Proposed

Species at Risk Act
Action Plan Series

Multi-species Action Plan for Yoho National Park of Canada [Proposed]

2017

Canada

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For copies of the action plan, or for additional information on species at risk, including COSEWIC Status Reports, residence descriptions, recovery strategies, and other related recovery documents, please visit the Species At Risk Public Registry[1].

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Approval statement

The Parks Canada Agency led the development of this federal action plan, working together with the other competent minister(s) under the Species at Risk Act. The Field Unit Superintendent hereby approves this document indicating that the relevant Species at Risk Act requirements related to action plan development have been fulfilled in accordance with the Act.

Approved by:

Rick Kubian
A/Field Unit Superintendent, Lake Louise, Yoho and Kootenay Field Unit, Parks Canada Agency

Preface

The federal, provincial, and territorial government signatories under the Accord for the Protection of Species at Risk (1996)[2] 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 action plans for species listed as Extirpated, Endangered, and Threatened for which recovery has been deemed feasible. They are also required to report on progress five years after the publication of the final document on the Species at Risk Public Registry.

Under SARA, one or more action plan(s) provides the detailed recovery planning that supports the strategic direction set out in the recovery strategies for the species. The plan outlines what needs to be done to achieve the population and distribution objectives (previously referred to as recovery goals and objectives) identified in the recovery strategies, including the measures to be taken to address the threats and monitor the recovery of the species, as well as the proposed measures to protect critical habitat that has been identified for the species. The document also includes an evaluation of the socio-economic costs of the action plan and the benefits to be derived from its implementation. The action plan is considered one in a series of documents that are linked and should be taken into consideration together with the COSEWIC status reports, recovery strategies, and other action plans produced for these species.

The Minister responsible for the Parks Canada Agency (the Minister of the Environment and Climate Change) is the competent minister under SARA for the species found in Yoho National Park and has prepared this action plan to implement the recovery strategies as they apply to the park, as per section 47 of SARA. It has been prepared to the extent possible in cooperation with local First Nations, Environment and Climate Change Canada, and the province of British Columbia as per section 48(1) of SARA.

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

Acknowledgments

Thanks are owed to all those who participated in the development of this action plan. The contributions of those who took part in the site-based analysis workshops in March 2014 and January 2016 are greatly appreciated.

[2] www.ec.gc.ca/media_archive/press/2001/010919_b_e.htm

Executive summary

The Multi-species Action Plan for Yoho National Park of Canada applies to lands and waters occurring only within the boundaries of the park. The plan meets the requirements for action plans set out in the Species at Risk Act (SARA s.47) for species requiring an action plan that regularly occur in the park.

Park-specific objectives for species at risk are identified in this plan and represent the site's contribution to objectives presented in federal recovery strategies. Species at risk, their residences, and their habitat are protected by existing regulations and management regimes in national parks as well as by SARA. Additional measures that will contribute to the survival and recovery of the species in the park are described in this plan. These measures were identified based on threats and actions outlined in federal and provincial status assessments and recovery documents, as well as knowledge of the status and needs of each species at the park. Population monitoring measures are also identified for the species for which management activities at the sites can contribute to recovery objectives.

No new critical habitat is identified in this action plan. Critical habitat for some species has been identified previously in their respective recovery strategies. Measures used for protection of existing critical habitat are described.

Measures proposed in this action plan will have limited socio-economic impact and place no restrictions on land use outside of Yoho National Park. Direct costs of implementing this action plan will be borne by Parks Canada. Indirect costs are expected to be minimal. Benefits include opportunities to engage with and benefit from traditional knowledge of Indigenous Peoples, including the potential to fill knowledge gaps and enhance and strengthen relationships. Additional benefits include positive impacts on park ecological integrity, and greater awareness and appreciation of the value of biodiversity to Canadians.

Table of contents

1. Context

Canada's national parks protect a country-wide system of representative natural areas of Canadian significance. Parks Canada is responsible for managing these special places for the benefit, education and enjoyment of Canadians, while ensuring that they are protected and maintained so that they are left unimpaired for future generations.

With over a century of accomplishments in establishing and protecting national parks, Parks Canada is a recognised world leader in conservation. Canada's national parks afford a high level of protection to plant and wildlife species that rely upon these lands for their habitat. National parks also provide a unique opportunity to engage Canadians in learning and stewardship activities focused on species at risk. The conservation of species at risk, using both ecological measures and educational programs, is an important part of the day-to-day work of Parks Canada.

This Species at Risk Action Plan describes the work that Parks Canada is doing in Yoho National Park as part of the larger national park conservation program to put vulnerable species on the path to recovery. It is one of the tangible ways Parks Canada protects species at risk, while providing ways to connect and educate Canadians about the endangered wildlife and plants found in these special places. Parks Canada will take a leadership role in implementing this action plan, but its full potential will be achieved by working with others, including Indigenous Peoples, park visitors, neighboring landowners, businesses, local residents and other Canadians.

