

DRAFT Government Response Statement
to the
Recovery Strategy for the Western Silvery Aster in Ontario

1 **Western Silvery Aster**

2 **Ontario Government Response Statement**

3 **Protecting and Recovering Species at Risk in Ontario**

4 Species at risk recovery is a key part of protecting Ontario's biodiversity. The
5 *Endangered Species Act, 2007* (ESA) is the Government of Ontario's legislative
6 commitment to protecting and recovering species at risk and their habitats.

7 Under the ESA, the Government of Ontario must ensure that a recovery strategy is
8 prepared for each species that is listed as endangered or threatened. A recovery
9 strategy provides science-based advice to government on what is required to achieve
10 recovery of a species.

11 Within nine months after a recovery strategy is prepared, the ESA requires the
12 government to publish a statement summarizing the government's intended actions and
13 priorities in response to the recovery strategy. The response statement is the
14 government's policy response to the scientific advice provided in the recovery strategy.
15 In addition to the strategy, the government response statement considered (where
16 available) input from Indigenous communities and organizations, stakeholders, other
17 jurisdictions, and members of the public. It reflects the best available local and scientific
18 knowledge, including Traditional Ecological Knowledge where it has been shared by
19 communities and Knowledge Holders, as appropriate and may be adapted if new
20 information becomes available. In implementing the actions in the response statement,
21 the ESA allows the government to determine what is feasible, taking into account social,
22 cultural and economic factors.

23 The [Recovery Strategy for the Western Silvery Aster \(*Symphyotrichum sericeum*\) in](#)
24 [Ontario](#) was completed on December 7, 2018.

25 Western Silvery Aster is a perennial wildflower that can grow up to 70 cm tall. It has
26 many branched upright stems and produces flowers that are violet to pink (sometimes
27 white) in colour. Its leaves are covered with silky hair, giving them a silvery appearance.

28 **Protecting and Recovering Western Silvery Aster**

29 Western Silvery Aster is listed as an endangered species under the ESA, which protects
30 both the plant and its habitat. The ESA prohibits harm or harassment of the species and

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31 damage or destruction of its habitat without authorization. Such authorization would
32 require that conditions established by the Ontario government be met.

33 Globally, the Western Silvery Aster occurs in central North America from Texas, north to
34 Manitoba and as far east as Ohio, and has been reported as far as Tennessee and
35 Georgia in the southeast. The species reaches the northern limit of its range in
36 Manitoba, approximately 120 km north of the Canada-U.S. border. In Ontario it is known
37 from only the northwestern part of the province. There are 23 known extant populations
38 in Canada, three of which are in Ontario.

39 All extant Ontario populations are in the Lake of the Woods region; populations are
40 found at Big Traverse Bay, French Portage Narrows and on Cliff Island. Two of these
41 populations are located within provincial protected areas: the Lake of the Woods Island
42 Conservation Reserve (Cliff Island) and Lake of the Woods Provincial Park (French
43 Portage Narrows). The population at Big Traverse Bay is located on lands that are
44 privately owned; stewardship actions by the landowner have increased the size of this
45 population. The species was also formerly found at Ingolf; however, survey attempts
46 have failed to find any individuals at this location since 1939, and therefore this
47 population is considered extirpated. An additional population was also recorded at
48 Rainy Lake in 1827, but the exact location of the observation is not known, and the
49 population is now considered extirpated. The current size and population trends of
50 Ontario populations are currently unknown. Given the size and remoteness of the area
51 where Western Silvery Aster occurs in Ontario, it is possible that additional populations
52 remain undetected in the province.

53 Western Silvery Aster inhabits a range of open habitats such as prairies, fields, oak
54 savannahs and open woodlands on well-drained calcium-rich soils. In Ontario, it grows
55 in provincially rare Bur Oak (*Quercus macrocarpa*) savannah habitat over alkaline
56 bedrock. The availability of habitat may limit the species' distribution within Ontario as
57 suitable habitat often occurs in small patches and/or are isolated on islands. The
58 species appears to be tolerant of natural levels of disturbance (such as grazing or fires)
59 required to maintain habitat conditions.

