

NAME OF SPECIES: *Heracleum mantegazzianum*

Synonyms:

Common Name: Giant Hogweed

**A. CURRENT STATUS AND DISTRIBUTION**

I. In Wisconsin?	1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	2. Abundance: In 2006 there were four verified sites in Iron County, each with 50 to 200 plants.
	3. Geographic Range: Reported in Iron county.
	4. Habitat Invaded: waste places, roadsides, disturbed woodlands, stream banks In Wisconsin and the Upper Peninsula, sites appear to be persistent from where planted near homes in the past. At a few sites it has spread up to 100 meters from the yard to neighboring woodlots. I have heard it is more invasive in the Lower Peninsula and Pennsylvania. Disturbed Areas <input checked="" type="checkbox"/> Undisturbed Areas <input type="checkbox"/>
	5. Historical Status and Rate of Spread in Wisconsin: First discovered in Wisconsin in 2004. Appears to be spreading very slowly. Three of four sites are clearly where planted. One site, along an ATV trail, is not next to an existing house.
	6. Proportion of potential range occupied: Unknown.
II. Invasive in Similar Climate Zones	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Where: OR, PA, WA, ME, MI, NY There are 20 sites in adjacent Gogebic County, Michigan. They generally are all persistent where planted, with just a couple spreading into adjacent natural areas up to 100 meters.
III. Invasive in Similar Habitat Types	1. Upland <input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Dune <input type="checkbox"/> Prairie <input type="checkbox"/> Aquatic <input type="checkbox"/> Forest <input checked="" type="checkbox"/> Grassland <input checked="" type="checkbox"/> Bog <input type="checkbox"/> Fen <input type="checkbox"/> Swamp <input type="checkbox"/> Marsh <input type="checkbox"/> Lake <input type="checkbox"/> Stream <input type="checkbox"/> Other: stream/river banks, forest edges, forest gaps, agricultural land
IV. Habitat Effected	1. Soil types favored (e.g. sand, silt, clay, or combinations thereof, pH): rich, moist soil
	2. Conservation significance of threatened habitats:
V. Native Habitat	1. List countries and native habitat types: Caucasus region of Eurasia (between Black & Caspian Seas), which includes countries: Georgia, Russia, Azerbaijan, Turkey, Armenia, Iran—temperate mixed forests/rocky ground above tree line—mountain/surrounding lowlands
VI. Legal Classification	1. Listed by government entities? Noxious/Prohibited in United States, AL, FL, CA, CT, MA, MN, NH, NC, OR, PA, SC, VT, WA
	2. Illegal to sell? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: Federally listed Noxious Weed: cannot propagate, sell, or transport

**B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS**

I. Life History	1. Type of plant: Annual <input type="checkbox"/> Biennial <input checked="" type="checkbox"/> Monocarpic Perennial <input checked="" type="checkbox"/> Herbaceous Perennial <input type="checkbox"/> Vine <input type="checkbox"/> Shrub <input type="checkbox"/> Tree <input type="checkbox"/>
	2. Time to Maturity: 2-5 yrs
	3. Length of Seed Viability: > 7 yrs

