

Multi-species Action Plan for Kejimikujik National Park and National Historic Site of Canada



2017

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¹ <http://sararegistry.gc.ca/default.asp?lang=En&n=24F7211B-1>

Approval Statement

The Parks Canada Agency led the development of this federal action plan under the Species at Risk Act. The relevant 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.

Recommended by:



Theresa Bunbury
*At Site Superintendent, Kejimikujik National Park and National Historic Site
Parks Canada Agency*

Approved by:



Julie Torpa
*Field Unit Superintendent, Mainland Nova Scotia 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 have been identified for the species. The action plan 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, management plans, 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 in Kejimikujik National Park and National Historic Site and has prepared this action plan to implement the recovery strategies as they apply to these sites, as per section 47 of SARA. It has been prepared in cooperation with Environment and Climate Change Canada, Fisheries and Oceans Canada, the Province of Nova Scotia, and Kwiilmu'kw Maw-klusuaqn (KMK), as per section 48(1) of SARA.

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

Acknowledgments

Thanks are extended to the Blanding's Turtle, Eastern Ribbonsnake, Piping Plover and Atlantic Coastal Plain Flora Recovery Teams for their knowledge and input. The following individuals and organizations also facilitated the development of this document through their participation in the site-analysis process: Environment and Climate Change Canada (Julie McKnight), Nova Scotia Department of Natural Resources (Mark Elderkin), Kwiilmu'kw Maw-klusuaqn (Michael Cox), Mersey Tobeatic Research Institute (Jeffie McNeil, Brad Toms, Amanda Lavers), Friends of Keji (Norm Green), Acadia

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

University (Tom Herman, Steve Mockford), and Bird Studies Canada (Sue Abbott). Parks Canada would also like to thank NatureServe Canada and the Atlantic Canada Conservation Data Centre for providing data and information used in assessing the status of species in Kejimikujik National Park and National Historic Site, and Dave Andrews at Environment and Climate Change Canada for preparing the critical habitat maps.

Executive Summary

The *Multi-species Action Plan for Kejimikujik National Park and National Historic Site of Canada* applies to lands and waters occurring within the boundaries of Kejimikujik National Park and National Historic Site (KNP and NHS), including Kejimikujik National Park Seaside. 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 and that regularly occur within these sites. Measures described in this plan will also provide benefits for other species of conservation concern that regularly occur at KNP and NHS.

Where it has been determined that the park can conduct management activities to help recover and/or manage a species, park-specific objectives are identified in this plan and represent the site's contribution to those presented in federal recovery strategies and management plans. Species at risk, their residences, and their habitat are protected by existing regulations and management regimes in national parks and national historic sites, as well as by SARA. Additional measures that will contribute to the survival, recovery and understanding of the species in Kejimikujik are described in this plan. These measures were identified based on threats and measures outlined in federal and provincial status assessments and recovery documents, as well as knowledge of the status and needs of each species in Kejimikujik NP and NHS. Population monitoring measures are also identified for the species for which management activities at these sites can contribute to recovery.

Critical habitat is identified in this action plan for Vole Ears Lichen, and for two additional sites for Eastern Ribbonsnake (Atlantic population). Measures used for protection of critical habitat in Kejimikujik are described.

Measures proposed in this action plan will have limited socio-economic impact and place no restrictions on land use outside of KNP or NHS. Direct costs of implementing this action plan will be borne by Parks Canada. Indirect costs are expected to be minimal, while benefits will include positive impacts on ecological integrity, greater awareness and appreciation of the value of biodiversity to Canadians, and opportunities for engagement of local communities and Indigenous groups.

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1. Context

The inland portion of Kejimikujik National Park and National Historic Site of Canada (hereafter Kejimikujik Inland) was acquired from the province of Nova Scotia in 1967 and formally established as a national park in 1974. The coastal portion of the park, Kejimikujik National Park of Canada Seaside (hereafter Kejimikujik Seaside), was acquired from the province in 1985 and was designated as part of the park in 1988. These two areas protect 403 km² of lands and waters in southwestern Nova Scotia (Figure 1), and hereafter are collectively referred to as Kejimikujik, or KNP and NHS. Kejimikujik Inland was established to protect representative examples of the Atlantic Coastal Uplands Region. Its forests include mixed coniferous and deciduous vegetation comprised of tree species including maple, hemlock, birch, beech, red oak, spruce and pine. This is often described as the Acadian forest type, with a high level of understory plant and animal diversity. Park aquatic ecosystems reflect the influence of shallow, acidic, warm water lakes, still waters and meandering streams featuring significant seasonal water level changes. Kejimikujik Seaside was established to provide protection for the unique coastal attributes of this region.

In 1995, Kejimikujik Inland was designated as a national historic site. This makes it unique – it is the only Canadian national park where a majority of the landscape has also been designated as a national historic site. Mi'kmaq have lived and traveled in the Kejimikujik area for at least 4,500 years and KNP and NHS contains petroglyphs, habitation sites, fishing areas, hunting territories, travel routes and burial sites. The wilderness character of Kejimikujik is an integral part of this cultural landscape. At Kejimikujik Seaside, Mi'kmaq used the coast for hunting and gathering while camping in the surrounding harbours. At the time of European expansion into North America, the Mi'kmaq occupied a vast territory in what is now Atlantic Canada. According to oral traditions, their overall territory was divided into seven districts. The district of Kespukwitk (“lands end”) covers southwestern Nova Scotia and includes Kejimikujik.

In 2001, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) designated the five counties of southwest Nova Scotia (Annapolis, Digby, Yarmouth, Shelburne, and Queens) as a biosphere reserve in recognition of the area's rich biodiversity and cultural history. Kejimikujik Inland, the Tobeatic Wilderness Area, and a portion of the Shelburne River (a Canadian Heritage River) function as the core protected area for the Southwest Nova Biosphere Reserve. This reserve is the second largest in Canada and first to be designated in Atlantic Canada. It focuses on regional cooperation and sustainable development.

Maintenance and restoration of ecological integrity is the first priority of national parks (*Canada National Parks Act* s.8(2)). Species at risk, their residences, and their habitat are therefore protected in Canada's national parks by existing national park regulations and management regimes as well as by SARA. 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 Parks Canada's ongoing ecological integrity programs. 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 therefore 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, and through the implementation of habitat restoration projects and other conservation action on the ground. The species-directed measures outlined in this plan will in turn contribute to maintaining and improving the ecological integrity of Kejimikujik by improving the conservation status of native species and their habitat, and maintaining biodiversity. Species at risk information will also be integrated into comprehensive visitor experience, education and outreach programs, helping to improve awareness, appreciation, and support for recovery efforts in Kejimikujik and beyond.

A number of federal and provincial recovery strategies and plans, management plans, and action plans have been prepared for species considered in this action plan. Along with status assessments, those documents provide guidance for the recovery of individual species, including strategic directions, recovery objectives, critical habitat, and threats. This action plan was developed and will be implemented in a manner that is consistent with those 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 within the boundaries of Kejimikujik, including both Kejimikujik Inland and Kejimikujik Seaside (Figure 1), as described in Schedule 1 of the *Canada National Parks Act*. This multi-species action plan has been written specifically for Kejimikujik NP and NHS because the Parks Canada Agency (PCA) is legally responsible for species at risk on PCA lands and waters, has the ability to take direct conservation action, and deals with different threats, legislation, and management priorities than areas outside of these sites.

