PROPOSED

Species at Risk Act
Management Plan Series

Management Plan for the Climbing Prairie Rose (*Rosa setigera*) in Canada

Climbing Prairie Rose

2013

Canada

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PREFACE

The federal, provincial, and territorial government signatories under the Accord for the Protection of Species at Risk (1996) agreed to establish complementary legislation and programs that provide for effective protection of species at risk throughout Canada. Under the *Species at Risk Act* (S.C. 2002, c.29) (SARA), the federal competent ministers are responsible for the preparation of management plans for listed species of special concern and are required to report on progress within five years.

The Minister of the Environment is the competent minister under SARA for the management of the Climbing Prairie Rose and has prepared this management plan as per section 65 of SARA. It has been prepared in cooperation with the Government of Ontario.

Success in the conservation of this species depends on the commitment and cooperation of many different constituencies that will be involved in implementing the directions set out in this plan and will not be achieved by Environment Canada, or any other jurisdiction alone. All Canadians are invited to join in supporting and implementing this plan for the benefit of the Climbing Prairie Rose and Canadian society as a whole.

Implementation of this management plan is subject to appropriations, priorities, and budgetary constraints of the participating jurisdictions and organizations.

ACKNOWLEDGMENTS

Earlier drafts of this management plan were prepared by Talena Kraus of Artemis Eco-Works, based on a previous draft prepared by Judith Jones of Winter Spider Eco-Consulting. Input from Jarmo Jalava (Consulting Ecologist), Allen Woodliffe (Ontario Ministry of Natural Resources) and Dan Lebedyk (Essex Region Conservation Authority) are much appreciated. Development of this management plan was facilitated by Ken Tuininga and Christina Rohe (Environment Canada, Canadian Wildlife Service – Ontario). Contributions from Susan Humphrey, Lesley Dunn, Barbara Slezak, Madeline Austen and Rachel deCatanzaro (Environment Canada, Canadian Wildlife Service – Ontario) are also gratefully acknowledged.

Acknowledgement and thanks is given to all other parties that provided advice and input used to help inform the development of this management plan including various Aboriginal organizations and individuals, individual citizens, and stakeholders who provided input and/or participated in consultation meetings.

EXECUTIVE SUMMARY

Climbing Prairie Rose (*Rosa setigera*) is listed as Special Concern on both Schedule 1 of the federal *Species at Risk Act* (SARA) and under the provincial *Endangered Species Act, 2007* (ESA 2007). It is a robust shrub with climbing or arching branches and generally occurs in early successional open habitat. Climbing Prairie Rose has bright pink flowers appearing in late June through July. It is a dioecious species, meaning that male and female flowers occur on separate plants; a characteristic which is unusual for roses.

The Climbing Prairie Rose occurs in the central United States of America and reaches the northern extent of its range in Canada. In Canada, this species is only found in the Carolinian region of southwestern Ontario; an area known for its long growing season and a climate moderated by the Great Lakes. In this region, the species is generally found in prairie remnants, open woods, shrub thickets, old fields and abandoned agricultural and urban land. The species is also found in more disturbed areas such as pastureland, hedgerows, drainage embankments, roadsides and ditch slopes where available.

Threats identified to the Canadian population of Climbing Prairie Rose include, but are not limited to: housing and commercial development; intensive agricultural use; successional changes resulting from alterations in anthropogenic activities; unrestricted recreational use of all-terrain vehicles; exotic invasive species; and varietal introductions.

The management objective is to maintain extant populations at their current abundance and distribution, and, to better document the abundance and distribution of this species in Canada.

To achieve the management objective, four broad strategies are recommended:

1. Maintain suitable habitat for extant populations.
2. Determine the species' distribution and abundance, and assess population viability.
3. Increase public awareness of the species and its habitat.
4. Fill knowledge gaps on the species.

A number of conservation measures to achieve the management objective of this plan are proposed, none of which are expected to have any significant negative effect on the environment or other species.

