

MN NWAC Risk Assessment Worksheet (07-2013)	Common Name	Latin Name
Reviewer	Elecampane	<i>Inula helenium L.</i>
Ken Graeve	Affiliation/Organization	Date (mm/dd/yyyy)
	MnDOT	08/6/2014

Inula Helenium is a non-native perennial in the composite family. This plant appears to have a very limited distribution in MN and the Midwest and therefore not much is known about its invasiveness in this region. Its large size allows it to form dominant stands and it is able to grow and reproduce in Minnesota. While it has not been observed to be a serious threat to intact native plant communities, it does form dominant stands in disturbed sites and this type of setting can compete with such aggressive species as reed canary grass, Canada goldenrod, and common buckthorn. Because it is unclear whether this species poses a serious threat, it is recommended that it be watched and possibly reassessed at a later time.



Box	Question	Answer	Outcome
1	Is the plant species or genotype non-native?	Yes. (USDA PLANTS database). Introduced from Europe (Gleason and Cronquist 1991). Native to Southeast Europe and Western Asia (USDA Forest Service 2006).	Go to box 3
3	Is the plant species, or a related species, documented as being a problem elsewhere?	<p>Yes, although it is unclear how invasive this species is.</p> <p>Inula helenium is given an Invasive Species Impact Rank of Medium/Insignificant by NatureServe, where it is said to be most likely to invade disturbed areas and is “classified as a potential problem in Oregon that may have a medium impact on native vegetation; occasionally becoming a dominant in native plant communities, modifying natural habitats, but not forming large monocultures and possibly not spreading far from parent plants...Presumably, it rarely threatens natural communities of conservation significance.”</p> <p>Listed as “minimally invasive” for southern Ontario, meaning “Species that do not pose an immediate threat to natural areas but do compete with more desirable native species. Once established, many can reproduce</p>	Go to box 6

Box	Question	Answer	Outcome
		<p>aggressively and become difficult to eradicate...Control where necessary and limit their spread to other areas.” (Credit Valley Conservancy).</p> <p><i>Inula helenium</i> is listed as Invasive in Oregon (USDA Forest Service 2006). This species and on monitor list in Washington (Washington State Noxious Weed Control Board).</p> <p><i>Inula helenium</i> is also naturalized in other areas with similar climates such as Washington, Michigan, New Jersey, Ontario (NatureServe), and Wisconsin (Fewless 2007).</p> <p><i>Inula helenium</i> is not yet listed as an invasive plant in Wisconsin, but in some circumstances it can be very aggressive (Fewless 2007).</p> <p>This species is said to be “sparingly naturalized” by Gleason and Cronquist (1991).</p> <p>Not much is known about the invasiveness of this species. In looking for reported infestations on EDDMaps, I found several reports for which I couldn’t track down current information. The records for St Louis and Stearns counties are old enough that if the species was becoming problematic it would have been noticed by now, and botanists I’ve talked to were not aware of it currently being present in those counties (Saupe 2014, Schimpf 2014).</p>	
6	A. Is the plant, or a close relative, currently established in Minnesota?	<p>Yes.</p> <p>Reports on EDDMaps from five MN counties. I was only able to find current information on infestations in Pine County. At least one of the infestations in Pine County is well established and spreading due roadside mowing.</p>	Go to box 7
7	Does the plant species have the potential to reproduce and spread in Minnesota?	<p>Yes.</p>	Go to Box 8

Box	Question	Answer	Outcome
	A. Does the plant reproduce by asexual/vegetative means?	Yes. Can reproduce vegetatively as well as from seed (USDA Forest Service).	Go to 7B.
	B. Are the asexual propagules effectively dispersed to new areas?	Yes. Fragmented root segments.	Go to 7I.
	E. Is this species self-fertile?	<i>Not known.</i>	<i>Blue text is provided as additional information not directed through the decision tree process for this particular risk assessment.</i>
	G. Can the species hybridize with native species (or other introduced species) and produce viable seed and fertile offspring in the absence of human intervention?	<i>No reports of hybridization found.</i>	<i>Blue text is provided as additional information not directed through the decision tree process for this particular risk assessment.</i>
	I. Do natural controls exist, species native to Minnesota, that are documented to effectively prevent the spread of the plant in question?	None known.	Go to Box 8
8	Does the plant species pose significant human or livestock concerns or has the potential to significantly harm agricultural production, native ecosystems, or	Uncertain... See box 8.C below and box 3 above	Place on watch list for further review

