

Jennifer E. Andreas¹, Carol B. Randall², Joseph Milan³, and Rachel L. Winston⁴

¹Washington State University Extension, ²Forest Service–Forest Health Protection, ³Bureau of Land Management, ⁴MIA Consulting

SYNONYMS

hemlock, wild hemlock, cicuta

INTRODUCTION

Poison hemlock (*Apiaceae*) is native to Europe, Asia, and northern Africa. It was intentionally introduced to North America as a garden plant in the 1800s (Winston et al. 2017). It has since been reported in all 50 states in the USA and seven Canadian provinces. It is often found growing in dense stands at shady or moist sites in or along irrigation canals, roadsides, pastures, and low-lying waste areas, but it also invades native plant communities in riparian areas (Fig. 1; DiTomaso et al. 2013). Poison hemlock outcompetes native species in natural areas, reduces crop and pasture production, and is an alternate host for many crop pests. All parts of the plant contain highly toxic alkaloids that have caused several birth defects in livestock and humans and can result in death (Gyaneshwari et al. 2023). Livestock tend to avoid grazing the live plant unless forage options are limited; they may also ingest dried poison hemlock present in hay or silage. Plant tissue contains irritating phototoxic compounds that may cause contact dermatitis, sensitivity to UV rays, and blistering in both livestock and humans (Chizzola and Lohwasser 2020). Upon ingestion, the symptoms may include dilated pupils, trembling, loss of muscle control, and a weak heart beat (Mitich 1998). Depending on



Figure 1. Dense stand of poison hemlock growing along a river (Travis McMahon, MIA Consulting)

the size and species of exposed animal, death can occur in 30 minutes to two hours.

BIOLOGY

Poison hemlock reproduces only by seed. Seeds may germinate anytime during the growing season if the soil is sufficiently moist and cool. Plants generally grow as biennials, remaining as rosettes the first year and then bolting and flowering the second year (Fig. 2; DiTomaso et al. 2013). Less frequently, plants may grow as winter annuals, germinating in winter and flowering within the same year. Flowering occurs from spring through summer. Most plants die after flowering and setting seed, though some may overwinter, re-grow from the root crown, and flower again the following year (Goeden et al. 1989). Most seeds fall to the ground and germinate around the parent plant (Mitich 1998), but some may be moved around in water, mud and clothing, vehicles/machinery, agricultural produce, and by animals. Most seeds germinate within three years; however, some may remain viable for six years (DiTomaso et al. 2013).



Figure 2. Poison hemlock plant flowering during its second year of growth (Travis McMahon, MIA Consulting)

IDENTIFICATION

Roots

Poison hemlock grows from thick, yellow-white taproots (Fig. 3) that are often mistaken for wild parsnips. Within one month of germination, most roots may be nearly 1 ft (30 cm) deep.



Figure 3. Poison hemlock taproots (Travis McMahon, MIA Consulting)

