



Parks
Canada

Parcs
Canada

Canada



Trent–Severn Waterway and Peterborough Lift Lock

National Historic Sites of Canada

Management Plan
2022



2022

Trent–Severn Waterway
and Peterborough
Lift Lock
National Historic Sites of Canada

Management Plan

© His Majesty the King in Right of Canada, represented
by the President & Chief Executive Officer of Parks Canada, 2022.

TRENT–SEVERN WATERWAY AND PETERBOROUGH LIFT LOCK NATIONAL HISTORIC SITES OF CANADA MANAGEMENT
PLAN, 2022.

Paper: R64-598/2022E
978-0-660-45053-7

PDF: R64-598/2022E-PDF
978-0-660-45052-0

Cette publication est aussi disponible en français.

Note to readers

The health and safety of visitors, employees and all Canadians are of the utmost importance. Parks Canada is following the advice and guidance of public health experts to limit the spread of COVID-19 while allowing Canadians to experience Canada's natural and cultural heritage.

Parks Canada acknowledges that the COVID-19 pandemic may have unforeseeable impacts on the *Trent–Severn Waterway and Peterborough Lift Lock National Historic Sites of Canada Management Plan*. Parks Canada will inform Indigenous partners, stakeholders and the public of any such impacts through its annual implementation update on the implementation of this plan.

For more information about the management plan or about

TRENT–SEVERN WATERWAY AND PETERBOROUGH LIFT LOCK NATIONAL HISTORIC SITES:

Trent–Severn Waterway National Historic Site
P.O. Box 567
2155 Ashburnham Drive
Peterborough ON K9J 6Z6

Tel: 705-750-4900
Email: trentsevern@pc.gc.ca
www.parkscanada.gc.ca/en/lhn-nhs/on/trentsevern

*Front cover image credits
top from left to right: Parks Canada
bottom: Parks Canada*

Foreword



From coast to coast to coast, national historic sites, national parks and national marine conservation areas are a source of shared pride for Canadians. They reflect Canada's natural and cultural heritage and tell stories of who we are, including the historic and contemporary contributions of Indigenous peoples.

These cherished places are a priority for the Government of Canada. We are committed to protecting natural and cultural heritage, expanding the system of protected places, and contributing to the recovery of species at risk.

At the same time, we continue to offer new and innovative visitor and outreach programs and activities to ensure that more Canadians can experience these iconic destinations and learn about history, culture and the environment.

In collaboration with Indigenous communities and key partners, Parks Canada conserves and protects national historic sites and national parks; enables people to discover and connect with history and nature; and helps sustain the economic value of these places for local and regional communities.

This new management plan for Trent–Severn Waterway and Peterborough Lift Lock National Historic Sites of Canada supports this vision.

Management plans are developed by a dedicated team at Parks Canada through extensive consultation and input from Indigenous partners, other partners and stakeholders, local communities, as well as visitors past and present. I would like to thank everyone who contributed to this plan for their commitment and spirit of cooperation.

As the Minister responsible for Parks Canada, I applaud this collaborative effort and I am pleased to approve the *Trent–Severn Waterway and Peterborough Lift Lock National Historic Sites of Canada Management Plan*.

Steven Guilbeault

Minister of Environment and Climate Change and Minister responsible for Parks Canada

Recommendations

Recommended by:

Ron Hallman
President & Chief Executive Officer
Parks Canada

Andrew Campbell
Senior Vice-President
Operations Directorate

David Britton
Director
Ontario Waterways Field Unit

Executive Summary

The Trent–Severn Waterway is a renowned inland canal and water management system, built and operated over a period exceeding 175 years. These waters lie within the traditional territories of the Anishinaabeg, Mohawk and Huron-Wendat peoples, and today the Trent–Severn Waterway runs primarily through the lands covered by the Williams Treaties First Nations Settlement Agreement. The canal extends 386 kilometres between Lake Ontario and Georgian Bay, with the vast majority of the waterway situated within the Greater Golden Horseshoe, Canada’s largest urban region and home of Canada’s largest and most culturally diverse metropolis, the Greater Toronto Area. Beyond the waters of the historic site itself, there are over 35 reservoir lakes, located in Haliburton and northern Peterborough counties, whose water levels are managed by Parks Canada to deliver an integrated water management approach across the watersheds.

Constructed between 1833 and 1930, the Trent–Severn Waterway was designated as nationally significant in 1929 because it formed part of Canada’s national canal system. Today, it is Canada’s second-largest national historic site and one of its most visited. The Peterborough Lift Lock, constructed in 1904, was designated a national historic site in 1979 for its national architectural significance as the highest hydraulic lift lock in the world. The heritage value of this site resides in its surviving physical attributes, and the fact that it was, and remains, an engineering achievement of national and international renown.

This management plan communicates the strategic direction over the next ten years toward realizing the long-term vision for the Trent–Severn Waterway and Peterborough Lift Lock. The successful implementation of this management plan will advance the establishment of the Trent–Severn Waterway as a vibrant and sustainable recreational destination, enriched by meaningful cooperation and collaboration with Indigenous peoples, partners and stakeholders, and supported by an adaptive and integrated water management system across the watershed that is responsive to climatic change.

Three key strategies and a dedicated management approach for the Peterborough Lift Lock will guide the management of the site over the next ten years:

Key Strategy 1: Establish the Trent–Severn Waterway as a premier Canadian recreational destination

The intent of this strategy is to build upon the century-long recreational boating experience of the Trent–Severn Waterway to provide a greater range of outdoor experiences, through low-impact recreational services and activities, in cooperation and collaboration with municipalities, Indigenous communities, organizations and businesses focused on sustainable tourism. While land-based visitation has steadily increased over the years, more can be done to fully engage these visitors in the history and significance of the Trent–Severn Waterway. Connecting visitors with more opportunities to engage with and experience the Trent–Severn Waterway will enhance its reputation as a valued and sustainable heritage waterway and as a gateway to the entire network of heritage places administered by Parks Canada throughout the country.

Key Strategy 2: Conserve, present and interpret the Trent–Severn Waterway’s rich and evolving history, engineering technology and natural environment

This strategy is focused on conserving the waterway’s diverse engineering works, terrestrial and freshwater ecosystem, and cooperation and collaboration with Indigenous peoples, partners and stakeholders to sustainably present and operate the waterway, within a changing climatic environment.

Key Strategy 3: Effectively administer an evolving waterway in the 21st century

This strategy recognizes the importance of robust management tools and processes to effectively respond to the diverse and evolving pressures affecting the Trent–Severn Waterway in the 21st century. This includes developing modern, comprehensive and supportive regulations and policy tools to support the effective management, maintenance, proper use and protection of the waterway, developing and enhancing sustainable sources of revenue, and supporting an integrated water management system across the watersheds.

A management area approach provides specific direction for the management of the Peterborough Lift Lock National Historic Site, building on the above key strategies to advance the conservation and interpretation of the historic site in collaboration with others to ensure it remains a must-see destination for visitors to the Trent–Severn Waterway and serves as a focal point for understanding and experiencing the history, significance and diverse experiences of the waterway and its region.