60 Western Silvery Aster flowers from early August to mid-September and requires insect
61 pollination to produce seed. In Manitoba, the main pollinators are the Two Form Bumble
62 Bee (*Bombus bifarius*) and syrphid flies (*Toxomerus spp.*). Ontario pollinators have not
63 been confirmed. Western Silvery Aster reproduces via seed but can also spread
64 through underground rootstalks (rhizomes). As a stress tolerant plant, the species is
65 thought to use more of its energy to grow than to produce seeds. This tendency
66 combined with other limiting factors such as high seed predation and competition with

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67 other plants for pollinators may influence the species' ability to sustain its populations
68 and increase abundance in the province.

69 Although some information can be gained from research in jurisdictions such as
70 Manitoba, additional research about the species' ecology (including recruitment, seed
71 bank dynamics, and Ontario pollinators) as well as its genetic variation and structure is
72 required to better inform recovery efforts.

73 The most significant threats to Western Silvery Aster in Ontario are habitat loss and
74 degradation. At French Portage and Cliff Narrows, the suppression of fires and other
75 natural disturbances may impact habitat suitability by enabling the encroachment of
76 woody shrubs and trees. These populations are also in areas that may be susceptible to
77 storms and flooding, and habitat loss and degradation may occur as a result. At Big
78 Traverse Bay, habitat loss and degradation may be caused by residential cottage and
79 road development, inappropriately timed mowing, and the presence of non-native
80 invasive species such as Common Tansy (*Tanacetum vulgare*) and Quackgrass
81 (*Elymus repens*). Inappropriate use of pesticides to control invasive plants or insect
82 pests may also negatively impact the Western Silvery Aster by reducing the availability
83 of pollinators. Recreational activities such as hiking, camping and picnicking may impact
84 the species and its habitat at all three locations. The long-term impact of these threats
85 and the management practices that address them are not well understood.

86 While analyses of viability have not been completed for the species, available
87 information suggests most extant Ontario populations are likely to be viable. As such,
88 actions that reduce threats and maintain or enhance habitat within and adjacent to
89 occupied areas are expected to help to support the species' recovery. Although two of
90 five populations recorded in Ontario are now considered extirpated, it is possible that
91 additional undetected populations exist. Given the above, provincial recovery efforts will
92 focus on supporting existing populations while improving understanding of the viability
93 of the species in the province. As further information is gathered about the species,
94 including current locations and population viability in Ontario, the need for additional
95 actions, including the potential need for population management actions (e.g.,
96 augmentation) may be re-evaluated.

97 **Government's Recovery Goal**

98 The government's goal for the recovery of Western Silvery Aster is to promote the
99 viability of existing populations across the species' distribution in Ontario and where
100 feasible, to facilitate natural expansion to adjacent habitat.

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101 **Actions**

102 Protecting and recovering species at risk is a shared responsibility. No single agency or
103 organization has the knowledge, authority or financial resources to protect and recover
104 all of Ontario's species at risk. Successful recovery requires inter-governmental
105 cooperation and the involvement of many individuals, organizations and communities. In
106 developing the government response statement, the government considered what
107 actions are feasible for the government to lead directly and what actions are feasible for
108 the government to support its conservation partners to undertake.