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1. COSEWIC* SPECIES ASSESSMENT INFORMATION

Date of Assessment: May 2003

Common Name (population): Climbing Prairie Rose

Scientific Name: *Rosa setigera*

COSEWIC Status: Special Concern

Reason for Designation: This is a shrub of remnant prairie habitats and clearings that is capable of also colonizing a variety of open disturbed sites within a geographically and climatically restricted region where decline in the extent and quality of habitat continues. Threats include factors such as urban expansion and intensive agricultural land use.

Canadian Occurrence: Ontario

COSEWIC Status History: Designated Special Concern in April 1986. Status re-examined and designated Threatened in May 2002. Status re-examined and designated Special Concern in May 2003.

*COSEWIC - Committee on the Status of Endangered Wildlife in Canada.

2. SPECIES STATUS INFORMATION

The global conservation status for Climbing Prairie Rose (*Rosa setigera*) is secure[1] (G5) (NatureServe 2010). In the United States, the national conservation status is currently imperiled[2] / apparently secure[3] (N2N4) (NatureServe 2010; Appendix B). In Canada, Climbing Prairie Rose is known from the Province of Ontario where the conservation status is vulnerable[4] (S3) (NatureServe 2010). The national conservation status for Canada is vulnerable (N3) (NatureServe 2010).

Climbing Prairie Rose is listed as Special Concern[5] on Schedule 1 of the federal *Species at Risk Act* (SARA). In Ontario, Climbing Prairie Rose is listed as Special Concern[6] under the provincial *Endangered Species Act, 2007* (ESA 2007).

The percentage of the global range found in Canada is estimated to be less than 1%.

[1] Common; widespread and abundant. The global conservation status rank (G-rank) is the overall status of a species and is a range-wide assessment of condition. National (N) and subnational (S) status ranks must always be equal to or lower than the global rank for a particular species or ecosystem.

[2] imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it vulnerable to extirpation from the nation or state/province

[3] uncommon but not rare; some cause for long-term concern due to declines or other factors

[4] vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation

[5] a wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats

[6] a species that lives in the wild in Ontario and that may become threatened or endangered because of a combination of biological characteristics and identified threats

3. SPECIES INFORMATION

3.1 Species Description

Climbing Prairie Rose is a perennial, vinelike shrub in the rose family (Rosaceae). The stems can generally be described as trailing, arching or climbing and are sparsely armed with stout, curved thorns (Soper and Heimburger 1985). Arching stems that touch the ground may root at the tip to form clusters of new plants (COSEWIC 2002) and climbing stems may advance up other tall plants or trees, reaching as much as five metres in height (Woodliffe pers. comm. 2009). Leaves are alternate, deciduous, and pinnately compound (3 to 11 leaflets) (Soper and Heimburger 1985). Leaflets are usually three on flowering branches and three or five on younger or vegetative branches and the leaf margins are toothed / serrated (COSEWIC 2002). Flowers of Climbing Prairie Rose appear hermaphroditic[7], but functionally they are dioecious; with separate male and female plants (Kevan et al. 1990 cited in Ambrose 2002). Flowering occurs from late June through July (Kemp et al. 2003), with one or more terminal corymbs[8] which are generally pink, fading to white. Petals are 2 to 3 cm long, and the styles (the neck of the ovaries) are united into a single column that protrudes from the centre of the flower (COSEWIC 2002). Flowers are visited by a diversity of pollinating insects, generally bees and flies, but the species are of unknown origin. The fruit is the typical "hip" (or hypantheum) characteristic of all roses, and is firm and orange to red in colour (Gleason and Cronquist 1991; Ambrose 2002). The fruit contains hard seeds; which are likely dispersed by birds and small mammals (COSEWIC 2002).The seeds typically germinate the following spring in open or thinly vegetated fields and meadows (COSEWIC 2002).

Climbing Prairie Rose is the only native climbing rose in Ontario (COSEWIC 2002), but can be difficult to distinguish from other rose species when not in flower (Oldham et al. 2003). Identification may be further complicated by varietal introductions of both native (e.g., Prickly Rose (*Rosa acicularis*) and exotic (e.g., Prairie Rose (*Rosa arkansana*)) species that have been planted and have escaped residential gardens.