Multi-species Action Plan for Kejimikujik National Park and National Historic Site

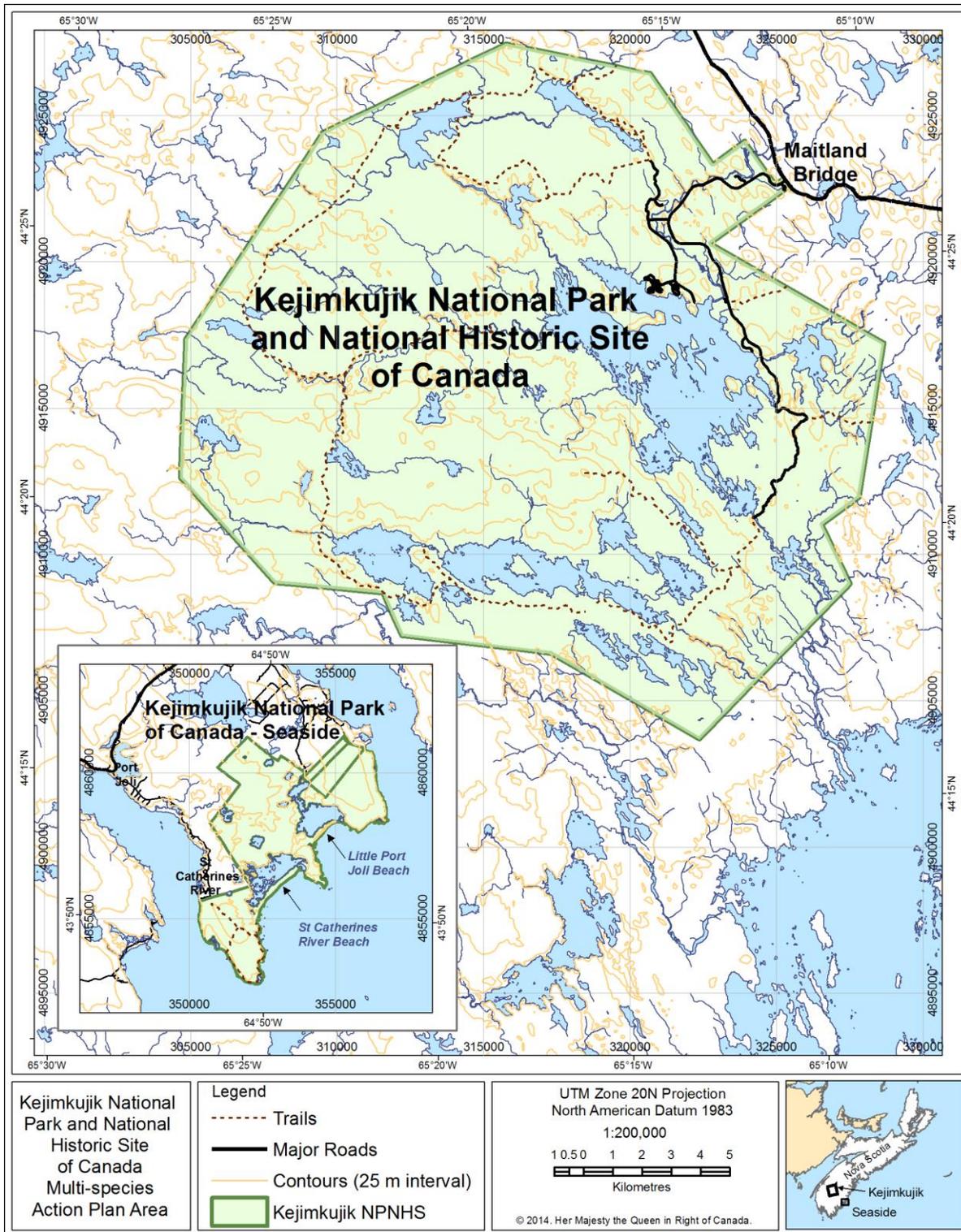


Figure 1. Geographic scope for the multi-species action plan for KNP and NHS.

This action plan addresses SARA-listed species that regularly occur in KNP and NHS and which require an action plan under SARA (s.47), as well as other species of conservation concern (Table 1). This approach both responds to the legislated requirements of the SARA and provides the Parks Canada Agency with a comprehensive plan for species conservation and recovery at these sites. The plan will be amended as required to meet SARA requirements for action planning.

Table 1. Species included in the multi-species action plan for KNP and NHS.

Species	COSEWIC assessment	SARA Schedule 1 status
Blanding's Turtle (Nova Scotia population) <i>Emydoidea blandingii</i>	Endangered	Endangered
Little Brown Myotis <i>Myotis lucifugus</i>	Endangered	Endangered
Northern Myotis <i>Myotis septentrionalis</i>	Endangered	Endangered
Piping Plover <i>Charadrius melodus melodus</i>	Endangered	Endangered
Tri-colored Bat <i>Perimyotis subflavus</i>	Endangered	Endangered
Vole Ears Lichen <i>Erioderma mollissimum</i>	Endangered	Endangered
American Eel <i>Anguilla rostrata</i>	Threatened	Under listing consideration
Barn Swallow <i>Hirundo rustica</i>	Threatened	Under listing consideration
Canada Warbler <i>Wilsonia canadensis</i>	Threatened	Threatened
Chimney Swift <i>Chaetura pelagica</i>	Threatened	Threatened
Common Nighthawk <i>Chordeiles minor</i>	Threatened	Threatened
Eastern Ribbonsnake (Atlantic population) <i>Thamnophis sauritus</i>	Threatened	Threatened
Olive-sided Flycatcher <i>Contopus cooperi</i>	Threatened	Threatened
Blue Felt Lichen <i>Degelia plumbea</i>	Special Concern	Under listing consideration
Eastern Wood-Pewee <i>Contopus virens</i>	Special Concern	Under listing consideration

Species	COSEWIC assessment	SARA Schedule 1 status
Long's Bulrush <i>Scirpus longii</i>	Special Concern	Special Concern
Monarch <i>Danaus plexippus</i>	Special Concern	Special Concern
Rusty Blackbird <i>Euphagus carolinus</i>	Special Concern	Special Concern
Snapping Turtle <i>Chelydra serpentina</i>	Special Concern	Special Concern
Water Pennywort <i>Hydrocotyle umbellata</i>	Special Concern	Threatened
Black Ash* <i>Fraxinus nigra</i>	Not listed	Not listed
Eastern Moose^ (Mainland Population) <i>Alces alces americana</i>	Not listed	Not listed

* Listed as Threatened by the Province of Nova Scotia

^ Listed as Endangered by the Province of Nova Scotia

2. Site-based Population and Distribution Objectives

The potential for PCA to undertake management actions at these sites that will contribute to the recovery of each species was assessed. Site-specific population and distribution objectives were developed to identify the contribution that Kejimikujik can make towards achieving the national objectives presented in recovery strategies and management plans (Appendix A). Monitoring activities are also reported in Appendix A because they are directly linked to population and distribution objectives.

If there is little opportunity for the Kejimikujik NP and NHS to contribute to the recovery of a species, site-specific objectives and conservation actions may be limited to protection measures in place under the *Canada National Parks Act* and SARA, population monitoring, habitat maintenance and restoration through the existing management regime at these sites. For many species, population and distribution objectives for park lands are not meaningful at the scale of this action plan for various reasons, including: 1) threats cannot be controlled in the park or do not exist in the park (e.g., widespread disease, loss of overwintering habitat elsewhere); 2) the species is only transient in the park; or 3) population within the site is a very small part of the Canadian distribution or is unknown or unconfirmed.

3. Conservation and Recovery Measures

The forests, wetlands, freshwater, and coastal habitats of Kejimikujik are biologically diverse and provide important ecosystem functions for species at risk. This action plan includes assessment of the knowledge, threats, and status of populations of each species at risk in Kejimikujik.

This action planning process identified measures to achieve the site-based population and distribution objectives, along with measures required to protect the species and learn more about them. The process of determining which measures will be conducted by the Park (Appendix B) and which measures will be encouraged through partnerships or when additional resources come available (Appendix C) involved a prioritization process. Additional measures have been developed for Kejimikujik that focus on outreach, education, and visitor experience related to species at risk (Appendix D). The prioritization process primarily considered ecological effectiveness of measures, and also included consideration of opportunities to increase the value of visitor experience to the park, opportunities to increase awareness through external relations, and budgetary opportunities and constraints. Wherever possible, Kejimikujik is taking an ecosystem approach, prioritizing actions that benefit numerous species at once to effectively and efficiently protect and recover species at risk.

Five themes have emerged from the identification of measures: Restoration and Protection; Threat Mitigation; First Nation Involvement; Volunteer Stewardship and Visitor Engagement; and Filling Knowledge Gaps.

Restoration and Protection

Restoration and protection of habitats and populations are key activities for the conservation and recovery of species at risk. Work will continue on projects such as Piping Plover habitat enhancement efforts at Kejimikujik Seaside, the placement of Barn Swallow nesting boxes in current and historical locations, and the protection and maintenance of habitats for species at risk that occur in Kejimikujik.

Threat Mitigation

Kejimikujik will continue to assess and mitigate threats to species at risk. This will involve continuing the nest protection program for Blanding's Turtles and Snapping Turtles to prevent destruction of nests by predators or flooding. The campground food and garbage awareness program will work to reduce the number of hyperabundant predators with artificially elevated populations that prey on turtle/bird eggs and hatchlings. Road mortality mitigation measures include speed reduction and signage along roadside nesting areas for the Blanding's Turtle. Road barriers will be placed at Grafton Lake to mitigate road mortality for the Eastern Ribbonsnake. The Freshwater Recovery project in Kejimikujik aims to prevent the introduction and/or establishment of exotic predatory fish which could threaten the Blanding's Turtles and Eastern Ribbonsnakes. In addition, beach closures and barriers will be used to mitigate human disturbance on Piping Plover nesting beaches and high-use visitor areas with Water Pennywort.

First Nation Involvement

Kejimikujik is part of a cultural landscape where Mi'kmaw people have lived in and traveled through for at least 4,500 years. There are a number of culturally significant species at risk in Kejimikujik including but not limited to the American Eel, Mainland Moose, and Black Ash. Kejimikujik will work with Mi'kmaw partners in species at risk

recovery efforts, to connect and share knowledge in non-conventional ways, and to highlight the culturally significant species at risk that occur within KNP and NHS.

Volunteer Stewardship and Visitor Engagement

Kejimikujik is part of a large volunteer program that encompasses the greater Kejimikujik ecosystem. Each year, over 300 volunteers contribute more than 10,000 hours of their time to species at risk recovery and environmental conservation. This represents over 155,000 hours since 2000. One example is the large role that volunteers play in Blanding's Turtle nest protection and hatchling emergence. Kejimikujik will continue to involve the public in meaningful recovery actions for species at risk through the volunteer program. In addition, over 70% of visitors to Kejimikujik are repeat visitors. Many of these individuals visit annually and understand how their actions can positively influence species recovery (i.e., watching for wildlife while driving, proper campground garbage and food storage, or by volunteering).

Filling Knowledge Gaps

Research and monitoring are required to fill gaps in the knowledge base for some species at risk that are cryptic, long-lived, or recently listed. Many of these actions will require partnerships and/or additional funding, and will benefit from the opportunity to collaborate with the academic community and the volunteer program. This includes an assessment of the long-term effectiveness and recovery gains from the turtle headstarting program, determination of distribution and abundance for some of the species at risk in Kejimikujik, and research to develop methods to overcome the challenges involved in Eastern Ribbonsnake recovery. Refer to the schedule of studies in relevant recovery strategies for further details.

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)). At the time of writing of this document, it was possible to identify additional critical habitat in KNP and NHS for the Eastern Ribbonsnake and the Vole Ears Lichen. Critical habitat has already been identified in Kejimikujik in recovery strategies for the Piping Plover, Blanding's Turtle, Eastern Ribbonsnake, and Water Pennywort. Where critical habitat identification is not complete, it will be identified in an upcoming or revised action plan or revised recovery strategy.

4.1 Identification of Critical Habitat for Eastern Ribbonsnake (Atlantic population)

4.1.1. Geographic Location

Two additional areas of critical habitat are newly identified for the Eastern Ribbonsnake near Grafton Lake (Figure 2). These areas are overwintering sites identified. Overwintering habitat is critical for ribbonsnake survival (Parks Canada Agency, 2012b).

The two forested overwintering sites at Grafton Lake in Kejimikujik, are the first confirmed in Nova Scotia, and were discovered by observing snakes in early spring and late fall. Both sites are located in mixedwood forests, approximately 150 m from the nearest wetland, in sloped and well-drained areas with numerous small underground holes. It has been observed that while snakes return to the same general site each year, the concentration spots vary, suggesting that the snakes may be using different underground holes each winter.

Critical habitat at the terrestrial overwintering site for the Eastern Ribbonsnake was identified using a similar process to the identification of wetland-based critical habitat in the species recovery strategy (Section 6.2). The following process was applied to identify the extent of the critical habitat:

- Sites were included that were confirmed as an overwintering area for two or more winters based on late fall and early spring sightings. A minimum convex polygon (MCP) was drawn around all observation points at the site.
- Critical habitat includes the area within the MCP, as well as a 100 metre zone around the boundaries of the MCP to capture travel to and from the overwintering site.

This process was specific to the two overwintering sites at Grafton Lake. As more overwintering sites are identified, the process will be reviewed to determine if a standard protocol can be developed that applies to all overwintering critical habitat.

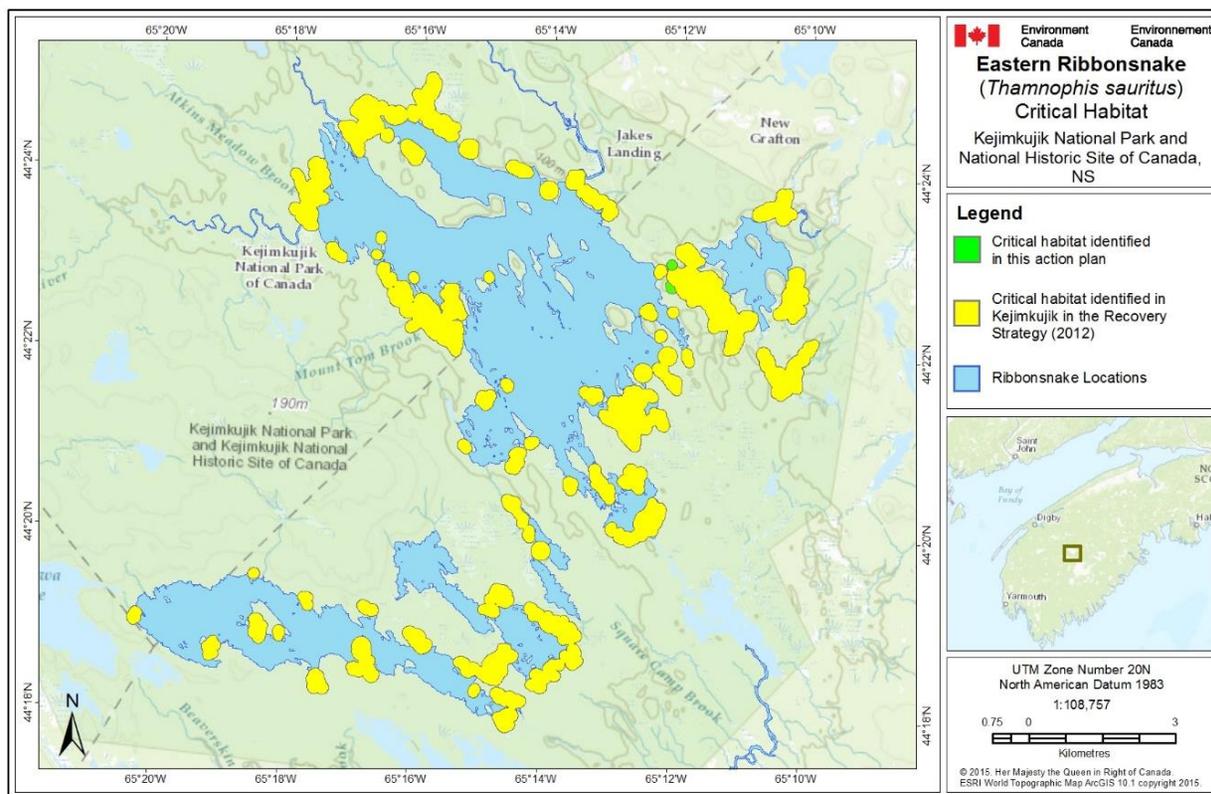


Figure 2: Critical habitat identified for the Eastern Ribbonsnake in Kejimikujik. The two new areas of critical habitat are shaded in green. Ribbonsnake locations shown in bright blue are those identified in the Recovery Strategy for the Eastern Ribbonsnake where there have been confirmed sightings within the last ten years (Parks Canada Agency, 2012b).

4.1.2. Biophysical Attributes

The biophysical attributes of suitable Eastern Ribbonsnake habitat, including basking, cover, feeding/shedding, gestation, birthing and mating habitat, are detailed in section 1.81 of the recovery strategy (Parks Canada Agency, 2012b). Critical habitat for the Eastern Ribbonsnake occurs where the critical habitat criteria and methodology described in section 6.2 of the recovery strategy are met (Parks Canada Agency, 2012b). Additional criteria for the identification of overwintering site critical habitat is detailed above, as it relates to known concentration areas, and allowing for travel to and from the overwintering site.

4.1.3 Examples of Activities Likely to Result in Destruction of Critical Habitat

Examples of activities likely to result in the destruction of critical habitat are described in section 6.4 of the recovery strategy (Parks Canada Agency, 2012b).

4.2 Identification of Critical Habitat for Vole Ears Lichen

4.2.1 Geographic Location

Additional critical habitat for Vole Ears Lichen is identified in Figure 3. This plan identifies one new site in addition to the sites identified in Table 5 of the Vole Ears Lichen recovery strategy (Environment Canada, 2014b).

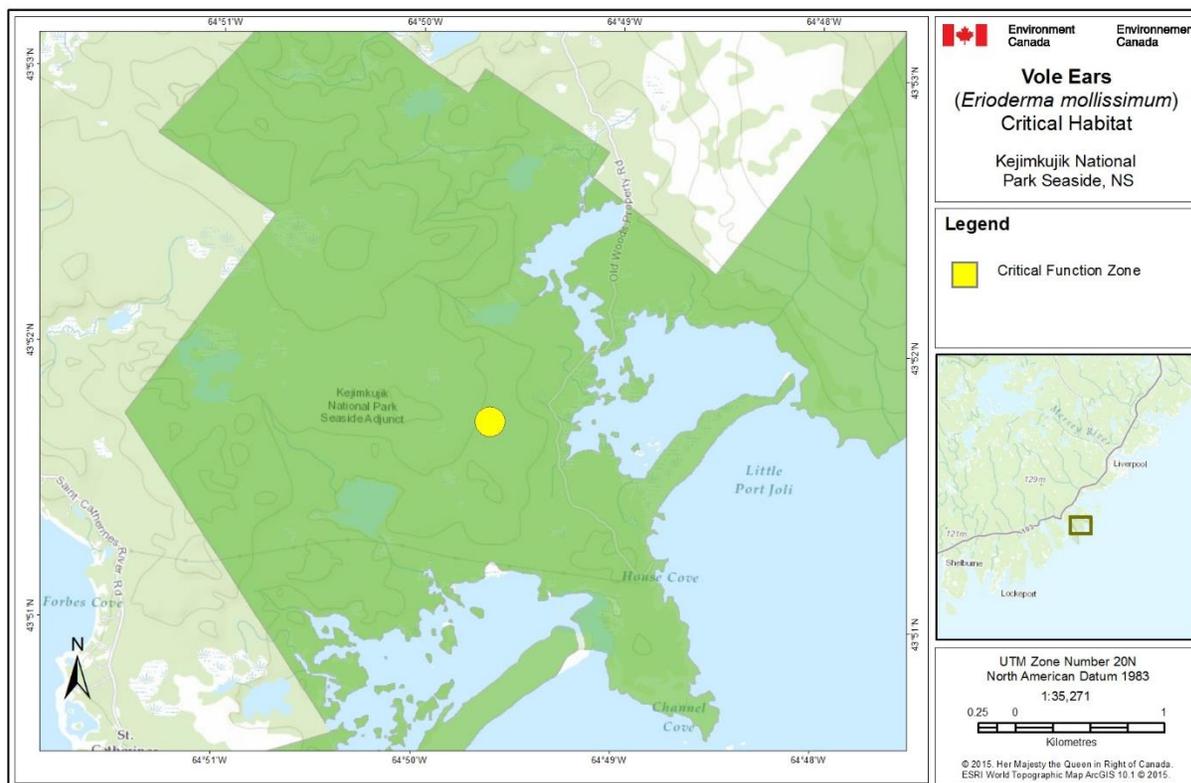


Figure 3. Critical habitat identified for Vole Ears Lichen in Kejimikujik. As outlined in the Recovery Strategy for Vole Ears Lichen, the critical function zone is identified as 100 m around the lichen and its substratum and an area around the wetland in which it occurs, or is adjacent to, dependent on wetland size as follows: for wetlands smaller than 100 m², a critical function zone of 100 m radius surrounding the wetland is identified and for wetlands greater than 100 m², a critical function zone of 50 m surrounding the wetland is identified (Environment Canada, 2014b).

4.2.2 Biophysical Attributes

The biophysical attributes of critical habitat for Vole Ears Lichen in Nova Scotia are described in section 7.1 of the recovery strategy (Environment Canada, 2014b). Critical habitat for Vole Ears Lichen occurs where the critical habitat criteria and methodology described in section 7.1 of the recovery strategy are met (Environment Canada, 2014b).

4.2.3 Examples of Activities Likely to Result in Destruction of Critical Habitat

Examples of activities likely to result in the destruction of critical habitat are described in section 7.3 of the recovery strategy (Environment Canada, 2014b).

4.3 Proposed Measures to Protect Critical Habitat

Critical habitat identified in this action plan and in other recovery documents within KNP and NHS will be legally protected from destruction as per section 58 of the *Species at Risk Act*.

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 action plan will be borne by Parks Canada out of existing budgets. Many of the proposed measures will be integrated into the operational management of Kejimikujik. This includes incremental salary costs, materials, equipment, and contracting of professional services for measures outlined in Appendix B. No major socio-economic costs to park visitors, partners, stakeholders or Indigenous groups are expected as a result of this action plan. Additional resources or partnerships will be sought to support the measures outlined in Appendix C.

The action plan applies to lands and waters in Kejimikujik, and does not bring any restrictions to land use outside the park and site. As such, this action plan will place no socio-economic costs on the public. However, minor restrictions may be placed on visitor activities on park lands and waters to protect and recover species at risk.

5.2 Benefits

Measures presented in this action plan for Kejimikujik will contribute to meeting recovery strategy objectives for threatened and endangered species, and will also contribute to meeting management objectives for species of special concern. These measures are expected to have an overall positive impact on ecological integrity and enhance opportunities for appreciation of the sites and the species by visitors and the general public. This action plan includes measures that could result in benefits to Canadians, such as positive impacts on biodiversity and the value individuals place on preserving biodiversity (Federal, Provincial, Territorial Governments of Canada, 2014).

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, and increasing public awareness and stewardship (e.g., signage, visitor programs, and highlights in communication media).

Potential economic benefits of the recovery of the species at risk found in Kejimikujik cannot be easily quantified, as many of the values derived from wildlife are non-market

commodities that are difficult to appraise in financial terms. Wildlife, in all its forms, has value in and of itself, and is valued by Canadians for aesthetic, cultural, spiritual, recreational, educational, historical, economic, medical, ecological, and scientific reasons. The conservation of wildlife 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.

Implementing this action plan is expected to have benefits for park visitors, local residents, and Indigenous groups. These include opportunities to learn about and take part in the recovery of culturally important species at risk, opportunities for visitors and local communities to be involved in conservation issues, opportunities for integration of Indigenous Traditional Knowledge into conservation issues in KNP and NHS, 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 "*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 this action plan (under s. 55 of SARA) will be done by assessing progress towards implementing the measures presented in Appendices B, C, and D. Reporting on the ecological impacts of the action plan will be done by assessing progress towards meeting the site-based population and distribution objectives presented in Appendix A.

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Appendix A: Species information, objectives and monitoring plans for species at risk in KNP & NHS

Species	National objectives ³	Site-based population & distribution objectives	Population trend in Kejimikujik ⁴	Population monitoring ⁵	General information and broad park approach
Blanding's Turtle (Nova Scotia pop.)	Achieve a self-sustaining population by maintaining and/or increasing the existing populations over the current range, with a less than 5% risk of extinction when projected over 10 generations (400 years), and maintain sufficient gene flow to prevent genetic isolation.	1) Maintain or increase adult survivorship at or above 98% 2) Maintain recruitment at or above two new nesting females every five years, on average.	Inferred and projected decline; updated population viability analysis suggests population is at risk of decline and extinction.	Blanding's Turtle are assessed as part of the ecological integrity monitoring program at Kejimikujik. Monitoring data are derived from nest protection, trapping, tracking, visual surveys, and hatchling emergence.	Through the headstarting project, over 250 turtles have been reared and released back into Kejimikujik. Nest protection efforts are maintained through a large volunteer program with the goal to protect a minimum of 19 nests each year using nest cages to prevent predation of eggs. Roadside mortality of nesting females is mitigated through the use of seasonal speed reductions, speed bumps, and signage. Habitat changes on nesting beaches is recorded through photo documentation each fall.
Little Brown Myotis, Northern Myotis, Tri-colored Bat	1. Short-term: Maintain and increase (where feasible) the current level of the population; Long-term: Self-sustaining, resilient, redundant and representative population; 2. Maintain or restore the pre-white-nose syndrome (WNS) extent of occurrence.	No objective established; status in Kejimikujik poorly understood.	Severely declining short-term trend (>70%) due to white nose syndrome.	Initiate inventory work to compare with baseline data; develop protocol to monitor trends in occurrence and activity levels.	Investigate how white nose syndrome has affected bats in Kejimikujik. Protect roosts and individuals in park buildings and infrastructure.

³ National objectives from recovery strategies or management plans available at the time of writing. Please refer to documents cited in references.

⁴ Population trend is from 2010-2014.

⁵ Where population and distribution objectives have been established for KNP and NHS, monitoring is designed to directly measure success in achieving those goals.

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Species	National objectives ³	Site-based population & distribution objectives	Population trend in Kejimikujik ⁴	Population monitoring ⁵	General information and broad park approach
Piping Plover – <i>melodus</i>	1) Maintain at least 255 pairs in Atlantic Canada, increasing to 310 pairs over time 2) Fledge at least 1.65 chicks per pair.	1) Maintain productivity of at least 1.65 chicks per pair per year 2) Maintain at least 4 pairs at the Kejimikujik Seaside on St. Catherine's and Little Port Joli Beaches (both calculated as a 5 year running average).	Population 1988-2008: average of 5.9 pairs, with 1.60 chicks fledged per pair. 2010-2014: average of 3.8 pairs, and 2.1 chicks fledged per pair.	As part of the ecological integrity monitoring program at Kejimikujik, Piping Plover nesting habitat is surveyed from May-August and pairs are monitored following a standardized plover monitoring protocol. Kejimikujik participates in the International Piping Plover Census, held every 5 years.	Disturbance of breeding pairs (identified as a high-level threat) is mitigated through area closures, signage, compliance, enforcement, and education. Nesting habitat is enhanced through habitat restoration efforts.
Vole Ears Lichen	Ensure that the species' known range and the health and stability of the three known populations are not impacted by biological resource use (of the species' host tree), transportation and service corridors, residential and commercial development, or invasive non-native species.	No objective established; status in Kejimikujik uncertain.	Unknown; first detected in 2011.	Lichen inventory work is required at Kejimikujik Seaside to determine abundance and distribution of this species.	One thallus on one tree detected in 2011; further inventory work required. Will continue to protect and maintain habitat.
Canada Warbler, Olive-sided Flycatcher, and Common Nighthawk	Short term: Halt the national decline by 2025, while ensuring the population does not decrease more than 10% over this time. Distribution objective: maintain the current extent of occurrence in Canada.	No objective established; status in Kejimikujik uncertain though park is likely of limited importance to the species' national recovery.	Unknown; breeds in park but population status unknown.	Uncommonly detected during forest bird monitoring in Kejimikujik. Supplementary reporting of observations by staff, visitors, and volunteers encouraged through education and a reporting system.	All three species breed in forests in Kejimikujik. Recent modelling predicts the occurrence of 242 territorial male Canada Warblers and 67 territorial male Olive-sided Flycatchers in Kejimikujik. This correlates with less than 1% of the estimated population of these species in New Brunswick and Nova Scotia. The abundance of Common Nighthawk has not been modelled. The park will continue to protect and maintain habitat.
Chimney Swift	Not applicable.	No objective established; status in Kejimikujik uncertain though park is likely of limited importance to the species' national recovery.	Unknown; not enough information to inform trend in Kejimikujik.	Uncommonly detected during forest bird monitoring in Kejimikujik. Supplementary reporting of observations by staff, visitors and volunteers encouraged through education and a reporting system.	Detected in forests in Kejimikujik with likely but unconfirmed breeding activity; will continue to protect and maintain habitat.

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Species	National objectives ³	Site-based population & distribution objectives	Population trend in Kejimikujik ⁴	Population monitoring ⁵	General information and broad park approach
Eastern Ribbonsnake	Ensure a self-sustaining population with a 95% probability of persistence across its range.	Maintain occupancy at known ribbonsnake locations in Kejimikujik.	Unknown; a reliable method to assess long-term population trends has not yet been identified.	Eastern Ribbonsnakes are surveyed at key locations in Kejimikujik through visual and conservation canine surveys. Known locations in the park were grouped into four areas in the recovery strategy: Kejimikujik/George/Snake Lakes, Cobreille/Peskowesk Lakes, Grafton Lake complex, and North Cranberry Lake.	Through surveys in the fall and spring, two overwintering sites were identified in the woods near Grafton Lake. Further research is required to understand population dynamics, movements and habitat use. Vehicular mortality is mitigated through traffic barriers at the former Grafton Lake Hatchery facility area.
Water Pennywort	1) Maintain extant populations at present levels of abundance or greater at current locations; 2) Maintain extent and quality of habitat.	Maintain extent of Water Pennywort at the known locations in Kejimikujik.	Stable; while density is impacted by annual water levels, the population is stable at the level of the stand.	Water Pennywort is annually monitored at known locations on Kejimikujik Lake.	Occurs at seven locations on Kejimikujik Lake; will continue to protect and maintain habitat. Over 60% of Kejimikujik Lake has been recently surveyed for rare Atlantic Coastal Plain Flora species including Water Pennywort; completion of this survey work is required.
Long's Bulrush	1) Maintain extant populations at present levels of abundance or greater at current locations; 2) Maintain extent and quality of habitat.	No objective established; no threats known in park and Kejimikujik is likely of limited importance to the species' conservation at a national scale.	Unknown; first documented in 2011.	Documented through the Atlantic Coastal Plain Flora atlas surveys targeted for all high priority lakeshores identified in the recovery strategy.	Seven occurrences have been documented on Kejimikujik and Loon Lakes from 2011-2013. Over 60% of Kejimikujik Lake has been recently surveyed for rare Atlantic Coastal Plain Flora species including Long's Bulrush; completion of this survey work is required. Will continue to protect and maintain habitat.
Monarch	Ensure there is sufficient habitat in Canada to maintain the current population and support the management of overwintering sites by international partners.	No objective established: no threats known in park and Kejimikujik is likely of limited importance to the species' conservation at a national scale.	Unknown; not enough information to inform trend in Kejimikujik.	Monarch butterfly gardens planted in Kejimikujik are checked during the breeding season for eggs and caterpillars; any Monarchs are reared and tagged through partnerships with Monarch Watch.	Known to occur and breed in Kejimikujik; will continue to protect and maintain habitat. Swamp milkweed grows naturally in Kejimikujik and two butterfly gardens have been planted. Over 1000 "Butterfly Club" kits have been sold to encourage the creation of butterfly habitat.

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Species	National objectives ³	Site-based population & distribution objectives	Population trend in Kejimikujik ⁴	Population monitoring ⁵	General information and broad park approach
Rusty Blackbird	1) Stop the decline and maintain the population at its 2014 level; 2) Increase the population, resulting in a 10-year sustained increase in the population of Rusty Blackbird in Canada.	No objective established; this species population and distribution in Kejimikujik are poorly understood.	Unknown; breeds in park but population status unknown.	Uncommonly detected during forest bird monitoring in Kejimikujik. Supplementary reporting of observations by staff, visitors and volunteers encouraged through education and a reporting system.	Likely breeds in very low numbers in forests in Kejimikujik; will continue to protect and maintain habitat.
Snapping Turtle	Maintain and, if possible, increase the index of area of occupancy of the Snapping Turtle in Canada and maintain and, if possible, increase Snapping Turtle abundance in Canada, by reducing the main threats to the species, particularly those affecting adult Snapping Turtles.	No objective established: currently, this species population and distribution in Kejimikujik are poorly understood.	Unknown; not enough information to measure trend in Kejimikujik.	Targeted surveys have been completed on Grafton and Kejimikujik Lake. Snapping Turtles are also monitored incidentally through the Blanding's Turtle monitoring program (nest protection and trapping).	Extent of occurrence throughout the western side of Kejimikujik is unclear. Targeted studies at Graton Lake estimate the population size to be 147 individuals. Nests are opportunistically covered along roadsides and beaches if observed.
American Eel	Not applicable	No objective established: Kejimikujik is likely of limited importance to the species' conservation at a national scale.	Unknown. Eel monitoring in 17 lakes in 1975 and 2011/12 suggest declines, although sampling methods differed.	Monitored sporadically since 1975.	Continue to protect and maintain habitat. Will continue to opportunistically survey, and record observations of this species.
Barn Swallow	Not applicable	No objective established: no threats known in park and Kejimikujik is likely of limited importance to the species' conservation at a national scale.	Declining; numbers have dropped sharply since 2004.	63 breeding pairs documented in the park in the early 1970s. This species is uncommonly detected during forest bird monitoring and nesting has been incidentally recorded at various locations in Kejimikujik.	Barn Swallows have built nests in nesting boxes placed at Jakes Landing in Kejimikujik.
Black Ash	Not applicable (provincial recovery document not posted at time of writing).	No objective established: no threats known in park and Kejimikujik is likely of limited importance to the species' conservation at a national scale.	Unknown; further inventory work required.	Locations of Black Ash have been documented and mapped in Kejimikujik, however further inventory work is required.	Black Ash work in Kejimikujik will be undertaken with cultural resources staff and in collaboration with interested Mi'kmaw organizations.

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Species	National objectives ³	Site-based population & distribution objectives	Population trend in Kejimikujik ⁴	Population monitoring ⁵	General information and broad park approach
Blue Felt Lichen	Not applicable	No objective established: status in Kejimikujik poorly understood.	Unknown; first detected in 2011.	Lichen inventory work is required at Kejimikujik Seaside to determine abundance and distribution of rare species.	Six individuals detected in 2011; further inventory work required. Will continue to protect and maintain habitat and assess threats.
Eastern Wood-pewee	Not applicable	No objective established: no threats known in park and Kejimikujik is likely of limited importance to the species' conservation at a national scale.	Unknown, considered a common annual breeder in Kejimikujik.	This species is regularly detected during forest bird monitoring in Kejimikujik. In 2013 this species was observed at 22 of 50 point counts (44%).	Kejimikujik represents a stronghold for this species in the greater ecosystem and is considered to be a relatively common annual breeder in park. Continue to protect and maintain habitat.
Eastern Moose (Mainland Population)	1) Maintain and enhance the current population and distribution; 2) Mitigate threats (where possible) that limit recovery; 3) Initiate research to address priority knowledge gaps; 4) Maintain and enhance habitat.	No objective established: status in Kejimikujik poorly understood.	Estimated declines since 1985.	Incidentally monitored through park staff and visitor observation cards. There have been 95 recorded sightings of Mainland Moose since 1967 (38 in the last 10 years). The most recent records are from 2015.	Continue to protect and maintain habitat. Individuals from the Tobeatic Wilderness Area population likely enter on the remote western side of Kejimikujik.

Appendix B: Conservation and recovery measures that will be conducted by KNP and NHS

Species	Measure number	Measure	Desired outcome	Threat or recovery measure addressed ⁶	Timeline
Wetland Ecosystem					
Blanding's Turtle	1	Mitigate threats to Blanding's Turtles in Kejimikujik through the nest protection program (predators, flooding) and road mortality mitigation measures (speed reduction, signage, education).	Decreased nest loss; reduction of mortality; increased awareness amongst road users about risks to turtles.	Undertake recovery actions to increase recruitment or decrease mortality.	Annual (2016-2020)
Blanding's Turtle	2	Conduct systematic trapping and visual surveys in Kejimikujik to locate juvenile and adult Blanding's Turtles and assess survivorship and recovery.	Long-term monitoring measure tied to Kejimikujik's Blanding's Turtle Ecological Integrity monitoring measure. Data compiled in the central turtle database and periodically used to update the population viability analysis.	Conduct strategic monitoring of the population complex and continue to reassess and update population models.	Annual (2016-2020)
Blanding's Turtle	3	Photo document nesting site habitat over time to ensure that existing and emerging threats to nesting habitat are being identified and adequately mitigated.	Documentation of habitat changes to nesting beaches over time in Kejimikujik, following the developed protocol.	Knowledge gaps: habitat trends and threats, introduced species, climate change.	Annual (2016-2020)
Blanding's Turtle	4	Facilitate genetic analysis by collecting scute clipping samples during ongoing monitoring and research.	Further understanding of genetics to fill knowledge gaps.	Knowledge gaps: effective population size.	Annual (2016-2020)
Blanding's Turtle, Eastern Ribbonsnake	5	Monitor for alien invasive fish (Smallmouth Bass, Chain Pickerel) and develop a response plan as required.	Maintain freshwater ecosystems that are free of alien invasive species.	Introduction/establishment of exotic predatory fish.	2014-2017
Eastern Ribbonsnake	6	Mitigate risks to ribbonsnakes at known sites.	Minimize incidental injury or mortality.	Disturbance or mortality by vehicles or machinery.	Annual (2016-2020)

⁶ Threat or recovery measures as per most recent versions of relevant recovery documents found in References section.

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Species	Measure number	Measure	Desired outcome	Threat or recovery measure addressed ⁶	Timeline
Blanding's Turtle, Snapping Turtle, Common Nighthawk	7	Reduce predation by hyperabundant wildlife (i.e. raccoons, red squirrels) through improved food and garbage storage and by park visitors.	Visitors aware of their potential impact on wildlife. Increased compliance with campground rules and regulations.	Changes in predator populations resulting from human activities.	Annual (2016-2020)
Snapping Turtle	8	Opportunistically cover nests along roadside and beaches as observed.	Decreased nest predation.	Excessive predation.	Annual (2016-2020)
Coastal Ecosystem					
Piping Plover	9	Reduce human disturbance on nesting beaches. Continue education and enforcement to ensure compliance with existing park regulations that help protect plovers.	Maintain at least 4 nesting pairs at Kejimikujik Seaside and a productivity of ≥ 1.65 chicks fledged per territorial pair (calculated as a 5-year running average).	Human disturbance during the nesting season from recreational beach use and vehicles.	Annual (2016-2020)
Piping Plover	10	Enhance Piping Plover breeding habitat as required (nesting habitat, reduction of perches, etc.).	Increased and/or maintained amount of suitable nesting habitat for Piping Plovers at St. Catherine's River beach.	Habitat loss or degradation. Ensure enough suitable habitat to meet population objectives.	As required (2016-2020)
Piping Plover	11	Contribute to regional monitoring and research initiatives including documenting evidence of predation at each life stage, recording stewardship indicators, and documenting marked birds during breeding and migration.	Knowledge gaps reduced, regional reporting and partnerships continued.	Knowledge gaps: migratory movements, predation.	Annual (2016-2020)
Vole Ears Lichen, Blue Felt Lichen	12	Complete population and distribution inventory work at Kejimikujik Seaside to assess extent and occurrence of rare lichens.	Increased knowledge of rare lichen distribution at Kejimikujik Seaside.	Knowledge gaps: refine population size and distribution information.	2017
Forest Ecosystem					
Barn Swallow	13	Place and maintain nest boxes at selected current and historical Barn Swallow locations in Kejimikujik.	Reduce disturbance and provide nesting habitat for successful nesting of the Barn Swallow.	Habitat loss and degradation on the breeding grounds.	2018

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Species	Measure number	Measure	Desired outcome	Threat or recovery measure addressed ⁶	Timeline
Black Ash	14	Inventory distribution of Black Ash occurrences in park through compilation of observation records, traditional ecological knowledge, and surveys of potential habitat.	Improved knowledge of Black Ash distribution in Kejimikujik.	Knowledge gap: knowledge of Black Ash distribution in the park.	2018
Freshwater Ecosystem					
Water Pennywort, Long's Bulrush	15	Complete the Atlantic Coastal Plain Flora (ACPF) Atlas on Kejimikujik Lake to complete population mapping on lakes listed as High Priority in the Recovery Strategy.	Rare Atlantic Coastal Plan Flora occurrences documented and mapped around the shoreline of Kejimikujik Lake.	Knowledge gap: Location of populations and suitable habitat at all High Priority locations.	2017
Water Pennywort	16	Seasonally protect Water Pennywort in the Jeremy's Bay campground using signs and barriers.	Reduced trampling by park visitors in campground locations where Water Pennywort occurs.	Trampling.	Annual (2016-2020)
All Ecosystems					
All species	17	Continue to involve the public in meaningful recovery actions for species at risk through collaboration with the Kejimikujik volunteer program (recruitment, training, support, capacity, recognition).	Engagement of volunteers in hands-on recovery actions that benefit species at risk and provide memorable and empowering experiences.	Various threats.	Annual (2016-2020)
Monarch	18	Continue Kejimikujik's tagging program and continue to promote the creation of butterfly gardens through "Butterfly Club" kits.	Contribution towards the understanding of Monarch migration pathways. Encouragement of the creation of chemical-free butterfly gardens.	Various threats.	Annual (2016-2020)

Appendix C: Other conservation and recovery measures that will be encouraged through partnerships or when additional resources become available

Species	Measure number	Measure	Desired outcome	Threat or recovery measure addressed ⁷
Wetland Ecosystem				
Blanding's Turtle	19	Continue tracking studies of hatchlings and young juveniles to better understand their seasonal movements, survivorship and distribution. Track females to locate new nesting sites and evaluate the need for nest protection efforts.	Increased knowledge of the survivorship rates of hatchlings and juveniles, seasonal movements, and habitat requirements.	Knowledge gaps: Determine the extent of the range and identify population status, structure, habitat use, and threats. Collect data necessary to assess the effectiveness of recovery actions.
Blanding's Turtle	20	Assess the effectiveness of the turtle headstarting program.	Data has been compiled and analyzed and the effectiveness of the turtle headstarting program determined. Recommendations made for improvements if necessary.	Knowledge gaps: Effects of headstarting on fitness.
Eastern Ribbonsnake	21	Investigate methods to overcome monitoring and research challenges (tracking movements, marking, etc.).	Efficient methods to track and identify individual ribbonsnakes, determined and employed.	Knowledge gaps: Lack of information on extent of overland movements and other connections between concentration sites.
Eastern Ribbonsnake	22	Locate and characterize the habitat of juveniles and adults and increase understanding of seasonal movements.	Key habitat requirements and seasonal movement patterns identified and used to inform threat mitigation and critical habitat identification.	Knowledge gaps: Lack of information on extent of overland movements and other connections between concentration sites.
Forest Ecosystem				
Canada Warbler, Olive-sided Flycatcher, Rusty Blackbird, Common Nighthawk	23	Conduct surveys to determine the extent and occurrence of at-risk birds at Kejimikujik Seaside.	Increased knowledge of at-risk bird distribution at Kejimikujik Seaside.	Knowledge gaps: Monitoring and research to determine distribution.

⁷ Threat or recovery measures as per most recent versions of relevant recovery documents found in References section.

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Species	Measure number	Measure	Desired outcome	Threat or recovery measure addressed ⁷
Little Brown Myotis, Northern Myotis, Tri-colored Bat	24	Assess distribution and relative abundance of bat species in Kejimikujik and compare with baseline data collected in the early 2000s.	Understanding of distribution and status of bat species in Kejimikujik is increased.	Knowledge gap: Clarify population status in Kejimikujik using the baseline data from the early 2000s.
Black Ash	25	Investigate the need to protect Black Ash seedlings from impacts of ungulate herbivory (e.g., exclosures and/or enclosures).	Threats to Black Ash recruitment reduced. Number of seedlings protected.	Knowledge gap: Grazing impacts on seedling survival.
All Ecosystems				
All species	26	Develop and promote a standardized species observation reporting system for park staff, volunteers, and visitors	Park staff and visitors easily reporting and sharing sighting information. Up to date database of species observations available.	Knowledge gaps: Distribution and occurrence of species at risk in Kejimikujik.

Appendix D: Outreach, education and visitor experience measures related to species at risk in KNP and NHS.

Measure ⁸	Measure number	Desired outcome	Proposed Measures ⁹
Encourage and include local Mi'kmaq of Nova Scotia in species at risk recovery efforts.	1	Local Mi'kmaq are involved in species at risk recovery.	<ul style="list-style-type: none"> Continued communication about SAR projects and recently listed species. Invite local Mi'kmaq to be involved in species at risk projects and events. Traditional ecological knowledge used during recovery and monitoring initiatives.
Promote species at risk messaging through news media, web content, social media and the Kejimikujik visitor guide.	2	Media content developed and shared.	<ul style="list-style-type: none"> At least five social media postings per year about species at risk Two positive media stories pitched per year about species at risk. Species at risk messaging included in the visitor guide and in web content.
Collaborate with recovery teams and partners to support an ecosystem based approach to recovery, and on projects that are beneficial to recovery in Kejimikujik.	3	Collaboration, efficiencies and sharing are fostered.	<ul style="list-style-type: none"> Participation at recovery team meetings and other regional initiatives. Collaboration with partners on projects that are beneficial. Sharing of knowledge and results.
Participate in sharing circles and cultural retreats with interested Mi'kmaw people, to discuss and exchange knowledge about species at risk.	4	Knowledge is shared in non-conventional ways and understanding between different communities and organizations is increased.	<ul style="list-style-type: none"> Attendance at retreats, if available, to discuss species at risk recovery and share traditional ecological knowledge.
Highlight Kejimikujik's significance as a National Historic Site by addressing culturally significant species at risk.	5	Park visitors understand connections between culturally important species at risk and Kejimikujik's role as a cultural and natural environment.	<ul style="list-style-type: none"> One interpretive program developed per year on culturally significant species at risk Traditional ecological knowledge shared with park visitors by interpretive staff.
Incorporate species at risk messaging and monitoring into interpretive programming, products, and special events	6	Park visitors are increasingly aware of species at risk in Kejimikujik and how they can help with protection and recovery.	<ul style="list-style-type: none"> Organize one special event per year highlighting species at risk Incorporate messaging makes clear the connection between the speed bumps and Blanding's Turtles Highlight SAR in Club Keji booklets, and geocaching initiatives Offer interpretive programs that build into and highlight volunteer opportunities (at least one per year) Develop approaches to foster more positive attitudes towards species that are negatively perceived (Snapping Turtle, American Eel, bats, etc.)

⁸ All measures will be implemented on an annual, ongoing basis and apply to all species at risk occurring in Kejimikujik.

⁹ Actual measures may vary from year-to-year based on available resources, opportunities, and emerging program needs

Appendix E: 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 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](#)'s¹⁰ (FSDS) goals and targets.

Recovery planning is intended to benefit species at risk and biodiversity in general. However, it is recognized that recovery measures 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 on 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 Kejimikujik. This plan puts into practice measures presented in recovery strategies for some of the species at risk in this plan, which were subject to SEAs during the development of those documents. Further, this action plan was developed to benefit all species at risk that regularly occur in Kejimikujik. Consequently all of these species were considered in the planning process, any potential secondary effects were evaluated and mitigated, and, where appropriate, measures were designed to benefit multiple species. The planning process was also guided by priorities identified in the ecological integrity monitoring program at Kejimikujik and by the park management plan (Parks Canada Agency, 2010). As a result, measures outlined in this plan address key management priorities aimed at improving the broader ecological health of Kejimikujik. Finally, this plan outlines stewardship measures, educational programs, volunteer opportunities, and awareness initiatives involving park visitors, local residents, Indigenous organizations, and the general public. This will lead to greater appreciation, understanding, and action towards the conservation and recovery of species at risk in general.

¹⁰ www.ec.gc.ca/dd-sd/default.asp?lang=En&n=F93CD795-1