109 **Government-led Actions**

110 To help protect and recover Western Silvery Aster, the government will directly
111 undertake the following actions:

- 112 • Continue to monitor and manage habitat in provincial parks and protected areas.
- 113 • Work with partners and stakeholders to support pollinator health in Ontario
114 through actions such as integrated pest management and education.
- 115 • Continue to implement the [Ontario Invasive Species Strategic Plan \(2012\)](#) to
116 address the invasive species (e.g., Quackgrass and Common Tansy) that
117 threaten Western Silvery Aster.
- 118 • Educate other agencies and authorities involved in planning and environmental
119 assessment processes on the protection requirements under the ESA.
- 120 • Encourage the submission of Western Silvery Aster data to the Ontario's central
121 repository through the citizen science project that they receive data from (i.e.,
122 [iNaturalist.ca](#)) and directly through the [Natural Heritage Information Centre](#).
- 123 • Undertake communications and outreach to increase public awareness of
124 species at risk in Ontario.
- 125 • Continue to protect Western Silvery Aster and its habitat through the ESA.
- 126 • Support conservation, agency, municipal and industry partners, and Indigenous
127 communities and organizations to undertake activities to protect and recover
128 Western Silvery Aster. Support will be provided where appropriate through
129 funding, agreements, permits (including conditions) and/or advisory services.

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- Encourage collaboration, and establish and communicate annual priority actions for government support in order to reduce duplication of efforts.

132 **Government-supported Actions**

133 The government endorses the following actions as being necessary for the protection
134 and recovery of Western Silvery Aster. Actions identified as “high” may be given priority
135 consideration for funding under the Species at Risk Stewardship Program. Where
136 reasonable, the government will also consider the priority assigned to these actions
137 when reviewing and issuing authorizations under the ESA. Other organizations are
138 encouraged to consider these priorities when developing projects or mitigation plans
139 related to species at risk.

140 **Focus Area: Research and Monitoring**

141 Objective: Increase knowledge of the species’ distribution, population viability
142 and ecology as well as threats and actions that can be taken to
143 address them.

144 Standardized scientific techniques for surveys and long-term monitoring presently exist
145 and should be implemented to improve understanding of population levels and trends
146 as well as track progress toward the recovery goal for the species. As there are un-
147 surveyed areas of suitable habitat in Ontario and the location of the population
148 previously identified near Rainy Lake is unknown, additional surveys are warranted to
149 better understand the species’ distribution in Ontario. In order to refine techniques to
150 manage Western Silvery Aster habitat, further information is needed about the species’
151 habitat needs as well as its response to habitat management activities. Similarly, further
152 research into the species’ ecology, genetics and population viability will help to inform
153 recovery actions and management of habitat. As most of the Canadian populations of
154 Western Silvery Aster are located outside of Ontario, and some aspects of research
155 may already be underway in other jurisdictions, it is important to collaborate with
156 partners and other jurisdictions on this research to maximize efficiency and avoid
157 duplication of efforts.

158 **Actions:**

- 159 1. **(High)** Use standardized techniques to implement long-term
160 monitoring at locations where Western Silvery Aster occurs. The
161 program should be designed and implemented to contribute to
162 research on population viability. The program should aim to:
- monitor population trends, demographics, reproductive
163 success;
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- 165 ○ monitor habitat conditions; and,
- 166 ○ assess and monitor threats to the species.
- 167 2. **(High)** Conduct research to increase understanding of the
- 168 impacts of existing habitat management practices and
- 169 determine the best management practices for the species,
- 170 including:
- 171 ○ appropriate timing and intensity of prescribed burns;
- 172 ○ appropriate timing and frequency of mowing;
- 173 ○ methods to remove invasive plants without harming
- 174 Western Silvery Aster; and,
- 175 ○ approaches to mitigate the effects of pesticide use in the
- 176 vicinity of Western Silvery Aster.
- 177 3. Conduct presence-absence surveys in areas where Western
- 178 Silvery Aster may be present based on the availability of
- 179 suitable habitat and historical records. Associated actions may
- 180 include developing habitat suitability or species distribution
- 181 models to refine priority search areas in Ontario.
- 182 4. Collaborate with partners and other jurisdictions to increase
- 183 understanding of Western Silvery Aster population viability and
- 184 the environmental conditions that affect it. This may include:
- 185 ○ studying the species' reproductive biology, including
- 186 germination, seed production, seed bank dynamics and
- 187 Ontario pollinators;
- 188 ○ studying influences on recruitment and population growth
- 189 (e.g., fire, encroachment of woody vegetation or invasive
- 190 plants);
- 191 ○ studying genetic variation and structure of Ontario
- 192 Western Silvery Aster relative to North American
- 193 populations; and,
- 194 ○ conducting population viability analyses for known
- 195 populations.