3.2 Population and Distribution

Climbing Prairie Rose occurs in central North America, from extreme southern Canada to the United States where it occurs from Michigan to outlying areas in New York and Pennsylvania, south along the western foothills of the Appalachian Mountains to Georgia and west to eastern Texas (Oldham et al. 2003; NatureServe 2010) (Figure 1; Appendix B).

Based on Natural Heritage Information Centre (NHIC) records, the current[9] Canadian distribution of Climbing Prairie Rose is limited to the Carolinian zone of southwestern Ontario (NHIC 2011; COSEWIC 2003). In this region, there are 103 known Climbing Prairie Rose

[7] an individual animal or flower that has both male and female reproductive organs
[8] form of inflorescence in which the flowers form a flat-topped or convex cluster, the outermost flowers being the first to open
[9] NHIC information accessed October 2011

element occurrences (EO)[10] (EO hereafter interchangeable with "population") which occur primarily in Essex County, but also in the adjacent Municipality of Chatham-Kent, Lambton County and one population just across the Middlesex County line (NHIC 2011; Oldham et al. 2003) (Figure 2). There is one additional historic (1944) record for Climbing Prairie Rose from Prince Edward County in southeastern Ontario (NHIC 2011), but this population was considered an escape from cultivation and has long since been extirpated (Lewis 1958 cited in Ambrose 1986). Of the 104 known populations (*including the one from Prince Edward County*), 68 are considered extant (where verification of the population status has been undertaken in the past 20 years), 30 are presumed historic (where appropriate habitat is likely still present but the species has not been observed in the past 20 years), and 6 are extirpated (where appropriate habitat is not present and extensive surveys have not revealed plants) (NHIC 2011) (Figure 2). The NHIC has an assigned EO rank[11] for each of the 68 extant populations (NHIC 2011). As EO ranks are often used in prioritizing conservation planning (NHIC 2011), it is important to note that of the 68 known extant populations, 21 are considered viable[12]; 22 are considered probably not viable; and the remaining 25 have been verified as still existing, but sufficient information on the factors used to estimate viability (i.e., namely size (including population size and/or occupied area), abiotic and biotic conditions, and landscape context) of the occurrence have not yet been obtained (NatureServe 2002; NHIC 2011) (Appendix C).

The overall abundance of Climbing Prairie Rose in Canada is not known with great certainty. The species is considered inconspicuous when not in flower (Oldham et al. 2003), and estimating abundance through field observation alone, is further complicated by the species' ability to form clones from rooting branch tips. In Ambrose (2002), when clusters of rose crowns were observed in a population, they were considered to be clones, and as such, multi-crowned clusters were counted as individuals. Ambrose (2002) estimated species' abundance at 125 to 150 mature individuals in Canada. However, surveys from the following year, for a portion of the Canadian range, located 491 clumps (*'clumps' considered to be interchangeable with 'cluster'*) of which 443 were flowering (Woodliffe 2002 as cited in Oldham et al. 2003). As noted in Oldham et al. (2003), species' abundance has been underestimated in previous status reports and additional surveys would likely reveal even more Climbing Prairie Rose populations. As an example, more recent (2008) surveys at a location in Windsor reported over 900 Climbing Prairie Rose in this area alone (Canada-United States-Ontario-Michigan-Border-Transportation Partnership 2008, 2009).

[10] individuals or groups of plants separated from each other by more than 1 km are generally recognized as separate element occurrences / populations in the COSEWIC, NatureServe and Natural Heritage Information Centre (NHIC) records for vascular plants

[11] As defined using the NatureServe Element Occurrence Data Standard (NatureServe 2002); EO ranks provide a succinct assessment of ESTIMATED VIABILITY or PROBABILITY OF PERSISTENCE (based on condition, size, and landscape factors) of occurrences of a given Element Occurrence (NatureServe 2002). EO ranks are assigned on the basis of data obtained from recent field surveys (except for historical, or in some cases extirpated, occurrences) by knowledgeable individuals using EO Rank Specification Standards (NatureServe 2002).

[12] The basic "A" through "D" ranks are based on current known factors that are used to predict the viability of an EO. The more viable an EO is, the higher its EO rank and the higher its conservation value. The cut-off for viability occurs at the "C" rank, with "D" ranked EO's characterized as probably not viable (NHIC 2011).