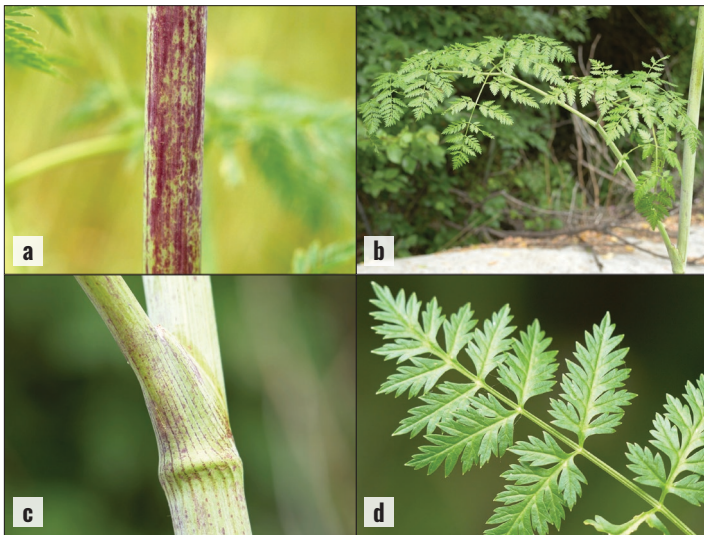


Figure 4. Poison hemlock (a) stems often have purple spots or splotches, (b) leaves are 2–3 times divided (pinnately compound) and (c) partially sheath the stem at the point of attachment. Poison hemlock (d) leaflets are glossy dark green and finely toothed (a–d: Travis McMahon, MIA Consulting)

Stems and Leaves

Most plants grow 3–6 ft (0.9–1.8 m) tall, but some may grow up to 9 ft (2¾ m). Plants typically have one main stem with several widely spaced branches (Fig. 2; DiTomaso et al. 2013). Stems are hollow, faintly ridged, light green, and sparsely to densely covered in purple spots or splotches (Fig. 4a). Rosette leaves are up to 18 in (45 cm) in length and have long leaf stalks. Stem leaves are alternate and usually grow smaller and smaller farther up the stem. Leaves are 2–3 times pinnately compound, meaning each leaf is divided 2–3 times into smaller leaflets (Fig. 4b). Leaf stalks partially sheath the plant stem at the point of attachment (Fig. 4c). Leaflets are dark green, glossy, and hairless. They have prominent veins on their undersides, which run to the tips of the leaflet teeth (Fig. 4d). Leaflets are opposite each other and are finely toothed (Fig. 4d), making the overall plant appear fern-like (Fig. 2; Winston et al. 2017). When crushed, leaves and stems give off a musty, unpleasant odor sometimes resembling mouse urine (DiTomaso et al. 2013).

Flowers

Poison hemlock flowers are produced in clusters (umbels) 3 in (7½ cm) across that grow at stem and branch tips (Fig.



Figure 5. Poison hemlock flowers are produced in (a) umbels that are further divided into umbellets. Each umbellet (b) has approximately 15 flowers, and all flowers have 5 tiny white petals (a,b: Travis McMahon, MIA Consulting)

2). The flower clusters resemble umbrellas in that all flower stems arise from a single point (Winston et al. 2017). Poison hemlock flowers are compound, meaning each flower stem is further divided into umbellets that each have approximately 15 flowers (Fig. 5a). The flowers are tiny and have five white, rounded, notched petals (Fig. 5b) (Anonymous 2015).

Fruits and Seeds

Poison hemlock fruits split into two 1-seeded structures, each of which is oval, flattened on one side, and has pronounced ribs (Fig. 6). Seeds are green initially but turn brown at maturity. The seeds are the most toxic part of the plant (Goeden 1989), and mature plants may produce 1,500–40,000 seeds each (Mitich 1998).



Figure 6. Poison hemlock fruits each split into 2 seeds that are ribbed, oval-shaped, and flattened on one side. (Steve Hurst, USDA NRCS PLANTS Database, Bugwood.org CC BY-3.0 US)

SIMILAR SPECIES

Poison hemlock can be differentiated from unrelated species with its combination of white umbel flower clusters, hollow stems with purple spots, and its hairless stems and leaves (Mitich 1998). However, there are many related species in the carrot family (*Apiaceae*) that are present in North America and that have some or all of these same features. In gardening or agricultural settings, it is essential to carefully inspect foliage and stems of similar related species before consuming. Cultivated carrot (*Daucus carota* subsp. *sativus*) and parsely (*Petroselinum crispum*) have similar fern-like leaves and a similar growth form if permitted to reach the flowering stage, though both grow smaller than poison hemlock. In a natural setting, bur chervil (*Anthriscus caucalis*), wild chervil (*A. sylvestris*), rough chervil (*Chaerophyllum temulum*), and wild carrot (*Daucus carota*) also resemble poison hemlock with their fern-like leaves and general appearance. These four species all grow smaller than poison hemlock, often have visible hairs on various parts of the plants, and most (with the exception of *C. temulum*) don't have purple spots or splotches on their stems. The introduced fool's parsley (*Aethusa cynapium*) is similar for the same reasons but is also hairless, like poison hemlock. Native angelicas (*Angelica* spp.) and water hemlocks (*Cicuta* spp.) and the introduced wild parsnip (*Pastinaca sativa*) can all resemble poison hemlock with their similar height, overall shape, and smooth leaves/stems; however, the leaves of these three species are not as finely divided and fern-like as poison hemlock, and many plants lack the purple-splotched stems. The introduced and invasive giant hogweed (*Heracleum mantegazzianum*) and native common cowparsnip (*Heracleum maximum*) both

