NAME OF SPECIES: Conium maculatum L.	
Synonyms:	
Common Name: Poison Hemlock, Poison Parsley, Deadly Hemlock.	
A. CURRENT STATUS AND DISTRIBUTION	
I. In Wisconsin?	1. YES ☒ NO ☐
	2. Abundance: Presently uncommon (1).
	3. Geographic Range: Herbarium records exist from 6 counties in Wisconsin (1). Reported mostly in 12 sites in 8 counties
	4. Habitat Invaded: Moist, full sun to partly shady habitats (2). Disturbed Areas ☒ Undisturbed Areas ☐
	5. Historical Status and Rate of Spread in Wisconsin: Earliest herbarium specimen was collected in 1919 in Pierce County (1).
	6. Proportion of potential range occupied: Minimal. Can expand its local range and abundance.
II. Invasive in Similar Climate Zones	1. YES ☒ NO ☐ Where (include trends): Invasive throughout much of the globe (2) (3). Abundant on roadsides in IL, IN, and IA, and in disturbed areas in Southern IL.
III. Invasive in Similar Habitat Types	1. Upland ☒ Wetland ☒ Dune ☐ Prairie ☐ Aquatic ☐ Forest ☒ Grassland ☐ Bog ☐ Fen ☒ Swamp ☒ Marsh ☒ Lake ☒ Stream ☒ Other: Along roadsides, field margins, ditchbanks and in low-lying waste areas, riparian woodlands, open flood plains of rivers and streams.
IV. Habitat Effected	1. Soil types favored (e.g. sand, silt, clay, or combinations thereof, pH): Soils with medium to high water holding capacity (2).
	2. Conservation significance of threatened habitats: Riparian corridors are important for nutrient and carbon sequestration, and for flood control.
V. Native Habitat	1. List countries and native habitat types: Native to Europe, western Asia, and north Africa (2).
VI. Legal Classification	1. Listed by government entities? Yes. Noxious in ID, NV, CO, IA, NM, WA, OH. Regulated in OR. (3).
	2. Illegal to sell? YES ☐ NO ☒ Notes:
B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS	
I. Life History	1. Type of plant: Annual ☐ Biennial ☒ Monocarpic Perennial ☐ Herbaceous Perennial ☐ Vine ☐ Shrub ☐ Tree ☐
	2. Time to Maturity: 2 years. Occasionally acts as a winter annual or perrenial.
	3. Length of Seed Viability: N/A
	4. Methods of Reproduction: Asexual ☐ Sexual ☒ Please note abundance of propagules and and other important information: Only reproduces from seed (2).
	5. Hybridization potential: Unknown but given its global distribution and life history requirement of sexual reproduction (and genetic recombination), introgressive hybrids between ecotypic races probably exist.

II. Climate	1. Climate restrictions: Prefers shady areas (2).
	2. Effects of potential climate change: Probably will not affect this species, as it already has global distribution.
III. Dispersal Potential	1. Pathways - Please check all that apply: Intentional: Ornamental ☒ Forage/Erosion control ☐ Medicine/Food: Other: Brought to the United States as a garden plant (2). Unintentional: Bird ☐ Animal ☐ Vehicles/Human ☒ Wind ☒ Water ☒ Other: Seeds can adhere to farm machinery, vehicles, agricultural produce, mud and clothing (5).
	2. Distinguishing characteristics that aid in its survival and/or inhibit its control: Basal rosette overwinters green and starts growing quickly in spring.
IV. Ability to go Undetected	1. HIGH ☐ MEDIUM ☒ LOW ☐
C. DAMAGE POTENTIAL	
I. Competitive Ability	1. Presence of Natural Enemies: Few insects attack C. maculatum (2). C. maculatum is often found infected by one or more plant viruses such as ringspot virus, carrot thin leaf virus (CTLV), alfalfa mosaic virus (AMV), and celery mosaic virus (CeMV). However, it is generally common for virus-affected plants to stunted rather than killed (6).
	2. Competition with native species: Once established, hemlock can exclude most other native vegetation and forage crops (5).
	3. Rate of Spread: HIGH(1-3 yrs) ☒ MEDIUM (4-6 yrs) ☐ LOW (7-10 yrs) ☐ Notes: Readily colonizes bare ground. Increases in density once the stand is established (2).
II. Environmental Effects	1. Alteration of ecosystem/community composition? YES ☒ NO ☐ Notes: Hemlock invasions reduce species richness and change species composition.
	2. Alteration of ecosystem/community structure? YES ☒ NO ☐ Notes: Taller than the native species it replaces (2).
	3. Alteration of ecosystem/community functions and processes? YES ☒ NO ☐ Notes: Fuel connectivity in solid hemlock patches is often insufficient to carry a fire.
	4. Allelopathic properties? YES ☐ NO ☒ Notes:

