass is very difficult to remove. It grows in highly dense stands that will eventually take over all other species. The result is a mono-culture of Reed Canary Grass. Reed Canary Grass is also very difficult to get rid of due to its effective reproduction. Mechanical harvesting can have some positive results. The best option is to mow the area, harvest as much of it as possible and plant native species like sedges which are able to compete. Sheet mulching or other covering techniques can also be effective.





Invasive

Common Name(s): Scotch Broom
Scientific Name: *Cytisus scoparius*
Growth Form: Shrub
Height: 3-6 Feet
Sun Exposure: Sun
Reproduction: Seeds
Planting Zone: Dry-moist

Removal Guidance: To permanently remove Scotch Broom it is necessary remove the root ball. For best results first cut the branches and then dig out all the roots (broken stems will re-sprout).





Invasive

Common Name (s): Tapegrass, Water Celery,
Eel Grass

Scientific Name: *Vallisneria americana*

Growth Form: Herb or grass like, with
long thin leaves that grow
a few feet

Height: 1-5 feet

Reproduction: Seed and rhizomes

Planting Zone: Aquatic species

Removal Guidance: *Vallisneria americana*
can be mechanically harvested or pulled.





Common Name(s): Yellow Flag Iris
Scientific Name: *Iris pseudacorus*
Growth Form: Shoreline emergent
Height: 3-5 Feet
Sun Exposure: Full sun-part shade
Reproduction: Seed
Planting Zone: Wet



Removal Guidance: If removing this plant by hand, use gloves, since it has a liquid substance in its stems that can cause skin irritation. Seeds can easily spread, so please do not remove this by weed whacking or other mechanical device. The most effective method is to dig it out.

Special Note: Yellow flag iris can have many benefits along the shoreline. It is good for erosion prevention and pulls nutrients and heavy metals out of the water. If you remove this plant please re-plant the area with plant species that will offer the same benefits such as slough sedge, three square bulrush or broad leaved cattail. See Devils Lake Planting Guide for more options.



Iris pseudacorus (exotic)
yellow flag, yellow water iris
Columbia Co., Oak Trail, Sauvie's Island
photo by Bruce Neil Newhouse May 24, 2003 OFP confirmed
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