frequently have purple-spotted or blotched stems, but both grow significantly larger than poison hemlock with much bigger flowers, larger, non-ferny leaves, and with visible hairs on various parts of the plants. North American species that most closely resemble poison hemlock are listed in **Table 1**, along with key traits useful for differentiation.

MANAGEMENT

Prevention

Prevention is the most cost-effective solution for poison hemlock management, followed by eradication of small populations. Because its seeds may remain viable for multiple years, if poison hemlock is not detected and removed early, intense and long-term control efforts will be unavoidable. In areas where poison hemlock is not yet present, it is important to minimize soil disturbance and regularly monitor sites to confirm they remain uninfested. Poison hemlock is spread by the movement of seeds, which are usually transported by vehicles/equipment, people, and water (DiTomaso et al. 2013). If it is not possible to avoid driving vehicles and machinery through poison hemlock infestations, it is crucial that a thorough cleaning is conducted before equipment leaves the contaminated area.

Cultural Control

Revegetating disturbed sites with more desirable, fast-growing, competitive plants can be useful in limiting poison hemlock spread. The best species will depend on land management goals and site conditions; contact your local county weed office, extension office, or conservation district for recommendations. Grazing is not an appropriate control method due to the toxicity of poison hemlock foliage, seeds, and roots. Toxins can take several years to dissipate from dried plants (DiTomaso et al. 2014). Burning should also be avoided because it may release volatile toxins into the air.

Manual Control

Pulling can be an effective removal method on small infestations, as it removes the entire plant and eliminates any regrowth, provided the entire taproot is removed (DiTomaso et al. 2013). Although mowing and plowing can be successful, they cause soil disturbance that often encourages germination of poison hemlock seeds. All manual control options should be applied prior to seed formation. Because poison hemlock seeds can sprout throughout the year, and plants can re-grow after being cut, all sites must be visited regularly and re-treated as necessary (Goeden et al. 1989). Replant bare ground with appropriate, more desirable species. Due to the plant's high toxicity, protective equipment should be worn and all equipment washed thoroughly when working with this species. All plant material should be bagged and disposed of in a landfill rather than composted (Anonymous 2015).




























Chemical Control

Several herbicides applied alone or in combination can be effective in controlling poison hemlock infestations in a variety of habitats. When applied before seeds sprout, pre-emergent herbicides such as aminopyralid + metsulfuron, imazapic, and imazapyr provide control of seedlings (DiTomaso et al. 2013, Anonymous 2015). Select sites carefully, however, as many of these products will control all seedlings, including desirable species, and certain herbicides may persist for more than one year.