Box	Question	Answer	Outcome
	managed landscapes?		
	A. Does the plant have toxic qualities, or other detrimental qualities, that pose a significant risk to livestock, wildlife, or people?	No. It was likely introduced for medicinal use, and may have caused illness through mis-use (USDA Forest Service 2006), but otherwise no reports of toxicity have been found.	Go to 8B
	B. Does, or could, the plant cause significant financial losses associated with decreased yields, reduced crop quality, or increased production costs?	No reports found. Does not tolerate tillage (Stevens County Noxious Weed Control Board 2014). Easily controlled by general use herbicides such as glyphosate and triclopyr (USDA Forest Service 2006).	Go to 8C
	C. Can the plant aggressively displace native species through competition (including allelopathic effects)?	Uncertain. So far this species has been observed to form dominant stands in disturbed areas but not in ecosystems of high conservation value (see box 3). However, there is an infestation in MN that while growing in a disturbed site is competing successfully with such aggressive species as Canada goldenrod, reed canary grass, and common buckthorn (see photos). It is also spreading along a highway adjacent to this site.	Place on watch list for further review
	D. Can the plant hybridize with native species resulting in a modified gene pool and potentially negative impacts on native populations?	<i>No.</i> <i>No reports of hybridization found.</i> <i>No native species of Inula (Gleason and Cronquist 1991).</i>	<i>Blue text is provided as additional information not directed through the decision tree process for this particular risk assessment.</i>
	E. Does the plant have the potential to change native ecosystems (adds a vegetative layer, affects ground or surface water	<i>Not likely on a large scale, according to sources cited in Box 3.</i>	<i>Blue text is provided as additional information not directed through the decision tree process for this particular risk</i>

Box	Question	Answer	Outcome
	levels, etc.)?		<i>assessment.</i>
	F. Does the plant have the potential to introduce or harbor another pest or serve as an alternate host?	<i>No such potential found.</i>	<i>Blue text is provided as additional information not directed through the decision tree process for this particular risk assessment.</i>

Final Results of Risk Assessment		
Review Entity	Comments	Outcome
NWAC Listing Subcommittee	The degree of invasiveness of Inula helenium is not known. This plant is relatively uncommon in Minnesota. More will be known about the difficulty of controlling this species after MnDOT has worked on controlling its infestation in Pine County. This species should be watched and re-assessed at a later time.	NWAC Watch List
NWAC Full-group		NWAC Watch List
MDA Commissioner		
File #: MDARA00039ELEC_8_06_2014		

Photos:



Flower head after blooming



Infestation



Stem leaves and flower heads



Infestation (Fewless 2007).

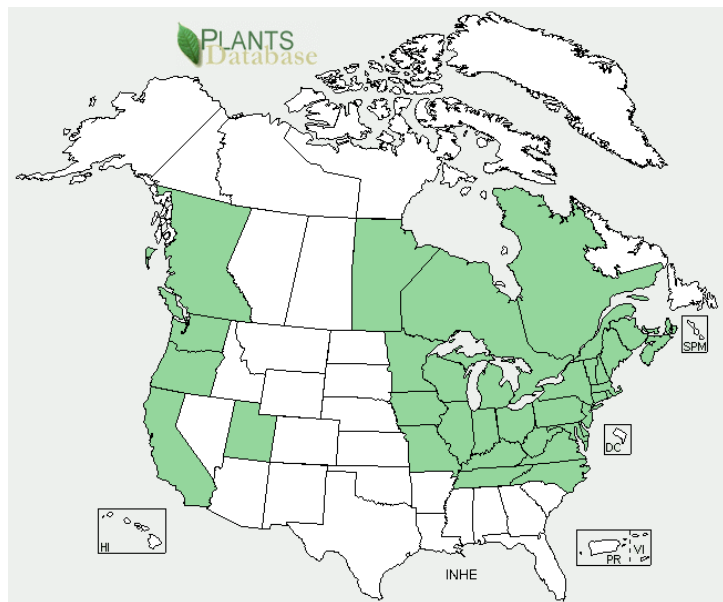


Infestation competing with Canada goldenrod and reed canary grass

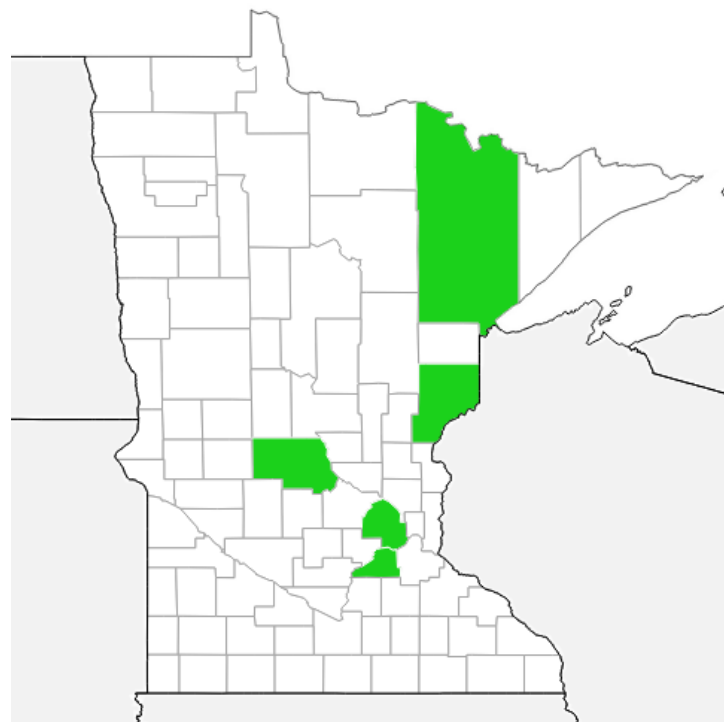


Infestation extending into shaded area and competing with understory species and common buckthorn

Distribution Maps



State and province level distribution for United States and Canada (USDA Plants).



County-level distribution within MN (EDDMaps).

References:

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