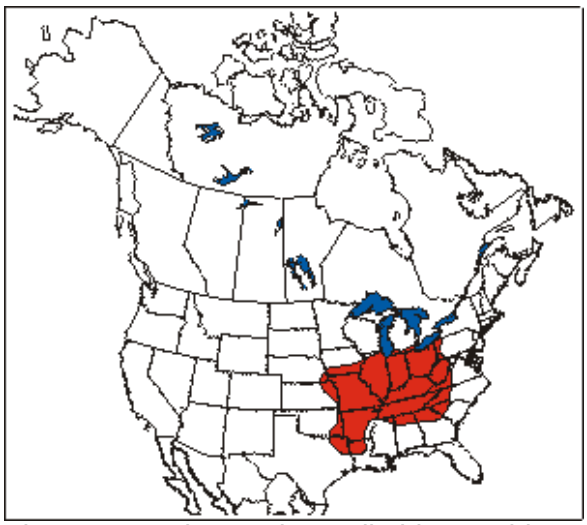

Figure 1, North American Climbing Prairie Rose distribution
(Modified from: Argus et al. 1982-1987).

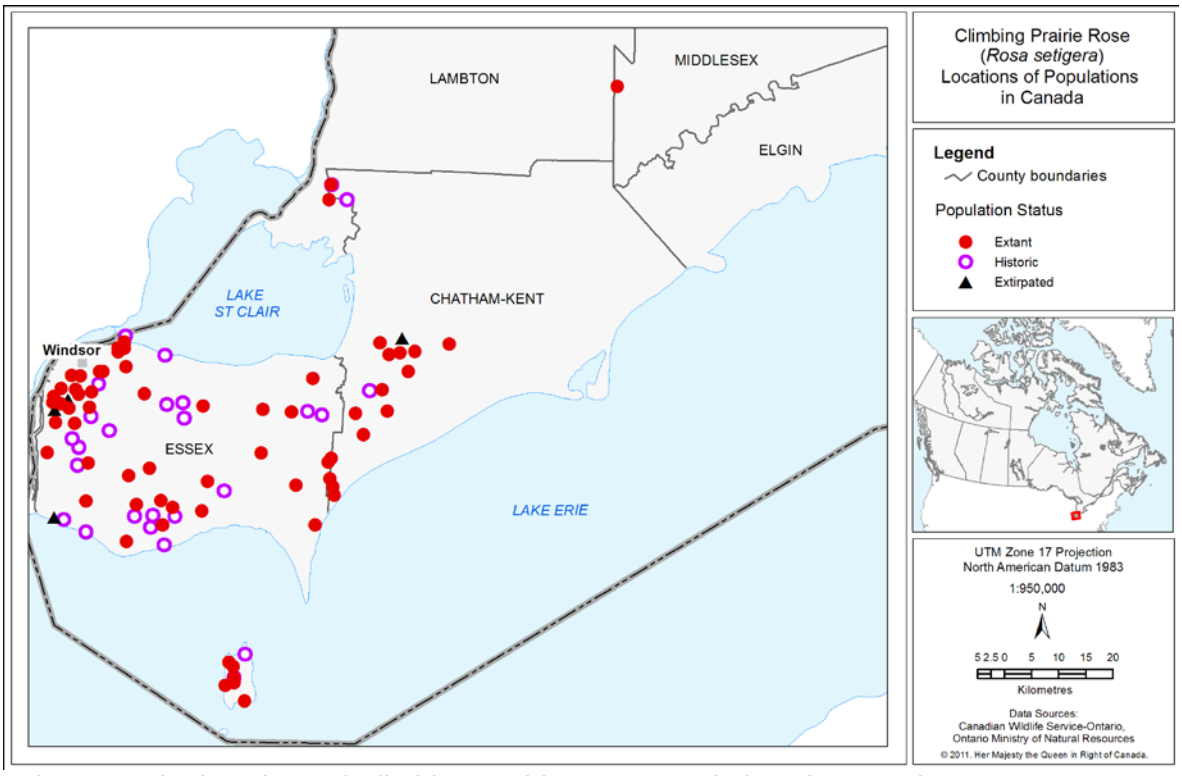

Figure 2. The locations of Climbing Prairie Rose populations in Canada. Note: one extant; three historic and two extirpated population(s) are not displayed in this figure as the geographical coordinates for these populations are unavailable (NHIC 2011).

