

# Species at Risk

## 2014-15 Recovery Action Summary

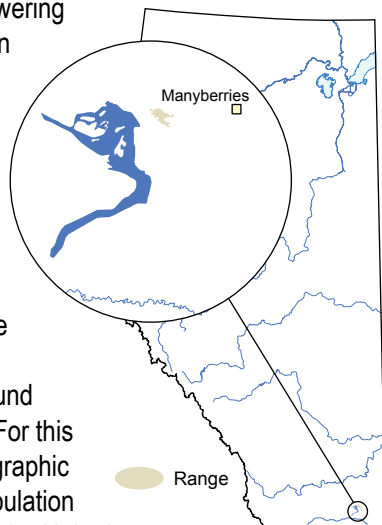


## Western Spiderwort



### Background

Western spiderwort is a flowering plant native to the Canadian prairie. Its name is derived from the sticky, stringy substance secreted from its stem when broken that hardens into cobweb-like threads upon exposure to air. With blue or purple flowers at the top of a slender stem, this herbaceous perennial is found at only one site in Alberta. For this reason, as well as the geographic separation of this small population from others in Canada and the United States, the species is listed as Endangered in Alberta – and is highly vulnerable to extirpation. With limited occurrence and distribution in Canada (one location in Saskatchewan and three locations in Manitoba), western spiderwort is federally designated as Threatened. In Alberta, western spiderwort occurs in the Dry Mixed Grass Subregion, typically in areas with sandy soils and sparsely vegetated areas around sand dunes. In 1986, when the species was discovered in Alberta, the population was recorded at 50 plants. However, the species shows a high amount of variability year to year depending on moisture levels; in 2005, the population was estimated at 28,400 plants, exceeding the previously recorded estimate of 7,700 plants in 2003.



Primary threats to the species involve competition with invasive species, and potential habitat loss or degradation resulting from sand extraction, oil and gas activities, grazing, and sand dune stabilization. With cooperation and commitment to implement recovery actions from stakeholders, leaseholders, landowners, and both levels of government, long-term persistence of western spiderwort in Alberta is expected.

### Recovery Plan

The *Alberta Western Spiderwort Recovery Plan 2012-2022*, an update of the 2005-2010 plan, was prepared by a multi-stakeholder team, and received Ministerial approval in 2012.

### Recovery Goal

Our goal is to maintain the existing habitat and distribution of western spiderwort and to maintain a naturally, self-sustaining population of the species in Alberta.



## Strategies

Four strategies are being used to conserve western spiderwort in Alberta:

1. Population Conservation and Management
2. Habitat Conservation and Management
3. Information and Education
4. Research

## Actions

Recovery actions have been successful in maintaining the population, distribution, and habitat of western spiderwort in Alberta. The current plan, which will guide recovery efforts through 2022, represents a continuation and refinement of conservation efforts for western spiderwort in Alberta. Actions are delivered by Alberta Environment and Sustainable Resource Development, Alberta Native Plant Council, University of Lethbridge, and several members of the local ranching community. A short summary of progress on actions is provided below.

### 1. Population Conservation and Management

- The 2011 spiderwort inventory found several hundred spiderwort plants just over 2 km west of what was previously the westernmost site. This finding doubled the east-west span of the population to just over 4 km. The plants in this area are large and well-established. As well, another new patch of several plants was found approximately 200 m south of what was previously the south-easternmost site, filling in a substantial gap.
- Standardized inventories conducted in 2007 and 2008 revealed the largest known population estimate for western spiderwort in Alberta, with a total of approximately 37,200 plants.
- Invasive plants (i.e., Baby's Breath) were monitored and removed within and adjacent to spiderwort habitat in 2007 and 2008. No re-growth was observed when assessed in 2009.

### 2. Habitat Conservation and Management

- Recorded range was expanded in 2011 in conjunction with the additional plants found, from an area of occupancy at approximately 2.2 km<sup>2</sup>, to approximately 8 km<sup>2</sup>.
- Intensive monitoring of permanent transects occurred in 2010 and 2011 to track annual population fluctuations and to aid in establishing a population trend over time.
- Involvement in the development, review, and implementation of industrial set-back guidelines to help protect plant species at risk, along with their habitats.

### 3. Information and Education

- Produced and distributed an information brochure on invasive species to detail the threats it poses to western spiderwort populations and its habitat.
- The County of Forty Mile undertook spraying of Baby's Breath in 2010 and 2011.
- Developed Beneficial Grazing Management Practices (BMPs) for landowners and lease holders.
- Personal contact is ongoing with landowners and lease holders with western spiderwort on their property.

### 4. Research

- Completed study on the demography and genetic diversity in western spiderwort in Canada; results from that research revealed relatively low levels of genetic diversity within the Alberta and Saskatchewan populations, with higher levels found in Manitoba. Overall, there is no gene flow between the Prairie Provinces due to geographic separation.

## Upcoming

Currently, no protection in the *Wildlife Act* exists for western spiderwort or its habitat, however efforts to maintain the western spiderwort population, and protect its habitat are ongoing. For further information visit [www.esrd.alberta.ca](http://www.esrd.alberta.ca).