Yoho National Park protects 1,313 km^2 of the west slope of the Rocky Mountains, extending from the peaks and glaciers of the Continental Divide to the mid-elevation montane forests of the Kicking Horse and Beaverfoot river valleys. The park is adjacent to Banff National Park to the east and Kootenay National Park to the south. These parks, together with Jasper National Park and Mount Robson and Hamber provincial parks, form a 20,069 km^2 protected area that has been designated the UNESCO Canadian Rocky Mountain Parks World Heritage Site.

Yoho National Park encompasses the upper portion of the Kicking Horse River watershed, including all of its major tributaries above the Beaverfoot. Park elevations range from 1025m where the river exits the park, to nearly 3,500m along the Continental Divide. Precipitation levels increase from west to east, and snowfall in particular is more abundant near the divide. The main ecosystem disturbance factors are wildfire, forest insects, avalanches, and fluvial erosion and deposition. This complex mountain landscape supports diverse ecosystems that include alpine meadows, moist subalpine forests, open shrub avalanche slopes, rich riparian zones and alluvial flats, semi-dry montane forest, and small patches of moist cedar-hemlock forest. These ecosystems support a high diversity of species, a number of which are at risk, or are of conservation concern.

"Maintenance or restoration of ecological integrity, through the protection of natural resources and natural processes, shall be the first priority of the Minister when considering all aspects of the management of parks" (Canada National Parks Act s.

8(2)). Species at risk, their residences, and their habitat are therefore protected by existing national park regulations and management regimes. In addition, the Species at Risk Act (SARA) prohibitions protecting individuals and residences apply automatically when a species is listed, and all critical habitat in national parks and national historic sites must be legally protected within 180 days of being identified.

Recovery measures for species at risk will be integrated within the framework of the park management plan and ecological integrity program. National parks maintain comprehensive, scientifically rigorous ecological integrity monitoring and restoration programs that are organized according to the major ecosystems present in the park. The recovery measures described in this action plan are organized in the same manner. Parks Canada's ecological integrity programs make contributions to the recovery of species at risk by providing inventory and monitoring data, through the implementation of habitat restoration projects, and other conservation measures. The species-specific measures outlined in this plan will in turn contribute to maintaining and improving the ecological integrity of Yoho National Park by improving the conservation status of native species and their habitat.

In addition to status assessments, a final SARA recovery strategy has been completed for Olive-sided Flycatcher, and a proposed recovery strategy has been prepared for Little Brown Myotis. A recovery strategy for Whitebark Pine is currently under development. These documents provide guidance for the recovery of individual species, including strategic directions, recovery objectives, identification of critical habitat to the extent possible, and threats. This action plan was developed and will be implemented in a manner that is consistent with these recovery documents, and should be viewed as part of this body of linked strategies and plans.

1.1 Scope of the action plan

The geographic scope of this action plan includes all lands and waters managed by Parks Canada in Yoho National Park. This multi-species action plan has been written specifically for Yoho National Park because Parks Canada is legally responsible for species at risk on park lands and waters, has the ability to take direct conservation action, and deals with different threats, legislation, and management priorities than areas outside the park. The advantage of a multi-species action plan is that it can minimize redundancies while allowing for coordination of key actions affecting multiple species at risk where these actions overlap in space or time.

Action plans are legally required for all SARA Schedule 1 listed endangered and threatened species once a final recovery strategy has been published on the Species at Risk (SAR) Public Registry. This action plan is a SARA action plan (as per SARA s.47) for the Olive-sided Flycatcher. It is also consistent with current direction in the proposed recovery strategy for Little Brown Myotis, and the draft recovery strategy for Whitebark Pine.

This action plan addresses SARA-listed species that regularly occur in Yoho National Park which (will) require an action plan under SARA (s.47) (Table 1). The plan will be amended as required, or additional plans will be prepared, to meet SARA requirements for action planning.

Table 1. Species at risk included in the action plan for Yoho National Park.

