Imminent Threat Assessment for the Piping Plover *circumcinctus* under Section 80 of the *Species at Risk Act*

2026

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Introduction

Statutory provision

The *Species at Risk Act* (SARA) includes discretionary authorities that enable emergency intervention in exceptional circumstances where a wildlife species' conservation status may warrant more immediate action than what can be provided through the standard SARA process and measures. According to section 80 of SARA, if the competent minister is of the opinion that a listed wildlife species faces imminent threats to its survival or recovery, they must recommend to the Governor in Council that an emergency order be made for the protection of the species.

Purpose

This assessment was developed to support the federal Minister of the Environment in forming an opinion on whether the Piping Plover *circumcinctus* subspecies (*Charadrius melodus circumcinctus*), which is listed as Endangered under SARA, is facing imminent threats to its survival or recovery, and was conducted in accordance with the *Policy on assessing imminent threats under sections 29 and 80 of the Species at Risk Act: terrestrial species* (hereafter the Imminent Threat Policy).

According to the Imminent Threat Policy, a terrestrial wildlife species will be determined to be facing an imminent threat to its survival or recovery if an identified new or intensifying human-induced threat is occurring or is likely to occur in the near term, would render the species' survival or recovery highly unlikely or impossible, and its new or additional impacts cannot be eliminated or mitigated without immediate intervention.

Trigger

This assessment was undertaken in response to a request from Ecojustice, on behalf of Environmental Defence and Ontario Nature, on January 27, 2026 for an emergency order for the protection of Piping Plover related to the potential impending damage and destruction of Piping Plover habitat at Wasaga Beach, in accordance with the requirements set out in the *Operational guide: requesting an imminent threat assessment for terrestrial species under the Species at Risk Act*.

Scope of the assessment

The assessment is scoped to assess whether Piping Plover *circumcinctus* subspecies is facing imminent threats to its survival or recovery within the meaning of section 80(2) of SARA, as a result of mechanical raking, increased recreational use, and development of the beachfront within the range of the Canadian Great Lakes Population of the subspecies in the Town of Wasaga Beach, Ontario (hereafter the Town).

Information sources used in the assessment

The assessment is based on the best available information on the the species' biology and ecological needs, the specific nature of the threat the species is facing, the likelihood and timing of the threat, the impacts of the threat on the species, and whether measures are in place, or are expected to be in place in a relevant timeframe, that would be expected to address the threat.

Specific information sources that informed this assessment include federal recovery documents (i.e., Recovery Strategy for the Piping Plover (*Charadrius melodus circumcinctus*) in Canada (Environment Canada 2006), Action Plan for the Piping Plover (*Charadrius melodus circumcinctus*) in Ontario

(Environment Canada 2013), and COSEWIC Assessment and Status Report on the Piping Plover *Charadrius melodus* in Canada (COSEWIC 2013), information provided by the requester, published peer-reviewed research, publicly available information about the species from Birds Canada, publicly available information from the Town of Wasaga Beach as well as information provided directly to Environment and Climate Change Canada, and advice from Environment and Climate Change Canada subject matter experts. Additional information about authorizations or regulatory approvals related to proposed beachfront developments was provided by the Department of Fisheries and Oceans, the Nottawasaga Valley Conservation Authority, the Town of Wasaga Beach, the Ontario Ministry of the Environment, Conservation and Parks, Ontario Ministry of Infrastructure, Ontario Ministry of Tourism, Culture and Gaming, and Ontario Ministry of Natural Resources.

1. Information on the species

1.1. Species characteristics

Piping Plover *circumcinctus* subspecies (*Charadrius melodus circumcinctus*) is a small migratory shorebird (Environment Canada 2006). Blending in well with its beach and dune habitat, Plovers are the colour of dry sand on their head and back with a white underside and orange legs (Environment Canada 2013). During the breeding season, they have a black collar or breastband, a black band above their forehead and a short, stout orange bill with a black tip (Environment Canada 2006).

Piping Plovers exhibit high fidelity (i.e., the tendency of an individual to return to or remain in a specific location) to the wide, sparsely vegetated beaches they nest in and, in Ontario, these beaches are often heavily used for human recreation (COSEWIC 2013; Environment Canada 2013). As development and recreational use increases on areas used by Piping Plover for nesting, the availability of suitable breeding habitat is becoming increasingly rare (COSEWIC 2013). The impacts of habitat loss for Piping Plover are compounded by their high site fidelity.

1.2. Population and distribution

Canada

The Piping Plover is only found in North America and breeds in the United States and Canada (COSEWIC 2013). Two subspecies are recognized: the Atlantic *melodus* subspecies and the inland *circumcinctus* subspecies, both of which are listed as endangered under SARA. Piping Plovers winter along the Atlantic coast of the southern United States, along the entire Gulf Coast, and in some areas of Mexico and the Caribbean (Environment Canada 2013).

Over one-third of the global breeding population and over one half of the breeding range for Piping Plover is found in Canada (COSEWIC 2013). The 2011 International Piping Plover Census estimated the Canadian population (i.e., both subspecies) to be approximately 1432 adults, of which 1026 individuals are of the *circumcinctus* subspecies (Elliott-Smith et al. 2015). The 2016 census found 945 individuals of the *circumcinctus* subspecies in Canada (Elliott-Smith et al. 2025).

In Canada, Piping Plover *circumcinctus* breeds in Alberta, Saskatchewan, Manitoba, and Ontario (Environment Canada 2013). The *circumcinctus* subspecies is made up of two distinct populations: the Prairie Canada Population and the Canadian Great Lakes Population. The Prairie Canada Population includes birds found in Alberta, Manitoba, Saskatchewan, and the Lake of the Woods area in Ontario. The Canadian Great Lakes Population includes birds found on the Canadian side of the Great Lakes in Ontario, excluding the Lake of the Woods area (Environment Canada 2013). Based on 2016 census data, the Prairie Canada Population was estimated to be 945 adults, compared to 27 individuals in the Canadian Great Lakes Population (Elliott-Smith et al. 2025).

Canadian Great Lakes Population of the Piping Plover circumcinctus *subspecies*

After 1977, Piping Plovers were extirpated from the Great Lakes in Ontario but returned in 2007 and have been successfully breeding in Ontario since their return (Environment Canada 2013). In 2007, a pair of Piping Plovers nested at Saugeen Beach (formerly referred to as Sauble Beach) in Ontario, followed by Wasaga Beach in 2008 (Environment Canada 2013). From 2007 to 2025, the distribution has been variable with a total of 11 nesting sites: four sites each on the shores of Lake Huron and Lake Ontario, and three sites on the shores of Georgian Bay (Birds Canada 2026). Wasaga Beach is the most consistent Piping Plover nesting site in Ontario, as it has hosted nests annually from 2008 to 2026. Following the destruction of habitat by raking and bulldozing at Saugeen Beach in 2019, nesting attempts were not successful in 2020 and 2021. No nesting attempts have been observed at Saugeen Beach since 2021. The other nine sites have been used inconsistently since 2007, and from 2020 to 2025, inclusive, no other new or historic sites had been used for nesting (Birds Canada 2026).

The Canadian Great Lakes Population remains very small. Best available empirical data collected by Piping Plover experts and citizen scientists show that at least 4 breeding pairs have been observed annually in Ontario from 2008 to 2025, inclusive (Birds Canada 2026). The number of breeding pairs peaked in 2016, at 15, and was lower but remained above 4 pairs from 2018 to 2025, inclusive, ranging between 5-8 pairs per year during that period (Birds Canada 2026).

Wasaga Beach nesting site

Wasaga Beach is the most consistent and productive nesting site in Ontario, hosting a minimum of one nest annually between 2008 and 2025, inclusive, and hosting two or more nests for 17 of those years (Birds Canada 2026). Wasaga Beach has accounted for 39% of breeding pairs (51), 37% of nests (59) and 46% of fledglings (87) in Ontario since 2008 (Birds Canada 2026). In 2026, one nest was established at Wasaga Beach.

The Wasaga Beach beachfront area is divided into six numbered sections (Beach Areas 1-6) in addition to New Wasaga Beach and Allenwood Beach (Figure 1). Beach Area 1 is the most productive nesting area for Piping Plovers in the province of Ontario, as it has hosted the most nests since Piping Plovers have returned to Ontario, accounting for 56 out of 59 known nests at Wasaga Beach between 2008 and 2025 (Birds Canada 2026). Two nests have been observed in New Wasaga Beach (2012 and 2015) and one nest in Allenwood Beach (2019), but none of these produced fledged young. Beach Areas 2 through 6 are currently considered to be unsuitable for nesting due to past raking activities and a lack of necessary habitat features (Birds Canada 2026).

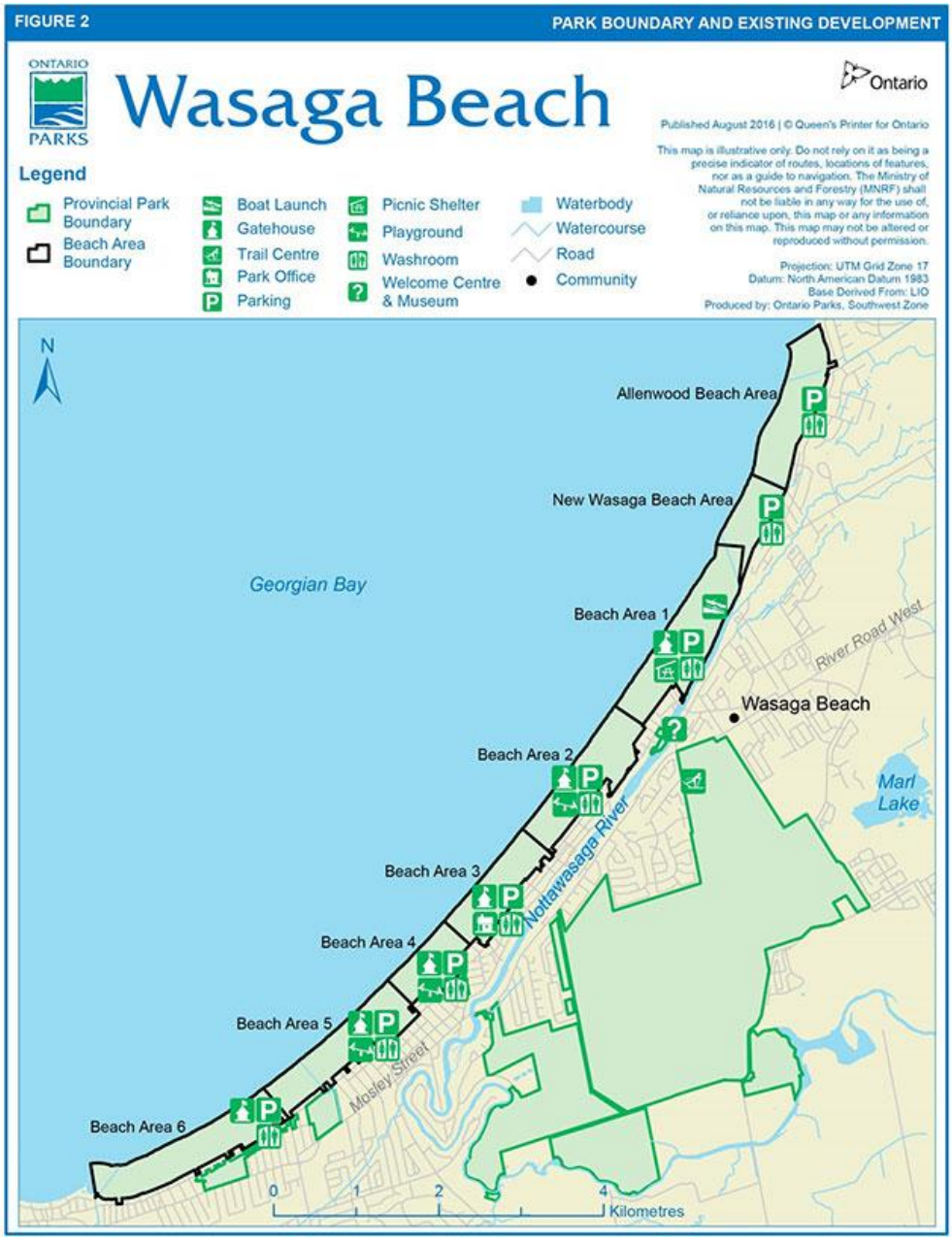

Figure 1: Sections of the Wasaga Beach Provincial Park beachfront prior to the November 2025 amendment of the *Provincial Parks and Conservation Reserves Act* which de-regulated Beach Area 1, Beach Area 2, New Wasaga Beach and Allenwood Beach (Ontario Parks 2017). The de-regulated beachfront areas have not yet been approved for transfer to the Town. Beach Area 1, where critical habitat is identified under SARA, is the most productive nest site for Piping Plover in Ontario. New Wasaga Beach and Allenwood Beach, based on more recent nest activity observed since the publication of the 2013 Action Plan, may also be important to the recovery of the species (no SARA status, see Table 1).

1.3. Habitat

In Ontario, Piping Plovers inhabit sandy to pebbled beaches on barrier islands, peninsulas or shorelines of large lakes (Environment Canada 2013). Adult Piping Plovers arrive on the breeding grounds in Canada from mid-April to mid-May, often returning to the same nesting site in consecutive years, and remain until late July (Environment Canada 2006; COSEWIC 2013). They prefer to nest on wide sections of beach with sparse vegetation and mixed substrates such as gravel, shells, sticks, and pebbles (COSEWIC 2013). Nests are made as simple depressions or scrapes in the sand and often lined with pebbles, shells or driftwood for camouflage. Wide beach areas allow the birds to nest in between and far from the vegetation line and the water, reducing risks of predation and flooding, respectively (COSEWIC 2013). Suitable habitat for the Piping Plover is described using the Ecological Land Classification (ELC) framework for Ontario as Open Beach/Bar and Open Sand Dune in the 2013 Action Plan (Environment Canada 2013). Suitable habitat is also known as Open Great Lakes sand dunes, provincially rare ecological communities that are characterized by sparse vegetation and patches of bare sand (Bakowsky & Henson 2014).

Critical habitat is defined in SARA subsection 2(1) as “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.” In the Action Plan for the Piping Plover (*Charadrius melodus circumcinctus*) in Ontario (Environment Canada 2013), critical habitat has been identified at four sites in Ontario: one site at each of Windy Point (Lake of the Woods), Wasaga Beach Provincial Park (Georgian Bay), Saugeen Beach (Lake Huron) and Oliphant Beach (Lake Huron). The Site Occupancy Criterion identifies sites where, at the time of identification, confirmed nesting had been observed for a minimum of one year and where the site had evidence of species' fidelity (i.e., where Piping Plovers breeding pairs had been present in multiple years). The critical habitat boundaries are defined by the extent of the Open Beach/Bar and/or Open Dune ELC community series (Lee et al. 1998), by the water’s edge, and by the approximate area used by Piping Plovers during their breeding cycle which is defined as a distance of 500 metres parallel to the water’s edge in both directions from a known observation of a breeding pair or Piping Plover nest observed between 1995 and 2009 (Environment Canada 2013). For additional clarity, critical habitat under SARA is identified within Beach Area 1 (see Table 1 and Figure 1). Based on more recent nest activity since the publication of the 2013 Action Plan, additional areas at New Wasaga Beach and Allenwood Beach may be necessary for the survival or recovery of the species. These additional areas are not currently identified as critical habitat under SARA since they have not been published in an amendment to the existing Recovery Strategy or Action Plan (see Table 1 and Figure 1). In other words, these areas ecologically meet the definition of critical habitat for the species but have not yet been legally identified as such. Due to regular mechanical raking in 2026, Allenwood Beach may not currently have the necessary habitat features to support nesting.

Table 1: SARA status for Piping Plover habitat of beach sections at Wasaga Beach, Ontario, that have been de-regulated as provincial parklands in the November 2025 amendment of the *Provincial Parks and Conservation Reserves Act*.

Section of Wasaga Beach	Critical habitat as identified under SARA for Piping Plover
Beach Area 1	Yes. Critical habitat identified in the 2013 Action Plan
Beach Area 2	No SARA status. No critical habitat present.

New Wasaga Beach	No SARA status. Recent nesting activity since the publication of the 2013 Action Plan suggests the area may be necessary for the survival or recovery of the species.
Allenwood Beach	No SARA status. Recent nesting activity since the publication of the 2013 Action Plan suggests the area may be necessary for the survival or recovery of the species.