Table of Contents

Foreword.....	Error! Bookmark not defined.
Recommendations	Error! Bookmark not defined.
Executive Summary	Error! Bookmark not defined.
1.0 Introduction	1
2.0 Significance of Trent–Severn Waterway National Historic Site	4
3.0 Planning Context.....	5
4.0 Development of the Management Plan.....	9
5.0 Vision.....	9
6.0 Key Strategies	10
7.0 Management Area.....	14
8.0 Summary of Strategic Environmental Assessment	17

Maps

Map 1: Regional Setting.....	2
Map 2: Trent–Severn Waterway National Historic Site.....	3
Map 3: Peterborough Lift Lock National Historic Site.....	16

1.0 Introduction

Parks Canada administers one of the finest and most extensive systems of protected natural and historic places in the world. The Agency's mandate is to protect and present these places for the benefit and enjoyment of current and future generations. Future-oriented, strategic management of each national historic site, national park, national marine conservation area and heritage canal administered by Parks Canada supports the Agency's vision:

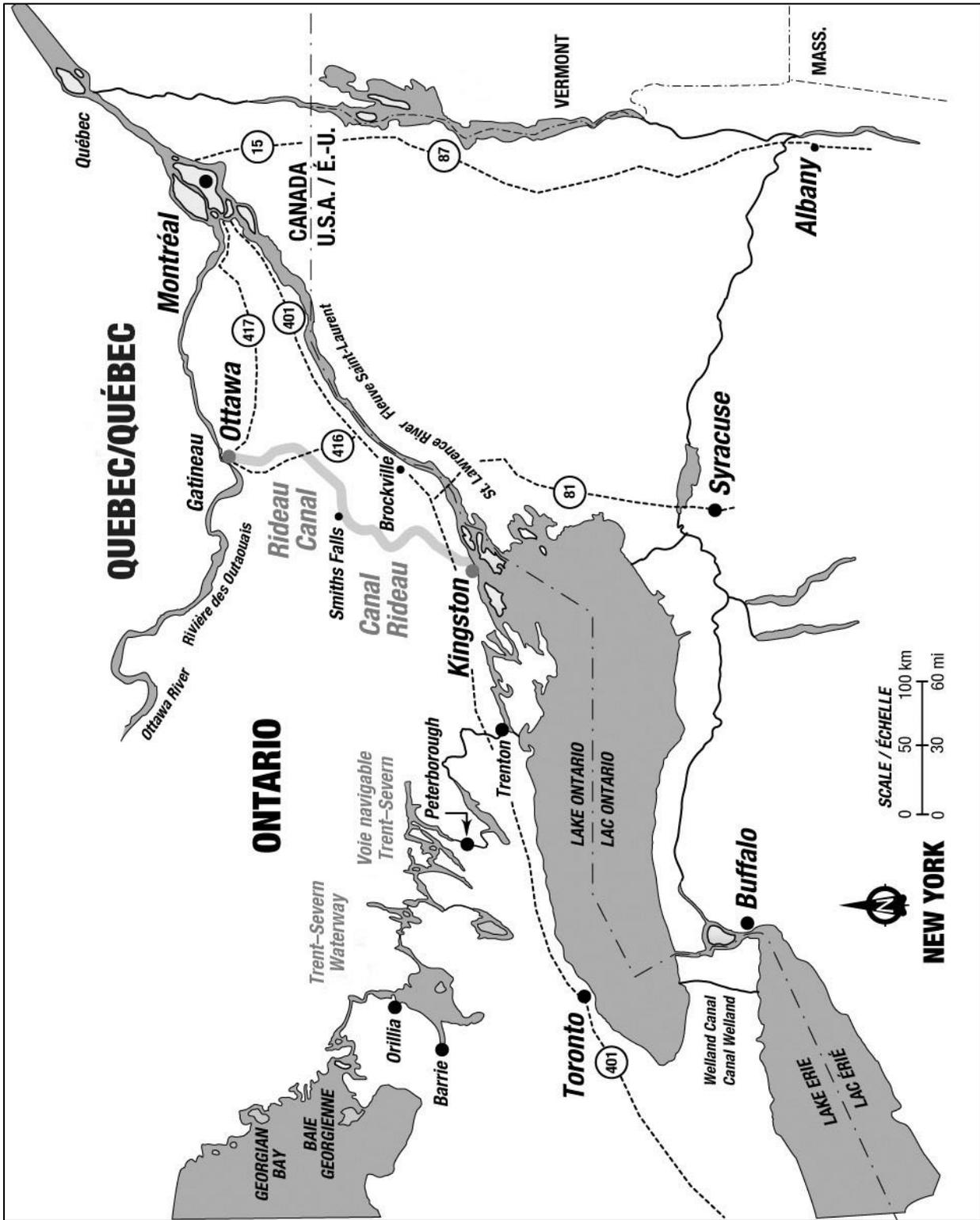
Canada's treasured natural and historic places will be a living legacy, connecting hearts and minds to a stronger, deeper understanding of the very essence of Canada.

The *Parks Canada Agency Act* requires Parks Canada to prepare a management plan for national historic sites administered by the Agency. The *Trent–Severn Waterway and Peterborough Lift Lock National Historic Sites of Canada Management Plan*, once approved by the Minister responsible for Parks Canada and tabled in Parliament, ensures Parks Canada's accountability to Canadians, outlining how historic site management will achieve measurable results in support of the Agency's mandate.