Species	Scientific name	SARA Schedule 1 status
Little Brown Myotis	*Myotis lucifugus*	Endangered
Olive-sided Flycatcher	*Contopus cooperi*	Threatened
Whitebark Pine	*Pinus albicaulis*	Endangered

2. Site-based population and distribution objectives

The potential for Parks Canada to undertake management actions at the park that will contribute to the recovery of each species was assessed. Site-specific population and distribution objectives were developed (Appendix A) to identify the contribution that the park can make towards achieving the national objectives presented in federal recovery strategies. Monitoring activities that are directly linked to the site-based population and distribution objectives are also reported in Appendix A. If there is little opportunity for the park to contribute to the recovery of a species, site-specific objectives and conservation measures may be limited to protection measures in place under the Canada National Parks Act and SARA, population monitoring, and habitat maintenance or restoration through the existing management regime at the site. This is the case for Olive-sided Flycatcher, where population and distribution objectives for Yoho National Park are not meaningful at the scale of this action plan because threats cannot be controlled in the park or do not exist in the park (e.g., loss of overwintering habitat elsewhere, migratory impacts), and the population within the park is a very small part of the Canadian distribution.

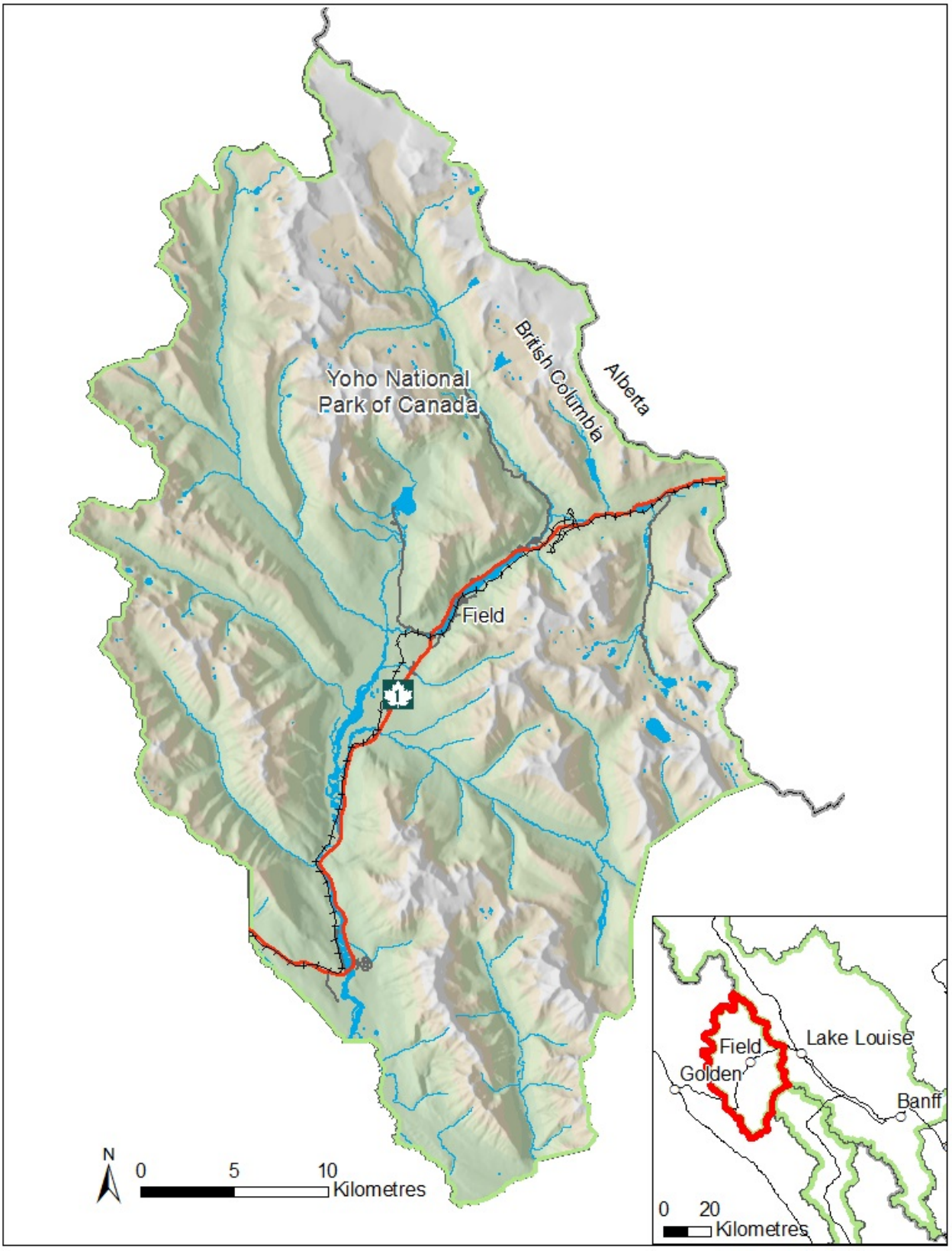

Figure 1: Yoho National Park

3. Conservation and recovery measures

Yoho National Park is situated on the edge of a large protected area complex – the Canadian Rocky Mountain Parks World Heritage Site. Its east and southeast borders are functionally invisible, as similar levels of habitat protection occur within adjacent protected areas. The western and northern boundaries of the park, however, are potentially more significant for species conservation as adjacent lands are managed for a variety of different land uses that affect habitat in various ways. Forest harvesting, wildfire suppression, ranching, gravel extraction, mining, and roads are significant contributors to landscape change in the surrounding area. Collaboration with adjacent land managers will be important to conserving cross-boundary species at risk.