Research from Birds Canada indicates that the Wasaga Beach site is the most consistent and productive nesting site in Ontario since Plovers returned in 2007 (Birds Canada 2026). Broadly, the availability of suitable habitat in Ontario has been declining because of human recreational use that negatively impacts the quality of habitat for Piping Plover (COSEWIC 2013; Environment Canada 2013).

1.4. Threats to the species

Primary threats to Piping Plover include predation, habitat loss, and human disturbance (COSEWIC 2013; Environment Canada 2006; Environment Canada 2013). The 2013 Action Plan identifies activities likely to result in the destruction of Piping Plover critical habitat and its attributes are those which cause significant or lasting alterations to the beach or dune habitat (including changes in water levels, a reduction in food sources, nesting habitat, or shelter, compaction of soils, or fragmentation of habitat). For the Canadian Great Lakes Population, these activities include those that 1) create soil compaction (e.g., development, construction, use of off-road, motorized and non-motorized vehicles), 2) trample or remove vegetation and debris (e.g., beach raking, use of off-road, motorized and non-motorized vehicles, and beach improvement (replacing lost sand from beach erosion)), 3) result in changes to habitat availability and suitability resulting from changes in wetland/watershed management (e.g., development, landscaping), and 4) alter beach and dune dynamics resulting from changes to offshore currents (e.g., such as construction of breakwater structures and marinas) (Environment Canada 2013). In addition to activities likely to result in the destruction of critical habitat, some threats such as human disturbance (e.g., pedestrians, off-leash dogs, all-terrain vehicles) and increased populations of predators may interfere with the species' behaviour (e.g., reduced time foraging, increased vigilance) and/or destroy the highly camouflaged eggs and chicks (Environment Canada 2006; Environment Canada 2013). Sites with suitable habitat free of human disturbance are becoming increasingly rare and fragmented in most areas as development and recreational use increase (COSEWIC 2013).

Piping Plovers nesting on the Canadian Great Lakes have been found on very populated recreational beaches (e.g., Saugeen Beach and Wasaga Beach) (Environment Canada 2013). The grooming and raking of beaches as well as human recreational use reduces the quality of the habitat available to Piping Plovers by removing the vegetation and debris used by roosting and brooding birds for shelter and food sources. Commercial development including construction and subsequent increases in recreational activities can destroy critical habitat because soils are too compact for nest creation (Environment Canada 2013).

1.5. Applicable laws and conservation measures that can control threats

Federal protection

The Piping Plover *circumcinctus* subspecies is listed as Endangered under SARA and is a migratory bird protected under the *Migratory Birds Convention Act* (MBCA).

SARA prohibits the killing, harming, harassing, capturing, taking, possessing, collecting, buying, selling or trading of individuals of endangered, threatened and extirpated species listed on Schedule 1 of the Act (section 32). The Act also prohibits the damage or destruction of their residences (section 33); for Piping Plover, the residence is the nest (Environment Canada, 2005). In the case of a migratory bird species listed under the MBCA, these SARA prohibitions apply everywhere the species occurs in Canada. No order has been made under SARA subsections 58(5) or 61(2) to bring a prohibition on the destruction of critical habitat into effect for this species. Additional federal protections related to the *Fisheries Act* and/or SARA for aquatic species may indirectly provide protections to Piping Plover and its habitat (see section 2.3).

SARA section 10 authorizes a competent minister to enter into an agreement with respect to the administration of the Act, including the preparation and implementation of recovery strategies, action plans and management plans. SARA section 11 authorizes a competent minister to enter into a conservation agreement to benefit a species at risk or enhance its survival in the wild. The agreement must provide for the taking of conservation measures consistent with the purposes of the Act and may include measures with respect to protecting the species' habitat, including its critical habitat. To date, Environment and Climate Change Canada (ECCC) has entered into several conservation agreements under s.10 and/or 11 of SARA (e.g., with provinces or territories, First Nations, or individual landowners) to benefit species at risk. As of yet, none have been an instrument that provides protection of critical habitat. The Town has stated that they expect that a section 11 agreement with Canada will be part of its long-term Municipal Piping Plover Stewardship Strategy (A. McNeill, personal communication, May 12, 2026). At this time, no details of proposed conservation measures have been discussed with ECCC and ECCC has not taken a decision to negotiate such an agreement with the Town.

Provincial/Territorial and local protection

Piping Plover has been classified as Endangered in Ontario by the Committee on the Status of Species at Risk (COSSARO) since the *Endangered Species Act, 2007* (ESA) came into effect, and was most recently re-assessed in 2014. The ESA provided protection for the species and its habitat until March 30, 2026. On March 30, 2026, the Province of Ontario repealed the ESA and implemented a new *Species Conservation Act, 2025* (SCA). Under the SCA, provincially protected species are listed on the Protected Species in Ontario List, and SARA listed migratory bird species, including Piping Plover, are not eligible for inclusion on this list. Similarly, habitat for Piping Plover does not receive protection under the provincial *Fish and Wildlife Conservation Act*, and protections for bird nests and eggs that apply under this Act do not apply to migratory birds protected under the MBCA, such as Piping Plover.

Prior to the November 2025 amendment of the *Provincial Parks and Conservation Reserves Act* (PPCRA) which de-regulated Beach Area 1, Beach Area 2, New Wasaga Beach and Allenwood Beach, Piping Plover habitat within these areas was managed by Ontario Parks. Under Ontario Parks management, Allenwood Beach, New Wasaga Beach and the portion of Beach Area 1 from

Spruce Street northeast to the mouth of the Nottawasaga River were identified as containing Piping Plover habitat and management practices for these beach areas were developed to support habitat protection (Ontario Parks 2017; Ontario Parks 2024). These management practices were generally consistent with the needs of the species. Upon the completion of the transfer of these lands to the Town, management decisions will be at the discretion of the Town. In the interim, the lands are managed by the Ministry of Infrastructure, which has entered into an agreement with the Town for it to take on day-to-day management activities on-site, until the transfer is completed by Infrastructure Ontario.

Ontario's land use planning policy framework (i.e., *Planning Act*, Provincial Planning Statement, Natural Heritage Reference Manual, etc.) provides rules and guidance for land use planning at a local level and requires municipalities to have consistent policies for the protection of ecological systems including natural areas, features and functions in the development of official plans and by-laws. Protections offered to habitat of endangered or threatened species under this policy framework do not apply to migratory birds such as Piping Plover. Although, habitat for Piping Plover may still receive some level of regulation under the policy framework since Piping Plover habitat may meet the criteria for Significant Wildlife Habitat (SWH) – habitat of species of conservation concern. Further, the Open Great Lakes sand dune vegetation community within Piping Plover habitat may receive some level of regulation under the provincial policy framework due to its provincial designation as a significant Area of Natural and Scientific Interest (ANSI) and potential qualification as SWH – rare vegetation community.

Local protection

Municipalities may include environmental protection policies in Official Plans through zoning lands for environmental protection and/or imposing conditions through site plan control. However, these tools are not necessarily species specific and may not trigger automatic habitat protections for specific species. The Town's 2025 Official Plan includes notional land use designations for the provincially owned lands identified for transfer to the Town (see section 2.3). ECCC understands that following the completion of the formal land transfer, the 2025 Official Plan and zoning by-laws may need to be amended to formally apply land use designation and zoning to the lands containing Piping Plover habitat.

On May 14, 2026, the Town approved a new Beach By-law (By-law No. 2026-39) with penalties to regulate the responsible enjoyment of Beach Area 1, Beach Area 2, New Wasaga Beach, and Allenwood Beach (Town of Wasaga Beach 2026g; Town of Wasaga Beach 2026h). The Beach By-law aims to strengthen local protection for dunes, critical habitat, sensitive natural areas and wildlife, including Piping Plover by restricting certain public activities including motorized vehicle use, fires and fireworks, littering, tents/camping, barbequing, pets, and damage to vegetation or natural features (Town of Wasaga Beach 2026g). Additional information is provided in section 2.3.

Piping Plover habitat occurs within the area regulated by the Nottawasaga Valley Conservation Authority (NVCA). The NVCA has permitting and regulation responsibilities under the Ontario *Conservation Authorities Act* which are intended to mitigate natural hazards (e.g., flooding and erosion) and may provide for the protection of or require mitigation measures to reduce impacts to the dynamic beach that supports Piping Plover habitat at Wasaga Beach (see section 2.3).

Other conservation measures

Since 2011, ECCC has supported Piping Plover stewardship and recovery efforts across Ontario through various funding initiatives. These efforts have been led by various organizations including

Birds Canada, the Ontario Ministry of Natural Resources, and Ontario Parks. Between 2011 and 2026, ECCC supported four projects led by the Province of Ontario and three projects led by Birds Canada that targeted conservation efforts at Wasaga Beach. Activities completed through these projects at Wasaga Beach include monitoring efforts (e.g., habitat use, arrival times, banding, productivity), threat abatement (e.g., predator exclosures, perimeter fencing), outreach with the Town of Wasaga Beach, and strategic conservation planning. With support from ECCC, Birds Canada also led a coordinated approach to Piping Plover stewardship efforts across the Province of Ontario to ensure standardized efforts and information sharing across all organizations and individuals focused on Piping Plovers nesting on the Great Lakes in Canada and the United States.

The Province of Ontario has also supported stewardship efforts for Piping Plover under funding initiatives that target species conservation. Since 2007, the province has funded 29 projects targeting Piping Plover which provided $1,897,828 in funding to conservation efforts under the Ontario's former Species at Risk Stewardship Program; seven of these projects occurred at Wasaga Beach. Today, the Species Conservation Program replaces the former Species at Risk Stewardship Program and invests in stewardship activities for species at risk, including preserving and rehabilitating habitat, supporting public education, threat mitigation, field-based surveys, research, and Indigenous knowledge collection. As a species classified as endangered by COSSARO, activities that promote the protection and conservation of Piping Plover are eligible for funding through Ontario's Species Conservation Program.

The Town has voluntarily committed to implementing conservation and stewardship efforts including avoiding mechanical raking at New Wasaga Beach and Beach Area 1 northeast of Spruce Street in 2026, recruiting volunteers and staff to support public education efforts, and engaging with Birds Canada to receive training on Piping Plover stewardship. The Town has implemented several measures to support areas without raking, including enhancing operational awareness and oversight for staff, and establishing defined boundaries through physical demarcation and signage. As the Town does not currently own Beach Area 1, 2 and New Wasaga, it has entered into a one-year interim management agreement with the province for the above areas. Once the formal transfer occurs, the Town will be in a position to make longer-term commitments. The Town is also engaging the NVCA to develop a long-term Municipal Piping Plover Stewardship Strategy and Municipal Beach Management Plan. Additional information is provided in Part 2.

1.6. Survival and recovery characteristics

The factors and characteristics that are considered to contribute to a species' likelihood of persistence are examined below. These characteristics are considered at the scale of the *circumcinctus* subspecies in Canada, but with a focus on the Canadian Great Lakes Population as it would be directly affected by the planned/proposed activities.

Stability: A species that has a stable (or increasing) population and distribution is more likely to persist over the long term.

At the subspecies level, Piping Plover *circumcinctus* subspecies (composed of the Prairie Canada Population and the Canadian Great Lakes Population) was broadly assessed to have a small and declining population (COSEWIC 2013). In the Canadian Great Lakes Population, at least 4 breeding pairs were observed annually from 2008 to 2025, inclusive. The number of breeding pairs peaked at 15 in 2016 and fell to as low as 5 pairs in 2022, 2023, and 2024. In 2025, 7 pairs were observed. Since the return of the species in 2007, the Canadian Great Lakes Population of this subspecies has a stable

(though not increasing) population trend of at least four breeding pairs. Its small size leaves the Canadian Great Lakes Population prone to stochastic events (see discussions on resilience and redundancy, below). Additionally, from 2020 to 2025, no new or historic nesting sites in Ontario were established, further indicating challenges in restoring stable growth across the population's range. Wasaga Beach has been essential for achieving stability in the Canadian Great Lakes Population, as it is the most consistent Piping Plover nesting site in Ontario having hosted nests annually from 2008 to 2025, and having fledged 87 chicks over 18 years of nesting (over 4.8 chicks per year on average; Table 2).

Table 2: Number of Piping Plover pairs[1] and chicks fledged (in parentheses) at each nesting site in Ontario from 2007 to 2025 (Birds Canada 2026). Of all the locations in Ontario where Piping Plovers have been observed, Wasaga Beach has been used most consistently by the species and produced the most fledglings.

Nesting Site	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Wasaga Beach		2 (1)	2 (4)	4 (1)	3 (5)	3 (6)	2 (6)	3 (9)	4 (9)	6 (14)	3 (1)	3 (9)	4 (6)	2 (3)	1 (3)	2 (4)	3 (2)	2 (4)	2 (0)	**51 (87)**
Saugeen Beach	1 (3)	1 (1)	4 (7)	2 (1)	2 (4)	2 (3)	2 (4)	4 (1)	4 (3)	4 (0)	5 (7)	3 (2)	2 (2)	1 (0)	1 (0)					**38 (38)**
Darlington Provincial Park										2 (7)	3 (1)	1 (2)	1 (0)	1 (4)	3 (4)	1 (0)		2 (2)	1 (1)	**15 (21)**
Carter's Bay			1 (4)	1 (0)			1 (3)		1 (2)	1 (3)										**5 (12)**
Presqu'ile Provincial Park/Brighton										1 (3)					1 (0)	1 (3)	1 (3)	1 (1)	2 (1)	**7 (11)**
Tiny Township														1 (2)	1 (2)	1 (3)	2 (0)			**5 (7)**
Toronto Island									1 (0)			1 (3)		2 (0)		1 (2)				**5 (5)**
Limestone Island Provincial Park										1 (?)	1 (?)		1 (?)						2 (5)	**5 (≥5)**
Port Elgin								1 (4)												**1 (4)**
Oliphant		1 (1)																		**1 (1)**
North Beach Provincial Park											1 (0)									**1 (0)**
Total	**1 (3)**	**4 (3)**	**7 (15)**	**7 (2)**	**5 (9)**	**5 (9)**	**5 (13)**	**8 (14)**	**10 (14)**	**15 (≥27)**	**13 (≥9)**	**8 (16)**	**8 (≥8)**	**7 (9)**	**7 (9)**	**6 (12)**	**6 (5)**	**5 (7)**	**7 (7)**	**134 (≥191)**

[1] A unique combination of Piping Plover individuals that attempted breeding at a given site; renesting by the same two individuals is considered the same pair.

Resilience: Resilience is the ability to recover after a perturbation. A resilient species is one that has a large enough population size and sufficient genetic diversity to rebound from disturbance and avoid demographic collapse and is therefore more likely to persist over the long term.

Multiple Population Viability Analyses have shown that Piping Plover populations have high sensitivity to extinction if there are small declines in adult and/or juvenile survival rates (Ryan et. al. 1993; Melvin & Gibbs 1996; Plissner & Haig 2000; Wemmer et. al. 2001; Larson et. al. 2002; Calvert et. al. 2006; Brault 2007). A Population Viability Analysis is not available for the *circumcinctus* subspecies in Canada specifically, but the subspecies was assessed as Endangered in 2013 by COSEWIC due to its small population size and projected decline. A total of 945 individuals of the *circumcinctus* subspecies was subsequently estimated in Canada as part of the 2016 International Piping Plover Breeding Census (Elliott-Smith et. al. 2025), which is below the COSEWIC threshold of 1000 individuals for a *Very Small or Restricted Total Canadian Population*. Accordingly, the subspecies may not yet have a large enough population size to be resilient from periodic disturbance. The small population size of the Canadian Great Lakes Population (i.e., 4-15 breeding pairs) leaves it vulnerable to stochastic events.

Redundancy: Redundancy refers to the number of locations and the degree to which the species is widespread. A species that has multiple locations, or a distribution that is very widespread, is more likely to persist over the long term because of reduced risk of catastrophic loss or extirpation from a single, local event. If one location becomes destroyed, others may be able to act as a source population.

Within the *circumcinctus* subspecies, immigration from the Prairie Canada Population to the Canadian Great Lakes Population is rare; therefore, rescue from the Prairie Canada Population is unlikely (Birds Canada 2026). Within the Great Lakes region, there is regular exchange of individuals between Canadian Great Lakes Population and the U.S. population. Recruits from areas near Lake Huron and Lake Michigan have been integral to increasing the population of the Canadian Great Lakes Population (Brown et. al. 2022).