For the Climbing Prairie Rose in Canada, the current extent of occurrence[13] is estimated at 3200 km^2 and the area of occupancy[14] is estimated at 20 km^2 (Oldham et al. 2003).

3.3 Needs of the Climbing Prairie Rose

Climbing Prairie Rose generally occurs in areas of open or early successional habitat, such as, prairie remnants, open woods, shrub thickets, old fields and abandoned agricultural and urban land (COSEWIC 2002). Climbing Prairie Rose is also found in more disturbed areas such as pastureland, hedgerows, drainage embankments, roadsides and ditch slopes where available (Woodliffe pers. comm. 2009). The species may persist in semi-shaded conditions with scattered trees, or even in areas with a partially closed canopy (Woodliffe 2002). For example, Climbing Prairie Rose has been observed in semi-shaded conditions where long branches climbed nearly five metres into mature trees (Woodliffe pers. comm. 2009). Soil conditions are generally described as moist, heavy clay to clay-loam, but are occasionally sandy or shallow soils that dry out during part of the growing season (COSEWIC 2002). This species occurs in the Carolinian Zone of southern Ontario, which has a long growing season and a climate moderated by Lake Erie.

Pollination and seed dispersal of the Climbing Prairie Rose have not been well studied, but a variety of bees and flies have been observed to visit the flowers with subsequent fruit production (COSEWIC 1986; COSEWIC 2002); it is unknown which species are responsible for pollination and seed dispersal (COSEWIC 2002).

3.3.1 Limiting factors

Because Climbing Prairie Rose is a dioecious species, small population size may be a limiting factor as isolated individuals are not able to produce fruit (and hence seeds) (COSEWIC 2002).

[13] the area included in a polygon without concave angles that encompasses the geographic distribution of all known populations of a wildlife species

[14] the area within 'extent of occurrence' that is occupied by a taxon, excluding cases of vagrancy

4. THREATS

4.1 Threat Assessment

Table 1. Threat Assessment Table

Threat	Level of Concern[1]	Extent	Occurrence	Frequency	Severity[2]	Causal Certainty[3]
Habitat loss or degradation						
Housing and commercial development	High	Localized	Historic / Current	Recurrent	High	High
Intensive agricultural use	Medium-High	Localized	Historic/ Current	Recurrent	Low	Low
Changes in ecological dynamics or natural processes						
Successional changes resulting from alterations in human activities	High	Widespread	Current	Seasonal	High	Medium
Disturbance or harm						
Unrestricted recreational use of all-terrain vehicles	Low	Unknown	Unknown	Unknown	Unknown	Low
Exotic, invasive or introduced species/genome						
Exotic invasive species (e.g., Autumn Olive **(***Elaeagnus umbellatus*))	Low	Unknown	Current	Unknown	Unknown	Low
Varietal Introductions	Low	Unknown	Unknown	Unknown	Unknown	Low

[1] *Level of Concern: signifies that managing the threat is of (high, medium or low) concern for the management of the species, consistent with the population and distribution objectives. This criterion considers the assessment of all the information in the table.*

[2] *Severity: reflects the population-level effect (High: very large population-level effect, Moderate, Low, Unknown).*

[3] *Causal certainty: reflects the degree of evidence that is known for the threat (High: available evidence strongly links the threat to stresses on population viability; Medium: there is a correlation between the threat and population viability e.g. expert opinion; Low: the threat is assumed or plausible).*

4.2 Description of threats

Housing and commercial development

Many of the known populations of Climbing Prairie Rose occur on open ground that is vulnerable to habitat loss or degradation resulting from development; especially in the Windsor area (COSEWIC 2002). For example, in the time between the two COSEWIC status reports (COSEWIC 1986; COSEWIC 2002), four sites have been completely or mostly lost due to incompatible urban development (COSEWIC 2002). Development continues to occur within the range of the species.