The main threats to biodiversity within the park are highway and railway-related wildlife mortality, historical fire suppression, and the introduction of non-native invasive species (Parks Canada 2008). Climate change is also likely to have a significant influence on the biodiversity of the park over the medium to long-term. For the two animal species included in this action plan, the known principal threats originate outside the park, and actions taken within the park will have a limited impact on species recovery. The causes of population decline for Little Brown Myotis and Whitebark Pine are well understood, while the causal factors responsible for the decline of Olive-sided Flycatcher are unknown. For all three species there are actions that can be taken by Parks Canada to contribute to their protection and where feasible their recovery within Yoho National Park.

Yoho National Park receives an estimated 610,000 visitors a year. Many of these visitors are travelling through on the Trans-Canada Highway and only stop briefly in the park. Popular attractions within the park include Takakkaw Falls, Lake O'Hara, Field, and Emerald Lake in the north, and Wapta Falls in the south. Communication efforts that target these few areas, along with the drive-through visitor segment, will optimize the potential to engage and connect with Canadians to build awareness of species at risk, and to encourage them to get involved in recovery efforts.

This action plan identifies measures to achieve the site-based population and distribution objectives, along with measures required to protect the species and gather more information about them. The list of measures that will be implemented is presented in Appendix B. These measures were evaluated using a ranking system and all of the measures received either a medium or high priority. The ranking process considered the ecological effectiveness of measures, along with opportunities to work with partners, engage visitors, and connect with external audiences. Wherever possible, Parks Canada is taking an ecosystem approach, prioritizing actions that benefit more than one species to effectively and efficiently protect and recover species at risk.

Several themes are reflected in these measures: active management; disease management; filling knowledge gaps; and working together in endangered species recovery. These themes and related conservation measures are discussed briefly below.

Active management

Habitat restoration through active management is important to ensuring the viability of Whitebark Pine. The habitat required by this species is vulnerable to forest ingrowth by other tree species, particularly where natural fire cycles have been disrupted through fire suppression. Climate change may also contribute to increased competition with other plant species. Restoring natural fire cycles on the landscape is an important strategy for ensuring the persistence of high quality Whitebark Pine habitat. Fire may also play a role in creating optimum breeding habitat for Olive-sided Flycatcher, as this species prefers a mix of live and dead trees within a mosaic of forest patches of different age structure particularly near wetlands. Parks Canada is internationally recognized for leadership in restoring fire through prescribed burning and continues to conduct burns and manage wildfire as part of a national restoration program.

Disease management

Two exotic invasive diseases threaten two native species covered in this plan. White-nose syndrome (WNS) is an introduced fungal disease affecting numerous species of bats, including Little Brown Myotis. It has had a devastating effect on bat colonies in eastern North America, and has recently been discovered in Washington State. Addressing the threat of WNS to Little Brown Myotis in the park will be critical to the persistence of the local population. The Canada National Parks Act General Regulations prohibit anyone without a permit from entering a cave or mine in a national park, and decontamination protocols are in place for anyone granted a permit. Compliance with these measures will reduce the risk of human transmission of the disease into potential hibernacula. White pine blister rust is another introduced fungus that is affecting 5-needle pines in North America, including Whitebark Pine. The identification and propagation of blister rust resistant trees, followed by the planting of these trees in suitable habitat is the key strategy to maintain persistence of Whitebark Pine on the landscape. Efforts to identify resistant trees are underway.

Filling knowledge gaps

Inventory and monitoring work is required to fill gaps in the knowledge base necessary to build programs for some species at risk. For example, more data are required to determine occupancy and population estimates, and to identify potential maternity roosting and hibernating sites for Little Brown Myotis. More precise data on the spatial distribution of Whitebark Pine within the park are required to support protection and recovery efforts. This is important knowledge that can help focus and prioritize recovery efforts. Working with Indigenous communities may allow the incorporation of traditional knowledge to fill information gaps for some species.

Working together

Engaging others in recovery of species at risk through involvement of Indigenous communities, partnering efforts, visitor experience opportunities, and outreach activities is an important component of this multi-species action plan. Through on-site interpretation efforts, park visitors can learn about endangered species and how personal behavior can contribute to species protection. By gaining awareness and knowledge, visitors can take an active role in recovery actions. Observant visitors can

contribute occurrence data on birds, bats, and healthy Whitebark Pine, provided they know what to look for. Communication efforts can increase awareness and encourage stewardship and compliance with regulations and conditions for activities such as tree falling, building demolition and cave entry. These will be important recovery measures for Little Brown Myotis, which may be vulnerable to habitat loss or unintentional spread of white nose syndrome due to human actions. Engaging Indigenous communities may create opportunities to incorporate traditional knowledge, and work together on specific recovery actions for species at risk. Education and awareness programs will also target external audiences. This is critical, as most of the species that are included in this action plan are found regionally beyond the park boundaries. External communications may also help to build support for species at risk generally.

4. Critical habitat

Critical habitat is “the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species’ critical habitat in the recovery strategy or in an action plan for the species” (SARA s. 2(1)). No critical habitat has been identified within Yoho National Park for any of the species included in this plan (as of January 2016). Critical habitat for Whitebark Pine is still being defined during the development of the federal recovery strategy. The proposed federal recovery strategy for Little Brown Myotis provides a partial definition of critical habitat as any hibernacula used by bats at least once since 1995. At this time there are no known documented hibernacula used by the species in Yoho National Park. The final recovery strategy for Olive-sided Flycatcher does not identify critical habitat due to data deficiencies. As more knowledge about habitat needs, and more data about habitat use by these species is gathered, critical habitat may be identified in upcoming or revised recovery strategies or action plans.

4.1 Proposed measures to protect critical habitat

Critical habitat identified in other recovery documents within Yoho National Park will be legally protected from destruction as per SARA (Sec. 58 (1)).

5. Evaluation of socio-economic costs and of benefits

The Species at Risk Act requires the responsible federal minister to undertake “an evaluation of the socio-economic costs of the action plan and the benefits to be derived from its implementation”.

5.1 Costs

The total cost to implement the multi-species action plan for Yoho National Park will be borne by Parks Canada out of existing salaries and budgets, and national ecosystem restoration project funding. This includes incremental salary costs, materials, equipment, and contracting of professional services for measures outlined in Appendix B. No major socio-economic costs to partners, stakeholders or Indigenous Peoples are expected as a result of this action plan. Specific project implementation will be contingent on funding being allocated through the park’s annual business planning

process, or from alternative funding mechanisms such as Parks Canada's national Conservation and Restoration (CoRe) program.

Some recovery measures are already being implemented in the park. The other proposed measures will be integrated into the operational management of the park and there will be few new costs. These costs will be covered by prioritization of existing funds and salary dollars at the park and thereby will not result in additional costs to society.

The action plan applies only to lands and waters in Yoho National Park, and does not include any restrictions to land use outside park boundaries. This action plan, therefore, will not result in any significant socio-economic impacts to the public. Minor restrictions may be placed on visitor activities on park lands and waters where they are considered necessary to protect and recover species at risk.

5.2 Benefits

Measures presented in this action plan for Yoho National Park will contribute to meeting recovery strategy objectives for threatened and endangered species. These measures are expected to have an overall positive impact on ecological integrity and enhance opportunities for appreciation of the park by visitors and the general public. Opportunities to engage with Indigenous communities and incorporate traditional knowledge could yield significant benefits for species at risk. Other measures in the action plan could result in additional benefits to Canadians, such as yielding positive impacts on biodiversity, and contributing to the value individuals derive from preserving native species and ecosystems.

The proposed measures seek a balanced approach to reducing or eliminating threats to species at risk populations and habitats, and include protection of individuals and their habitat (e.g., restrictions to human activities within areas occupied by the species, combined with ongoing research and monitoring), potential species re-establishment (e.g. planting Whitebark Pine), and increasing public awareness and stewardship (e.g., interpretive signage, visitor programs, and highlights in communication media).

Potential economic benefits of recovering species at risk found in the park cannot be easily quantified, as many of the values related to these species are non-market considerations that are difficult to evaluate in monetary terms. Biodiversity has intrinsic worth, and may be valued by Canadians for aesthetic, cultural, spiritual, recreational, educational, historic, economic, medical, ecological and scientific reasons. The conservation of species at risk is an important component of the Government of Canada's commitment to conserving biological diversity, and is important to Canada's current and future economic and natural wealth.

Maintaining healthy ecosystems and a full range of native biodiversity is a key component of visitor experience in Yoho National Park. Wildlife viewing is one of the most common visitor activities in the park and this helps support the economic health of the communities in the area.