Within the Canadian Great Lakes Population, Piping Plovers have been observed at 11 nesting sites between 2007 and 2025 (Birds Canada 2026) (Table 2). Of these, Wasaga Beach followed by Saugeen Beach have been used most frequently (although Saugeen Beach's ability to support successfully breeding Piping Plovers is unknown, as it is not known whether it has the necessary habitat features after it was mechanically raked and bulldozed in 2019). Of the nine other nesting sites, three sites have been used for one year each (North Beach Provincial Park, Port Elgin, Oliphant), three sites have been used sporadically for a total of four years each (Limestone Island Provincial Park, Toronto Island, Carter's Bay), and the remaining sites have been used between 4 and 9 years with some consistent and some sporadic nesting (Darlington Provincial Park, Presqu'ile Provincial Park, Tiny Township). While three of the four sites used in 2025 (Darlington Provincial Park, Presqu'ile Provincial Park, and Limestone Island Provincial Park) benefit from protection afforded by the *Provincial Parks and Conservation Reserves Act*, 2006, a total of 37 Piping Plovers have fledged from these sites since the species' return to Ontario, representing 19% of the total number of chicks fledged between 2007 and 2025 (Birds Canada 2026). Wasaga Beach has contributed to redundancy within the Canadian Great Lakes Population by being a consistent source of fledged birds that have contributed to population expansion and re-establishment. Eighty-seven Piping Plovers have fledged from Wasaga Beach over 18 nesting seasons (Birds Canada 2026), and 37.7% of Ontario's breeding adults fledged from Wasaga or were offspring of fledged Wasaga birds (Birds Canada 2026). Accordingly, while there is some redundancy, the species is highly dependent on only a few sites for breeding and nesting, and particularly Wasaga Beach.

Connectivity: A species that has more continuity in distribution (e.g., between breeding locations) is more likely to persist in the long term.

Within the *circumcinctus* subspecies, the Canadian Great Lakes Population is disjunct and fragmented from the Prairie Canada Population (Birds Canada 2026); birds nesting at the Lake of the Woods site in Northern Ontario (part of the Prairie Canada Population) have been hypothesized to be a link between the Canadian Great Lakes and Prairie Canada Populations, but the population at the Lake of the Woods site is very low (Kirk 2013). Connectivity exists with the U.S. Great Lakes population, with 54% of the Canadian Great Lakes Population breeding adults coming from the U.S. (Birds Canada 2026). Connectivity is important within the Canadian Great Lakes Population as well, as 46% of breeding adults fledged from breeding sites in Ontario. Wasaga Beach serves as a critical source for the Canadian Great Lakes Population, accounting for a significant portion of the breeding birds that disperse to other nesting locations within the Canadian Great Lakes Population.

Protection from human-caused threats: A species for which significant threat impacts caused by humans are ceased, avoided, or mitigated, is more likely to persist over the long term.

In the Canadian Great Lakes Population, human disturbance to Piping Plovers and their nests by beachgoers has traditionally been mitigated through efforts by partner organizations (e.g., Birds Canada), Canadian Wildlife Service staff, federal Wildlife Enforcement Officers, Province of Ontario staff, and Provincial Park enforcement officers within the boundaries of Ontario Provincial Parks locations. Impacts on Piping Plover habitat by beach raking, grooming, and grading have been mitigated at some breeding sites through complete cessation of or limiting the raked areas to those other than the specific areas with nests, the timing of raking in areas outside of the boundaries of identified critical habitat (e.g., raking once chicks have fledged), or by ensuring there is a “plover spotter” to make sure individual Piping Plovers are not injured or disturbed by the raking equipment. Avoiding or reducing impacts caused by humans are largely voluntary stewardship measures and can include psychological (also referred to as symbolic) fencing around nests, educational signage, and similar measures.

Considerations for assessing the impact of the threat on the ability to recover the species

The long-term recovery goal identified in the Recovery Strategy for Piping Plover *circumcinctus* subspecies is to achieve a viable, self-sustained, and broadly distributed population within the current Prairie Canada Population range and the reestablishment of the Piping Plover in the historical southern Ontario range (Environment Canada 2006). For the Canadian Great Lakes Population, the recovery objective from the Recovery Strategy is to ensure protection and monitoring of historical breeding habitat and any breeding pairs or individuals that may appear (Environment Canada 2006). The Recovery Strategy identified Long Point Provincial Park, Long Point National Wildlife Area, Presqu’ile Provincial Park, Wasaga Beach Provincial Park and Wellers Bay National Wildlife Area as historic breeding sites in Ontario (Environment Canada 2006).

The recovery goal for the Canadian Great Lakes Population in Ontario was further elaborated in the Action Plan for the Piping Plover (*Charadrius melodus circumcinctus*) in Ontario (Environment Canada 2013) to include the following population and distribution objectives:

(1) ensure protection and monitoring of historical breeding habitat, and

(2) maintain a minimum of four breeding pairs while maintaining, and where feasible increasing, the current distribution in Ontario.

These population and distribution objectives address the 2013 COSEWIC reasons for designation. COSEWIC (2013) stated that Piping Plover *circumcinctus* subspecies meets the criteria for Endangered because there are fewer than 2500 mature individuals and a projected decline in the numbers of mature individuals with one subpopulation (i.e., the Prairie Canada Population) having more than 95% of all mature individuals. Achieving a viable, self-sustained population will improve stability and resilience and addresses the COSEWIC criteria related to a small, declining population. Reestablishing Piping Plover in the historic southern Ontario range, and specifically maintaining a minimum of four breeding pairs while protecting and monitoring historical breeding habitat for the Canadian Great Lakes subpopulation, addresses the COSEWIC criteria related to one subpopulation representing more than 95% of all mature individuals. The population and distribution objectives in the 2013 Action Plan address the COSEWIC criteria related to one subpopulation (i.e., the Prairie Canada Population) representing more than 95% of all mature individuals and aim to retain or regain representation associated with the species' natural condition prior to the significant negative impacts of human activity. The minimum target of four breeding pairs was conservatively established in the Action Plan, based on breeding occurrences observed immediately following the species' return to Ontario between 2007 and 2009. More recent breeding occurrence data suggest that a higher minimum breeding population is likely necessary to achieve a resilient and stable population and address the 2013 COSEWIC reasons for designation (i.e., the Canadian Great Lakes Population representing 5% of the total). The population and distribution objectives are therefore relevant to determine the impact of a threat on the ability to recover the species in the present context.

2. Information on the new or intensifying threat

This section provides the best available information on the threat, as scoped for this assessment.

2.1. Overview of the threat

The request that triggered this assessment identified two threats to Piping Plover at Wasaga Beach: beach management and commercial development. In addition to these threats, ECCC has identified the anticipated increased recreational use of the beach as another potential threat to be assessed since recreational use is an expected outcome of the beach management and commercial development activities. These threats are associated with a recent investment from the Province of Ontario to support the Town in becoming a year-round tourism destination (Ontario 2025). The request identifies a recent amendment to the PPCRA that removed certain portions of Wasaga Beach from provincial park designation, including beach areas with Piping Plover habitat, the impending transfer of these areas to the Town, the June 2025 amendment to the provincial ESA followed by its repeal and the implementation of the SCA in March 2026 that does not include Piping Plover on the List of Protected Species in Ontario, as a conduit for these threats.

Regarding the threat of beach management, the request states that the Town will mechanically rake beachfront areas that include critical habitat for Piping Plover as soon as spring 2026. In correspondence with ECCC, the Town confirmed that, during the interim period before the lands are transferred to the Town, they are assuming maintenance responsibilities of the beachfront areas that were recently removed from the provincial park designation beginning in spring 2026 (A. McNeill, personal communication, February 27, 2026 and May 15, 2026). The Town has committed to

implementing certain beach management protocols outlined in the following documents: Wasaga Beach Provincial Park Beach Management Secondary Plan (2017), Wasaga Beach Provincial Park Beach Maintenance Protocols (2024), Wasaga Beach Provincial Park Plover Spotter Standard Operating Procedures, and Birds Canada Guidelines of the Ontario Piping Plover Conservation Program (A. McNeill, personal communication, February 27, 2026). Consistent with some Ontario Parks practices, the Town has committed to avoid raking at New Wasaga Beach and at Beach Area 1 from Spruce Street northeast to the mouth of the Nottawasaga River for the 2026 calendar year (A. McNeill, personal communication, February 27 and March 6, 2026) (Figure 2). This portion of Beach Area 1 overlaps with the portion of critical habitat where Piping Plover has been known to nest annually since 2008. The Town has also confirmed its intention, in 2026, to mechanically rake the portion of the critical habitat at Beach Area 1 southwest of Spruce Street, which has been raked in recent years by Ontario Parks (A. McNeill, personal communication, February 27, 2026; Ontario Parks 2017; Ontario Parks 2024). In addition, the Town confirmed its intention to mechanically rake Allenwood Beach in a manner consistent with high intensity recreational use (i.e., consistent with Ontario Parks raking practices for Beach Area 2) (A. McNeill, personal communication, February 27, 2026). ECCC understands the Town's raking practices for Allenwood Beach are inconsistent with Ontario Parks practices (Ontario Parks 2017; Ontario Parks 2024). Beyond 2026, the Town has not explicitly communicated a commitment to avoid raking New Wasaga Beach nor Beach Area 1 northeast of the Spruce Street boundary. The Town has indicated that they expect to complete a longer-term plan for managing the beach with considerations for Piping Plover, with advice from the NVCA in summer 2026 (A. McNeill, personal communication, February 27 and May 25, 2026).

The Town has communicated that, in its view, the transition from provincial (Ontario Parks) to municipal (Town) delivery does not represent a reduction in protection for the beach, Piping Plover or its critical habitat and that environmental stewardship is a core principle of Destination Wasaga (e.g., Town of Wasaga Beach 2025b; Town of Wasaga Beach 2026h). The Town approved a Beach By-law in May 2026 which regulates recreational activities in beachfront areas and provides the Town with enforceable regulations to manage recreational use (Town of Wasaga Beach 2026g; Town of Wasaga Beach 2026h). The Town has implemented stewardship efforts including hiring dedicated staff (e.g., two seasonal Destination Wasaga Piping Plover Technicians) in addition to coordinating volunteers to support beach surveys, monitor nests, collect data, and educate the public (Town of Wasaga Beach 2026d; Town of Wasaga Beach 2026f), the installation of signage at the beachfront to support public awareness and education, and working with Birds Canada to install fencing and a mini-nest exclosure following the establishment of a Piping Plover nest at Beach Area 1 in May 2026 (A. McNeill, personal communication, May 15, 2026; A. McNeill, personal communication, August 20, 2026). The Town recorded over 2 million visitors in 2025, which represents a ~15% increase from 2024 (Town of Wasaga Beach 2025e). Over time, recreational use may increase at Wasaga Beach as a result of the Town's efforts and provincial investments to build the community into a year-round tourist destination which could bring more visitors and/or expand the footprint of the high intensity recreation than has typically occurred at certain areas along the beachfront.

Regarding the threat of commercial development, there are several projects currently underway or that are being considered by the Town within or adjacent to the area containing critical habitat at Beach Area 1. The projects that are under construction or in the approval process (i.e., the Beach Drive construction, Marriott Hotel and Stonebridge development) are located within the nearby, urbanized area and do not overlap with the area containing critical habitat at Beach Area 1 (A. McNeill, personal communication, April 22, 2026). See section 2.2 and Table 3 for more information. Specific, finalized

design information for the other projects being considered by the Town are associated with the draft Destination Wasaga Master Plan and are not yet available; the Town clarified to ECCC in an in-person meeting on April 14, 2026 and in correspondence on April 22, 2026, that these projects are design concepts for which they are seeking public input. In a series of public engagement sessions from April 7 to 9, 2026, concept plans were presented on a map illustrating proposed project locations (Town of Wasaga Beach 2026a). The Town intends to approve these plans under the Destination Wasaga Master Plan in Council in summer 2026 (Town of Wasaga Beach n. d.-c).

2.2. Activities likely to pose threats

Specific activities related to the threats of beach management, anticipated increased recreational use, and commercial development to Piping Plover and its habitat are identified in Table 3.

Under Ontario Parks management, Allenwood Beach, New Wasaga Beach and the portion of Beach Area 1 from Spruce Street northeast to the mouth of the Nottawasaga River were identified as containing Piping Plover habitat (Ontario Parks 2017; Ontario Parks 2024). Accordingly, ECCC understands that these beach areas were not mechanically cleaned or raked, except in very limited circumstances where it supported habitat management under guidance from Birds Canada and the Ministry of Environment, Conservation and Park's Species at Risk Branch, and recreational use in sensitive features (e.g., the Nottawasaga River Spit Area of Natural and Scientific Interest) and active Piping Plover nesting habitat was restricted (Ontario Parks 2024; Ontario Parks, personal communication, May 29, 2026). The request that triggered this assessment identified several public statements made by the Town in 2025 that they intended to rake Beach Area 1, Allenwood Beach and New Wasaga Beach as soon as possible, as early as spring 2026 and before Piping Plovers return to Ontario from their spring migration (Town of Wasaga Beach 2025c; Town of Wasaga Beach 2025d; Wasaga Beach Ratepayers 2025). ECCC notes that these practices would be out of alignment with the Ontario Parks practices (Ontario Parks 2024).

In subsequent correspondence between the Town and ECCC, the Town described the intention to regularly maintain (e.g., including raking) Allenwood Beach (see Table 1 and Figure 1) throughout the 2026 season, and, contrary to the 2025 public statements, indicated that they do not plan to rake New Wasaga Beach or Beach Area 1 from Spruce Street northeast to the mouth of the Nottawasaga River (A. McNeill, personal communication, February 27, 2026). Upon ECCC inquiring about reports received from the public that raking occurred past the Spruce Street boundary, the Town confirmed that their staff mistakenly encroached into the Town's no raking area at Beach Area 1 on April 13, 2026 and raked a loop extending up to 126 metres past the Spruce Street boundary (K. Lalonde, personal communication, April 16, 2026; see Figure 2). Following this incident, the Town installed fencing to mark the Spruce Street boundary and gave clear direction to all equipment operators of the raking boundary (Town of Wasaga Beach 2026e). The Town informed ECCC that a permanent fence was installed at the Spruce Street boundary on May 25, 2026 (A. McNeill, personal communication, May 25, 2026).