A variety of herbicide active ingredients and active ingredient combinations are available to help manage existing poison hemlock plants, including 2,4-D, aminocyclopyrachlor + chlorsulfuron, aminopyralid + metsulfuron, chlorsulfuron, dicamba, glyphosate, imazapyr, metsulfuron, and triclopyr, (Goeden et al. 1983, DiTomaso et al. 2013, Anonymous 2015, Peachey 2024). Most of these are best applied in the seedling to rosette stage, though chlorsulfuron, glyphosate, and metsulfuron may also be effective if applied properly against bolting plants (DiTomaso et al. 2013, Anonymous 2015, Peachey 2024). Herbicide active ingredients are not specific to poison hemlock so care should be taken to ensure only poison hemlock plants and foliage is treated with herbicides to prevent unintended damage to desirable vegetation. Follow up by frequently checking the site for new poison hemlock plants or regrowth, and repeat herbicide treatments when necessary. After reviewing the pesticide label to ensure any planting waiting periods have expired, re-plant bare ground with appropriate, more desirable species.

Many of the herbicide active ingredients listed above are formulated in a variety of commercial pesticide products, each with pros and cons. When using pesticides, pesticide product labels provide critical information about how to safely and legally handle and use pesticide products. Unlike most other types of product labels, pesticide labels are legally enforceable, and all of them carry the statement: "It is a violation of Federal law to use this product in a manner inconsistent with its labeling." In other words, the label is the law (US EPA 2024). Always read and follow label directions when using herbicides, and keep in mind that not all products are registered for use in all locations. For example, some formulations of glyphosate and imazapyr are approved for infestations growing near water while other formulations are not, and some herbicide formulations of active ingredients listed in this section are not registered for use in all states (DiTomaso et al. 2013, Anonymous 2015). Refer to the Pacific Northwest Weed Management Handbook (Peachey 2024) or contact your local county noxious weed program or county extension educator for recommendations and information about the proper, safe, and legal use of herbicides in your area.

Table 1. Key traits for differentiating poison hemlock from similar species in the carrot family (Apiaceae) established in North America. Table modified from Randall et al. (2024).

SPECIES	SIMILARITIES	DIFFERENCES	PLANT	LEAVES	FLOWERS
Cultivated carrot <i>Daucus carota</i> subsp. <i>sativus</i> Introduced biennial, but annual when cultivated	Can be a garden escapee; stout taproot; stems with longitudinal ridges; finely divided leaves; compound umbels with white flowers; ribbed seeds	Typically only cultivated; carrot odor; leaflets more deeply lobed, sparsely hairy; stems solid, all green; umbel with long forked bracts; umbel closes after pollination; seeds bristly			
Parsley <i>Petroselinum crispum</i> Introduced biennial, but annual when cultivated	Can be a garden escapee; stems hollow with longitudinal ridges; finely divided, hairless leaves; compound umbels; ribbed seeds	Typically only cultivated; <30 in (75 cm) tall; parsley odor when crushed; stems not spotted purple; leaflets either flat or curly; flowers more yellowish			
Fool's parsley <i>Aethusa cynapium</i> Introduced annual	Habitat: mostly hairless; stems may have few purple lines; leaf size, shape, color; disagreeable odor when crushed; compound umbels; white flowers; ribbed seeds	<2 ft (60 cm) tall; stems smooth, not spotted purple; umbel more flat-topped, <2 in (5 cm) across; umbellets with 8–12 flowers, 3 or 4 long hanging bracts; may have fine hairs on umbel stalks			
Purple-stemmed angelica <i>Angelica atropurpurea</i> Native perennial	Found in moist habitats; similar height; stems purplish, hollow, hairless; widely-spaced branches; compound umbels	Not found in dry habitats; leaves larger, not finely divided; leaflets sharply toothed; leaf sheath larger; umbel more ball-shaped, much larger; flowers more yellowish			
Bur chervil <i>Anthriscus caucalis</i> Introduced annual	Habitat: stems with ridges, may be hairless, may have red/purple streaks; leaf size, shape, color; compound umbels; white flowers	<3.3 ft (1 m) tall; umbel smaller; fewer and smaller umbellets with 3–7 flowers; may have fine hairs on lower stems, leaves, flowers; fruit covered in hooked hairs			
Rough chervil <i>Chaerophyllum temulum</i> Introduced biennial	Habitat: stems purplish or with purple spots; fern-like appearance; leaf size, shape, color; compound umbels; white flowers	<3.3 ft (1 m) tall; stems solid, swollen beneath leaf nodes, covered in long spreading hairs; leaflets with short flattened hairs on both surfaces; leaflet tips more rounded			
Spotted water hemlock <i>Cicuta maculata</i> Native biennial or perennial	Moist habitat; similar height; stems often purplish, ridged, hairless, widely branched; compound umbels; umbellets with ≤ 15 white flowers	Not found in dry habitats; leaves larger, not finely divided; leaflets jaggedly toothed; leaf veins extend to notches between teeth rather than teeth tips; umbel larger			
Wild carrot <i>Daucus carota</i> Introduced biennial	Habitat: stems with longitudinal ridges; older stems purplish; finely divided leaves; compound umbels with white flowers	Not branched; stems solid; stems and leaf stalks hairy; umbel flatter, ≤ 6 in (15 cm) across with long forked bracts; center flower may be red; umbel closes after pollination; seeds burred			
Wild parsnip <i>Pastinaca sativa</i> Introduced biennial or perennial	Habitat: size; stems with longitudinal ridges, mostly hairless; widely spaced branches; compound umbels	Leaves larger, not finely divided; leaflets jaggedly toothed; umbels much larger; umbellets with 12–35 yellow flowers; fruits flattened, winged			