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196 **Focus Area: Habitat Management**
197 Objective: Maintain and enhance habitat to promote Western Silvery Aster
198 population viability in Ontario.

199 Given that habitat loss and degradation are thought to be the most significant threats
200 impacting the species and that the number of populations within Ontario is limited, the
201 focus of recovery actions for Western Silvery Aster in Ontario are actions related to the
202 protection and management of its habitat. In Ontario, private landowners have
203 undertaken successful stewardship efforts that appear to have resulted in increased
204 distribution and density of the species. Continued monitoring of the effectiveness of
205 these types of effort on public and private lands are necessary to inform subsequent
206 habitat management actions as well as to monitor the effects of these efforts on other
207 native species.

- 208 **Actions:**
- 209 5. **(High)** Work collaboratively with land owners, land managers
210 and researchers to develop, implement and evaluate strategies
211 to maintain or enhance habitat within and adjacent to areas
212 currently occupied by Western Silvery Aster. Actions should be
213 adapted based on effectiveness, and the effects on other native
214 species should be considered prior to implementation. Actions
215 may include best management practices such as:
- 216 ○ controlling or preventing encroachment of vegetation that
217 is reducing habitat quality (e.g., through use of
218 appropriately timed mowing, prescribed burns, etc.); and,
 - 219 ○ removing or inhibiting invasive species posing a direct
220 threat to Western Silvery Aster.

222 **Focus Area: Awareness and Threat Management**
223 Objective: Increase local awareness of the species and its habitat and actions
224 that can be taken to minimize threats and to maintain or enhance
225 habitat suitability.

226 In Ontario, Western Silvery Aster is found on public lands used for a variety of
227 recreational purposes as well as on privately owned lands. As a result, the involvement
228 of several groups and organizations will be necessary to implement recovery actions
229 and promote awareness of the species, its threats, and the potential benefits of habitat
230 management activities. Improved education and awareness about the species and
231 associated management actions will help to ensure that appropriate best management
232 practices are applied. Collaboration will support coordinated implementation of actions,
233 improve efficiency and prevent duplication of efforts.

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Actions:

6. Collaborate with organizations, land managers, land users and Indigenous communities and organizations to promote awareness of Western Silvery Aster among people engaged in development, recreation and stewardship activities in Ontario by sharing information on:
 - how to identify the species;
 - the species' habitat requirements;
 - actions that can be taken to maintain and enhance habitat suitability (e.g., prescribed burns);
 - the protection afforded to the species and its habitat under the ESA; and,
 - actions that can be taken to avoid or minimize impacts to the species and its habitat.

248 **Implementing Actions**

249 Financial support for the implementation of actions may be available through the
250 Species at Risk Stewardship Program. Conservation partners are encouraged to
251 discuss project proposals related to the actions in this response statement with the
252 program staff. The Ontario government can also advise if any authorizations under the
253 ESA or other legislation may be required to undertake the project.

254 Implementation of the actions may be subject to changing priorities across the multitude
255 of species at risk, available resources and the capacity of partners to undertake
256 recovery activities. Where appropriate, the implementation of actions for multiple
257 species will be coordinated across government response statements.

258 **Reviewing Progress**

259 The ESA requires the Ontario government to conduct a review of progress towards
260 protecting and recovering a species not later than five years from the publication of this
261 response statement. The review will help identify if adjustments are needed to achieve
262 the protection and recovery of Western Silvery Aster.

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263 **Acknowledgement**

264 We would like to thank all those who participated in the development of the Recovery
265 Strategy for the Western Silvery Aster (*Symphyotrichum sericeum*) in Ontario for their
266 dedication to protecting and recovering species at risk.

267 **For Additional Information:**

268 Visit the species at risk website at ontario.ca/speciesatrisk

269 Contact the Natural Resources Information and Support Centre

270 1-800-667-1940

271 TTY 1-866-686-6072

272 nrisc@ontario.ca