	<p>4. Methods of Spread: Asexual <input type="checkbox"/> Sexual <input checked="" type="checkbox"/></p> <p>Please note abundance of propagules and other important information: Compound umbels hold insect-pollinated, hermaphrodite flowers. Most reproduction is result of outcrossing, but plant can viably self-fertilize. Fruit consists of 2 winged mericarps, each containing 1 seed. Average plant produces ~20,000 seeds, but some have been reported with over 100,000. More than 1/2 of the seeds germinate and successfully grow (a single plant is capable of founding a new population). Seeds collect in a seed bank, most in top 2" of soil and loose dormancy from the cold of winter to begin germination.</p> <p>5. Hybridization potential:</p>
II. Climate	<p>1. Climate restrictions: prefers seasonally cold, semi-shade to low-shade conditions</p> <p>2. Effects of potential climate change:</p>
III. Dispersal Potential	<p>1. Pathways - Please check all that apply:  Intentional: Ornamental <input checked="" type="checkbox"/> Forage/Erosion control <input type="checkbox"/>  Other:</p> <p>Unintentional: Bird <input type="checkbox"/> Animal <input type="checkbox"/> Vehicles/Human <input checked="" type="checkbox"/>  Wind <input type="checkbox"/> Water <input type="checkbox"/> Other: Whole umbels w/dried seeds are sometime used as decoration. Dried fruits of the plant may be imported as a spice/foodstuff called "golpar" in Iranian cooking.</p> <p>2. Distinguishing characteristics that aid in its survival and/or inhibit its control: Tall stalk (7-15 ft) allows it to capture as much as 80% of incoming light-suppressing other light demanding species, abundant seed production, persistent root stalk, vegetative reproduction from perennating buds, high regenerative capabilities, germinate in early spring before resident vegetation appears, plants can postpone flowering under stressful conditions</p>
IV. Ability to go Undetected	HIGH <input type="checkbox"/> MEDIUM <input checked="" type="checkbox"/> LOW <input type="checkbox"/>
<b>C. DAMAGE POTENTIAL</b>	
I. Competitive Ability	<p>1. Presence of Natural Enemies:</p> <p>2. Presence of Competitors:</p> <p>3. Rate of Spread:  HIGH(1-3 yrs) <input type="checkbox"/> MEDIUM (4-6 yrs) <input type="checkbox"/> LOW (7-10 yrs) <input checked="" type="checkbox"/>  Notes: Some plants can produce seeds after just 2 yrs. Plants can also postpone flowering for many yrs until conditions are suitable and seed viability is high. (In Czech Republic, average spread was 10m/yr)</p>
II. Environmental Effects	<p>1. Alteration of ecosystem/community composition?  YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>  Notes: Out-competes indigenous species for light—can completely dominate depending on density. Density can range from sparse (1-3 individuals in 10 square m) to domination (&gt; 20 individuals in 10 square m). Can alter species diversity with greater densities.</p> <p>2. Alteration of ecosystem/community structure?  YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>  Notes: Areas w/denser stands of adult plants contain fewer</p>

	species.
	3. Alteration of ecosystem/community functions and processes? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> Notes: Increased density of individuals increases alteration in original function of ecosystem.
	4. Allelopathic properties? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> Notes:
<b>D. SOCIO-ECONOMIC Effects</b>	
I. Positive aspects of the species to the economy/society:	Notes: In the past giant hogweed was popular as a garden curiosity. It is called the world's largest herb. People around Ironwood liked it and shared sprouts. Also a persian spice.
II. Potential socio-economic effects of restricting use:	Notes: When people see the photos of the burns they lose interest in keeping the plant in their garden.
III. Direct and indirect effects :	Notes: Public health hazard.
IV. Increased cost to a sector:	Notes:
V. Effects on human health:	Notes: Sap causes skin irritation known as photodermatitis/photosensitivity that produces painful, burning blisters w/in 24-48 hours after contact. Plant juices also cause painless red blotches that leave purple/brown scars. In order for these skin conditions to occur, the contaminated skin must be moist and exposed to sunlight. Contact w/eyes can lead to temporary or permanent blindness.
<b>E. CONTROL AND PREVENTION</b>	
I. Detection Capability:	Notes: Relatively easy to detect. Public information leads to people reporting cow parsnip and other plants as giant hogweed.
II. Costs of Prevention (including education; please be as specific as possible):	Notes:
III. Responsiveness to prevention efforts:	Notes: Excellent. It would be hard to imagine a better plant for getting public responsiveness.
IV. Effective Control tactics:	Mechanical <input checked="" type="checkbox"/> Biological <input checked="" type="checkbox"/> Chemical <input checked="" type="checkbox"/>  Times and uses: <b>Mechanical:</b> 1. Clear stems/leaves by hand, then remove roots/seeds in early spring and again in mid-summer (Always wear protective clothing). Roots should be cut at least 4" below soil level, some must be cut deeper. This method recommended for individual plants or small groupings, b/c it is very labor intensive. 2. Use rototiller then plant lawn seed or grass mixtures at high densities. Proven suitable grass mixtures used in Europe include: Dactylis glomerata, Festuca rubra (50:50), and Lolium perenne, Festuca rubra, Poa pratensis (12:35:53). <b>Biological:</b> cattle, sheep, and pigs eat plant w/o apparent harm and also trample/damage the plant. <b>Chemical:</b> "The Pennsylvania Department of Agriculture recommends utilizing both pre and post emergent herbicides, plus competitive vegetation. PDA applies Pre-M at 1-1.5 oz./1000 s.f. in late-March. When germination of hogweed seed was noticed, Transline was incorporated at .5 oz./1000 s.f. along with Pre-M at the 1.5 oz/1000 s.f. rate. This continued until other vegetation started to grow. Later in the