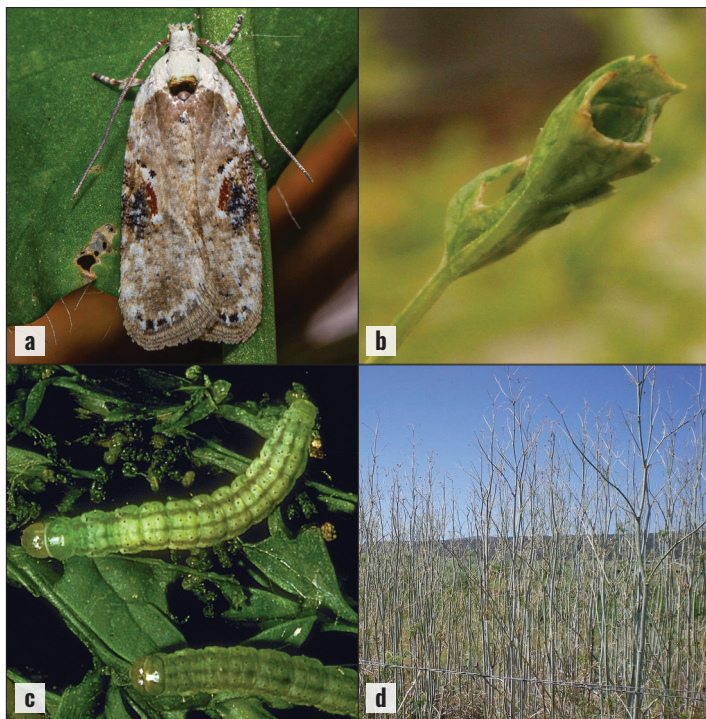


Figure 7. *Agonopterix alstroemeriana* (a) adult; (b) feeding tubes made of leaf particles; (c) late-instar larvae; (d) heavy defoliation of poison hemlock plants (a: Grahame, iNaturalist.org CC BY-NC-ND 4.0; b–d: Eric Coombs, Oregon Department of Agriculture, Bugwood.org CC BY 3.0 US)

Biological Control

Only one species of biocontrol agent, the hemlock defoliating moth (*Agonopterix alstroemeriana*), is approved for redistribution against poison hemlock in the USA (Winston et al. 2023). Adults emerge in early spring and begin mating. Typical adults are 10 mm long with wingspans of 18 mm. They are speckled brownish-gray and have a distinctive dark brown spot on each wing (Fig. 7a). Females deposit yellow eggs on the undersides of poison hemlock leaves. Hatching larvae feed on leaves, creating tubes of leaf particles and sometimes flower tissue (Fig. 7b). Larvae develop through five instars, changing from yellow to light green with three dark green longitudinal stripes (Fig. 7c; Berenbaum and Passoa 1983). Pupation occurs in the soil, and new adults emerge in midsummer. Adults overwinter in plant litter. There is one generation per year (Castells and Berenbaum 2006).