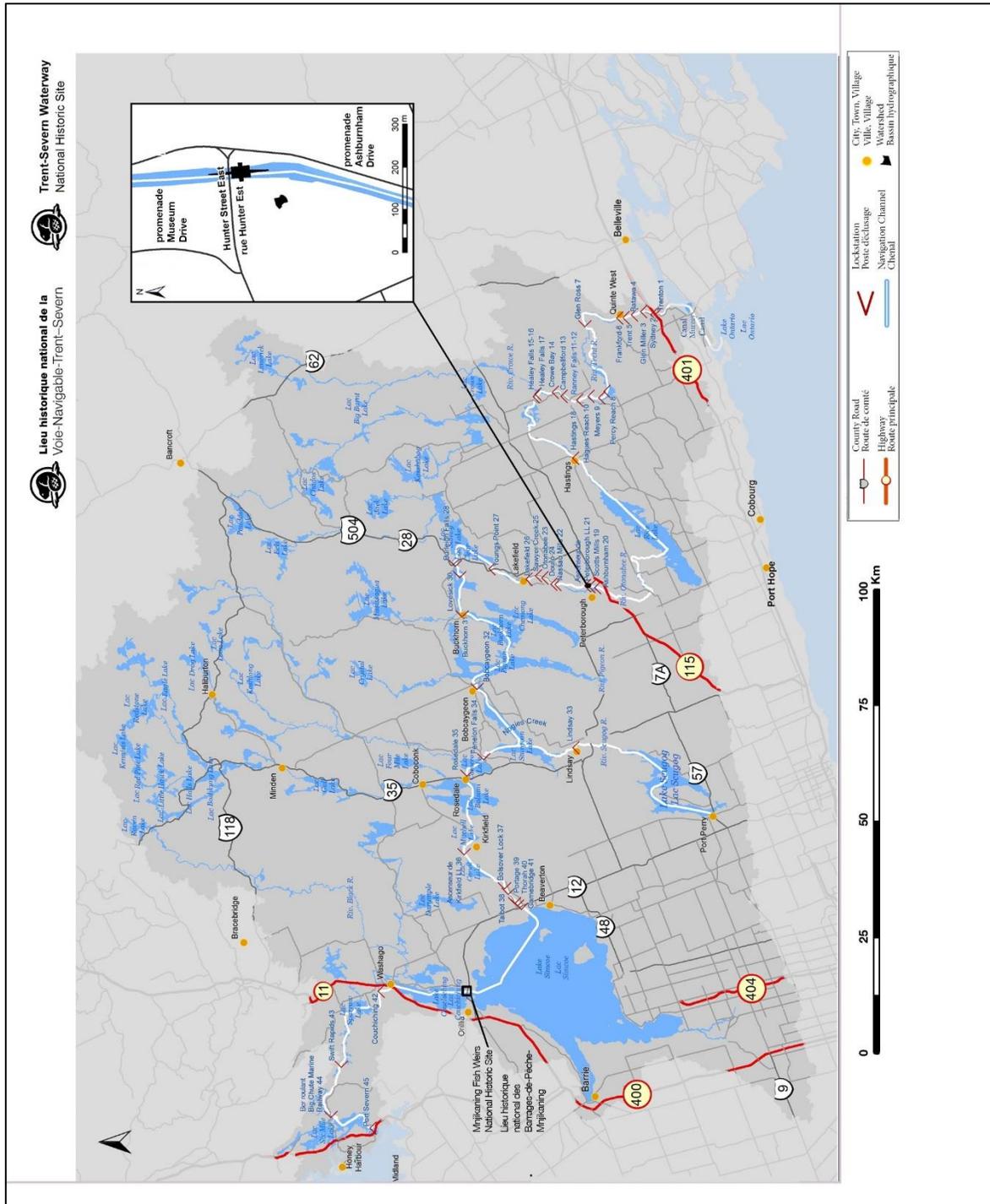
The Williams Treaties First Nations, Mohawks of the Bay of Quinte, Huron-Wendat Nation, and Kawartha Nishnawbe are important partners in the stewardship of these heritage places, with connections to the lands and waters since time immemorial. Indigenous peoples, stakeholders, partners and the Canadian public were involved in the preparation of the management plan, helping to shape the future direction of the national historic sites. The plan sets clear, strategic direction for the management and operation of Trent–Severn Waterway and Peterborough Lift Lock national historic sites by articulating a vision, key strategies and objectives. Parks Canada will report annually on progress toward achieving the plan objectives and will review the plan every ten years or sooner if required.

This plan is not an end in and of itself. Parks Canada will maintain an open dialogue on the implementation of the management plan, to ensure that it remains relevant and meaningful. The plan will serve as the focus for ongoing engagement and, where appropriate, consultation, on the management of Trent–Severn Waterway and Peterborough Lift Lock national historic sites in years to come.

Map 1: Regional Setting



Map 2: Trent-Severn Waterway National Historic Site



2.0 Significance of Trent–Severn Waterway National Historic Site

The Trent–Severn Waterway is a renowned inland canal and water management system built and operated over a period exceeding 175 years. These waters lie within the traditional territories of the Anishinaabeg, Mohawk and Huron-Wendat peoples, and today the Trent–Severn Waterway runs primarily through the lands covered by the Williams Treaties First Nations Settlement Agreement. The waterway extends 386 kilometres between Lake Ontario and Georgian Bay, with the vast majority of the waterway situated within the Greater Golden Horseshoe Canada’s largest urban region and home of Canada’s largest and the world’s most culturally diverse metropolis, the Greater Toronto Area. The waterway links communities from Trenton to Port Severn, flowing through the heart of numerous towns and cities such as Campbellford, Hastings, Peterborough, Lakefield, Bobcaygeon, Lindsay, and Fenelon Falls. Beyond the waters of the historic site itself, there are over 35 reservoir lakes, located in Haliburton and northern Peterborough counties, whose water levels are managed by Parks Canada to deliver an integrated water management approach across the watersheds.

Constructed between 1833 and 1930, the Trent–Severn Waterway was designated as nationally significant in 1929 because it formed part of Canada’s national canal system. Today, it is Canada’s second-largest national historic site and one of its most visited. The site features 36 conventional locks, two flight locks, two hydraulic lift locks and a marine railway. Two of the world’s few remaining hydraulic lift locks are found on the waterway: the Peterborough Lift Lock, the world’s tallest of its type, and the Kirkfield Lift Lock, both of which are more than a century old. More modern examples of similarly impressive technology include North America’s only large marine railway at Big Chute, and the large locks at Swift Rapids and Burleigh Falls. For recreational boaters and land-based visitors alike, these lockstations constitute stunning examples of engineering technological achievement and evolution, and provide visitor experiences unique within Canada’s system of heritage canals. Additionally, the Lake Simcoe – Balsam Lake section of the waterway is highly valued as most of the lockstations in this section retain their integrity from the early 20th century period.

The Peterborough Lift Lock is located on the Otonabee River section of the Trent–Severn Waterway in the city of Peterborough. In 1979, it was designated a national historic site for its national architectural significance as the highest hydraulic lift lock in the world. The heritage value of this site resides in its surviving physical attributes, and the fact that it was, and remains, an engineering achievement of national and international renown. When completed in 1904, it was the highest hydraulic lift lock ever built, with a vertical lift of nearly 20 metres, and was reputed to be the largest unreinforced concrete structure in the world. The lock operates on a balance system, whereby water is let into the upper chamber, a connecting valve is opened and the heavier chamber automatically descends, forcing up the lower chamber to start a new cycle. Its engineering features include the immediate upper and lower canal cuts and the embankments, which are integral components of the lock design and operation. Management direction specific to the Peterborough Lift Lock can be found in Section 7.

Despite the dramatic alterations to the environment as a result of the waterway’s construction, including flooded landscapes, the system continues to support a wealth of native biodiversity including many rare species. With its natural resources, including 230 wetlands and more than 60 federally listed species at risk, the Trent–Severn Waterway makes a significant contribution to ecological conservation in the region. It serves as a regional ribbon of life, connecting a diverse array of aquatic and terrestrial ecosystems across central Ontario.

The most fundamental part of the story, however, is not the waterway, but water itself. Throughout all of the watersheds of the Trent–Severn Waterway, water has influenced communities for millennia. Since time immemorial, Indigenous peoples have held a special relationship with the lands and waters. As one example, the Mnjikaning Fish Weirs National Historic Site at Orillia reflects the 5,000-year-old history of Indigenous use of these waters for fishing. The construction of the vast system of modern water control structures across seven large watersheds in the heartland of Ontario in the 19th and 20th centuries had far reaching consequences. Many of these changes negatively impacted the Indigenous communities living along the shorelines by flooding traditional lands, changing travel routes and enabling further growth of

towns and industry. The creation of the Trent–Severn Waterway has re-engineered the natural, cultural and economic landscape of the region, and has facilitated the creation and growth of towns, villages and cities, industry, and a recreational economy that today is worth billions of dollars annually.

More information about the significance and long-term management of the Mnjikaning Fish Weirs National Historic Site can be found in a separate management statement for this site.

A third national historic site associated with the Trent–Severn Waterway is the Canal Lake Concrete Arch Bridge, which spans the waterway near the community of Bolsover. Designated in 1988 because it is the earliest known reinforced concrete bridge in Canada, this site is owned and maintained by the City of Kawartha Lakes and does not form part of this management plan.

3.0 Planning Context

The Trent–Severn Waterway is one of nine heritage canals managed by Parks Canada across the country. It forms part of a navigable network that connects to the Rideau Canal National Historic Site in Ontario and heritage canals in Quebec to the east. These canals have a common history in their contribution to the building of Canada as we know it today prior to and following Confederation. Today, many of the challenges and opportunities that are facing the Trent–Severn Waterway are shared by the other heritage canals across Canada.

Geopolitical

The Trent–Severn Waterway meanders nearly 400 kilometres across central Ontario to create a unique corridor of interconnected lakes and rivers crossing through many communities that are intimately associated with the waterway. The waterway has been an integral part of the development of these communities, shaping their identities and landscapes. This relationship extends beyond the site to the broader watershed and the network of reservoir lakes which support the vast water management system. Hundreds of thousands of people, across the watersheds, rely on and are impacted by this integrated water management system, which is also essential for public safety, municipal water supply, protection of the environment, fish and wildlife, and hydro generation.

The sheer size and complexity of the Trent–Severn Waterway results in a multi-jurisdictional environment. Parks Canada is responsible for the administration of the Trent–Severn Waterway National Historic Site, comprising the bed of the waterway up to the upper controlled water elevation limit across much of the system, as well as the land associated with its lockstations, bridges and dams, including those in the reservoir lakes. This responsibility includes but is not limited to protecting the commemorative integrity of the site; safe navigation of the waterway; integrated water management; and some aspects of environmental stewardship. Other government departments and agencies, at the municipal, provincial and federal levels, share responsibilities affecting both lands and waters of the waterway, including land use planning and development, conservation and protection, water quality, transportation, agriculture, resource extraction, and tourism activities.

As these responsibilities are inherently linked, Parks Canada has varying relationships with each of these authorities. Understanding and navigating this complex framework can be challenging for both responsible authorities and the public. Ongoing cooperation and collaboration can support this. For example, more than 4,500 kilometres of shoreline abutting over 100,000 private properties fall under Parks Canada's permitting authority governing in-water and shoreline works. Parks Canada works closely with conservation authorities, municipalities and other agencies in support of reviewing work permits as well as planning applications for upland development.

Public education, interpretation and visitor experiences along the waterway

The Trent–Severn Waterway has a long history as a working canal that has evolved, and will continue to do so, in response to changing technology and community needs. By showcasing the story of innovative technological achievements in the 19th and early 20th centuries, it illustrates how Canadians have been at the forefront of engineering developments in hydrology and civil engineering.

During the 2021 season, a total of 118,772 vessels passed through the locks of the Trent–Severn Waterway. While the number of boats locked through the Trent–Severn Waterway has rebounded since 2013 and is now relatively stable, the numbers remain below the highs seen in previous decades. With a great number of popular trails, parks, green spaces, scenic viewpoints, and campsites, the Trent–Severn Waterway is also a popular year round destination for local, regional, and international visitors. An estimated 1.3 million land-based visitors spent time at Trent–Severn Waterway in 2019, but without access gates or entry fees, these are merely estimates of non-boating traffic. With the Lift Lock regarded as a signature destination along the waterway, the Peterborough Lift Lock Visitor Centre has historically been Parks Canada’s main hub for information and interpretation about the waterway, welcoming nearly 25,000 visitors in the summer of 2019.

Considerable effort has been made in recent years to expand and promote the Trent–Severn Waterway as a destination for a variety of users. Unique programming and events such as Lock N Paddle, Learn to Paddle, #Lockstop, Learn to Camp and partnering opportunities such as the Under the Lock dining experience have generated considerable media attention and attracted new and returning visitors to the waterway. New on-site accommodation programs began in 2015, and the Trent–Severn Waterway now offers seven oTENTiks, one Oasis pod, one cabin, with additional offers in development. Continuing to expand the user base and increase visitation both by land and by water remain priority objectives for Parks Canada. The establishment of a new world-class Canadian Canoe Museum beside the Trent–Severn Waterway in Peterborough and in proximity to the Peterborough Lift Lock, will not only provide an additional draw for both domestic and international visitors to the waterway, but will also provide opportunities for a renewal of the interpretive program in this region, and interplay with other destinations along the waterway and the broader family of protected heritage areas administered by Parks Canada.

Many of these new initiatives can be realized in collaboration with the tourism sector, through the provision of expanded third-party services and offers, such as on-water opportunities for visitors who do not own a boat, and through increased services and support for visitors enjoying self-propelled watercraft and local trails. The proximity of the Trent–Severn Waterway to the Greater Toronto Area; and collaboration with the Canadian Canoe Museum, paddling associations, and regional tourism organizations; as well as targeted events and promotional activities, aim to expand waterway users beyond the traditional motorized boating audiences. Land-based visitation has steadily increased; however, more could be done to fully engage these visitors in the history and significance of the Trent–Severn Waterway. Initiatives are currently underway to provide increased opportunities for compatible businesses to operate at select lockstations through licensing arrangements and/or the re-purposing of existing surplus or under-utilized structures.

Indigenous Peoples and the Trent–Severn Waterway

The Trent–Severn Waterway and its watershed area are located within the traditional territories of the Williams Treaties First Nations. A much smaller area to the extreme south of the waterway falls within the traditional territory of the Mohawks of the Bay of Quinte. Current relations between Parks Canada and the Mohawks of the Bay of Quinte have generally focused on the impacts of proposed developments. The Huron-Wendat Nation have historical and traditional ties to much of the region, and are primarily engaged by Parks Canada on items of historical and/or archaeological interest. Preliminary engagement is also being explored with the Kawartha Nishnawbe regarding management of the Trent–Severn Waterway in and around Burleigh Falls. In the spirit of reconciliation, Parks Canada is actively pursuing ways to facilitate the strengthening of relationships with Indigenous peoples at all heritage places.

