

NAME OF SPECIES: <i>Lepidium latifolium</i>	
Synonyms:	
Common Name: Perennial Pepperweed	
A. CURRENT STATUS AND DISTRIBUTION	
I. In Wisconsin?	1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	2. <u>Abundance:</u> very low
	3. <u>Geographic Range:</u> 1 known site in Brown County. (1).
	4. <u>Habitat Invaded:</u> roadside near warehouse Disturbed Areas <input checked="" type="checkbox"/> Undisturbed Areas <input type="checkbox"/>
	5. <u>Historical Status and Rate of Spread in Wisconsin:</u> unknown until 2007.
	6. <u>Proportion of potential range occupied:</u> < then .1%
II. Invasive in Similar Climate Zones	1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> <u>Where (include trends):</u> Troublesome in Western States, now spreading in some eastern and midwestern states.
	III. Invasive in Similar Habitat Types
III. Invasive in Similar Habitat Types	1. Upland <input checked="" type="checkbox"/> Wetland <input checked="" type="checkbox"/> Dune <input type="checkbox"/> Prairie <input type="checkbox"/> Aquatic <input type="checkbox"/> Forest <input 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: Roadsides, pastures, hayfields, floodplains, ditches, (1).
IV. Habitat Effected	1. <u>Soil types favored (e.g. sand, silt, clay, or combinations thereof, pH):</u>
	2. <u>Conservation significance of threatened habitats:</u> Can shade natural and agricultural areas.
V. Native Habitat	1. <u>List countries and native habitat types:</u> Europe and Asia
VI. Legal Classification	1. <u>Listed by government entities?</u> Yes. Noxious in AK, CA, CO, HI, ID, MT, NV,, NM, UT, WA, WY. Regulated in CT, MA, OR, SD.
	2. <u>Illegal to sell?</u> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	Notes: In states where listed
B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS	
I. Life History	1. <u>Type of plant:</u> Annual <input type="checkbox"/> Biennial <input type="checkbox"/> Monocarpic Perennial <input type="checkbox"/> Herbaceous Perennial <input checked="" type="checkbox"/> Vine <input type="checkbox"/> Shrub <input type="checkbox"/> Tree <input type="checkbox"/>
	2. <u>Time to Maturity:</u> Flowers in second year. New rosettes form after seed production. (1).
	3. <u>Length of Seed Viability:</u>
	4. <u>Methods of Reproduction:</u> Asexual <input checked="" type="checkbox"/> Sexual <input checked="" type="checkbox"/> <u>Please note abundance of propagules and and other important information:</u> Resprouts from roots up to 10' away. High seed production (6.4 billion seeds/acre) but few seedlings observed in field (2).
	5. <u>Hybridization potential:</u>
II. Climate	1. <u>Climate restrictions:</u>
	2. <u>Effects of potential climate change:</u>

III. Dispersal Potential	<p>1. <u>Pathways - Please check all that apply:</u> <u>Intentional:</u> Ornamental <input type="checkbox"/> Forage/Erosion control <input type="checkbox"/> Medicine/Food: Other:</p> <p><u>Unintentional:</u> Bird <input type="checkbox"/> Animal <input type="checkbox"/> Vehicles/Human <input checked="" type="checkbox"/> Wind <input checked="" type="checkbox"/> Water <input type="checkbox"/> Other: Appears to be brought in accidentally with long distance shipping. Can spread by root fragments with tillage, or through movement of infested hay (3).</p> <p>2. <u>Distinguishing characteristics that aid in its survival and/or inhibit its control:</u></p>
IV. Ability to go Undetected	<p>1. HIGH <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> LOW <input type="checkbox"/> New to WI so very few know what it looks like.</p>
C. DAMAGE POTENTIAL	
I. Competitive Ability	<p>1. <u>Presence of Natural Enemies:</u></p> <p>2. <u>Competition with native species:</u> Highly competitive in western states. No info on its impacts in WI.</p> <p>3. <u>Rate of Spread:</u> HIGH(1-3 yrs) <input checked="" type="checkbox"/> MEDIUM (4-6 yrs) <input type="checkbox"/> LOW (7-10 yrs) <input type="checkbox"/> Notes: Large seed production in second year.</p>
II. Environmental Effects	<p>1. <u>Alteration of ecosystem/community composition?</u> YES <input type="checkbox"/> NO <input type="checkbox"/> Notes:</p> <p>2. <u>Alteration of ecosystem/community structure?</u> YES <input type="checkbox"/> NO <input type="checkbox"/> Notes:</p> <p>3. <u>Alteration of ecosystem/community functions and processes?</u> YES <input type="checkbox"/> NO <input type="checkbox"/> Notes:</p> <p>4. <u>Allelopathic properties?</u> YES <input type="checkbox"/> NO <input type="checkbox"/> Notes:</p>
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: None.
III. Direct and indirect effects :	Notes:
IV. Increased cost to a sector:	Notes: Can be destructive in pastures and alfalfa.
V. Effects on human health:	Notes:
E. CONTROL AND PREVENTION	
I. Costs of Prevention (including education; please be as specific as possible):	Notes: Monitoring and early detection and control are critical. Education of farmers and others will be important.

II. Responsiveness to prevention efforts:	Notes: Good species for monitoring and early detection.
III. Effective Control tactics:	Mechanical <input checked="" type="checkbox"/> Biological <input type="checkbox"/> Chemical <input checked="" type="checkbox"/> Times and uses: Carefully timed mowing can reduce seed set, but herbicide use in bud to early flowering stage is needed for eradication.
IV. Minimum Effort:	Notes:
V. Costs of Control:	Notes: Control at the one known site in Green Bay is minimal now - infestation small.
VI. Cost of prevention or control vs. Cost of allowing invasion to occur:	Notes: At current stage of invasion, cost of prevention/control is negligible compared to potential costs of infestation.
VII. Non-Target Effects of Control:	Notes: Selective herbicides can be useful.
VIII. Efficacy of monitoring:	Notes: Very important.
IX. Legal and landowner issues:	Notes: UWEX Brown co. staff are working with landowners to control.

F. REFERENCES USED:

- UW Herbarium
- WI DNR
- TNC
- Native Plant Conservation Alliance
- IPANE
- USDA Plants

Number	Reference
1.	University of Wisconsin Extension. Perennial Pepperweed. Mark Renz A3832. 2007.
2.	Young, J.A., D.E. Palmquiste, and R. Blank. 1998. The ecology and control of perennial pepperweed (<i>Lepidium latifolium</i> L.) <i>Weed Technol.</i> 12:402-405.
3.	Renz, M.J. 2002. The Biology, Ecology and Control of Perennial Pepperweed (<i>Lepidium latifolium</i> L.) <i>Dissertation</i> Univ. of California, Davis. Pages 129.
4.	Young, J.A., C.D. Clements, and R.R. Blank. 2002. Herbicide residues and perennial grass on established perennial pepperweed sites. <i>J. Range Manage.</i> 55:194-196.

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Approved and Completed Date: