THURSTON COUNTY NOXIOUS WEED FACT SHEET

Yellow Flag Iris (*Iris pseudacorus*)

Description:

Yellow flag iris (*Iris pseudacorus*) is an emergent aquatic perennial, usually found along wetland areas such as lakes, rivers, streams or at the edge of ponds. It has showy yellow flowers, with three downward facing sepals, often with brown or purple veins at the base, and three smaller, upward pointing petals. Each stem may have multiple flower heads. It has broad, flat, pointed leaves that overlap at the base, leaves often remain green year round in mild winter climates.

Yellow flag iris has thick rhizomes (root system) that form dense mats. It spreads both by rhizomes and by seed. After the plant blooms, seed pods grow in clusters at the base of the flower. The seeds are about 1/4 inch in diameter and have the ability to float. Yellow flag iris grows 3-4' tall, in comparison to bearded iris that grow 27-41 inches in height.

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Impacts:

The dense mats this iris forms can move into and crowd out native vegetation, trap sediment, inhibit flow in streams and rivers, and jeopardize habitat for fish and wildlife. In addition, the sap produced by this plant is poisonous to humans and livestock.

Control Options:

Thurston County's Integrated Pest Management emphasizes cultural, biological, and manual control methods to keep pests and vegetation problems low enough to prevent damage. The strategy of Thurston County's IPM policy is to minimize the use of pesticides.

► **Cultural / Habitat:** Do not plant yellow flag iris in your landscape. If you already have yellow flag iris, please consider removing it and re-planting the area with native vegetation.

Hartman Creek, Thurston County, Washington

► **Manual / Mechanical:** Small infestations of yellow flag iris (2 or 3 clumps or more if manageable) may be pulled or dug out. Since the sap is poisonous and may cause a skin reaction, gloves and protective clothing should be worn when working with or around yellow flag iris. Care should be taken to remove all rhizomes, re-growth will occur from missed rhizomes.

The most important step to controlling yellow flag iris is ***removing the seed pods***. This will eliminate new infestations germinating from seeds, however rhizomes may still break off and float to a new location forming new infestations. Seed pod removal can be performed any time of the year should always be the highest priority control measure.

Cutting and covering the plants with landscape fabric or durable tarps has shown to be moderately successful. However, you must cover all of the plants and the coverings need to be maintained for several years. This is only practical if infestations are new and cover small areas. Covering large areas of shorelines would require permits from several jurisdictions.

► **Biological:** There are currently no known biological controls for yellow flag iris.

► **Chemical:**

Aquatic / Riparian Applications: Yellow flag iris usually grows in wet areas along lakes, streams, and ditches. If there is a chance for your herbicide to get into a water body, the use of an herbicide formulated for aquatic settings is required. ***Aquatic herbicides are restricted for purchase and use in Washington State by licensed applicators only.*** Herbicides that have been shown to be effective in controlling yellow flag iris at aquatic sites include aquatic formulations of the herbicides ***glyphosate*** (example: Aquamaster®) and ***imazapyr*** (example: Habitat®). Because of the restrictions and difficulty in controlling these sites, you will probably need to contact a licensed applicator to develop a control plan.

Spot spraying with ***glyphosate*** (Aquamaster®) is effective in controlling yellow flag iris. Glyphosate is non-selective, and will injure any plants that it comes in contact with, including grass. Aquamaster® has a supplemental label for treating yellow flag iris by an alternate method known as "stem injection". This method is especially useful where there are sensitive plants nearby. Note: Based on the maximum annual use rate of glyphosate the combined total for all treatments must not exceed 8 quarts of this product per acre. At 0.5 mL per stem, 8 quarts should treat approximately 15,000 stems. Due to recent health reviews, Thurston County recognized some scientific studies have concluded the use of glyphosate products have carcinogenic potential. The risk of spot spraying with these products is considered to be low provided the applicator uses personal protection equipment which includes chemically resistant gloves in addition to long sleeve shirt, long pants, socks and shoes and all other label precautions are followed.

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Imazapyr (Habitat®) is also effective in controlling yellow flag iris. Imazapyr is also non-selective and may damage or kill any other plants that it contacts. Do not use on lawns, walks, driveways or similar areas where roots of desirable vegetation may extend and be exposed to potential injury. It may also leave persistent bare ground in the treatment area. This can be minimized by using only as directed, spraying at the recommended strength and no more than necessary to wet the surface of the leaves and stems. Products containing the active ingredient imazapyr are considered "moderate in hazard" by Thurston County's pesticide review process for the potential for chemical mobility and persistence.

Spot foliar applications (licensed applicator only):

- For spot applications of either glyphosate or imazapyr, prepare herbicide by following label instructions at rates listed below. Spray each plant thoroughly on the stems and leaves, enough to be wet but not dripping. Spot application means the herbicide is applied only to the target plants, and not on the surrounding plants or soil.
- Keep people and pets out of treated areas until spray solution has dried.

Hollow stem injection using Aquamaster®(licensed applicator only):

- The glyphosate containing product Aquamaster® has a supplemental label which allows it to be injected directly into the plant stem (Thurston County is unaware of any other products with this labeled use).
- Follow the supplemental label instructions which are summarized in the table below.
- This technique can be useful in minimizing injury to neighboring plants when compared to spraying techniques.

Terrestrial Applications: The same active ingredients are also available in products labeled for use by homeowners in terrestrial (dry) environments, for example: ***imazapyr*** (Polaris®) or ***glyphosate*** (Roundup Pro® or Eliminator Weed & Grass Killer®).

- Where yellow flag iris is found in dry ground areas away from water bodies, follow label instructions for mixing and applying products at the rates listed in the terrestrial section below. Use care in applying to the target plants only.
- Appling a glyphosate product at a 2.5-5% solution in the fall can achieve up to 93% control.

Timing: Apply to actively growing foliage during the summer or fall before a killing frost. In general, fall treatments seem to be somewhat more effective than spring or summer. Bagging and disposing of mature seed pods is essential to reduce further spread of the species even with treatment.

Pollinator Protection: To minimize negative impacts to bees and other pollinators, treatment prior to blooming is recommended. Removal of flowers before treating can be an option in some circumstances. Late applications after pod removal or treatments using the injection method would have minimal affect on pollinators. If treatment must occur during the blooming period, try to spray early or late in the day or on cloudy, cool days when pollinators are least active.

Product/Method	Rates	Mix
Aquatic applications (Licensed applicator only)		
Glyphosate / Spot Foliar Aquamaster®	2.5—5%	Add 3.25—6.5 oz (6.5—13 Tablespoons) concentrated product per gallon of water.
Glyphosate / Injection Aquamaster®	100%	Cut flower stems with clippers 8 to 9 inches above the root crown. Use a cavity needle that is pushed into the stem center and then slowly removed as 0.5 mL per stem of this product is injected into the stem.
Imazapyr / Spot Foliar Habitat®	1-1.5%	Add 1.3—1.9 oz. (2.6—3.8 Tablespoons) concentrated product per gallon of water.
Terrestrial (dry land) applications		
Glyphosate / Spot Foliar Roundup Pro® Eliminator Weed & Grass Killer®	2.5—5%	Add 3.25—6.5 oz (6.5—13 Tablespoons) concentrated product per gallon of water.
Imazapyr / Spot Foliar Polaris® *Alligare™ Imazapyr 2SL*	1-1.5%	Add 1.3—1.9 oz. (2.6—3.8 Tablespoons) concentrated product per gallon of water.

READ AND FOLLOW ALL LABEL DIRECTIONS AND RESTRICTIONS. Obey all label precautions including site specific and safety measures. Always use personal protective equipment that includes coveralls, chemical resistant gloves, shoes plus socks, and protective eyewear. Use of brand names does not connote endorsement and is for reference only; other formulations of the same herbicides may be available under other names. Information provided is current as of the date of the fact sheet. Pesticide product registration is renewed annually. Product names and formulations may vary from year to year.

REFERENCES:

Aquatic Weeds Management Fund Final Report Grant # G0500123 WSDA 6/30/08

King County Department of Natural Resources and Parks Water and Land Resources Division– Noxious Weed Control Program. Yellow Flag Iris Best Management Practices January 2007

Washington State University Spokane County Extension Master Gardener Program—Yellow Flag Iris

TNC Element Stewardship Abstract for Yellow Flag Iris

Written Findings of the Washington State Noxious Weed Control Board

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