Parks Canada and the Williams Treaties First Nations have established a Steering Committee, comprised of community consultation representatives. Meetings of the Committee are held regularly and discuss a variety of subjects including infrastructure projects, wild rice (*manoomin*) harvesting, archaeology and

cultural sites, and environmental protection. The creation of a framework for discussion and action regarding the harvesting of wild rice has charted a course for sustaining this traditional practice. Initial work has also begun seeking input and support from Elders and harvesters on a variety of projects including those related to species at risk and wild rice management.

There remains an opportunity to build and improve upon relationships with these Indigenous partners, to strengthen the voice of the Steering Committee, to expand upon the presentation and interpretation of Indigenous stories, cultures and heritage, to encourage economic partnerships and opportunities with Indigenous peoples, and to enhance Indigenous employment opportunities.

Natural Environment

While the waterway's creation resulted in drastic environmental changes at the time, its continuous operation has today resulted in the protection of a corridor of natural areas, both aquatic and terrestrial. This has helped to maintain the availability of important habitat for many species within an area of Canada that has been subject to major disturbances through urban land use and agriculture.

The Trent–Severn Waterway's natural environment is rich with woodland, wetland, and aquatic ecosystems that are home to a wide variety of flora and fauna. The system supports a wealth of native biodiversity including rare, threatened or endangered species and the habitats and ecosystems that support them. The system also supports important habitat for migration, spawning, feeding, resting, moulting and breeding, and serves as an ecological corridor across central Ontario. The waterway is home to over 60 rare species which are threatened or at risk. The waterway has critical habitats for 13 of these species.

There are also many species of cultural importance to Indigenous peoples and their traditional rights and harvesting practices. The system continues to support many of these species such as the American eel, lake sturgeon, walleye, wild rice (*manoomin*) and furbearers like muskrats and beavers, living in and along the waterway.

Species at risk individuals, residences and critical habitat are taken into consideration during impact assessment and shoreline permitting processes and efforts are made to include conservation gains in these projects. Some Parks Canada projects have included the enhancement of important walleye spawning shoals, invasive species management, creation of turtle nesting areas, and landscape restoration of sites using native species. Invasive species such as water soldier have the potential to impact some species at risk; as such, an ongoing monitoring and treatment program is underway to control this invasive plant.

Parks Canada has also invested in research to understand some of the more complex system-wide management interests, such as the influence of locks and dams on connectivity, invasive species, water quality and aquatic vegetation management, and the potential for actions to influence these dynamics. Improvements in the functionality, adaptability and resilience of the aquatic and terrestrial ecosystems will support stronger biodiversity and contribute to better quality of life for residents along the waterway and better experiences for visitors.

An operating waterway that traverses a varied landscape also poses a number of unique challenges that are outside of Parks Canada's direct jurisdiction. Threats at the site include adjacent upland development, invasive and exotic species, nutrient inputs, and the cumulative impacts of shoreline development. Climate change also has the potential to accentuate these pressures with scenarios for the region predicting increased extreme weather events, increased flooding risk, but reduced water availability and lower water levels in summer.

Operational Realities

The Trent–Severn Waterway includes nearly 800 built assets, with an estimated value of more than \$5 billion. Well-functioning assets of an enduring, modern and operational canal play many important roles. They maintain navigation, manage water levels and flows, create recreational spaces that enhance the well-being of residents, and protect public safety. In many cases, they also serve as essential public infrastructure, creating roadway linkages and connecting communities.

The challenge for contemporary canal operations is to balance the requirements of effective, integrated water management at the watershed level, safe navigation and a working canal system. This includes updating and maintaining critical infrastructure, such as dams, locks and bridges, to meet modern standards, while protecting and celebrating the waterway's heritage of evolving engineering technology. According to an assessment conducted in 2017, the cultural resources, and the overall commemorative integrity of the waterway, are in a major state of impairment, largely as a result of deteriorating condition. This includes the Peterborough Lift Lock, which requires significant conservation work to maintain it in operational condition.

A historically unparalleled program of reinvestment was announced in 2015, with the Trent–Severn Waterway receiving over \$615 million in investments into aging infrastructure through the Federal Infrastructure Investments Program. While these investments are improving the condition of these assets, and addressing some cultural resource management challenges, supplemental capital is required to address deferred work and prevent further deterioration of the asset portfolio. An asset management strategy will support priority setting and risk management.

Driven by the findings of the Panel on the Future of the Trent–Severn Waterway, captured in its 2008 report *It's All About the Water*, over the past ten years, a broader, integrated water management approach has been undertaken using a watershed-wide approach, which includes the management of water levels in the reservoir lakes that provide a critical buffer capacity for the entire waterway. This requires the balanced management of multiple objectives including public safety, flood mitigation, and protection of the environment, fisheries, wildlife habitats; water supplies; navigation; recreation; and hydro generation. The water management team carefully monitors and adjusts the flow and water levels throughout the waterway and the reservoir area, supported by a system of nearly 200 water control structures equipped with either manual and automated water gauges. Water management decisions are made by highly qualified technical staff using real-time water level and flow data for the entire system, weather forecasts, and historical data to determine appropriate adjustments.

Water power facilities on the Trent–Severn Waterway contribute to the province's commitment to renewable energy production. There are 18 water power generation stations operating under licence with Parks Canada. There are several additional generating stations within the watershed that are located outside the area of Parks Canada's water rights; however, they are subject to Parks Canada's water management of the system. The 18 licensed facilities represent a total installed capacity of approximately 100 megawatts, with an annual average revenue of \$1 million to Parks Canada.

Studies have been conducted to ensure that new and upgraded infrastructure along the waterway will address known inefficiencies; however, it is difficult to construct infrastructure capable of mitigating all possible climate change extremes. Climate change scenarios for the region are modelled to have more extreme weather events, with potential for extreme periods of wet and drought. It is expected the potential impacts of climate change on water levels, precipitation events, droughts and flooding areas will add complexity to these operations and will likely continue to require appropriate risk management measures in the future.

Additionally, the complexities of the waterway's modern-day operations require a strong, responsive legislative and policy framework to ensure effective management. Parks Canada relies primarily on the *Historic Canals Regulations* under the *Department of Transport Act* to support the management, maintenance, proper use and protection of the Trent–Severn Waterway. However, these regulations are antiquated and do not fully address the complexities of operating a large, evolved waterway and its vital watershed, in the 21st century.

4.0 Development of the Management Plan

In order to facilitate meaningful opportunities for the public to contribute to the management plan review for the Trent–Severn Waterway and Peterborough Lift Lock, a two-phased approach was developed to collect feedback from Indigenous peoples, partners, stakeholders and the Canadian public, locally and nationally, using in-person and online channels to obtain public input.

Phase one engagement in 2019 focused on exploring the opportunities and challenges related to management of the sites, prior to the development of a draft management plan. Engagement activities commenced in March to share and discuss the findings of the *State of the Site Assessment* (2019) with the Williams Treaties First Nations. This report assessed the condition of indicators for national historic sites pertaining to cultural resources, built assets, visitor experience, external relations and Indigenous relations and highlighted the key issues facing the Trent–Severn Waterway. Given the complexity of the site, other indicators reflecting the roles and responsibilities for the Trent–Severn Waterway, including species at risk, business development, realty and permitting and operation, were also explored.

This engagement progressed over the spring and summer of 2019, with a series of five stakeholder engagement workshops and one workshop with the Williams Treaties First Nations, held in communities situated along the length of the waterway. As the Haliburton and north Peterborough County watersheds form a significant reservoir for the operation of the waterway, one stakeholder engagement workshop was also held in the town of Haliburton. Over 35 representatives from a wide range of sectors and communities attended, including provincial and municipal government, non-government organizations and not-for-profit groups, boating industry, heritage and culture, natural environment and tourism. These interactive workshops provided an overview of the management plan review process, discussed the key issues and opportunities for the site and the broader watershed, and brainstormed what the Trent–Severn Waterway could be in 15 to 20 years.

To protect the health of all Canadians during the COVID-19 pandemic, a strictly online consultation process was held from April 4, 2022, to June 30, 2022. An online bilingual engagement platform on Parks Canada’s website was developed to facilitate the collection of feedback using an online comment card and direct emails. Four virtual public consultation sessions, one virtual stakeholder consultation session, and meetings with the Williams Treaties First Nations and Curve Lake First Nation were held to discuss and elicit feedback on the draft plan. These sessions were supported by letters to stakeholders and communications on social media channels.

The feedback provided to Parks Canada via the online comment card, consultation sessions and direct email focused on water management across the watershed that minimizes impacts to residents, boaters and the natural environment; the importance of low impact visitor experiences, services and amenities; conservation of the natural environment and waterway infrastructure; ongoing public and stakeholder engagement; law enforcement and compliance; and effective regulatory and policy tools. This feedback has informed revisions to all sections of this management plan.

5.0 Vision

The vision presented below expresses the future desired state of Trent–Severn Waterway National Historic Site looking ahead 20 years:

The Trent–Severn Waterway is recognized as a sustainable recreational destination offering a wide range of premier cultural and natural experiences and activities to new and returning visitors and local residents. Parks Canada, working in collaboration and cooperation with its partners, has solidly positioned the Trent–Severn Waterway as a world-renowned and vibrant waterway that promotes outdoor recreation, low-impact tourism and responsible development while conserving its cultural and natural heritage for future generations.

The Trent–Severn Waterway’s unique natural landscape, and its broader and vital watershed, provides a ribbon of life and refuge for flora and fauna. As a result of close collaboration, and through the adoption and promotion of green operations, the natural environment of the Trent–Severn Waterway is healthy and well-protected, and the waterway remains the lifeblood of thriving ecosystems and a catalyst for economic prosperity in the region.

The cultural resources and contemporary assets of the waterway, such as its locks, dams and bridges, showcase the incredible evolution of engineering technology from the 19th to the 21st century, illustrating how Canadians have been at the forefront of engineering developments in hydrology and civil engineering.

One such engineering marvel is the Peterborough Lift Lock, a forever iconic and defining feature of the Trent–Severn Waterway. As a landmark within the city of Peterborough, the Lift Lock is appreciated and enjoyed for its historical and engineering significance, and as an integral operational and interpretive component of the Trent–Severn Waterway. Together with its surrounding landscape, the Peterborough Lift Lock endures as a treasured local and regional attraction.

As this inland canal and water management system was built within the traditional territories of the Anishinaabeg, Mohawk and Huron-Wendat peoples, Parks Canada continues to work with Indigenous peoples, in the spirit of reconciliation and meaningful collaboration, to share their cultures, histories and stories, and to support ongoing relationships and cultural practices with the waterway and broader watershed area.

As a historic site with impacts and relationships extending far beyond its boundaries, the Trent–Severn Waterway and the over 35 reservoir lakes it relies upon, exemplifies Parks Canada’s leadership in delivering a complex, adaptive integrated water management system across an entire watershed that is responsive to climatic change and technological advancements.

6.0 Key Strategies

The key strategies below frame the management direction for the Trent–Severn Waterway National Historic Site for the next ten years. The strategies and corresponding objectives and targets focus on achieving the vision for the site through an integrated approach to site management. Unless otherwise specified, all objectives and targets are meant to be achieved within the ten-year period of this plan. Annual implementation updates will be reported to Indigenous peoples, partners, stakeholders and the general public, and will feed into Parks Canada’s broader business planning processes. More importantly, these strategies and their related objectives and targets will serve as the basis for engagement and consultation into the future.

Key Strategy 1: Establish the Trent–Severn Waterway as a premier Canadian recreational destination

The Trent–Severn Waterway is a recreational destination in Ontario, sought out for its scenic lakes and rivers, opportunities for outdoor adventures, and an impressive showcase of engineering technology. While recreational boating along the Trent–Severn Waterway remains a primary focus for the ongoing operation and visitor experience of the waterway, there are also increasing opportunities to encourage land-based visitors to experience the region by water, discover lesser-known reaches and lockstations along the waterway, and to attract new visitors to the region.

This key strategy seeks to grow the existing range and number of outdoor experiences, through low-impact recreational services and activities, in cooperation and collaboration with municipalities, Indigenous communities, organizations and businesses focused on sustainable tourism. While land-based

visitation has steadily increased over the years, more can be done to fully engage these visitors in the history and significance of the Trent–Severn Waterway.

Connecting visitors with more opportunities to engage with and experience the Trent–Severn Waterway will enhance its reputation as a valued and sustainable heritage waterway and as a gateway to the entire network of heritage places managed by Parks Canada throughout the country.

Objective 1.1: A broad range of visitors experience the Trent–Severn Waterway through greater opportunities to explore the region by paddling, camping, cycling and hiking.

Targets

- By 2024, new visitor offers for paddlers using the Trent–Severn Waterway are developed and implemented.
- Trip planning tools, such as routes, brochures, guides and outfitters, and amenities/facilities such as docks, showers, and camping sites, are developed by 2026 in partnership with others.
- Yearly, at least one special event that promotes camping, hiking, cycling and paddling on the Trent–Severn Waterway is hosted in partnership with others.

Objective 1.2: Land-based visitation to lockstations is increased and visitors are more engaged with the Trent–Severn Waterway.

Targets

- Enhanced measurement of land-based visitation and demographic information is undertaken by 2024 to inform the development of a visitor experience strategy, targeted marketing, visitor experience offers, and to manage visitor use levels.
- By 2025, a visitor experience strategy is developed for the Trent–Severn Waterway in consultation with others.
- By 2027, site plans are developed for two strategic lockstations (and/or groups of lockstations), in collaboration with key stakeholders, that outline priorities for future site enhancements to support and sustain engaging visitor experiences, increased land-based visitation, improved accessibility, and safe waterway operations. By 2032, an additional three site plans are developed. Example locations could include Big Chute, Kirkfield, Bobcaygeon, Fenelon Falls and Campbellford, and the multiple lockstations within the city of Peterborough.
- By 2029, improvements to land-based programs and service offers are implemented at five lockstations, in collaboration with local communities and partners.
- Continue to expand shore power, where feasible, with new or expanded services at five lockstations by 2032.

Objective 1.3: Parks Canada’s management of the Trent–Severn Waterway is supported and strengthened by collaborative relationships with others.

Targets

- Parks Canada meets annually with key partners, stakeholders, organizations, and local communities to discuss shared interests and challenges along the waterway and to explore opportunities and new initiatives.
- Parks Canada meets annually with regional and municipal economic development and tourism organizations to ensure the Trent–Severn Waterway and the broader watershed, including its many attractions, amenities, services and experiences, are collaboratively marketed and promoted with a consistent approach.

Key Strategy 2: Conserve, present and interpret the Trent–Severn Waterway’s rich and evolving history, engineering technology and natural environment

The Trent–Severn Waterway is a historically rich and complex site that has been altered over almost 200 years, and today showcases the incredible evolution of modern engineering technology. Regular maintenance and monitoring of the waterway’s built assets and natural resources, and stable capital investment are required to support the conservation and presentation of this engineering marvel, which attracts visitors from around the world due to its diverse recreational and scenic values.

In the spirit of reconciliation, Parks Canada will also continue to work cooperatively with Indigenous communities to support public awareness and understanding of the long-standing and continuous Indigenous relationships within the Trent–Severn watershed, to expand the inclusion of Indigenous cultures and perspectives in site management and interpretation, and to strengthen their connections to traditional lands and waters.

Sustainable development is central to Parks Canada’s mandate and vision. As such, the waterway must do its part to support overall Parks Canada and federal and provincial government goals for sustainable development with concrete local action.

Objective 2.1: The Trent–Severn Waterway’s engineering marvels are conserved.

Targets

- By 2032, a high-level cultural resource management strategy that responds to the evolution in engineering technology along the waterway is developed.
- Long-term asset management plans, that conserve the cultural heritage significance of the Trent–Severn Waterway, and identify actions to make the asset portfolio sustainable, and address climate change risks to assets, services and operations, are developed by 2024 and are reviewed annually.

Objective 2.2: The terrestrial and freshwater ecosystem of the Trent–Severn Waterway is better understood, conserved and protected.

Targets

- Biodiversity is protected by developing and implementing a species at risk site action plan by 2025.
- Over the next ten years, Parks Canada continues to support the work of academic institutions, such as those undertaking Natural Sciences and Engineering Research Council of Canada (NSERC) research projects and programs.
- Water Soldier, an aquatic invasive species, continues to be controlled across the Trent–Severn Waterway in partnership with federal, provincial, municipal and stakeholder groups. Invasive species management targets are reviewed on a five-year basis to incorporate adaptive management practices.

Objective 2.3: Indigenous peoples have meaningful opportunities to connect with the ancestral lands and waters of the Trent–Severn Waterway and share their knowledge and cultures.

Targets

- The Williams Treaties First Nations continue to be engaged on a regular and ongoing basis through the established Steering Committee framework, to ensure Indigenous perspectives are respectfully considered in Parks Canada’s management of the waterway.
- Through collaborative work with Indigenous communities, opportunities to expand upon the presentation and interpretation of Indigenous stories, cultures and heritage are explored.
- Through collaborative work with Indigenous communities, opportunities for the management of natural resources, contracting and employment are identified.

Objective 2.4: Cultural and natural heritage resources and values of the Trent–Severn Waterway are integrated into visitor experiences and tourism strategies and initiatives.

Targets

- The next visitor information program survey indicates that visitors are learning more about the natural resources and cultural heritage of the waterway through new experiences developed for target audiences.
- By 2032, an integrated tourism strategy is developed with regional tourism organizations, Indigenous communities and municipal partners that builds upon the regional Trail Towns' initiative using the waterway as the strategy's key connecting focus.
- By 2032, new sustainable visitor experience opportunities are developed at five lockstations highlighting the waterway's natural resources and cultural heritage.
- By 2032, three rehabilitated historic buildings support visitor experience and asset sustainability objectives.

Objective 2.5: Sustainable development principles are better integrated into the operation of the Trent–Severn Waterway.

Targets

- By 2025, a strategy is developed and implemented for greening Parks Canada activities that includes adopting zero-emission or hybrid vehicles; constructing new, low-carbon buildings; increasing the energy efficiency of existing facilities; and improving waste reduction and diversion practices.
- By 2027, the use of small-scale renewable energy generation is implemented to support operations, reduce greenhouse gas emissions and offset energy costs.
- By 2024, an evaluation is undertaken of how current predictions for regional climate change may impact operations, construction and asset management, environmental management and water management on the Trent–Severn Waterway, in order to inform future adaptive approaches.

Key Strategy 3: Effectively administer an evolving waterway in the 21st century

The building of the Trent–Severn Waterway evolved through a series of largely independent construction initiatives intended to support and improve local commercial transportation and access. Parks Canada has been relying on capital investments to manage and maintain many of these cultural resources and contemporary assets in recent years, supported by the Government of Canada's Infrastructure Investments Program. These resources require stable funding and asset management capacity to monitor conditions and undertake rehabilitation and conservation work in a timely, effective and cost-efficient manner.

Continued investment in sustainable business development represents an opportunity for the waterway to grow the supply of renewable energy in the province, generate revenue, off-set costs, and reinvest in waterway assets and priorities, while enhancing visitor services and activities.

Today, Parks Canada is responsible for managing water levels and flows on the waterway on a year-round basis to achieve multiple objectives. These include navigation, flood mitigation, protection of the environment, such as species at risk, fisheries and other wildlife habitats, provision of water for municipal water supplies, recreation, and hydro generation. Public safety also represents a challenge as the dam system on the Trent–Severn Waterway was designed a century ago to provide water levels for navigation, not as a flood or drought mitigation system. Extreme fluctuations associated with climate change patterns have resulted in challenges for water management decision making as well as infrastructure maintenance.

Lastly, Parks Canada relies on regulations which do not fully address the complexities of operating a large, evolving waterway and its vital watershed, in the 21st century. There are also limitations on existing regulations and legislation which impact the ability to manage realty permitting and carry out compliance and enforcement. Developing modern, comprehensive and supportive regulations and tools would improve the ability of Parks Canada to effectively and timely respond to the diversity of visitor needs and

interests, manage water levels and flows, address the impacts of climate change, and would better support Parks Canada's regulatory authority on a historic, navigable waterway in the 21st century.

Objective 3.1: Administrative tools are modernized to comprehensively and effectively address the complexities of an operational, evolving waterway.

Targets

- An analysis of gaps in the current statutory, regulatory and policy framework is completed, and needed improvements within Parks Canada's control are identified by 2024.
- A review of in-water and shoreline works policies is completed by 2025 and implemented by 2026.

Objective 3.2: Sustainable sources of revenue are developed and enhanced.

