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| NAME OF SPECIES: <i>Chelidonium majus</i> L.       |  |
| Synonyms: N/A                                      |  |
| Common Name: Greater Celadnine                     |  |
| A. CURRENT STATUS AND DISTRIBUTION                 |  |
| I. In Wisconsin?                                   | 1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>   |
|  | 2. <u>Abundance</u> : Distribution presently limited to southern Wisconsin (1)   |
|  | 3. <u>Geographic Range</u> : Reported in 14 counties in Wisconsin (1).   |
|  | 4. <u>Habitat Invaded</u> : Southern mesic forest. Spread from urban areas into oak savanna and oak woodlands.<br>Disturbed Areas <input checked="" type="checkbox"/> Undisturbed Areas <input checked="" type="checkbox"/>  |
|  | 5. <u>Historical Status and Rate of Spread in Wisconsin</u> : Earliest herbarium specimen was collected in 1915 in Sheboygan County (1).   |
|  | 6. <u>Proportion of potential range occupied</u> : Capable of expanding its local range. Not wide spread yet, but very persistent where found.   |
| II. Invasive in Similar Climate Zones              | 1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/><br><u>Where (include trends)</u> : Widely distributed in North America.   |
| 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"/><br>Forest <input checked="" type="checkbox"/> Grassland <input type="checkbox"/> Bog <input type="checkbox"/> Fen <input type="checkbox"/> Swamp <input type="checkbox"/><br>Marsh <input type="checkbox"/> Lake <input type="checkbox"/> Stream <input type="checkbox"/> Other: Damp roadsides, waste places, cliff faces, rocky habitats, hedges. |
| IV. Habitat Effected                               | 1. <u>Soil types favored (e.g. sand, silt, clay, or combinations thereof, pH)</u> : Moderately and poorly drained soil textures.   |
|  | 2. <u>Conservation significance of threatened habitats</u> :   |
| V. Native Habitat                                  | 1. <u>List countries and native habitat types</u> : Europe and the Mediterranean basin.  |
| VI. Legal Classification                           | 1. <u>Listed by government entities?</u> No (2).   |
|  | 2. <u>Illegal to sell?</u> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/><br>Notes:   |
| B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS |  |
| I. Life History                                    | 1. <u>Type of plant</u> : Annual <input type="checkbox"/> Biennial <input checked="" type="checkbox"/> Monocarpic Perennial <input type="checkbox"/><br>Herbaceous Perennial <input type="checkbox"/> Vine <input type="checkbox"/> Shrub <input type="checkbox"/> Tree <input type="checkbox"/> in the poppy family   |
|  | 2. <u>Time to Maturity</u> : Two growing seasons.  |
|  | 3. <u>Length of Seed Viability</u> : N/A   |
|  | 4. <u>Methods of Reproduction</u> : Asexual <input type="checkbox"/> Sexual <input checked="" type="checkbox"/><br><u>Please note abundance of propagules and and other important information</u> : A two-flowered variety (naturally occurring mutation) has been documented.   |
|  | 5. <u>Hybridization potential</u> : Unknown.   |
| II. Climate  | 1. <u>Climate restrictions</u> : Restricted to temperate zones.  |
|  | 2. <u>Effects of potential climate change</u> : Unknown.   |



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| III. Dispersal Potential     | <p>1. <u>Pathways</u> - Please check all that apply:<br/> <u>Intentional</u>: Ornamental <input checked="" type="checkbox"/> Forage/Erosion control <input type="checkbox"/><br/> Medicine/Food: Brought to the United States as an herbal remedy for warts as early as 1672. Other:</p> <p><u>Unintentional</u>: Bird <input type="checkbox"/> Animal <input checked="" type="checkbox"/> Vehicles/Human <input checked="" type="checkbox"/><br/> Wind <input type="checkbox"/> Water <input type="checkbox"/> Other: Garlic mustard control efforts may spread C. majus.</p> <p>2. <u>Distinguishing characteristics that aid in its survival and/or inhibit its control</u>: Appears to spread from ornamental plantings into nearby woodlandsleaves are glabrous, and herbicide can run off the leaves.</p> |
| IV. Ability to go Undetected | 1. HIGH <input type="checkbox"/> MEDIUM <input checked="" type="checkbox"/> LOW <input type="checkbox"/>  |

