



# Poison Hemlock

*Conium maculatum*

**Description:** Poison hemlock is a member of the parsnip or carrot family (umbelliferae). This species is a biennial, producing large rosette leaves during the first year of growth. During the second year the plant may grow to a height of up to 12 feet. Except for its size it closely resembles wild carrot, a common plant found throughout Thurston County. Poison hemlock has hollow, hairless stems (leaf canes) with purple blotches. It is a biennial, reproducing by seeds only. Leaves are fern like and up to 1 1/2 feet long. The flowers are white and develop into green, ridged seed capsules that eventually turn brown. Each plant is capable of producing up to 38,000 seeds, which can remain viable in the soil for up to 6 years.

**Impacts:** The entire plant is toxic to humans and animals. It contains the poisonous alkaloid coniine and other alkaloids. Most poisoning occurs because the leaves are mistaken for parsley, the roots for parsnip and the seeds for anise. Poisoning of humans have occurred after the ingestion of seeds, leaves and roots and even as a result of blowing through the hollow stems when used as whistles or peashooters. The seeds, however, are the most toxic part of the plant. "Poison hemlock remains toxic for several years after being pulled, and it is wise not to leave the dead plants where they might be eaten by wildlife or children" (Parsons 1973).

**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 goal of Thurston County's pesticide use policy is to minimize the use of pesticides by utilizing and providing information about the most effective control options that are available and practical.

► **Cultural / Habitat**

Follow-up planting of any bare or disturbed area is recommended to provide competition with hemlock seedlings that will emerge from the seed bank in the soil at infestation sites.

► **Manual / Mechanical**

Hand removal is recommended for small infestations. When pulling the plants, dig down and remove the entire taproot. Be sure to wear gloves and to wash your hands after working with poison hemlock. Manual control efforts can be successful, but we



have found that the disturbance of soil resulting from manual removal methods encourages germination of seeds at infested sites. Solid carpets of hemlock seedlings are not uncommon. Cutting the poison hemlock is an ineffective option for control, since the plants do not die and re-growth will occur, plants send up new seed stalks in the same season the cutting occurs.

► **Biological**

The Defoliating Hemlock Moth (*Agonopterix alstroemeriana*) is available and has been released in Thurston and other counties in Washington but results have been highly variable and almost completely ineffective in Thurston County. Additionally, biocontrols are dependent on heavy densities of undisturbed host plants, and Thurston County's goal is to control all Poison Hemlock wherever it is found.



## ► Chemical

Spot spraying with an herbicide containing the active ingredient **glyphosate** (example: Roundup Pro®, Glyphos®, etc.) can be effective in controlling poison hemlock. Currently, products containing the active ingredient glyphosate are the only herbicides for the control of poison hemlock that are considered “low in hazard” by Thurston County’s pesticide review process for the potential for chemical mobility and persistence. Glyphosate products can be used to treat individual plants or small patches, either by spot foliar application, or by stem injection (instructions from supplemental labeling in table below).

**Thurston County has observed that most ready-to-use, pre-mixed products do not contain sufficient active ingredients to be as effective as concentrated products that are then mixed with water to create a specific finished concentration. The following instructions are for products containing 41% glyphosate which will be mixed down to a specified dilution rate. Be sure to read your label carefully, and make adjustments to rates accordingly.**



### Foliar applications of glyphosate (ROUNDUP PRO™):

- Using a spot application, 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 poison hemlock plants, and not on the surrounding plants or soil. A 2% glyphosate solution (after mixing for use) is necessary to control poison hemlock. Follow label directions for mixing product to application strength.
- Glyphosate is non-selective, and will injure any plants that it comes in contact with, including grass.
- Keep people and pets off treated areas until spray solution has dried.

### Hollow stem injection using glyphosate:

- Individual poison hemlock plants may be treated by injecting up to 6 milliliters of a 5% solution of Roundup Pro™ with a hand-held injection device directly into the hollow stem.
- Mark each plant when injecting it, to avoid retreating the same plant. Inject with a hand-held device into one leaf cane per plant 10 to 12 inches above root crown.

Herbicide & Method	Product Rates	Mix
RoundUp Pro™ Spot/Foliar	2%	To 1 gallon of water add 2.66 oz. RoundUp Pro™, apply to foliage at or beyond bud stage.
RoundUp Pro™ Stem Injection	5%	Inject one leaf cane per plant 10 - 12 inches above root crown with 6 mL of a 5% solution of this product. Use a cavity needle and push it into the stem center, then slowly remove it as the product is injected into the stem.

Products containing the active ingredient **imazapyr** (Habitat® and Arsenal®), are also effective for controlling poison hemlock. Imazapyr is considered “moderate in hazard” by Thurston County’s pesticide review process for the potential for chemical mobility and persistence and is a second choice for chemical control.

### Foliar applications of imazapyr (Habitat®), (Arsenal®)

- Licensed applicators are required to use this product.
- Spot applications with imazapyr products are effective.
- Imazapyr is non-selective, and will injure any plants that it comes in contact with, including grass.
- Keep people and pets off treated areas until spray solution has dried.
- Do not use on lawns, walks, driveways or similar areas where roots of desirable vegetation may extend and be exposed to potential injury.

**Timing:** Control of poison hemlock should be performed whenever it is found when the plant is actively growing and prior to seed production. After control measures are performed, monitor the area the following year to check for new plants from existing seed bank.

**READ AND FOLLOW ALL LABEL DIRECTIONS AND RESTRICTIONS.** Obey all label precautions and safety measures. Always use personal protective equipment that includes coveralls, waterproof 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 and product names and formulations may vary from year to year.

### References:

University of Illinois Extension IPM Bulletin, Article 8/May 19, 2006; <http://bulletin.ipm.illinois.edu/article.php?id=524>  
“Indiana Plants Poisonous to Livestock and Pets”, Purdue University Cooperative Extension Service Fact Sheet;  
USDA/ARS Poisonous Plant Research Laboratory Fact Sheet 415;  
“Highly Toxic Poison Hemlock, a Threat in Newly Urbanized Areas” by Mauricio Espinoza, Ohio State University Extension



Thurston County Public Health & Social Services  
2000 Lakeridge Drive SW  
Olympia WA 98502  
Phone: 360-754- 4111  
T.D.D. 360-754-2933  
[www.co.thurston.wa.us](http://www.co.thurston.wa.us)

Thurston County Noxious Weed Control  
11834 Tilley Road S.  
Olympia, WA 9812  
Phone: 360-786-5576  
T.D.D. 360-754-2933  
[tcweeds@co.thurston.wa.us](mailto:tcweeds@co.thurston.wa.us)