Successional changes resulting from alterations in human activities
Climbing Prairie Rose is considered to be an opportunistic species, but is generally limited to areas of open or semi-open habitat. Without conditions to keep the habitat open, the habitat often becomes less favourable for this species (COSEWIC 2002). Although periods of drought and fire may contribute to maintaining open habitat, habitats which are kept open by management activities (e.g., mowing) are also occupied by the species.

In Ontario, Climbing Prairie Rose is commonly found in areas that were once cleared for human influenced activities (e.g., agriculture, timber harvest, rail lines, etc.) and either kept open by some level of landuse management (e.g., ploughing, grazing, brush clearing, prescribed burning, mowing, etc.) or the land was abandoned as the activity became less viable, thereby leaving conditions favourable for successional changes in vegetation. For example, COSEWIC (2002) noted that some populations that once occurred along the edges of rail lines have declined since these habitats have been converted to walking trails through "rails to trails" programs. Thus, vegetation, which was once controlled on a regular basis as part of a right-of-way maintenance program, is now thriving, due to a lack of management, in the area.

Intensive agricultural use
Intensive agriculture threatens extant populations of Climbing Prairie Rose and its opportunity to colonize much of the remaining areas of potential early successional habitat. For example, open areas of habitat that occur on the edge of agricultural fields are subject to agricultural expansion and / or loss of habitat quality (COSEWIC 2002) and open areas of abandoned agricultural fields may be restored for cultivation or subject to development.

Unrestricted recreational use of all-terrain vehicles (ATVs)
Unrestricted recreational use of ATVs may threaten the Climbing Prairie Rose by directly damaging the species through trampling and/or indirectly through compaction of the soil, making the habitat unsuitable (VanWagner pers. comm. 2009).

Exotic invasive species
Invasive species are encroaching on many prairie habitats and contributing to a decline in habitat quality and availability. Impacts of invasive species can range from competitive exclusion, niche displacement or hybridization of some species (Mooney and Cleland 2001). Although the extent and frequency is largely unknown, the Autumn Olive (*Elaeagnus umbellatus*) has been identified as an invasive exotic shrub seen in some habitats of the Climbing Prairie Rose and could become a significant competitor (COSEWIC 2002). The threat from other invasive species may need to be evaluated.

Varietal introductions
Climbing Prairie Rose had widely been used for breeding hardy climbing roses (Krussman 1981 cited in Ambrose 1986) and roses of many varieties make popular garden plants. This introduces a potential threat to the genetic composition of native populations if garden varieties are unknowingly introduced into natural areas.

5. MANAGEMENT OBJECTIVE

The management objective is to maintain extant[15] populations at their current abundance and distribution, and, to better document the abundance and distribution of this species in Canada.

Recent status updates have suggested that the species' abundance has been underestimated in previous reports and additional surveys would likely reveal more Climbing Prairie Rose individuals and possibly additional populations. Therefore, the management objective is focused on the maintenance of extant Climbing Prairie Rose populations and surveys to locate additional individuals or populations in Canada.

6. BROAD STRATEGIES AND CONSERVATION MEASURES

6.1 Actions Already Completed or Currently Underway

The following actions are known to have been completed, or are currently underway to assist in the conservation of Climbing Prairie Rose in Canada.

- Planting of Climbing Prairie Rose was done by the Lower Thames Valley Conservation Authority (LTVCA) in 2008; fifty bare root plugs were planted in a prairie remnant. The LTVCA has maintained some of the prairie's open habitat character with periodic selective mowing as required (VanWagner pers. comm. 2009; VanEvery 2011).

- Prescribed burns are planned for the Ojibway Prairie Provincial Nature Reserve and are used as a management tool to maintain prairie species and habitats.

- Periodic fires have been used to maintain openness at the Stone Road Alvar on Pelee Island, but have been curtailed in recent years due to the negative impacts on species at risk, such as the Blue Racer (*Coluber constrictor foxii*) (Woodliffe pers comm. 2012).

Recovery actions described in the Draft Walpole Island Ecosystem Recovery Strategy (Bowles 2005) include raising awareness in the community about species at risk.

6.2 Broad Strategies

The broad strategies of the management plan for the Climbing Prairie Rose in Canada are as follows:

1. Maintain suitable habitat for extant populations.
2. Determine the species' distribution and abundance, and assess population viability.
3. Increase public awareness of the species and its habitat.
4. Fill knowledge gaps on the species.