**C. DAMAGE POTENTIAL**

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| I. Competitive Ability    | 1. <u>Presence of Natural Enemies</u> : Unknown.  |
|                           | 2. <u>Competition with native species</u> : Intense. Quickly displaces spring ephemeral forest herbs where locally abundant.  |
|                           | 3. Rate of Spread:<br>HIGH(1-3 yrs) <input checked="" type="checkbox"/> MEDIUM (4-6 yrs) <input type="checkbox"/> LOW (7-10 yrs) <input type="checkbox"/><br>Notes: Similar niche and spread as garlic mustard. |
| II. Environmental Effects | 1. <u>Alteration of ecosystem/community composition?</u><br>YES <input checked="" type="checkbox"/> NO <input type="checkbox"/><br>Notes: Displaces native species, lowering species density and diversity.     |
|                           | 2. <u>Alteration of ecosystem/community structure?</u><br>YES <input checked="" type="checkbox"/> NO <input type="checkbox"/><br>Notes: Can form monotypic vegetation stands in some areas.                     |
|                           | 3. <u>Alteration of ecosystem/community functions and processes?</u><br>YES <input type="checkbox"/> NO <input type="checkbox"/><br>Notes: N/A  |
|                           | 4. <u>Allelopathic properties?</u> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/><br>Notes:  |

**D. SOCIO-ECONOMIC Effects**

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| I. Positive aspects of the species to the economy/society: | Notes: Has been used as a medicinal herb.    |
| II. Potential socio-economic effects of restricting use:   | Notes: No known use in the nursery industry. |
| III. Direct and indirect effects :                         | Notes: N/A                                   |
| IV. Increased cost to a sector:                            | Notes: N/A                                   |
| V. Effects on human health:                                | Notes: Slightly toxic.                       |

**E. CONTROL AND PREVENTION**

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| I. Costs of Prevention (including education; please be as specific as possible): | Notes: N/A |
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**F. REFERENCES USED:**

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| II. Responsiveness to prevention efforts:                                 | Notes: Can be treated concomitantly with garlic mustard.   |
| III. Effective Control tactics:   | Mechanical <input type="checkbox"/> Biological <input type="checkbox"/> Chemical <input checked="" type="checkbox"/><br>Times and uses: A 2% (active ingredient) solution of glyphosate applied to basal rosettes in spring will control <i>C. majus</i> . |
| IV. Minimum Effort:   | Notes: Two growing seasons.  |
| V. Costs of Control:  | Notes: Variable and site-specific.   |
| VI. Cost of prevention or control vs. Cost of allowing invasion to occur: | Notes: Early detection of control will save time and money.  |
| VII. Non-Target Effects of Control:                                       | Notes: Control may require the use of herbicides and additives.  |
| VIII. Efficacy of monitoring:   | Notes: If detected early, <i>C. majus</i> can be eradicated. Subsequent monitoring is usually necessary.   |
| IX. Legal and landowner issues:   | Notes:   |

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

| Number | Reference   |
|--------|---|
| 1      | Wisconsin State Herbarium. 2007. WISFLORA: Wisconsin Vascular Plant Species ( <a href="http://www.botany.wisc.edu/wisflora/">http://www.botany.wisc.edu/wisflora/</a> ). Dept. Botany, Univ. Wisconsin, Madison, WI 53706-1381 USA. |
| 2      | USDA, NRCS. 2007. The PLANTS Database ( <a href="http://plants.usda.gov">http://plants.usda.gov</a> , 16 March 2007). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.   |
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**Author(s), Draft number, and date completed:** Craig A. Annen, Draft 1, June 30, 2007.

**Reviewer(s) and date reviewed:** Kelly Kearns, October 20, 2007.

**Approved and Completed Date:**