Agonopterix alstroemeriana is native to Europe and Asia. It was accidentally introduced to New York, North America by 1973. It spread rapidly, reaching California and Oregon by 1983. The moth was subsequently officially approved for redistribution in the USA (Winston et al. 2023) and has been reported throughout most of North America, although it is most prevalent in the Northeast and Northwest (GBIF

2023) where moth densities are often high. In the Pacific Northwest, *A. alstroemeriana* has been observed causing severe defoliation (Fig. 7d), which can reduce poison hemlock seed production and has sometimes been attributed with causing plant death. However, plants often recover once the moths pupate in summer, leading to no observable long-term changes in poison hemlock stand densities. As a result, the overall impact of this moth is considered limited in the western USA (Winston et al. 2023).

RESOURCES

- Anonymous. 2015. Field Guide for Managing Poison Hemlock in the Southwest. TP-R3-16-16. USDA Forest Service, Southwestern Region, Albuquerque, New Mexico. 9 pp.
- Berenbaum, M. and S. Passoa. 1983. Notes on the biology of *Agonopterix alstroemeriana* (Clerck), with descriptions of the immature stages (Oecophoridae). *Journal of the Lepidopterists' Society* 37: 38–45.
- Castells, E. and M.R. Berenbaum. 2006. Laboratory rearing of *Agonopterix alstroemeriana*, the defoliating poison hemlock (*Conium maculatum* L.) moth, and effects of piperidine alkaloids on preference and performance. *Environmental Entomology* 35(3): 607–615.
- Chizzola, R., and U. Lohwasser. 2020. Diversity of secondary metabolites in roots from *Conium maculatum* L. *Plants* 9(8): 939.
- DiTomaso, J.M., G.B. Kyser, et al. 2013. *Weed Control in Natural Areas in the Western United States*. Weed Research and Information Center, University of California. 544 pp.
- EDDMapS. 2025. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Available online at <http://www.eddmaps.org/>; last [Accessed 1 January 1 2025].
- GBIF. 2023. Global Biodiversity Information Facility. <https://www.gbif.org/> [Accessed 19 July 2023].
- Goeden, D., L. Constance, C.E. Turner, and J. McHenry. 1989. Element Stewardship Abstract for *Conium maculatum*. The Nature Conservancy, Arlington, Virginia. 9 pp.
- Gyaneshwari, U., A.K. Singh, P. Pal, and B. Pandey. 2023. *Conium maculatum* (hemlock or poison hemlock). In: A. Husen, Ed. *Exploring Poisonous Plants: Medicinal Values, Toxicity Responses, and Therapeutic Uses*. CRC Press, Boca Raton, Florida. pp. 203–218.
- Mitich, L.W. 1998. Poison-hemlock (*Conium maculatum* L.). *Weed Technology* 12: 194–197.
- Peachey, E., Ed. 2024. *Pacific Northwest Weed Management Handbook—Poison Hemlock (Conium maculatum)*. Oregon State University, Corvallis, Oregon. Available online at <https://pnwhandbooks.org/weed/problem-weeds/hemlock-poison-conium-maculatum> [Accessed 30 October 2024].
- Randall, C.B., J. Milan, and J.E. Andreas. 2024. *Poison Hemlock (Conium maculatum): History and Ecology in North America*. In: R.L. Winston, Ed. *Biological Control of Weeds in North America*. North American Invasive Species Management Association, Milwaukee, WI. NAISMA-BCW-2024-22-POISON HEMLOCK-P.