Implementing this action plan is expected to have positive benefits for park visitors, local residents, and Indigenous Peoples. Some activities in the plan may create opportunities for people to become involved in the recovery of species at risk and for cooperation and community partnerships in species at risk recovery. These include opportunities to learn about and take part in the recovery of species at risk, opportunities for visitors, stakeholders and local communities to be involved in conservation issues, opportunities for integration of Indigenous traditional knowledge into biodiversity conservation, and greater awareness of Indigenous values and culture among local residents and visitors to the parks. In doing so the plan supports the goals under the Species at Risk Act which states: “the traditional knowledge of the aboriginal peoples of Canada should be considered in the assessment of which species may be at risk and in developing and implementing recovery measures”.

6. Measuring progress

Reporting on implementation of the action plan, as required by the Species at Risk Act (s. 55), will be done by assessing progress towards carrying out the specific measures outlined in the appendices. Reporting on the ecological and socio-economic impacts of the action plan will be done by assessing progress towards meeting the site-based population and distribution objectives.

7. References

Environment Canada. 2016. Recovery strategy for Olive-sided Flycatcher (*Contopus cooperi*) in Canada. *Species at Risk Act* Recovery Strategy Series. Environment Canada, Ottawa, vii + 52p.

Environment Canada. 2015. Recovery strategy for Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), and Tri-colored Bat (*Perimyotis subflavus*) in Canada (Proposed). *Species at Risk Act* Recovery Strategy Series. Environment Canada, Ottawa. 110 pp.

Environment Canada. 2014. Recovery strategy for Whitebark Pine (*Pinus albicaulis*) in Canada (Draft). *Species at Risk Act Recovery* Strategy Series. Environment Canada, Ottawa.

Parks Canada Agency. 2010. Yoho National Park Management Plan. Parks Canada Agency. Ottawa. 75 p.

Parks Canada. 2008. Yoho National Park of Canada, state of the park report. April 2008, 44p.

Appendix A: Species information, objectives and monitoring plans for species at risk in Yoho National Park.

Species	National objectives	Site-based population & distribution objectives	Population trend in YNP (2010-2015)	Population monitoring[3]	General information and broad park approach
Little Brown Myotis	The distribution objective is to maintain the pre-WNS extent of occurrence. Within areas not yet affected by WNS, the population objective is to maintain (and where feasible increase) the current level of the population.[4]	1. Maintain current spatial and temporal distribution. 2. Protect all known hibernacula and maternity roosts.	Data deficient[5], but thought to be stable.	1. Use the North American Bat Monitoring Protocol (NABat) and opportunistic observations to identify significant bat locations (species, numbers) in natural areas and human structures. Monitor these sites to detect any changes. 2. Monitor for bat use and hibernation activity in caves and mines using roost loggers.	WNS has not yet spread to Yoho. Primary conservation approach is to identify important habitat, in particular hibernacula and maternity roosts, and prevent the human transmission of WNS to these sites. Protection of individuals and residences. Continue to actively manage cave access (permit required) and use decontamination protocol to deter the spread of WNS through human vectors.

[3] Where population and distribution objectives have been established for YNP, monitoring is designed to directly measure success in achieving those goals.
[4] Objectives are from the Proposed Recovery Strategy. The reader should consult the final version once completed for the official objectives.
[5] Population has not been monitored historically, as threats were not present. Data collection on bat occupancy has begun due to the westward advance of white-nose syndrome, the principal threat to this species.

Species	National objectives	Site-based population & distribution objectives	Population trend in YNP (2010-2015)	Population monitoring[3]	General information and broad park approach
Olive-sided Flycatcher	Short term: To halt the national decline by 2025 while ensuring that the population does not decrease more than 10% over this time. Long term (after 2025): To ensure a positive 10-year population trend. Distribution objective is to maintain the current extent of occurrence in Canada.	No objectives established: Nests and birds are protected by the Canada National Parks Act and the Migratory Birds Act. Fire management practices may provide more nesting habitat. Yoho is of limited importance to the species national recovery.	Declining, based on breeding bird surveys.	1. Monitor for breeding activity through existing Breeding Bird Surveys. 2. Record incidental observations including those found on external databases such as eBird.	Protection of individuals and residences. Fire management program may be used to enhance habitat.
Whitebark Pine	To establish a self-sustaining, rust-resistant population of Whitebark Pine throughout the species' range that demonstrates natural seed dispersal, connectivity, genetic diversity and adaptability to changing climate (DRAFT).	To establish a self-sustaining, rust-resistant population of Whitebark Pine throughout the species' range in the park that demonstrates natural seed dispersal, connectivity, genetic diversity and adaptability to changing climate.	Infection and mortality rates have increased from 2003 to 2014. White pine blister rust is distributed throughout the park. BC trend is declining.	1. Disease infection, stand density and mortality rate via stand health transects. 2. Hectares of habitat created or restored. 3. Number of potentially resistant trees identified and protected and number of these with stored seeds. 4. If fire is applied, the amount of regeneration 5-years post-fire.	Assess stands to identify trees that are potentially resistant to white pine blister rust. Collect and conserve seeds from potential blister rust resistant trees; test for resistance; plant resistant trees. Forest management practices such as prescribed burning, thinning and wildfire impact mitigation can be used to protect and restore habitat.