F. REFERENCES USED: ☒ UW Herbarium

D. SOCIO-ECONOMIC Effects	
I. Positive aspects of the species to the economy/society:	Notes: None.
II. Potential socio-economic effects of restricting use:	Notes: Invades pastures making them unusable (5). is found in soybeans in IL.
III. Direct and indirect effects :	Notes: Primarily a problem in roadsides, grasslands, and pastures.
IV. Increased cost to a sector:	Notes: Highly toxic to livestock. Most animals avoid eating it.
V. Effects on human health:	Notes: Five closely related alkaloid derivatives are neurotoxins. Sap is deadly to humans and animals (including livestock). Seeds are the most toxic part of the plant, although all parts (leaves, roots, and stems) contain toxin (2). The alkaloids are also teratogenic (2).
E. CONTROL AND PREVENTION	
I. Costs of Prevention (including education; please be as specific as possible):	Notes: N/A
II. Responsiveness to prevention efforts:	Notes: Easy to control, but takes several years to eradicate (2).
III. Effective Control tactics:	Mechanical ☒ Biological ☐ Chemical ☒ Times and uses: Hand pulling or digging works best in wet soils with small infestations. When digging, it is not necessary to remove the entire root system since the plant is not perennial (2). Repeated mowings close to the ground just before flowering may eventually eliminate C. maculatum. 2,4-D ester or dicamba applied to basal rosettes is a very effective control technique in stands without native broadleaf species present (2). Glyphosate -could be effective.
IV. Minimum Effort:	Notes: Two growing seasons (2).
V. Costs of Control:	Notes: Herbicides that C. maculatum is susceptible to are relatively inexpensive. Specific costs are variable and site-specific.
VI. Cost of prevention or control vs. Cost of allowing invasion to occur:	Notes: Eradication may be difficult, but worth it.
VII. Non-Target Effects of Control:	Notes: Control may require the use of herbicides and additives.
VIII. Efficacy of monitoring:	Notes: Early detection and intervention can greatly reduce the time and resources that must be invested into controlling established poison hemlock stands.
IX. Legal and landowner issues:	Notes: Permits and/or licenses may be required to control this species on public lands.

☐ WI DNR
☒ TNC
☐ Native Plant Conservation Alliance
☐ IPANE
☒ USDA Plants

Number	Reference
1	Wisconsin State Herbarium. 2007. WISFLORA: Wisconsin Vascular Plant Species (http://www.botany.wisc.edu/wisflora/). Dept. Botany, Univ. Wisconsin, Madison, WI 53706-1381 USA.
2	Pitcher, D. 2004. Element Stewardship Abstract for Conium maculatum L. The Nature Conservancy. Arlington, VA.
3	USDA, NRCS. 2007. The PLANTS Database (http://plants.usda.gov, 16 March 2007). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.
4	Goeden, R. D. and D. W. Ricker. 1982. Poison hemlock, Conium Maculatum, in southern California - an alien weed attacked by few insects. Annals of Entomological Society of America 75: 173-176.
5	Parsons, W. T. 1973. Noxious weeds of Victoria. Inkata Press, Ltd., Melbourne, Australia. 300 pp.
6	Howell, W. E. and G. I. Mink. 1981. Viruses isolated from wild carrot and poison hemlock. Plant Diseases 65:277-279.

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