[15] based on NHIC information accessed October 2011

6.3 Conservation Measures

The conservation measures and implementation schedule proposed to meet the broad strategies outlined in section 6.2 are presented in Table 2.

Table 2. Conservation Measures and Implementation Schedule

Conservation Measure	Priority	Threats or concerns addressed	Timeline
1. Maintain suitable habitat for extant populations			
1.1 Support the development and use of best management practices for areas in which Climbing Prairie Rose occurs. Ensure best management practices help address key threats, particularly those described in Table 1 as being of high concern.	High	Successional changes resulting from alterations in human activity; Intensive agricultural use; Unrestricted recreational use of all-terrain vehicles; Exotic invasive species; Varietal introductions	2013-2018
1.2 Encourage the conservation of open and / or early successional habitat at key sites through available protection tools.	High	Housing and commercial development; Intensive agricultural use	Ongoing
2. Determine the species' distribution and abundance, and assess population viability			
2.1 Conduct targeted surveys to better understand the species' distribution and abundance in Canada.	Medium	Population and distribution knowledge gap	Ongoing
2.2 Using the Element Occurence Rank Specification Standards (NatureServe 2002), assess the 25 extant populations with unknown viability status.	Medium	Population viability knowledge gap	2013-2018
3. Increase public awareness of the species and its habitat			
3.0 Support the development and distribution of outreach/education materials (e.g., a general guide / handout) for best management practices that would also positively affect Climbing Prairie Rose and a number of other species requiring similar habitats.	Medium	Intensive agricultural use; Successional changes of open habitat; Exotic invasive species; Varietal introductions	2013-2018
3.1 Promote community and individual involvement and awareness regarding species at risk and their habitats, including Climbing Prairie Rose; Encourage the transfer and archiving of Traditional Ecological Knowledge.	Medium	All threats	Ongoing

3.2 Use signage to communicate Climbing Prairie Rose presence and deter recreational activities which may negatively affect the species or its habitat	Low	Unrestricted use of all-terrain vehicles	2013-2018
4. Fill knowledge gaps on the species			
4.1 Determine the relative significance of threats	Low	Unrestricted use of all-terrain vehicles; Invasive species; Varietal introductions	2013-2018

7. MEASURING PROGRESS

Every five years, success of this management plan implementation will be measured against the following performance indicators:

- The abundance of extant populations of Climbing Prairie Rose in Canada has not decreased.
- The distribution of extant populations of Climbing Prairie Rose in Canada has not decreased.
- The overall abundance and distribution of the species has been better documented in Canada.

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APPENDIX A: EFFECTS ON THE ENVIRONMENT AND OTHER SPECIES

A strategic environmental assessment (SEA) is conducted on all SARA recovery planning documents, in accordance with the *Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals*. The purpose of a SEA is to incorporate environmental considerations into the development of public policies, plans, and program proposals to support environmentally sound decision-making.

Recovery planning is intended to benefit species at risk and biodiversity in general. However, it is recognized that plans may also inadvertently lead to environmental effects beyond the intended benefits. The planning process based on national guidelines directly incorporates consideration of all environmental effects, with a particular focus on possible impacts upon non-target species or habitats. The results of the SEA are incorporated directly into the plan itself, but are also summarized below.

Recovery activities that protect prairie habitats, open woods, and other general areas of open grassland will positively affect a number of other species requiring similar habitats, including other species at risk (table below).

Species at risk that may benefit from conservation and management of Climbing Prairie Rose in Canada.*

Common Name	Scientific Name	SARA Status
Gattinger's Agalinis	*Agalinis gattingeri*	Endangered
Small White Lady's-slipper	*Cypripedium candidum*	Endangered
Pink Milkwort	*Polygala incarnata*	Endangered
Showy Goldenrod	*Solidago speciosa*	Endangered
Colicroot	*Aletris fainosa*	Threatened
Dense Blazing Star	*Liatris spicata*	Threatened
Common Hoptree	*Ptelea trifoliate*	Threatened
Willowleaf Aster	*Symphyotrichum praealtum*	Threatened
Henslow's Sparrow	*Ammodramus henslowii*	Endangered
Northern Bobwhite	*Colinus virginianus*	Endangered
Massasauga	*Sistrurus catenatus*	Threatened
Eastern Foxsnake	*Pantherophis gloydi*	Endangered
Butler's Gartersnake	*Thamnophis butleri*	Threatened
Monarch	*Danaus plexippus*	Special Concern

* Note: Associate species at sites where Climbing Prairie Rose occurs have not been researched, however, the list above includes species that may be present in habitats occupied by Climbing Prairie Rose.