Appendix B: Conservation and recovery measures that will be conducted in Yoho National Park.

Species	Measure #	Measure	Desired outcome	Threat or recovery measure addressed	Timeline
FOREST COMMUNITY					
Little Brown Myotis	1	Determine the distribution and relative abundance of Little Brown Myotis, with emphasis on identifying hibernacula and maternity roosting sites.	1. Increase knowledge of bat presence and populations in caves/mines and maternity roosts over each 5 year period. 2. Presence and populations are known for high-potential hibernacula in first 5 year reporting period.	Habitat loss. Exotic invasive species (WNS).	Ongoing
Little Brown Myotis	2	Limit spread of white-nose syndrome by sharing protocols (such as the Canadian National White-Nose Syndrome Decontamination Protocol) for cave researchers, and maintaining access restrictions, to protect bats and their residences.	1. Action plan developed for access to significant bat hibernacula and roosts before WNS arrives. 2. Limit human caused spread of WNS through increased awareness, enforcement of restricted access, and implementation of decontamination protocols and BMPs for researchers.	Disturbance or harm. Exotic invasive species (WNS).	Ongoing.
Little Brown Myotis	3	1. Adopt best practices for the maintenance or decommissioning of park infrastructure that contains Little Brown Myotis roosts. 2. Work with partners and the community to protect important bat sites in buildings.	1. Establish best practices for Parks Canada staff and park stakeholders to address maintenance of infrastructure that contains roosts. 2. Important roosts are identified for infrastructure requiring maintenance, and impacts are mitigated.	Disturbance or harm; destruction of hibernacula or maternity roosts.	Ongoing.

Species	Measure #	Measure	Desired outcome	Threat or recovery measure addressed	Timeline
Little Brown Myotis	4	Enhance current communications aimed at raising awareness, and develop targeted communications in support of actions to prevent disturbance, disease transmission, and potential human-caused mortality.	1. Raise awareness about this species among priority audiences. 2. Support an integrated approach towards increased compliance to prevent habitat degradation and human-caused mortality.	Habitat loss or degradation; Disturbance or harm (recreational or scientific); Invasive species (WNS).	First 5 years.
Whitebark Pine	5	1. Identify putatively rust resistant individuals (Plus Trees) at high priority sites. 2. Conduct Plus Tree seed resistance testing for high probability trees. 3. Collect seed for genetic conservation. 4. Protect high value Plus Trees from mountain pine beetle.	1. Where conditions permit, identify rust resistant trees or high value individuals, and conserve genetic resources. 2. Where mountain pine beetle protection is required, protect high-value individual Whitebark Pine trees.	Invasive non-native / alien species (white pine blister rust); Problematic native species (mountain pine beetle).	Ongoing. Identify rust-resistant stands in high risk areas by 2019.
Whitebark Pine	6	1. Complete predictive habitat model and map of Whitebark Pine distribution for the park. 2. Where stand assessments are completed, they include aspects of stand health (i.e., rust presence/absence and stand density).	1. Predictive map of Whitebark Pine distribution and suitable habitat for the park. 2. Assessed high-value stands in high risk areas. 3. Data inform targeted and efficient management and recovery.	Invasive non-native / alien species (white pine blister rust); Problematic native species (mountain pine beetle); Fire and fire suppression	Predictive map completed by 2017.
Whitebark Pine	7	1. Plant putatively rust resistant seedlings, and when available, confirmed rust resistant seedlings, in priority restoration sites. 2. Inoculate seedlings with mycorrhizal fungi to improve establishment.	1. Plant a minimum of 2000 rust-resistant Whitebark Pine seedlings by 2019. Continue annual planting beyond 2019 as resources are available and based on priority areas for restoration need. 2. Where available, inoculate at least 50% of seedlings with mycorrhizal fungi prior to planting.	Invasive non-native / alien species (white pine blister rust); Fire and fire suppression	Ongoing.