	<p>season, they used Drive at 1 oz./A. Post-emergent applications of 91% Thinvert, 7% Garlon 3A and 2% Transline are initiated in mid-April. These herbicide applications continue until snowfall covers the hogweed. Previously, glyphosate has been considered the most effective herbicide, but it should be used with caution around desirable plants. The herbicides 2,4-D, TBA, MCPA, and dicamba are not effective on GHW roots. Rodeo (glyphosate) has been recommended in wet areas. Herbicides should be applied to large plants with protective clothing. “ (<a href="http://www.invasive.org">www.invasive.org</a>)</p> <p>Lee Shambeau 4-Control tried Escort in 2006 and 2007 on MI &amp; WI infestations and had good results. They may have tried one or two other herbicides too (Milestone?). They mostly used a mixture of 5% triclopyr and 2% clopyralid. recommended my Pennsylvania Dept of Ag, and had good results.</p> <p>**A combination of methods may be more efficient than one method alone.</p>
V. Minimum Effort:	<p>Notes: If the area allows: grazing throughout the growing season. Most areas will most likely be in disturbed edge areas that will require either repeated root cutting/digging in early growing season or chemical application from early spring until first snowfall.</p> <p>Most of the sites in WI and the UP are in backyards. Homeowners can easily take care of it themselves with mowing, cutting, or herbicides.</p>
VI. Costs of Control:	Notes:
VII. Cost of prevention or control vs. Cost of allowing invasion to occur:	Notes:
VIII. Non-Target Effects of Control:	Notes: The use of some chemicals may destroy surrounding desirable plants.
IX. Efficacy of monitoring:	Notes:
X. Legal and landowner issues:	Notes: Already a federally-listed noxious weed, so counties with a noxious weed commissioner could require control. The City of Ironwood made one owner get rid of their hogweed under a blight ordinance.

## F. REFERENCES USED:

- UW Herbarium
- WI DNR
- TNC
- Native Plant Conservation Alliance
- IPANE
- USDA Plants
- Other: [www.NPS.gov](http://www.NPS.gov)

[www.invasive.org](http://www.invasive.org)

Federal Noxious Weed Disseminules of U.S. [www.lucidcentral.org](http://www.lucidcentral.org),

Massachusetts Natural Resources Collaborations (Introduced Pests Outreach Project) <http://www.massnrc.org>,

Washington State Noxious Weed Control Board <http://www.nwcb.wa.gov/>,

Giant Hogweed Best Practice Manual [http://www.giant-alien.dk/pdf/Giant\\_alien\\_uk.pdf](http://www.giant-alien.dk/pdf/Giant_alien_uk.pdf)

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**Date Completed:** 02/09/07

**Reviewer(s) and date reviewed:** Ian Shackleford, 13 September 2007