While some of the proposed conservation measures will benefit the environment in general and are expected to positively affect other sympatric native species, there could be consequences to those species whose requirements differ from those of the Climbing Prairie Rose. Consequently, it is important that habitat management activities for the Climbing Prairie Rose be considered from an ecosystem perspective through the development, with input from responsible jurisdictions, of multi-species plans, ecosystem-based recovery programs or area management plans that take into account the needs of multiple species, including other species at risk.

Prescribed burns, is a technique already in use at several locations to maintain open prairie habitat (City of Windsor 2009; Van Wagner pers. comm. 2009). If implemented, prescribed burns could have a moderately detrimental effect on the Climbing Prairie Rose and other shrub species which may be reduced or removed to open up the habitat. These other shrubs are mostly widespread, common species, such as dogwoods and hawthorns, which are not restricted to prairie habitat. In addition, there may be detrimental effects to snakes (e.g., Blue Racer), some insects and invertebrates in the habitat. However, the negative effects can be mitigated in various ways, such as prescribed burns for only parts of the habitat, or by burning in early spring or late fall when invertebrate presence may be low. Following accepted protocols already in use at locations such as Pelee Island - Stone Road Alvar or the Ojibway Prairie may help mitigate negative impacts. Taking these mitigation measures into account, it was concluded that the benefits to the prairie habitat will outweigh any adverse effects.

APPENDIX B: SUBNATIONAL CONSERVATION RANKS OF CLIMBING PRAIRIE ROSE IN THE UNITED STATES

List and description of various conservation status ranks for Climbing Prairie Rose in the United States (from NatureServe 2010).

	Global (G) Rank	**National (N) Rank (United States)**	**Sub-national (S) Rank**
Climbing Prairie Rose (*Rosa setigera*)	G5 (Secure – common; widespread and abundant)	N2N4 N2 (Imperiled in the nation or state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state) N4 (uncommon but not rare; some cause for long-term concern due to declines or other factors)	Alabama (SNR) Arkansas (SNR) Connecticut (SNR) Delaware (SNA) District of Columbia (SX) Florida (SNR) Georgia (S3?) Illinois (SNR) Indiana (SNR) Iowa (S3) Kansas (SNR) Kentucky (S5) Louisiana (SNR) Maryland (SNA) Massachusetts (SNR) Michigan (S2S3) Missouri (SNR) Nebraska (SNR) New Hampshire (SNR) New Jersey (SNR) New York (SNR) North Carolina (SNA) Ohio (SNR) Oklahoma (SNR) Pennsylvania (S1) South Carolina (SNR) Tennessee (SNR) Texas (SNR) Virginia (S1) West Virginia (S3) Wisconsin (SNR)

S1: Critically Imperilled; S2: Imperilled; S3: Vulnerable; S4: Apparently Secure; S5:Secure, SNR: Unranked; SH: Possibly Extirpated; SX: Presumed Extirpated; SNA, Not Applicable.

APPENDIX C: ELEMENT OCCURRENCE RANKS OF CLIMBING PRAIRIE ROSE IN CANADA

Element Occurrence (EO) ranks for the Climbing Prairie Rose in Canada (NHIC 2011).

EO Rank	Description	Count (n=104)
A	excellent estimated viability	2
B	good estimated viability	1
C	fair estimated viability	10
C?*		8
D	poor estimated viability	20
D?*		2
E	verified extant (viability not assessed)	25
H	historical	30
F	failed to find	N/A
X	extirpated	6

* EO ranks and the "?" qualifier may be used to indicate uncertainty about particular basic ranks (NatureServe 2002).