Species	Measure #	Measure	Desired outcome	Threat or recovery measure addressed	Timeline
Whitebark Pine	8	Protect and, where feasible, increase the number and extent of existing stands and of blister rust resistant individuals through habitat management and restoration.	1. Restore WBP habitat (e.g. prescribed fire and mechanical thinning) to a degree that will allow the persistence or expansion of existing stands and the potential for generation of new stands. Target 30 ha by 2019, and continue beyond as resources are available based on priority areas for restoration need. 2. Mitigate threats in priority high value stands.	Fire and fire suppression; Problematic native species (mountain pine beetle)	2019 Beyond 2019 if additional funding is available.
Whitebark Pine	9	Continue communication activities aimed at increasing awareness of, and reducing human-caused impacts on, Whitebark Pine as outlined in the CoRe[6] Whitebark Pine conservation project.	1. Increase awareness about this species among priority audiences. 2. Reduce accidental harm/removal of Whitebark Pine trees.	Human intrusions and disturbance; recreational activities; commercial development – tourism and recreation areas.	Ongoing.
All species in plan	10	Increase general awareness about species at risk that are found in the park, through interpretive programming, targeted communications, and outreach.	1. Increased support and action for SAR conservation and associated management activities. 2. Priority audiences, including park visitors, youth, urban and new Canadians, learn about species at risk found in the park.	Promotes general awareness of species at risk, recovery efforts, and steps that can be taken to contribute to recovery.	Ongoing.
All species in plan	11	Provide timely and effective species-specific communications to target audiences to disseminate knowledge, enhance understanding, and ensure compliance with SARA requirements.	Visitor activities are successfully managed to prevent habitat destruction or harm to individuals of a species.	Human disturbance; habitat loss or degradation; accidental mortality.	First 5 years.

[6] Refers to Parks Canada's **Co**nservation and **Re**storation program.

Species	Measure #	Measure	Desired outcome	Threat or recovery measure addressed	Timeline
All species in plan	12	Acquire data on species distribution and habitat use to fill knowledge gaps in order to increase efficacy of conservation and recovery actions. Data will be acquired through research and monitoring, and by promoting the reporting of observations by park staff, stakeholders, and visitors.	1. Sufficient data is gathered to increase confidence in Detailed Assessments that can be used to inform the next State of the Park Report (SOPR) and the Park Management Plan (PMP). 2. Habitat mapping provides key data for the identification of critical habitat.	All.	On-going. SOPR – 2019 PMP - 2020
All species in plan	13	Strengthen species at risk recovery by working with Indigenous communities to incorporate traditional knowledge into SAR understanding.	Indigenous traditional knowledge is incorporated to fill species knowledge gaps.	This will be specific to the particular knowledge gap.	As opportunities arise.
All species in plan	14	1. Explore the interests of various Indigenous communities in SAR education and recovery. 2. Collaborate with interested communities on outreach, education and visitor experience actions in mutually agreed upon ways.	Increased Indigenous community involvement in the delivery of SAR outreach, education, and visitor experience actions.	This will be specific to the species and type of action.	As opportunities arise.

Species	Measure #	Measure	Desired outcome	Threat or recovery measure addressed	Timeline
All species in plan	15	Work with adjacent land management agencies, conservation scientists, and others to improve understanding and knowledge of populations of species at risk, and to increase the level of recovery of species occurring across park boundaries within multiple jurisdictions throughout the species' range.	1. Data is shared between Parks Canada and other conservation agencies involved in the protection and recovery of species at risk. 2. Different agencies collaborate and keep each other informed of species at risk planning and recovery initiatives.	All.	Ongoing
All species in plan	16	Maintain or increase law enforcement patrols to prevent disturbance, destruction or removal of species at risk and their habitats.	Law enforcement capability is maintained or improved to prevent disturbance to SAR and associated habitat.	Disturbance or harm; habitat loss.	Ongoing.

Appendix C: 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 an SEA is to incorporate environmental considerations into the development of public policies, plans, and program proposals to support environmentally sound decision-making and to evaluate whether the outcomes of a recovery planning document could affect any component of the environment or achievement of any of the Federal Sustainable Development Strategy[7] goals and targets.

Recovery planning is intended to benefit species at risk and biodiversity in general. However, it is recognized that recovery actions may also inadvertently lead to environmental effects beyond the intended benefits. The planning process, which is 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, and are summarized below.

Overall, it is anticipated that implementation of this action plan will have a beneficial impact on non-target species, ecological processes, and the environment in Yoho National Park. This plan puts into practice recovery goals presented in draft recovery strategies, which were subject to SEAs during the development of those documents. Further, this action plan was developed to benefit species at risk that regularly occur in the park; all of these species were considered in the planning process. Where appropriate, measures were designed to benefit multiple species. The planning process was also guided by priorities identified in the park's ecological integrity monitoring program and the park management plan (Parks Canada, 2010). Consequently activities outlined in this plan address key management priorities aimed at improving the broader ecological health of the park. Finally, this plan outlines stewardship actions, educational programs, and awareness initiatives that will involve visitors, local residents, Indigenous organizations, stakeholders, and the general public. This will lead to greater appreciation, understanding, and action towards the conservation and recovery of species at risk in general.

[7] www.ec.gc.ca/dd-sd/default.asp?lang=En&n=F93CD795-1