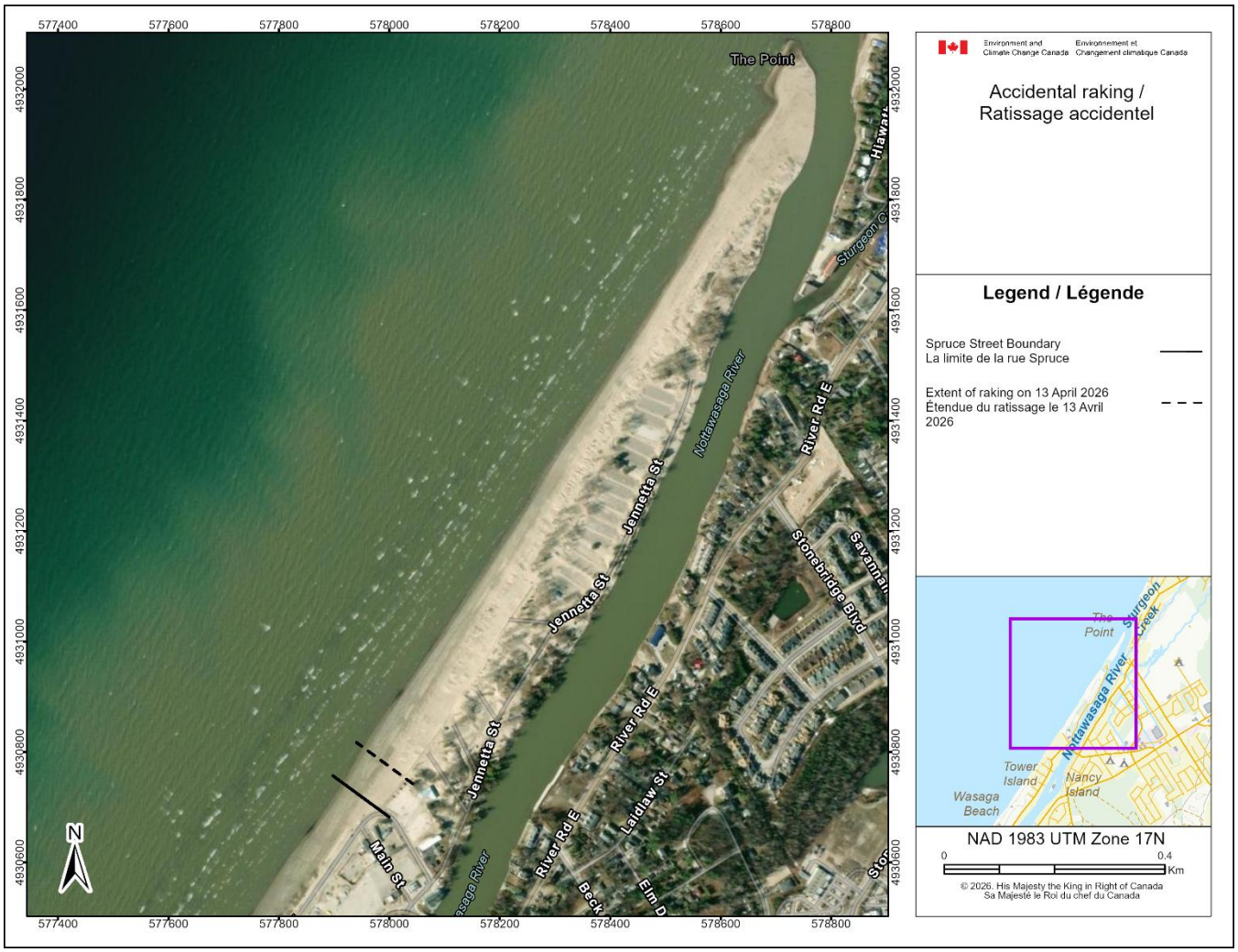

Figure 2: Extent of the accidental raking (dashed line) passed the Spruce Street boundary (solid line) at Beach Area 1 that occurred on April 13, 2026. The Town has committed to avoid raking from the Spruce Street boundary northeast to the mouth of the Nottawasaga River in 2026.

The Town planned a “spring clean-up” along the shoreline to clear debris at New Wasaga Beach (see Table 1 and Figure 1) followed by regular litter collection and garbage removal through the spring/summer (A. McNeill, personal communication, February 27, 2026). The Town reported that this spring clean-up would be conducted with “minimal intervention”, using hand collection methods and, where necessary, by using vehicles to remove large hazardous material (A. McNeill, personal communication, March 6, 2026). The Town completed the spring hand litter collection on April 15, 2026 (K. Lalonde, personal communication, April 21, 2026).

The Town’s plans for managing recreational use in known Piping Plover habitat are evolving as the land transfer is not yet complete. While the lands are under provincial jurisdiction until the land transfer takes place (expected in fall 2026), the Town’s Council enacted a Beach By-law, No. 2026-39, to regulate activities at Beach Area 1, Beach Area 2, New Wasaga Beach and Allenwood Beach and has authority to enforce the by-law prior to the formal land transfer (A. McNeill, personal communication, May 12, 2026; Town of Wasaga Beach 2026g; Town of Wasaga Beach 2026h). In correspondence with

ECCC on February 27, 2026, the Town indicated that they would consider establishing fencing to restrict public access and motorized vehicles in Piping Plover habitat in the event that a nest is established (A. McNeill, personal communication). The Beach By-law (No. 2026-39), enacted in May 2026, restricts access of motorized vehicles unless authorized under a Work Permit or granted an exemption pursuant to Section 14. ECCC is aware that off-road vehicle use has been observed in Beach Area 1 northeast of Spruce Street in spring (i.e., April, May) and summer (i.e., July, August, September) 2026 with some of these incidents occurring prior to the by-law being in place. The Town has installed additional signage at Beach Area 1 to advise that motorized vehicle use is prohibited under the Beach By-law and subject to fines up to $25,000 (A. McNeill, personal communication, August 20, 2026).

Since the correspondence on February 27, 2026, the Town has worked with Birds Canada to receive training on Piping Plover stewardship activities and, following the establishment of a Piping Plover nest at Beach Area 1 in May 2026, supported Birds Canada with the implementation of nest protection measures (Town of Wasaga Beach 2026b; A. McNeill, personal communication, May 15, 2026). The Town communicated an intention of having on-the-ground presence during the nesting season (e.g., two Destination Wasaga Piping Plover Technicians and Plover Stewardship Volunteers) to manage public access as well as using fencing and signage to define ‘protected areas’ (A. McNeill, personal communication, April 22, 2026). The Town informed ECCC on May 25, 2026, that volunteers were on the ground and conducting daily activities, and that the technicians would be hired within the next week (A. McNeill, personal communication, May 25, 2026). The Town has informed ECCC that by-law enforcement officers are monitoring the beach areas for compliance with the Beach By-law (A. McNeill, personal communication, August 20, 2026).

The Town’s stewardship website describes 'protected areas' as temporarily (May-July) fenced-off areas at Beach Area 1 established around nesting Piping Plovers (Town of Wasaga Beach n. d.-a). This suggests that the Town will establish ‘protected areas’ wherever nesting Piping Plovers are found. The Town has installed educational signage at the beachfront to support public awareness and education (A. McNeill, personal communication, May 12, 2026; Town of Wasaga Beach 2026g). Under Ontario Parks management, Ontario Parks implemented access restrictions in Piping Plover nesting areas within Allenwood, New Wasaga Beach and Beach Area 1 during the nesting and breeding season (Ontario Parks 2017; Ontario Parks 2024). For example, Wasaga Beach Provincial Park stationed staff near nesting sites to deter and redirect visitors from using the shoreline adjacent to nests, and stretches of shoreline were closed by the park after hatching to allow chicks to access the shore for foraging.

Recreational pressure on the beachfront areas could continue to increase due to anticipated annual increases in tourism (e.g., 15% increase in visitors from 2024 to 2025) (Town of Wasaga Beach 2025e) and, in time, potentially spurred by the substantial financial investments to boost local tourism at Wasaga Beach (Ontario 2025) which may bring more visitors to the area and/or develop tourist attractions in new areas of the beachfront that have previously experienced lower intensity recreational use. Recreational activity at any time of the year can affect the quality of habitat through the trampling or removal of vegetation and debris and/or by creating soil compaction. Increases in human activity may attract predators (e.g., gulls, raccoons) to areas where garbage is disposed of and other food sources are available, which can increase the risk of predation for Piping Plover. The Town has indicated that they will manage garbage barrels as Ontario Parks did prior to the de-regulation of the beach areas (A. McNeill, personal communication, May 25, 2026).

In June 2026, ECCC became aware of parking lot maintenance undertaken by the Town at Beach Area 1 adjacent to Piping Plover critical habitat northeast of Spruce Street. The Town described the

work as removing blow sand from the parking lot surface, adjacent boulevard, and parking lot medians (A. McNeill, personal communication, June 26, 2026). Photos that ECCC received from the public indicate that sand may have also been scraped from the dune next to the parking lot. The Town is of the view that these activities do not relate to the management of sand dunes and does not conflict with Ontario Parks' maintenance protocols for Beach Area 1 (i.e., Ontario Parks 2024) (A. McNeill, personal communication, June 26, 2026). The Town indicated that the prohibitions of the Beach By-law (No. 2026-39) did not apply to the activities associated with the parking lot maintenance as the work was conducted by the Town through its Public Works department (A. McNeill, personal communication, June 26, 2026). The Town stated that a permit from the NVCA under the *Conservation Authorities Act* was not required for these activities (A. McNeill, personal communication, June 26, 2026). NVCA confirmed that the maintenance activity appeared to be part of standard maintenance and upkeep needs, and that the activity occurred within paved areas (J. Vincent, personal communication, July 9, 2026). The NVCA indicated that municipal efforts to address blowing sand along roads, parking lots, and other developed areas adjacent to the beach would generally require NVCA review and permitting only where the proposed measures extend beyond routine maintenance and involve physical alterations within NVCA-regulated areas (J. Vincent, personal communication, July 9, 2026).

The Wasaga Beach beachfront is a relict beach and dune complex which consists of a finite deposit of post-glacial sand, which is not replenished by ongoing littoral draft along the Georgian Bay shoreline. It functions as an integrated sediment reservoir with sand being continually recycled between the nearshore, beach, and dune environments through wave action and wind driven transport (J. Vincent, personal communication, July 9, 2026). As a result, wind-blown sand accumulation on adjacent infrastructure, including beachfront parking areas, is a natural consequence of the active aeolian processes that shape the beach-dune system and maintaining sand on the beachfront means returning wind-transported sand to the beachfront (J. Vincent, personal communication, July 9, 2026). Under Ontario Parks management, parking lot maintenance generally focused on maintaining safe vehicle access and preserving existing infrastructure which could include the removal of sand that had accumulated on paved surfaces (Ontario Parks, personal communication, July 31, 2026). Based on NVCA observations of the parking lot maintenance, expertise the NVCA provided on the beach-dune dynamics, and the past Ontario Parks maintenance activities, it does not appear that the parking lot maintenance undertaken by the Town in June 2026 represents a change in the spatial extent of the activity.

Table 3: Planned or proposed projects or activities being evaluated in this assessment as having the potential to cause threats to Piping Plover and its habitat at Wasaga Beach, Ontario.

Planned or proposed projects or activities	Timeframe	Information on the specific aspects of the project/activity that have the potential to cause threats	Resulting impact(s) the activity can have on Piping Plover and/or its habitat as described in the 2013 Action Plan (Environment Canada 2013)
Threat: Beach Management			
Mechanical raking	Allenwood Beach and Beach Area 1 southwest of Spruce Street: **Currently underway**; raking began in spring 2026. New Wasaga Beach and Beach Area 1 northeast of Spruce Street: the Town has committed to avoid raking in 2026, although the Town encroached into this area in error in April 2026. The Town reported in May 2026 that fencing was installed to prevent future accidents. There is no commitment to avoid raking beyond 2026, pending development of a Municipal Piping Plover Stewardship Strategy and Municipal Beach Management Plan.	Allenwood Beach and Beach Area 1 southwest of Spruce Street: • Use of a mechanical beach rake to clean the beach areas • Frequency is weekly raking in the shoulder season and daily raking in the peak season New Wasaga Beach and Beach Area 1 northeast of Spruce Street: • Hand litter collection in 2026 • Possible use of vehicles to remove large hazardous material	**Trampling or removal of vegetation and debris.** Examples of activities that may result in this impact: beach raking (removal of vegetation and debris); and use of off-road, motorized and non-motorized vehicles can destroy critical habitat used as food sources and shelter. **Creating soil compaction.** Examples of activities that may result in this impact: use of off-road, motorized and non-motorized vehicles can destroy critical habitat because soils are too compact for nest creation resulting in a loss of nesting habitat. (Beach management is linked to IUCN threat category[2]: 7.3 Other Ecosystem Modifications)
Increased recreational use	Increase in recreational use of beach areas is uncertain. Town assumed responsibility of the lands ahead of **spring 2026.** The Town informed ECCC in May 2026 that By-law enforcement officers have been watching Beach Area 1	Increases in visitor numbers. Expansion of high intensity recreational areas into areas that previously experienced less intense recreational use.	**Trampling or removal of vegetation and debris.** Examples of activities that may result in this impact: use of off-road, motorized and non-motorized vehicles (e.g. all-terrain vehicles) can destroy critical habitat used as food sources and shelter. **Creating soil compaction.** Examples of activities that may result in this impact: use of ATVs and

[2] Terminology follows the threat lexicon of the International Union Conservation of Nature – Conservation Measures Partnership (IUCN-CMP) unified threats classification system.

	to ensure no unwanted activities occur. In addition, that Piping Plover volunteers have been on the ground daily and Destination Wasaga Piping Plover Technicians would be hired by the start of June 2026.	Special Events with uncertain requirements related to environmental protection.	other vehicles and increased recreational activities can destroy critical habitat because soils are too compact for nest creation resulting in a loss of nesting habitat. Human disturbance (e.g., pedestrians, off-leash dogs, all-terrain vehicles) and increased populations of predators associated with recreational activities may interfere with the species' behaviour (e.g., reduced time foraging, increased vigilance) and/or destroy the highly camouflaged eggs and chicks. (Recreational activities is linked to IUCN threat category: 6.1 Recreational Activities)
Threat: Commercial Development			
Beach Drive	**Construction underway**; began in 2025 and expected to be completed by 2027.	Construction footprint is approximately 12 acres within current footprint of Beach Drive abutting the portion of Beach Area 1 southwest of Spruce Street and includes (Town of Wasaga Beach n. d.-b): • Installation of steel seawall at the interface of the road and the beachfront • Raise the road by approximately 1.5 meters • Rebuild the underlying water, stormwater, and sewage systems	**Creating soil compaction.** Examples of activities that may result in this impact: commercial development including construction and associated activities can destroy critical habitat because soils are too compact for nest creation resulting in a loss of nesting habitat. **Changes to habitat availability and suitability resulting from changes in wetland/watershed management.** Examples of activities that may result in this impact: commercial development, and landscaping can result in the loss of critical habitat. **Changes to offshore currents.** Examples of activities that may result in this impact: construction of breakwater structures can alter beach and dune dynamics limiting critical habitat availability and thus reducing nesting and foraging habitat.

			(The Beach Drive Construction is linked to IUCN threat category: 1.3 Tourism & Recreation Areas)
Stonebridge development	**Construction underway**; began in 2025 and expected to be completed by 2027.	Footprint is within existing urbanized area adjacent to the portion of Beach Area 1 southwest of Spruce Street. The precise location of the development is contained within Beach Drive to the north, First Street to the east, Mosley Street to the south, and Third Street to the west (Town of Wasaga Beach 2026c). The development plan includes (Balsamo 2025): • More than 150 residential units • 31 commercial spaces	**Creating soil compaction.** Examples of activities that may result in this impact: residential or commercial development including construction and associated activities; landscaping can destroy critical habitat because soils are too compact for nest creation resulting in a loss of nesting habitat. **Changes to habitat availability and suitability resulting from changes in wetland/watershed management.** Examples of activities that may result in this impact: residential or commercial development can result in the loss of critical habitat. (The Stonebridge development is linked to IUCN threat category: 1.1 Housing & Urban Areas)
Marriott Hotel (Sunray Group)	**Construction expected to begin in 2026** and expected to continue for several years. However, certain regulatory approvals have yet to be sought by the proponent which could alter/delay timeline.	Footprint is within existing urbanized area adjacent to the portion of Beach Area 1 southwest of Spruce Street. The precise location of the development is contained within Beach Drive to the north, Main Street to the east, Mosley Street to the south, and First Street to the west (Town of Wasaga Beach 2026c). The development plan includes (Town of Wasaga Beach 2025a): • 120 room hotel • Amenities including a restaurant • Public gathering space	**Creating soil compaction.** Examples of activities that may result in this impact: commercial development including construction and associated activities can destroy critical habitat because soils are too compact for nest creation resulting in a loss of nesting habitat. **Changes to habitat availability and suitability resulting from changes in wetland/watershed management.** Examples of activities that may result in this impact: commercial development can result in the loss of critical habitat. (The Marriott Hotel development is linked to IUCN threat category: 1.3 Tourism & Recreation Areas)

Boardwalk repairs	**Repairs expected to occur in spring 2026,** prior to the peak recreation season.	The boardwalk extends parallel to the shoreline from Spruce Street towards the mouth of the Nottawasaga River and is less than 1 kilometer in length. The repairs are expected to occur within the footprint of the existing boardwalk. Purpose of the repairs are to address health and safety hazards (e.g., replacing rotted boards). The impact of the repairs will depend on whether heavy equipment is used to facilitate the work.	**Trampling or removal of vegetation and debris.** Examples of activities that may result in this impact: increased recreational activities can destroy critical habitat used as food sources and shelter. **Creating soil compaction.** Examples of activities that may result in this impact: use of off-road, motorized and non-motorized vehicles (e.g. all-terrain vehicles) and increased recreational activities can destroy critical habitat because soils are too compact for nest creation resulting in a loss of nesting habitat. (The boardwalk repairs are linked to IUCN threat category: 1.3 Tourism & Recreation Areas)
Enhanced boardwalk through Beach Area 1 An 'amusement deck' expanding Beach Drive into the beachfront Construction of an eco-resort, glamping facility, and concert amphitheatre along Beach Area 1 Construction of hotels, cultural centres, and parking structures adjacent to Beach Area 1	Precise timing information has not been defined. Projects are proposed in a draft master plan that is anticipated to be approved by Council in summer 2026. Timeline is likely to be years away given regulatory approval processes, need to source funding, etc.	Specific design information of these proposed projects is being developed by the Town. Concept plans proposed by the Town include (Town of Wasaga Beach 2026c): • Enhanced boardwalk through Beach Area 1 northeast of Spruce Street, which may include shelters, interpretive signage, and increased parking • An amusement deck that expands Beach Drive into the beachfront of Beach Area 1 at Spruce Street • Eco-resort, glamping facility, and amphitheatre integrated into the dune habitat within Beach Area 1 northeast of Spruce Street • Hotels, cultural centres (e.g., museums, arts centres), and parking	**Creating soil compaction.** Examples of activities that may result in this impact: commercial development including construction and associated activities and increased recreational activities can destroy critical habitat because soils are too compact for nest creation resulting in a loss of nesting habitat. **Trampling or removal of vegetation and debris.** Examples of activities that may result in this impact: increased recreational activities can destroy critical habitat used as food sources and shelter. **Changes to habitat availability and suitability resulting from changes in wetland/watershed management.** Examples of activities that may result in this impact: commercial development, and landscaping can result in the loss of critical habitat.

		structures developed in the semi-urbanized area adjacent to Beach Area 1 near Spruce Street	(The activities associated with these projects is linked to IUCN threat category: 1.3 Tourism & Recreation Areas)
New Marina with pedestrian bridge	Precise timing information has not been defined. Projects are proposed in a draft master plan that is anticipated to be approved by Council in summer 2026. Timeline is likely to be years away given regulatory approval processes, need to source funding, etc.	Specific design information of this proposed project is being developed by the Town. The location is expected to be at the mouth of the Nottawasaga River. Concept plans presented by the Town include (Town of Wasaga Beach 2026c): • Two groynes extending into Georgian Bay from the mouth of the Nottawasaga River • Series of rock/concrete piers to create the marina • Pedestrian bridge connecting Beach Area 1 to New Wasaga Beach	**Changes to offshore currents.** Examples of activities that may result in this impact: construction of marinas can alter beach and dune dynamics limiting critical habitat availability and thus reducing nesting and foraging habitat. **Creating soil compaction.** Examples of activities that may result in this impact: commercial development including construction and associated activities and increased recreational activities can destroy critical habitat. (The activities associated with these projects is linked to IUCN threat category: 1.3 Tourism & Recreation Areas)

Regarding the threat of commercial development, the request described components of the Town's Destination Wasaga initiative, including several specific projects that it asserts would negatively affect Piping Plover (Table 3). The request describes that these projects are within or adjacent to areas containing critical habitat for Piping Plover. The construction associated with the Stonebridge development as well as the Marriott Hotel (Sunray Group) is contained within the urbanized area adjacent to Beach Area 1 (A. McNeill, personal communication, April 22, 2026) (Figure 3). The construction associated with Beach Drive is also contained within the urbanized area adjacent to Beach Area 1 (A. McNeill, personal communication, April 22, 2026) (Figure 3). The installation of a steel seawall along Beach Drive, to help manage flooding hazards, will raise the road by approximately 1.5 metres. This seawall is directly adjacent to the portion of the area containing critical habitat for Piping Plover at Beach Area 1 southwest of Spruce Street. Steel seawalls adjacent to beaches may alter beach and dune dynamics, possibly affecting nearby availability of beach habitat. The Town indicated that repairs will be done to the boardwalk that extends along Beach Area 1 from Spruce Street towards the mouth of the Nottawasaga River (Meeting with Town of Wasaga Beach on April 14, 2026). ECCC understands that repairs would be minimal (e.g., replacing individual boards) and would be contained within the existing boardwalk footprint.

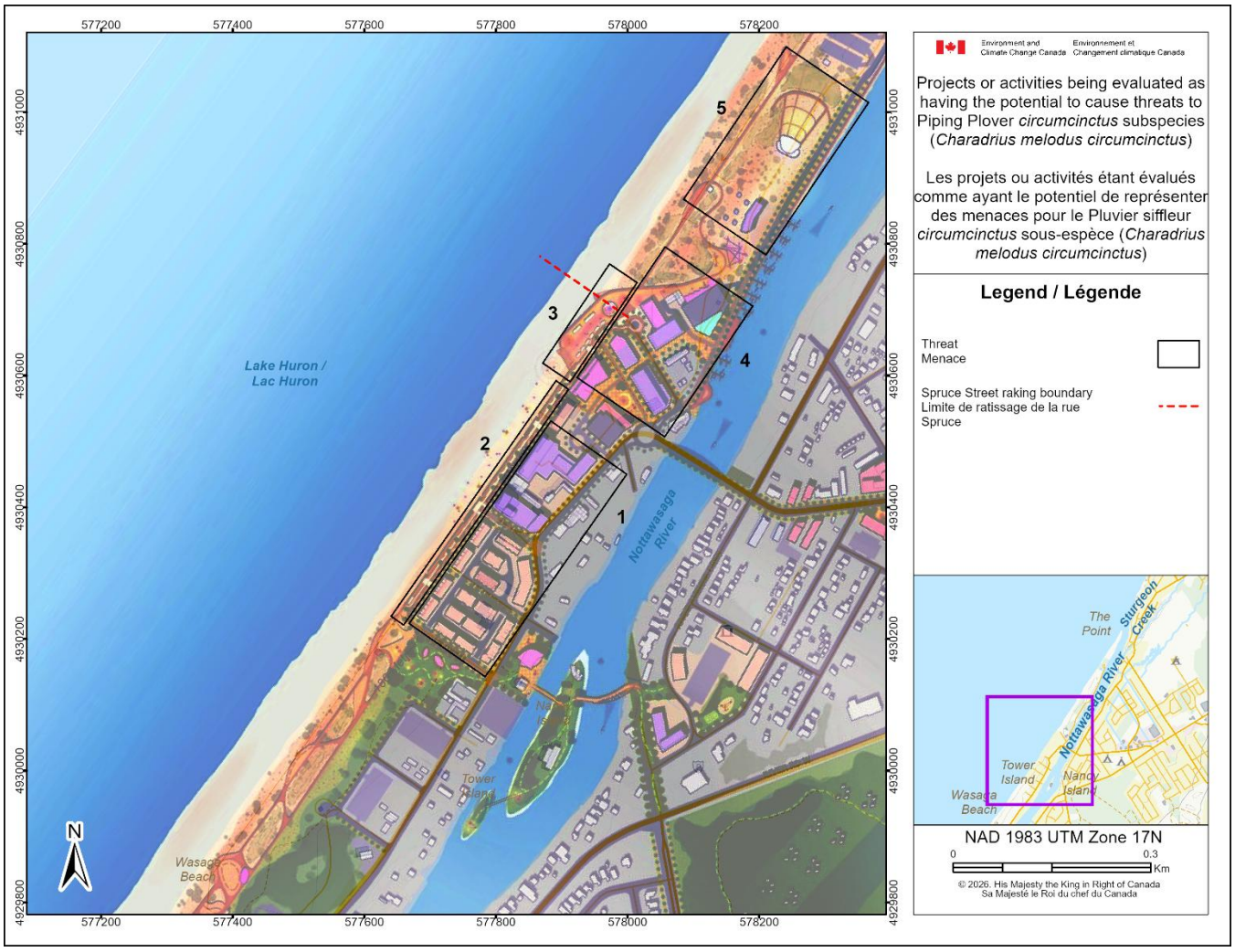

Figure 3: Concept plans for proposed Destination Wasaga commercial developments identified at or near Beach Area 1 (Town of Wasaga Beach 2026a), overlain with identifiers for the approximate

locations of threats considered in the assessment for landmarking purposes only. Developments shown include: 1) Stonebridge and Marriott Hotel developments, 2) Beach Drive construction, 3) Amusement Deck, 4) Hotels, cultural centres, and parking structure, 5) an Eco-resort and amphitheatre.

The precise timing and locations of other commercial development projects under the draft Destination Wasaga Master Plan including the enhanced boardwalk, 'amusement deck', glamping facility, various hotels including an eco-resort, cultural centres including an amphitheatre, parking structure, and new marina with pedestrian bridge have not yet been defined (Table 3). These projects are proposed in the draft Destination Wasaga Master Plan which is anticipated to be approved by Council in summer 2026 (Town of Wasaga Beach n. d.-c). The realization of these projects would be dependent on the securement of necessary funding, regulatory authorization, and other reviews and, therefore, may be years in the future. Based on concept plans presented in Town Hall meetings hosted by the Town, these proposed projects are likely to be located directly adjacent to the area containing critical habitat in Beach Area 1 (Figure 3 and 4).

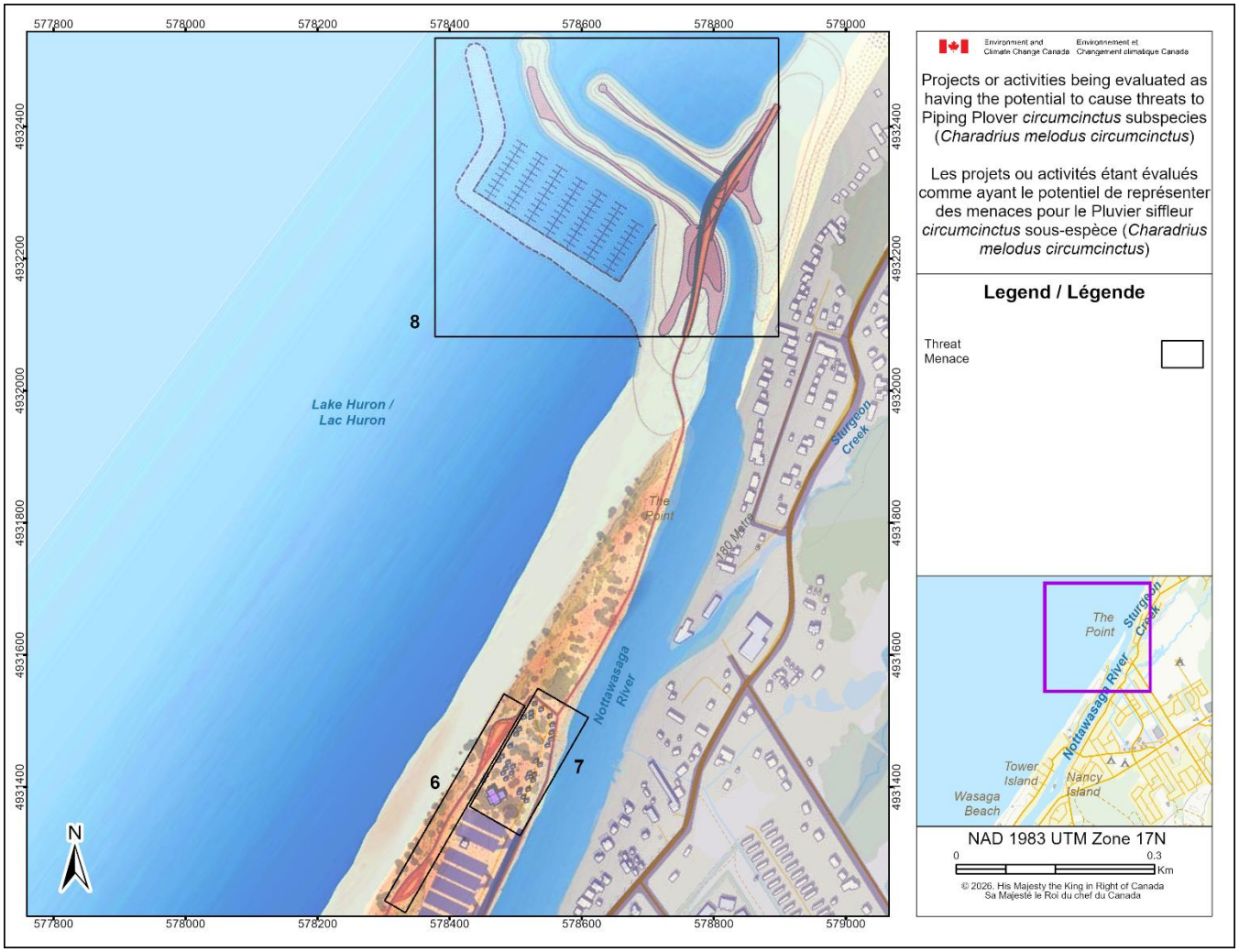

Figure 4: Concept plans for proposed Destination Wasaga commercial developments identified at or near Beach Area 1 (Town of Wasaga Beach 2026a), overlain with identifiers for the approximate locations of threats considered in the assessment for landmarking purposes only. Developments shown include: 6) Enhanced boardwalk, 7) Glamping facility, and 8) Marina with pedestrian bridge.

2.3 Applicable regulatory regimes

The purpose of this section is to describe the applicable regulatory regimes for the project/activity associated with the threats, including the federal, provincial and municipal levels, as well as their status related to the threats. This information is considered in Part 3 to determine whether immediate intervention is required beyond existing protection measures.

The disturbance or harm to individuals, eggs, and nests/residences that are in use by Piping Plover, without a permit, would be a violation of both the MBCA and SARA, and there is no permitting mechanism to authorize the incidental destruction of nests. These protections apply to the species and all types of activities that could violate the prohibitions, including those related to beach management, commercial development, and general use of beach areas occupied by Piping Plover.

Mechanical Raking and Increased Recreational Use

ECCC is not aware of any applicable federal, provincial, or municipal authorization or regulatory regime for mechanical beach raking or other beach cleaning activities that occur when the birds and/or their nests/residences are absent. Similarly, mechanical beach raking or other beach cleaning activities are not subject to impact or environmental assessment legislation at the federal, provincial, or municipal levels.

Since there is no federal prohibition in place regarding the destruction of critical habitat on non-federal lands for this species, any such activity could lawfully proceed without any required measures (i.e., according to the terms and conditions of a SARA permit) to avoid or reduce negative impacts to Piping Plover critical habitat. As of the March 2026 repeal of the ESA and implementation of the SCA, there are no provincial protections for Piping Plover. However, the Town is engaging with the NVCA to develop a Municipal Piping Plover Stewardship Strategy and Municipal Beach Management Plan for the beach which should inform the beach management practices implemented at the beachfront. The Town has also stated that they expect that a SARA section 11 agreement with Canada will be part of this long-term strategy (see section 1.5).

Outside of a formal regulatory process, the Town has committed to voluntarily implementing mitigation measures to reduce the impact of beach management activities on Piping Plover habitat (see section 2.1). The Town has voluntarily implemented measures to restrict access (e.g., erected symbolic fencing) following the establishment of a nest at Beach Area 1 in May 2026 (see section 2.2). Further, they will coordinate volunteers and staff (two Destination Wasaga Piping Plover Technicians) to monitor nesting areas and support public education (Town of Wasaga Beach 2026d; Town of Wasaga Beach 2026f). The Town informed ECCC on May 25, 2026, that volunteers were presently conducting daily activities, and that the technicians would be hired within the next week (A. McNeill, personal communication, May 25, 2026).

The Town enacted a Beach By-law, No. 2026-39, for the beach areas proposed for transfer from the Province to the Town, prior to the formal transfer. The stated intent of the by-law is to regulate the responsible enjoyment and use of the beach areas including Beach Area 1, Beach Area 2, Allenwood, and New Wasaga. The by-law does not contain any provisions related to mechanical beach raking or other beach cleaning activities. With respect to recreational activities, the by-law restricts certain activities including motorized vehicle use, fires and fireworks, littering, tents/camping, barbequing, pets, and damage to natural features. The provisions of the by-law do not apply to the Town's employees or contractors while performing their duties. The Chief Administrative Officer may exempt any person from any of the provisions of the by-law.

Commercial Development

Some of the proposed commercial development activities that may pose a threat to Piping Plover critical habitat may be subject to a federal, provincial, or municipal authorization or regulatory regime which may lessen the potential impacts of these activities. The likelihood and extent to which impacts may be lessened varies among the activities that pose a threat as well as the regulatory mechanism that applies to the activities.

In the context of proposed commercial development activities at Wasaga Beach, authorization(s) may be required under the *Fisheries Act* for the construction of a new marina at the mouth of the Nottawasaga River, depending on the proposed design as well as measures incorporated to avoid and mitigate impacts to fish and fish habitat. Should an authorization under the *Fisheries Act* be issued to address impacts to fish and fish habitat, it is possible that design features that allow water circulation and minimize impacts on coastal processes, if incorporated, may also help reduce impacts to Piping Plover. However, there is currently insufficient information to determine whether the proposed marina will result in adverse effects requiring authorization under the *Fisheries Act*. Regarding effects to aquatic species at risk, it is unlikely that a permit will be required from Fisheries and Oceans Canada under SARA as there are currently no aquatic species at risk located in the proposed location of the marina for which the prohibitions of SARA apply.

Under the *Conservation Authorities Act*, conservation authorities regulate development in their 'regulated areas' (e.g., wetlands, water courses, and shorelines) and provide technical expertise to ensure people and property are protected from natural hazards (e.g., flooding and erosion) while conserving natural resources. The development projects underway or proposed would require compliance with the *Conservation Authorities Act.* For Wasaga Beach, these activities would fall completely or partially within the regulated area of the NVCA, the local conservation authority responsible for watershed management in the Wasaga Beach area, and proponents would likely require NVCA permission prior to proceeding. The NVCA may issue a permit for development projects, if the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil/bedrock and the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property, which may incidentally minimize impacts to Piping Plover. The NVCA has issued a permit for the activities associated with the construction of Beach Drive which includes conditions such as minimizing erosion, soil stabilization, and prohibiting additional removal of vegetation or trees.

Regulations for development at the beachfront at Wasaga Beach under the provincial land use planning policy framework (i.e., *Planning Act,* Provincial Planning Statement, etc.) and the Town's Official Plan are complex. The 2025 Official Plan includes notional land use designations for Beach Area 1 (Town of Wasaga Beach 2025f). Schedule C2 of the 2025 Official Plan notionally identifies the beachfront at Beach Area 1, which overlaps with the area containing Piping Plover critical habitat including the portion southwest of Spruce Street, as 'Greenland - Environmental Protection' and the remainder of Beach Area 1, which includes roads and parking lots, as 'Mixed Use'. Schedule G maps the specific classifications of the 'Greenland – Environmental Protection' land use designation and shows all of Beach Area 1 as the 'Natural Hazard' classification. In addition to the 'Natural Hazard' classification for Beach Area 1 mapped on Schedule G, there may be other 'Greenland - Environmental Protection' policies that could apply to Beach Area 1, including 'Natural Heritage (Category 1)' for the Nottawasaga River Spit ANSI and 'Natural Heritage (Category 2)' for the 'Beach & Dune Conservation Area'.

The intent of the ‘Greenland – Environmental Protection’ land use designation is to identify areas of natural heritage and protect them from development or site alteration (Town of Wasaga Beach 2025f). It does not preclude development or site alteration where there are exceptions, including for public uses (e.g., Section 2.7.2.2) (Town of Wasaga Beach 2025f). Any proposed development or site alteration on or adjacent to this area is required to include an Environmental Impact Study (EIS), to the satisfaction of the Town and any other required agency, to assess the potential impacts of a specific development proposal on the natural heritage features of a particular site or over a larger area. Recommendations stemming from an EIS must demonstrate no negative impact to natural heritage features by avoiding, mitigating and/or enhancing habitat and can be implemented through instruments such as Site Plan Control or Development Agreements. EIS recommendations can also be implemented as conditions of a Conservation Authority permit.

The 2025 Official Plan includes a notional ‘Greenland – Environmental Protection’ classification of ‘Natural Hazard’ for Beach Area 1 in Schedule G (Town of Wasaga Beach 2025f). The Town describes Natural Hazard lands in Section 4.2 of the 2025 Official Plan as “areas where naturally occurring processes could pose a threat to the safety of people or to property.” The policies that apply to Natural Hazard lands focus on preventing loss of life, minimizing risks to property, and ensuring development is protected from natural hazards (e.g., flooding, erosion, dynamic beaches, wave uprush, etc.). The 2025 Official Plan specifies some development preclusions for areas identified as dynamic beach hazards. The extent of the dynamic beach hazard limit is determined through the completion of technical studies associated with specific development applications.

The provincial land use policy framework prohibits development and site alteration in significant ANSI unless no negative impacts have been demonstrated. Section 4.1.3.4 (1) of the Town's 2025 Official Plan specifies that no development or site alteration shall be permitted in any portion of an ANSI that is classified as “Natural Heritage (Category 1)” on Schedule G. Since the Nottawasaga River Spit ANSI is not classified as “Natural Heritage (Category 1)” on Schedule G of the 2025 Official Plan, ECCC understands that an amendment to the Official Plan and/or Zoning By-law may be required for Section 4.1.3.4 (1) of the 2025 Official Plan, which prohibits development or site alteration, to apply. Regardless of how lands are classified on Schedule G, the 2025 Official Plan applies policies for ‘Natural Heritage (Category 1)’ to significant ANSIs which limit development or site alteration to activities associated with public works, public uses, or structures or other works necessary for flood or erosion control (2025 Official Plan Section 4.1.3 (3)). While Piping Plovers have nested in the Nottawasaga River Spit ANSI, nesting records from Wasaga Beach indicate that the majority of nests are outside the ANSI (Birds Canada 2026). This is contrary to the Town’s website which states: “Typically, Plover nest in the protected land where the Nottawasaga River meets Georgian Bay, which is a [provincially] designated Area of Scientific Interest (ANSI)” (Town of Wasaga Beach n. d.-a).

The 2025 Official Plan recognizes a ‘Beach & Dune Conservation Area’ that approximately extends from Beach Area 1 to Beach Area 6 (therefore excluding New Wasaga and Allenwood Beach). The 'Beach & Dune Conservation Area' is considered ‘Natural Heritage (Category 2)’ under the ‘Greenland – Environmental Protection’ (Section 4.1.4) and is meant to apply to all privately and publicly owned properties that abut the Wasaga Beach Provincial Park beach area (Section 4.1.5). It is unknown how this policy of the 2025 Official Plan may apply following the deregulation of Beach Areas 1 and 2 as provincial parklands. In the ‘Beach & Dune Conservation Area’, development and site alteration are not prohibited, and instead enhancements are encouraged such as incorporating native vegetation, restoring areas where vegetation has been removed, and replacement of sand materials excavated by construction works (Town of Wasaga Beach 2025f).

The 2025 Official Plan defines an endangered species as only species listed as endangered under the ESA or any successor to that Act (i.e., SCA). Therefore, with the changes to provincial legislation, all habitat protection measures identified in the 2025 Official Plan that apply to habitats of endangered or threatened species (e.g., Section 4.1.3.3), such as the intent to protect the habitat in its natural state, do not apply to Piping Plover.

The provincial land use planning framework prohibits development and site alteration in Significant Wildlife Habitat (SWH) unless no negative impact by avoiding, mitigating and/or enhancing habitat can be demonstrated. Under the provincial land use planning policy (i.e., the Natural Heritage Reference Manual, 2005), SWH for 'species of conservation concern' includes "species identified as nationally endangered or by the Committee on the Status of Endangered Wildlife in Canada, which are not protected in regulation under Ontario's ESA". Given that Piping Plover is not protected under the SCA, habitat for Piping Plover appears to qualify provincially as SWH for 'species of conservation concern'. The SWH Technical Guide (2000) under the provincial land use policy framework specifically includes the Great Lakes dunes at Wasaga Beach as SWH. The Town's 2025 Official Plan defines SWH as "the habitat, as that term is defined in the *Endangered Species Act*, *2007* (S.O. 2007, c. 6) or in any successor thereto, of an endangered species, a threatened species, or a species that is classified as being of special concern under that Act or any successor thereto, and includes any area prescribed as the habitat of an endangered species or threatened species by the regulations under the *Endangered Species Act, 2007* or any successor thereto" (Section 8.5 (48)) and is not consistent with the provincial land use policy framework. This definition of SWH does not apply to Piping Plover. Section 4.1.4.3 (1) of the Town's Official Plan (2025) describes policies that apply to "significant habitat" for significant wildlife species as "significant wildlife habitat that is not the habitat of an endangered species or threatened species", which is inconsistent with the definition of SWH provided in Section 8.5 (48). If the definition of "significant habitat" in Section 4.1.4.3 (1) includes habitat for Piping Plover or the Open Great Lakes sand dunes, development and site alteration may be permitted provided that an EIS has demonstrated no negative impacts on the viability of the significant habitat.

Under the *Planning Act*, a municipality enact a zoning by-law to implement the municipal land use policies established in the *Planning Act* and the municipality's Official Plan. The Town is developing a new Comprehensive Zoning By-law that implements the Town's 2025 Official Plan and released a draft zoning by-law for public review in June 2026 (Town of Wasaga Beach 2026i). The draft zoning by-law includes notional zoning for Beach Area 1, New Wasaga Beach, and Allenwood Beach (Town of Wasaga Beach 2026i). Notional zoning at Beach Area 1 includes 'Greenland – Environmental Protection' for the area that overlaps with the Nottawasaga River Split ANSI. Notional zoning for the portion of Piping Plover critical habitat that extends from the ANSI southwest to the end of Beach Area 1, where the majority of Piping Plover nests have occurred (Birds Canada 2026) includes 'Open Space' (i.e., 'Greenland – Parks & Open Space') and 'Natural Hazard'. The 'Greenland – Parks & Open Space' designation is predominantly used for parks and other public recreation purposes, and development is allowed in relation to the permitted uses specified in the 2025 Official Plan and zoning by-law. The 'Greenland – Parks & Open Space' designation does not automatically trigger an Environmental Impact Study. Regardless of the land use designation, an Environmental Impact Study may be required for development, redevelopment, or site alteration that could potentially have an impact on a natural heritage feature or its ecological or hydrological functions (2025 Official Plan Section 4.1.1.1) and policies in the 2025 Official Plan related to natural heritage features apply to any lands that have been determined to contain a significant natural heritage feature (2025 Official Plan Section 4.1.3 (1)). As described above, it is unknown how the policies of the 2025 Official Plan apply to Piping Plover habitat or the Great Lakes dunes.

Additional regulatory authority regarding commercial developments rests with the local municipality (i.e., Town of Wasaga Beach) per the provincial land use planning policy framework (i.e., *Planning Act,* Provincial Planning Statement, etc.). ECCC recognizes that the proposed or underway developments would likely be subject to site plan applications, official plan amendments, zoning by-law amendments and/or similar authorizations issued by the Town. The new Beach By-law, No. 2026-39, contains a provision that allows the Town to issue work permits for construction works on any beach area, or abutting any beach area, which may include the use of motorized vehicles. The provisions of the by-law do not apply to the Town of Wasaga Beach employees or contractors while performing their duties.

Any of the proposed or underway development projects may also require authorization from the Ontario Ministry of Environment, Conservation and Parks for activities regulated under the *Ontario Water Resources Act*, *Environmental Protection Act*, and *Safe Drinking Water Act* if the activities relate to sewage and stormwater management and/or water quality.

2.4 Barriers to carrying out activities

The purpose of this section is to provide information on any barriers to carrying out activities that would affect the likelihood of threats occurring (e.g., legal challenges, enforcement activities, access or infrastructure issues, public opposition). This information is considered in Part 3 to determine whether immediate intervention is required beyond existing protection measures.

ECCC is not aware of any applicable federal, provincial, or municipal regulatory regime that would present a barrier to mechanical beach raking in the absence of a Piping Plover nest, including those discussed in section 2.3. The Town's Beach By-law (No. 2026-39) is a barrier to certain activities including littering, pets, damage to natural features and use of motorized vehicles on the beachfront unless authorized under a Work Permit. These provisions of the by-law may be exempt pursuant to Section 14.

As part of the Ontario Piping Plover Conservation Program, Birds Canada partners and volunteers walk along Wasaga Beach daily to watch for the return of Piping Plovers beginning in mid-April. For the 2026 nesting season, the Town partnered with Birds Canada to complete monitoring and stewardship activities for Piping Plover (Town of Wasaga Beach, personal communication, April 14, 2026). The Town participated in training sessions for their staff with Birds Canada, sent a call for volunteers (formerly a Birds Canada role at Wasaga Beach) and planned to hire two Destination Wasaga Piping Plover Technicians for the Piping Plover nesting season (Town of Wasaga Beach 2026b; Town of Wasaga Beach 2026d; Town of Wasaga Beach 2026f). Following the establishment of a nest at Beach Area 1 in May 2026, the Town worked with Birds Canada to construct a predator exclosure and erect fencing as a protective buffer area around the nest to support the birds breeding activities (A. McNeill, personal communication, May 15, 2026). This visible stewardship activity and nest protection may represent a short-term barrier to carrying out activities on the beach such as raking. The Town confirmed on May 25, 2026, that volunteers were conducting daily activities at that time, and that the technicians would be hired within the next week (A. McNeill, personal communication, May 25, 2026).

There is some public opposition to mechanical beach raking / cleaning and commercial development activities based on public inquiries sent to ECCC that have relayed concerns about Piping Plover and its habitat protection at Wasaga Beach, following amendments to the ESA (amended in June 2025, prior to being repealed in March 2026) and PPCRA. Additionally, 98% of public comments submitted to the Ministry of the Environment Conservation and Parks via the Environmental Registry of Ontario opposed the proposed removal of beach areas from provincial park lands

(https://ero.ontario.ca/notice/025-0694). There is some public support based on records from Town Hall Public Meetings and public inquiries sent to ECCC that relay support for Destination Wasaga.

3. Assessment of imminent threat to recovery and survival

For the purposes of advising the minister on whether a wildlife species is facing an imminent threat to its survival or recovery for the purposes of section 80 of SARA, a terrestrial wildlife species will be determined to be facing an imminent threat to its survival or recovery if an identified new or intensifying human-induced threat is occurring or is likely to occur in the near term, would render the species' survival or recovery highly unlikely or impossible, and its new or additional impacts cannot be eliminated or mitigated without immediate intervention.

The following three key questions, relying on the best-available scientific information and expert opinion and the principles and purpose of SARA, are used to determine whether a species is facing an imminent threat to its survival or recovery for the purposes of section 80 of SARA:

1. is the wildlife species facing a new or intensifying human-induced threat?
2. will the impact of the threat make:
    a. survival of the wildlife species highly unlikely or impossible?
    b. recovery of the wildlife species highly unlikely or impossible?
3. does the threat require immediate intervention beyond existing protection measures?

Question 1: Is the wildlife species facing a new or intensifying human-induced threat?

This question aims to determine whether the species is facing a new or intensifying human-induced threat that is likely to materialize in the near term, using a sector-sensitive framework with a focus on the likelihood and timing of the threat. Each new or intensifying threat is assigned an imminency rating, which is a combination of a threat's timing and likelihood rating. Threats with ratings of "extreme", "very high" or "high" are assessed further in Question 2. Threats with ratings of low to moderate could be further assessed under certain conditions (e.g., highly vulnerable species or high potential severity). A new threat is generally one that has not been previously documented or expected, or the first appearance of a documented threat to the species or habitat in a particular geographic area. An intensifying threat is generally a known threat that is increasing in scope, frequency, spatial extent or severity of its impact.

Yes. Piping Plover is facing new and intensifying human-induced threats from beach management (e.g., mechanical raking) and commercial development at Wasaga Beach, Ontario.

Table 4 contains details of the imminency rating for the projects or activities that were determined to be new or intensifying and will be assessed in Question 2. The de-regulation of certain beach areas, the impending transfer of the lands from the province to the Town, and recent changes to provincial species at risk legislation that removed provincial protection for Piping Plover have collectively created conditions for the species to face new (i.e., development projects) or intensifying (i.e., beach management) threats at Wasaga Beach.

Threats associated with mechanical raking and the Beach Drive seawall were determined to have an imminency rating of 'extreme'. In the absence of established Ontario Parks beach management protocols and given the removal of provincial habitat protection for the species, the spatial extent to which mechanical raking could occur has expanded to overlap with the area of known Piping Plover

habitat at this site. Although the Town has communicated in writing that it has voluntarily limited mechanical raking in some areas that contain Piping Plover habitat (i.e., Beach Area 1 northeast of Spruce Street and New Wasaga Beach), those undertakings are limited to 2026, and the Imminent Threat Policy and its associate guidance considers threats likely to occur in the near term (e.g., up to 24 months) to be new or intensifying. Further, the Town is raking Allenwood Beach in 2026 and this beach area has been identified at containing habitat for Piping Plovers (see section 1.3 for additional information). While the Beach Drive and associated construction footprint have no geographic overlap with the area containing Piping Plover critical habitat, the seawall that is being installed directly abuts the area containing Piping Plover critical habitat at Beach Area 1 (i.e., southwest of Spruce Street).

The threats associated with the proposed development projects (i.e., enhanced boardwalk, amusement deck, eco-resort, amphitheatre, glamping facility, and marina with pedestrian bridge) were determined to have an imminency rating of 'moderate' or 'low' but will also be assessed in Question 2 because these threats have a high potential severity and Piping Plover is a highly vulnerable species[3]. The construction footprints for the enhanced boardwalk, amusement deck, eco-resort, amphitheatre and glamping facility could encroach into Piping Plover habitat within Beach Area 1 and could cause permanent destruction or degradation of habitat as well as permanent ecosystem changes. The construction of the marina and pedestrian bridge could result in the destruction and degradation of critical habitat and/or permanent ecosystem changes since the proposed location directly overlaps with Piping Plover habitat and previous nest locations.

The following projects and associated construction activities will not be evaluated further in this assessment: repairs to the existing boardwalk, Stonebridge development, Marriott Hotel, as well as the cultural centres, other hotels and parking structure proposed in the draft Destination Wasaga Master Plan (see Figure 3). ECCC understands that repairs to the existing boardwalk would be minimal (e.g., replacing individual boards) and would be contained within the existing boardwalk footprint. Boardwalk maintenance has occurred under Ontario Parks management and the extent or scope of the repairs to be completed by the Town is expected to be consistent with previous maintenance. The Stonebridge development and the Marriott Hotel projects and associated construction activities are expected to occur entirely within the urbanized area outside of Piping Plover critical habitat at Beach Area 1 to the southwest of the Spruce Street boundary (see Figure 3 and Table 3). The cultural centres, other hotels and parking structure proposed under the draft Destination Wasaga Master Plan appear to be located within the semi-urban area near (i.e., less than 500 metres from) Piping Plover critical habitat at Beach Area 1 at the Spruce Street boundary and may not overlap with Piping Plover habitat. Further, these proposed developments are speculative, and realization of these projects relies on the Town approving the draft Master Plan in Council, securing necessary funding, developing designs, and obtaining required regulatory approvals. However, all of these developments, including the Stonebridge and Marriott Hotel developments, are expected to contribute to increased tourism in the Wasaga Beach area and therefore increased recreational use of the beachfront.

The threat of increased recreational use is considered separately from the threats associated with the construction of these developments. Although parts of the beachfront have long experienced high recreational use, the proposed developments projects under the draft Destination Wasaga Master Plan

[3] Piping Plover meets the COSEWIC criterion for small population size, is listed as Endangered under SARA, is a habitat specialist in rare ecological communities (i.e., Great Lakes sand dunes), demonstrates high site fidelity, and limited dispersal or recruitment from other populations, therefore it is considered to be a highly vulnerable species. Further, the species is already facing multiple, interacting threats at Wasaga Beach (e.g., predation).

would expand high intensity recreational use into areas containing Piping Plover habitat at Beach Area 1. The enactment of the Beach By-law, No. 2026-39, restricts certain recreational activities, such as motorized vehicle use, fires and fireworks, littering, pets, and damage to natural features, and may present a barrier to the occurrence of these activities due to the high financial penalties. The imminency rating for increased recreational use was determined to be 'low' since the timing of this threat is dependent on the realization of conceptual development projects and the potential impacts from recreational use may be avoided or mitigated through the enforcement of the Beach By-law. The threat of increased recreational use will not be assessed in Question 2.

Table 4: Imminency assessment for new or intensifying threats to Piping Plover at Wasaga Beach, Ontario, that will be assessed in Question 2 to determine whether the impact of threats will make survival or recovery of the species highly unlikely or impossible.

Planned projects or activities	Likelihood rating	Timing	Likelihood justification	Imminency Rating
Threat: Beach Management				
Mechanical raking	High	Immediate: 1 to 12 months	• No mechanism to regulate raking. • The Town has the necessary capacity and resources (e.g., purchased a Barber Beach Rake in 2025) to mechanically rake the beach. • Town is currently raking Allenwood Beach. • Town has committed to avoid raking New Wasaga Beach and Beach Area 1 northeast of Spruce Street in 2026, although a small area was raked in April 2026, in error (Figure 2). • Uncertainty regarding the Town's planned beach management activities beyond 2026, including whether raking will occur in Piping Plover habitat at New Wasaga Beach and/or Beach Area 1 northeast of Spruce Street, pending finalization of the Municipal Piping Plover Stewardship Strategy and Municipal Beach Management Plan. • If raking were to occur in 2027, the approximate start date would be in April.	Extreme
Threat: Commercial Development				
Beach Drive Seawall	Very High / Certain	Ongoing: already occurring	• Construction began in 2025 and expected to be completed by 2027. • Permit obtained from the NVCA for the activities associated with the Beach Drive construction including the seawall.	Extreme
Enhanced boardwalk, amusement deck, eco-resort, amphitheatre, glamping facility	Moderate	Mid Term: 2 to 5 years	• Projects are conceptual and are part of the Town's the draft Destination Wasaga Master Plan, which is a 10-year planning horizon. • Anticipated Council approval date of the draft Master Plan is summer 2026. • Town indicates that the realization of these projects depends on securing funding,	Moderate

			developing detailed designs, regulatory approvals and environmental reviews. • Minimum timeline for regulatory approvals related to provincial land use policy framework and permitting under the *Conservation Authorities Act* is likely between 19-31 weeks but may be extended based on many factors including the completeness/quality of applications, field verification, multi-agency coordination, and/or complexity of works. • Timing of these projects is uncertain and could occur within 2-5 years.	
New Marina with pedestrian bridge	Low	Long Term: 5+ years	• Projects are conceptual and are part of the Town's the draft Destination Wasaga Master Plan, which is a 10-year planning horizon. • Anticipated Council approval date of the draft Master Plan is summer 2026. • Town indicates that the realization of this project depends on securing funding, developing detailed designs, regulatory approvals and environmental reviews. • Minimum timeline for regulatory approvals related to provincial land use policy framework and permitting under the *Conservation Authorities Act* is likely between 19-31 weeks but may be extended based on many factors including the completeness/quality of applications, field verification, multi-agency coordination, and/or complexity of works. • Timing of this project is uncertain, however, given the complexity of the project (e.g., dredging to create a deep-water marina, stabilizing the mouth of the river) timing could be 5+ years for the project to occur.	Low

Question 2: Will the impact of threat(s) make survival or recovery of the species highly unlikely or impossible?

a) Survival of the species highly unlikely or impossible?

This question aims to determine whether impacts of the threat will render the survival of the entire species at the national scale highly unlikely or impossible. An assessment of survival is based on the needs of the taxonomic species as listed on Schedule 1 to persist in the long term (see Part 1, “Survival and recovery characteristics”). The assessment considers characteristics of the species’ likelihood of survival, including population stability, resilience, redundance, connectivity, and protection from human-caused threats.

No. ECCC’s assessment is that the impact of the identified threats (beach management, increased recreational use, and commercial development) at Wasaga Beach would not be likely to render the

survival of the Piping Plover *circumcinctus* subspecies impossible or highly unlikely throughout its range in Canada. At the national scale, the Prairie Canada Population represents more than 95% of the *circumcinctus* subspecies distributed across four provinces. With the Canadian Great Lakes Population representing less than 5% of the *circumcinctus* subspecies and considering the limited connectivity with the Prairie Canada Population, the identified threats at Wasaga Beach will not occur at a scale sufficient to render the survival of the subspecies highly unlikely or impossible. As specified in the "Scope of the assessment" section, this assessment focuses on threats present/anticipated at Wasaga Beach. However, Question 2 (a) deals with the subspecies' survival across its entire Canadian range.

While these threats could significantly impact Wasaga Beach and the Piping Plover *circumcinctus* subspecies' Canadian Great Lakes Population, the broader survival of the subspecies at the national level is supported by the larger and more widely distributed Prairie Canada Population. Immigration from the U.S. Great Lakes population also provides some degree of demographic reinforcement for the Canadian Great Lakes Population. This conclusion is supported by the stability, redundancy, connectivity, and resilience provided by the larger and more widespread Prairie Canada Population and continuing contributions from the U.S. Great Lakes population. Although the loss or further decline of the Canadian Great Lakes Population would have serious regional implications, it is not the most significant driver behind the subspecies' overall persistence in Canada, as the Prairie Canada Population constitutes most of the national population.

The following factors and characteristics have been considered in this assessment:

Stability: Based on counts (every 5 years) from the International Piping Plover Census between 1991 and 2016, the Prairie Canada Population represents more than 95% of the *circumcinctus* subspecies with Saskatchewan and Alberta being home to 75%-83% and 12-24% of the subspecies in Canada, respectively (Ferland & Haig 2002; Elliott-Smith et. al. 2009; Elliott-Smith et. al. 2015; Elliott-Smith et. al. 2025). A subspecies-wide census has not been completed since 2016, however, survey results from 2024 observed 877 adult Piping Plovers in the Prairie Canada Population across Alberta, Saskatchewan, and Manitoba (Nature Saskatchewan, unpublished data, 2024) compared to 5 breeding individuals in the Canadian Great Lakes Populations (Birds Canada 2026). With the Canadian Great Lakes Population representing less than 5% of the *circumcinctus* subspecies, the threats at Wasaga Beach are unlikely to occur at a scale sufficient to significantly impact the national population's stability. While the Canadian Great Lakes Population has a stable (though not increasing) population trend of at least 4 breeding pairs, the population remains vulnerable to stochastic events, such as predation and high wave activity at nesting sites, that can lead to mortality and decreased reproductive output. Mechanical raking of beaches, increases in human activity, and nearby commercial development at Wasaga Beach could decrease stability by further degrading habitat quality and increasing nest disturbance at a nesting site that has been essential for achieving stability in the Canadian Great Lakes Population. Continued immigration from the U.S. Great Lakes population may support stability of the Canadian Great Lakes Population; however, the availability of critical breeding sites like Wasaga Beach is essential for maintaining the population over the long term.

Resilience: At the subspecies level, the Prairie Canada Population is the main driver of overall resilience due to its larger numbers and broad distribution across a greater number of nesting sites compared to the Canadian Great Lakes Population. Counts from the International Piping Plover Census between 1991 and 2016 show that the Prairie Canada Population accounts for more than 95% of the *circumcinctus* subspecies population distributed across three provinces. Further, with the lack of connectivity between the Prairie Canada Population and the Canadian Great Lakes Population, the Prairie Canada Population is not reliant on immigration from the Canadian Great Lakes Population

(Ferland & Haig 2002; Elliott-Smith et. al. 2009; Elliott-Smith et. al. 2015; Elliott-Smith et. al. 2025). The subspecies will retain some ability to adapt to and recover from disturbances at a national level even if local impacts diminish the resilience of the Canadian Great Lakes Population.

The Canadian Great Lakes Population shows limited resilience, as its population size is small and geographically constrained, making it vulnerable to periodic disturbances and environmental changes. Population Viability Analyses conducted for the *circumcinctus* subspecies have shown that even small decreases in adult survival or nest productivity could result in significant population declines (Ryan et al. 1993, Melvin & Gibbs 1996, Plissner & Haig 2000, Wemmer et al. 2001, Larson et al. 2002, Calvert et al. 2006, Brault 2007). This suggests that any increases in disturbances or degradation of habitat quality at critical breeding sites like Wasaga Beach (e.g., through commercial development or mechanical beach raking) could overwhelm the Canadian Great Lakes Population's capacity to persist.

Redundancy: At the national scale, the redundancy of the Piping Plover *circumcinctus* subspecies is supported by the larger Prairie Canada Population, which benefits from a broader geographic range and a greater number of nesting sites. The current Piping Plover core breeding distribution in the Prairie region ranges from east-central Alberta to south-central Saskatchewan and stretches east into Manitoba and northwestern Ontario (i.e., Lake of the Woods). In the 2016 International Piping Plover Census, adult Piping Plovers were observed at 103 locations in Canada with 96 of those locations in the Prairie Canada Population compared to 7 in the Canadian Great Lakes Population (Elliott-Smith et. al. 2025). These attributes provide critical resilience against the impacts of localized threats, ensuring that the *circumcinctus* subspecies can persist even if individual populations within its range are impacted.

Redundancy within the Canadian Great Lakes Population is limited, as the population relies on a small number of key nesting sites in Ontario. Of the 11 nesting sites used between 2007 and 2025, only a few have supported consistent nesting with Wasaga Beach being the most frequently used site and fledging the most chicks (see Table 2). Over 37% of all fledged adults in Ontario can be attributed to Wasaga Beach, which has supported annual nesting for 18 years and produced 87 fledged chicks during that period (Birds Canada 2026). This site's key role as a source population highlights its importance for maintaining the regional redundancy of the Canadian Great Lakes Population. Projects or activities that may cause threats at Wasaga Beach, including mechanical beach raking, development, and recreational disturbances, could significantly reduce the redundancy of the Canadian Great Lakes Population by compromising one of its few highly productive nesting sites.

Despite the limited redundancy within the Canadian Great Lakes Population, connectivity with the U.S. Great Lakes population reduces the risk of catastrophic loss or extirpation from a single, local event. The U.S. Great Lakes population provides regular immigration to Ontario, with an estimated 54% of the breeding adults in Canada originating from U.S. nesting locations (Birds Canada 2026). This dynamic recruitment has bolstered Ontario's fledging capacity and contributed to building redundancy within the broader Great Lakes metapopulation (both Canadian and U.S. portions). While threats to Wasaga Beach pose localized risks, the ongoing influx of individuals from the U.S. Great Lakes population helps buffer against the complete extirpation of Piping Plovers within the Canadian Great Lakes Population.

Connectivity: At the national scale, connectivity between the Prairie Canada Population and the Canadian Great Lakes Population is limited, as the two populations are disjunct. Immigration from the Prairie Canada Population to the Canadian Great Lakes Population is rare (Birds Canada 2026). However, there is significant connectivity between the Canadian and U.S. Great Lakes Populations,

with an estimated 54% of breeding adults in Ontario being recruited from U.S. nesting sites (Birds Canada 2026).

While the anticipated threats at Wasaga Beach could reduce connectivity within the Canadian Great Lakes Population, particularly by jeopardizing its role as an important source population, these local and regional impacts are unlikely to significantly affect the connectivity of the *circumcinctus* subspecies at the national scale. The strong connectivity across the larger Great Lakes region (Canada and the U.S.) is expected to continue contributing to the persistence of the Canadian Great Lakes Population and the subspecies as a whole.

Protection from human-caused threats: While there have been region-specific loss of habitat protections, some regulatory safeguards remain in place for the *circumcinctus* subspecies through federal protections under the MBCA and SARA, as well as stewardship measures. These tools help mitigate human-caused threats across the broader national distribution, promoting likely survival of the subspecies in Canada.

In Ontario, human-caused threats to the Canadian Great Lakes Population such as recreation, disturbance to nests, and habitat degradation/destruction from beach management were historically mitigated by collaborative stewardship efforts and protection afforded by Ontario's ESA and the PPCRA. However, recent legislative changes (i.e., the repeal of the ESA and implementation of the SCA) and the removal of provincial park ownership/management at parts of Wasaga Beach represent a weakening of safeguards for Piping Plover within the Canadian Great Lakes region. Furthermore, while the Town of Wasaga Beach has demonstrated a willingness to implement voluntary and regulatory measures, on-going evaluation, improvement and adaptation of measures is likely required to mitigate anticipated impacts, particularly in the face of increased scale and intensity of human activity and development pressures.

b) Recovery of the species highly unlikely or impossible?

This question aims to determine whether impacts of the threat will make recovery of the species highly unlikely or impossible. The assessment considers the impacts of threats on the recovery objective for Piping Plover.

Yes. The recovery of the Piping Plover *circumcinctus* subspecies is highly unlikely without immediate intervention to address the new and intensifying threats at Wasaga Beach.

The long-term recovery goal for the subspecies is to achieve a viable, self-sustaining, and broadly distributed population within both the Prairie Canada Population and its historical southern Ontario range (Environment Canada 2006). Achieving a viable, self-sustained population addresses the COSEWIC reason for designation related to a small, declining population and reestablishing Piping Plover in the historic southern Ontario range addresses the COSEWIC reason for designation related to one subpopulation representing more than 95% of all mature individuals (see section 1.6 *Considerations for assessing the impact of the threat on the ability to recover the species* for additional information). The new and intensifying threats at Wasaga Beach are highly likely to compromise achieving a self-sustaining and broadly distributed Canadian Great Lakes Population in the historical southern Ontario range, making the recovery of the species highly unlikely or impossible.

In addition to the long-term recovery goal, the population and distribution objectives for the Canadian Great Lakes Population include achieving a minimum of four breeding pairs and maintaining or increasing the population's current distribution in Ontario (Environment Canada 2013) addressing the

COSEWIC reason for designation related to one subpopulation (i.e., the Prairie Canada Population) representing more than 95% of all mature individuals. Based on counts (every 5 years) from the International Piping Plover Census between 1991 and 2016, the Prairie Canada Population represents between 97-100% of the *circumcinctus* subspecies (Ferland & Haig 2002; Elliott-Smith et. al. 2009; Elliott-Smith et. al. 2015; Elliott-Smith et. al. 2025). A subspecies-wide census has not been completed since 2016, however, survey results from 2024 observed 877 adult Piping Plovers in the Prairie Canada Population across Alberta, Saskatchewan, and Manitoba (Nature Saskatchewan, unpublished data, 2024) compared to 5 breeding individuals in the Canadian Great Lakes Populations (Birds Canada 2026) indicating that the Canadian Great Lakes Population still represents less than 5% of all mature individuals.

As the most successful and consistently used breeding sites for the Canadian Great Lakes Population, reductions in Piping Plover productivity at Wasaga Beach would impact the resilience of the Canadian Great Lakes Population, increasing its' vulnerability to periodic disturbances and environmental changes which could overwhelm the Canadian Great Lakes Population's capacity to persist in the long term, and would further reduce the proportion of the subspecies' total population that the Canadian Great Lakes Population represents. This would make the recovery of the subspecies highly unlikely or impossible and detract from the significant gains made in reestablishing the Canadian Great Lakes Population. Piping Plovers demonstrate high fidelity (i.e., the tendency of an individual to return to or remain in a specific location) to their nesting sites and, in the Canadian Great Lakes Population, are highly dependent on only a few sites for nesting, with Wasaga Beach being particularly important. Wasaga Beach has contributed to redundancy and connectivity within the Canadian Great Lakes Population by being a consistent source of fledged birds that have contributed to population expansion and re-establishment. Eighty-seven Piping Plovers have fledged from Wasaga Beach over 18 nesting seasons accounting for 46% of the total chicks fledged in this population between 2007 and 2025 (Birds Canada 2026). Wasaga Beach serves as a critical source for the Canadian Great Lakes Population: 37.7% of Canadian Great Lakes Population's breeding adults have fledged from Wasaga Beach or were offspring of fledged Wasaga Beach birds (Birds Canada 2026).

The impacts of mechanical raking and proposed commercial development (i.e., enhanced boardwalk, amusement deck, eco-resort, amphitheatre, glamping facility, and marina with pedestrian bridge) at Wasaga Beach, as currently understood and without additional mitigations, have the potential to cause significant and lasting damage to habitat, including critical habitat. The degradation or loss of habitat, would very likely in turn affect the birds' use of the site and their productivity, further destabilizing the Canadian Great Lakes Population. Given that Wasaga Beach is the primary contributor to the reproductive success of the Canadian Great Lakes Population, reduced productivity at this location would substantially hinder the achievement of all key recovery parameters, including maintaining a minimum of four breeding pairs, broadening distribution, and maintaining or increasing the species' distribution in Ontario.

While these localized threats at Wasaga Beach do not directly impact the larger Prairie Canada Population, the subspecies' long-term recovery relies on achieving Canadian Great Lakes Population-specific objectives. For the Prairie Canada Population on its own to address the COSEWIC reason for designation[4], the population would have to reverse its decline and increase to over 10,000 individuals

[4] COSEWIC (2013) stated that Piping Plover circumcinctus subspecies meets the C2a(ii) criteria for Endangered because there are fewer than 2500 mature individuals and a projected decline in the numbers of mature individuals with one subpopulation (i.e., the Prairie Canada Population) having more than 95% of all mature individuals.

(COSEWIC 2026). Counts from the International Piping Plover Census between 1991 and 2016 (every 5 years) recorded number of adults in the Prairie Canada Population have varied between 1,703 and 918 (Ferland & Haig 2002; Elliott-Smith et. al. 2009; Elliott-Smith et. al. 2015; Elliott-Smith et. al. 2025). Notably, numbers of adults in 2011 were reported to be 1012 and declined to 918 in 2016 (Elliott-Smith et. al. 2015; Elliott-Smith et. al. 2025). Survey results from 2024 observed fewer adults with 877 adult Piping Plovers in the Prairie Canada Population (Nature Saskatchewan, unpublished data, 2024). The Prairie Canada Population would have to increase by 9,123 mature adults, a greater than tenfold increase based on 2024 survey results, to address the COSEWIC reason for designation. A species with only one remaining subpopulation is highly vulnerable to single events (like disease or localized impacts). Relying solely on the Prairie Canada Population to achieve recovery would be virtually impossible and counter to the recovery goals and population and distribution objectives' aim to retain or regain representation associated with a species' natural condition prior to the significant negative impacts of human activity which is a key factor in characterizing and operationalizing recovery. Without mitigation measures and longer-term, broader habitat protections, the identified threats to Piping Plovers at Wasaga Beach are likely to compromise the population and distribution objectives for the Canadian Great Lakes Population and thereby make the overall recovery of the Piping Plover *circumcinctus* subspecies in Canada highly unlikely.

The following analysis outlines the impacts of these localized threats on recovery:

Mechanical Raking

The threat of mechanical raking at Wasaga Beach was determined to have a 'high' likelihood, and 'immediate' timing, which together equate to an 'extreme' imminency rating (Table 4). If mechanical raking occurs, it could result in the destruction of habitat, either permanently or temporarily, such that it would not serve its function when needed by the species. Mechanical raking results in the removal of vegetation and debris used by Piping Plover as food sources and shelter (Environment Canada 2013). The use of large, motorized vehicles to carry out mechanical raking can create soils that are too compact for nest creation resulting in a loss of nesting habitat (Environment Canada 2013).

In particular, habitat destruction caused by mechanical raking would significantly reduce productivity and nesting success at this key site and make achieving population and distribution objectives such as a minimum of four breeding pairs and maintaining or increasing the species' distribution in Ontario highly unlikely. Without adequate and long-term mitigation measures or controls, mechanical raking poses a substantial threat to the recovery of the Canadian Great Lakes Population and therefore recovery of the subspecies as a whole highly unlikely.

Commercial Development

Beach Drive Seawall: The Beach Drive Seawall was determined to have a 'very high / certain' likelihood, 'ongoing' timing, and, therefore, 'extreme' imminency rating (Table 4). The construction of the Beach Drive Seawall, already underway, abuts the area containing Piping Plover critical habitat at Beach Area 1. This project, already permitted by the NVCA to mitigate flooding risks, is adjacent to an existing road. Section 28.1 of the *Conservation Authorities Act* states that a conservation authority may issue a permit if in the opinion of the authority the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock. Consequently, this project is not expected to significantly affect beach dynamics if it follows the conditions of the existing NVCA permit, and its impacts on the *circumcinctus* subspecies' recovery goals are considered negligible.

Proposed Commercial Developments (Enhanced Boardwalk, Amusement Deck, Eco-Resort, Amphitheatre, Glamping Facility): These conceptual projects are part of the draft Destination Wasaga Master Plan, with a 'moderate' likelihood, 'mid-term' timing and, therefore, 'moderate' imminency rating (Table 4). If these projects proceed without mitigations to minimize adverse effects, they may overlap with critical habitat in Beach Area 1 and could result in permanent ecosystem changes such as habitat loss and reduced availability of nesting areas. Commercial development and associated construction activities can create soil compaction leading to the loss of nesting habitat because soils are too compact for nest creation (Environment Canada 2013). Construction activities can also trample or remove vegetation and debris destroying habitat used by the species as food sources and shelter (Environment Canada 2013). The realization of these projects, without mitigations to minimize or avoid adverse effects, would directly reduce Wasaga Beach's ability to contribute to the population and distribution objectives outlined in the 2013 Action Plan, specifically ensuring the protection of historical breeding habitat and maintaining (and where feasible increasing) the current distribution in Ontario. Long-term recovery of the Piping Plover *circumcinctus* subspecies would be highly unlikely if these projects are implemented without mitigations to minimize or avoid adverse effects.

Proposed Marina and Pedestrian Bridge: The proposed marina and pedestrian bridge have a 'low' likelihood, a 'long-term' timing, and 'low' imminency rating (Table 4). However, their realization at the proposed location could directly destroy critical habitat within Beach Area 1 and irreversibly alter beach and dune dynamics. Activities that result in the changes to offshore currents, such as the construction of marinas, can alter beach and dune dynamics limiting the availability of suitable habitat (Environment Canada 2013). Further, the construction activities could create soil compaction and remove/trample vegetation and debris (Environment Canada 2013). This would eliminate portions of suitable nesting and foraging habitat at Wasaga Beach, representing a long-term and potentially significant impact to the population and distribution objectives outlined in the 2013 Action Plan, specifically ensuring the protection of historical breeding habitat. Further, any habitat destruction would significantly reduce productivity and nesting success at this key site and impede progress toward achieving population and distribution objectives such as a minimum of four breeding pairs and maintaining or increasing the species' distribution in Ontario. Long-term recovery of the Piping Plover *circumcinctus* subspecies would be highly unlikely if these projects are implemented without mitigations to minimize or avoid adverse effects.

Question 3: Is immediate intervention required beyond existing protection measures?

Mechanical raking

Yes, immediate intervention is required until more permanent measures that address mechanical raking are implemented. ECCC is not aware of any applicable federal, provincial, or municipal authorization, regulatory regime or other formal measure that is in place to address the threat of mechanical beach raking to Piping Plover habitat. The Town's recently enacted municipal Beach By-law, No. 2026-39, includes provisions to prohibit damage to vegetation, dunes, and natural objects, but it does not contain provisions specific to mechanical raking or other beach management activities. Likewise, as mechanical raking is an activity undertaken by the Town, this by-law does not regulate mechanical raking since it does not apply to Town employees or contractors while carrying out their duties. Prohibitions under SARA offer protection to individuals (section 32) and nests (section 33) but do not prohibit activities that may lead to the destruction of habitat.

For 2026, the Town has voluntarily committed to implementing certain Ontario Parks beach management protocols, including avoiding mechanical raking in the majority of critical habitat (Beach Area 1 northeast of Spruce Street) as well as some of the other known Piping Plover habitat at Wasaga Beach (i.e., New Wasaga Beach). However, the Town is managing Allenwood Beach in a manner that is inconsistent with Ontario Park's protocols for Allenwood Beach and is, therefore, incompatible with Piping Plover. The Town has indicated its intention to develop a long-term Municipal Piping Plover Stewardship Strategy and Municipal Beach Management Plan that would, according to them, outline future approaches to beach management including in Piping Plover habitat; however, it is not yet available and, at this time, they have not yet communicated or committed to specific measures (e.g., areas that would be avoided) beyond the 2026 calendar year. As the Imminent Threat Policy and its associated guidance considers threats likely to occur in the near term (e.g., up to 24 months) to be new or intensifying and the timing of mechanical raking extends into the 2027 calendar year and Piping Plover breeding season (i.e., in less than 24 months), the Town's 2026 beach management commitments do not fully address the threat of mechanical raking at Wasaga Beach. The Town has also expressed the expectation that a conservation agreement under SARA section 11 would be part of the Town's proposed long-term Municipal Piping Plover Stewardship Strategy. Although a conservation agreement under SARA can include measures that protect a listed species and its critical habitat, ECCC and the Town have yet to enter into discussions regarding a conservation agreement. Therefore, the role of such an agreement in addressing the threats to the Piping Plover at Wasaga Beach is unknown at this time.

To address the threat of mechanical raking, there are voluntary, time limited, and geographically limited measures in place for 2026. The management practices implemented by the Town for 2026 for New Wasaga Beach and Beach Area 1 northeast of Spruce Street do not include other habitat on which the species has relied such as Allenwood Beach. Consequently, immediate intervention is required until more permanent measures are in place that address the threat of mechanical raking so that the habitat at Beach Area 1, New Wasaga Beach, and Allenwood Beach is suitable for Piping Plover during the breeding and nesting season. Such measures could include the Town's pending Municipal Piping Plover Stewardship Strategy and/or Municipal Beach Management Plan and/or a formal conservation agreement between the federal government and the Town, or a commitment by the Town to a long-term approach to managing the areas of the beach containing Piping Plover habitat (i.e., Beach Area 1, New Wasaga Beach and Allenwood Beach) that is compatible with the needs of the species.

Commercial Development

No, immediate intervention is not required to address the threat of commercial development. Since these commercial development projects are presently concepts under the draft Destination Wasaga Master Plan, there is insufficient information to determine whether the existing protection measures would prevent or minimize impacts to Piping Plover. For the development projects that would be subject to regulation under the *Fisheries Act* and the *Conservation Authorities Act,* the regulatory regimes may present a barrier to development and/or would require regulatory approvals that may include measures that incidentally avoid or mitigate impacts to Piping Plover. Further, the provincial land use planning policy framework (i.e., *Planning Act*, Provincial Planning Statement, etc.) prohibits development and site alteration in Significant Wildlife Habitat unless negative impacts are demonstrably avoided, mitigated and/or habitat is enhanced. This requirement could be applicable for these concept commercial developments at Wasaga Beach, since both Piping Plover habitat and Open Great Lakes

sand dune vegetation community within Piping Plover habitat may be considered Significant Wildlife Habitat under provincial land use planning policy. At this time, immediate intervention is not required to mitigate the impacts of commercial development activities that are described in the draft Destination Wasaga Master Plan including the enhanced boardwalk, amusement deck, eco-resort, amphitheatre, glamping facility, and marina with pedestrian bridge as these are presently concept plans. The threat of commercial development at Wasaga Beach may warrant re-assessment in the future.

Conclusion

Based on this assessment of the best available information, ECCC is of the view that the Piping Plover *circumcinctus* subspecies is facing an imminent threat to its recovery from beach management activities at Wasaga Beach, Ontario. The de-regulation of beach areas containing Piping Plover habitat under the Ontario *Provincial Parks and Conservation Reserves Act*, the impending transfer of these lands to the Town of Wasaga Beach, uncertainty regarding the approach to beach management in areas with Piping Plover habitat in 2027, and recent changes to provincial species at risk legislation that removed provincial protection for Piping Plover habitat have collectively created conditions for the species to face new and intensifying threats at Wasaga Beach, Ontario. Beach management activities such as mechanical raking can compact soils and remove debris and vegetation that is necessary for the species. Accordingly, if these activities are undertaken within the areas of beach containing nesting and/or critical habitat for the species, habitat quality would be diminished such that it would no longer offer the necessary features to support the species' critical life functions. Given Wasaga Beach's importance to the Piping Plover *circumcinctus* subspecies' Canadian Great Lakes Population, habitat destruction caused by beach management practices that are incompatible with the species would significantly reduce productivity and nesting success at this key site, counter to the population and distribution objectives identified in the species' recovery documents, rendering the recovery of the species highly unlikely. As there are no regulatory regimes or other measures in place to fully address the threat of incompatible beach management practices at Allenwood Beach in 2026 and at Beach Area 1, New Wasaga Beach and Allenwood Beach beyond 2026, immediate intervention would be required until more permanent measures are implemented. Such measures would need to address beach management so that the habitat at Beach Area 1, New Wasaga Beach, and Allenwood Beach is suitable for Piping Plover during the breeding and nesting season. Such measures could include a formal conservation agreement between the federal government and the Town of Wasaga Beach, or a commitment by the Town to a long-term approach to managing the areas of the beach containing Piping Plover habitat that is compatible with the needs of the species.

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