Photo credits Table 1: cultivated carrot plants (Deldean), leaf (Евгений Баргов), flowers (Igor); parsley plant (Michael Berardozzi), flat leaves (Naomy27), curly leaves (Fynnundsascha), flowers (Andreadt08); fool's parsley plant, leaves, flowers (Jessicahigham); purple-stemmed angelica plant (Dthaase), leaf (Nate Martineau), flowers (Erik Attaway); bur chervil plant (Dylan Winkler), leaves (Sarahwilson), flowers (Jacob Smith); rough chervil plant (Сепрей), leaf (Csim69), flowers (Tom Erler); spotted water hemlock plant (Dstover), leaves and flowers (Sheri); wild carrot plant (Prairieflower), leaf (Lionsmane91), flowers (lvconrad1977); wild parsnip plant (Alexander Iosipenko), leaves (Alexander_sh), flowers (Alinanat); all images iNaturalist.org CC BY-NC 4.0

US EPA. 2024. Introduction to pesticide labels. United States Environmental Protection Agency. <https://www.epa.gov/pesticide-labels/introduction-pesticide-labels>. Accessed 31 October 2024.

Winston, R.L., C.B. Randall, B. Blossey, P.W. Tipping, E.C. Lake, and J. Hough-Goldstein. 2017. Field Guide for the Biological Control of Weeds in Eastern North America. USDA Forest Service, Forest Health Technology Enterprise Team, Morgantown, West Virginia. FHTET-2016-04.

Winston, R.L., M. Schwarzlander, H.L. Hinz, M.D. Day, M.J.W. Cock, and M.H. Julien, Eds. 2023. Biological Control of Weeds: A World Catalogue of Agents and Their Target Weeds. Based on FHTET-2014-04, USDA Forest Service, Forest Health Technology Enterprise Team. Available online at <https://www.ibiocontrol.org/catalog/> [Accessed 18 July 2023].

ACKNOWLEDGMENTS

The authors thank three anonymous reviewers for providing helpful comments on earlier versions of this publication. This fact sheet was produced by the North American Invasive Species Management Association (NAISMA) with financial support from the USDI Bureau of Land Management and the USDA Forest Service. The layout was designed by Rachel Winston, MIA Consulting.

NAISMA is a network of professionals challenged by invasive species: land managers, water resource managers, state, regional, and federal agency directors and staff, researchers, and nonprofit organizations. NAISMA's members are a diverse group of individuals and organizations who are involved in implementing invasive species management programs at all scales. Our mission is to support, promote, and empower invasive species prevention and management in North America. Our vision is to have North America's lands and waters protected from invasive species. NAISMA's programs aim to provide the support, training, and standards needed by the professional invasive species management community.

SUGGESTED CITATION

Andreas, J.E., C.B. Randall, J. Milan, and R.L. Winston. 2024. Poison Hemlock (*Conium maculatum*): Biology and Management in the Western USA. North American Invasive Species Management Association, Milwaukee, WI. NAISMA-IPM-2024-2-POISON HEMLOCK.



References to pesticides appear in this publication. These statements do not constitute endorsement or recommendation of them by the U.S. Department of Agriculture or the authors of this publication, nor do they imply that the uses discussed have been registered. Use of most pesticides is regulated by state and federal laws. Applicable regulations must be obtained from the appropriate regulatory agency prior to their use.

CAUTION: Pesticides can be injurious to humans, domestic animals, desirable plants, and fish or other wildlife if they are not handled or applied properly. Use all pesticides selectively and carefully. Follow recommended practices given on the label for the use and disposal of pesticides and pesticide containers.

The use of trade, firm, or corporation names in this publication is for the information and convenience of the reader. Such use does not constitute an official endorsement or approval by the U.S. Department of Agriculture or the Forest Service of any product or service to the exclusion of others that may be suitable.

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at http://www.ascr.usda.gov/complaint_filing_cust.html and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.