Targets

- By 2026, the implementation of licensing is expanded to include all commercial operators who use Parks Canada's lands and facilities, or the Parks Canada-administered bed of the waterway, in support of their business operations.
- Parks Canada will continue to work with the Province and waterpower industry to support the management, development and expansion of environmentally friendly waterpower facilities on the waterway.

Objective 3.3: Water management decisions are made using a system-wide approach based on high quality, systematic, regularized data collection.

Targets

- The water monitoring network continues to be modernized through the ongoing exploration and development of new tools and methodologies, such as hydrological modelling, and their integration into decision making is reviewed on an annual basis.
- A formal communications protocol for communicating Parks Canada water management information to the public and stakeholders is in place by 2024.

7.0 Management Area

Peterborough Lift Lock National Historic Site

Significance

The Peterborough Lift Lock is situated within the city of Peterborough, just north of Little Lake. It is the oldest of the two hydraulic lift locks ever built in North America, both constructed on the Trent-Severn Waterway. It represents a significant feat of late 19th- to early 20th-century engineering and remains a key operational component of the Trent-Severn Waterway National Historic Site. The Peterborough Lift Lock was designated a national historic site in 1979, in recognition of it being the highest hydraulic lift lock in the world.

Work on the Peterborough Lift Lock began in 1896. Its design was at the time, and still is, unique in many respects. It is much larger than any contemporary hydraulic lock; the caissons of the Peterborough Lift Lock are 42 metres long and 10 metres wide with a normal depth of 2.5 metres, a size that could support the passage of commercial barge traffic. By comparison, hydraulic lift locks in Europe at the time were only half the size. They were also supported by sub-structures of brick and steel, whereas the Peterborough Lift Lock's sub-structure is built entirely of unreinforced concrete, a daring feat of engineering given the technology of the day. The Peterborough Lift Lock officially opened on July 9, 1904, to great fanfare – a military band, over 100 dignitaries onboard the new steamer Stoney Lake to make the first official descent, and cheering crowds numbering in the thousands.

The heritage value of the Peterborough Lift Lock resides in its surviving physical attributes, and the fact that it is an engineering achievement of national and international renown. When completed in 1904, it was the highest hydraulic lift lock ever built, with a vertical lift of nearly 20 metres, and was reputed to be the largest unreinforced concrete structure in the world. Its engineering features include the immediate upper and lower canal cuts and the embankments, which are integral components of the lock design and operation.

Planning context

Today, the Peterborough Lift Lock is an iconic symbol of the Trent–Severn Waterway and Peterborough region. Since the 1980s, Parks Canada has welcomed visitors to the Peterborough Lift Lock Visitor Centre to experience the history and significance of the Lift Lock and the Trent–Severn Waterway, and to explore services, amenities and activities across the region.

The installation of the world-renown Canadian Canoe Museum on the Trent–Severn Waterway at Little Lake presents an opportunity for greater collaboration between the museum and Parks Canada to broaden visitors' understanding of the evolving role of the waterway and its impact on shaping the region, and to engage visitors in experiencing the latest chapter in the canal's long history.

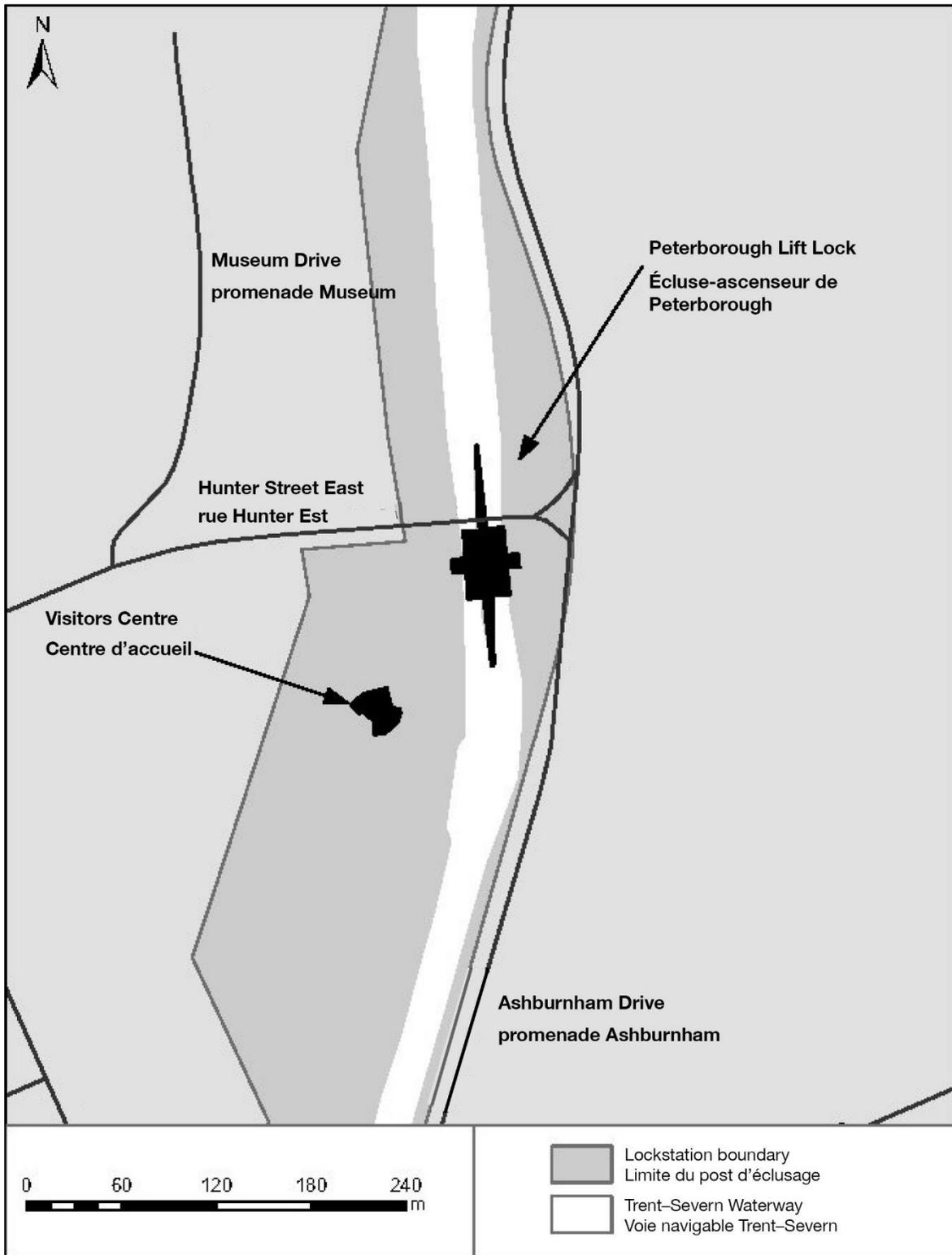
An integrated management approach for the Peterborough Lift Lock is recommended, given the long history of collaboration with many community partners, its connections to Peterborough area lockstations and bridge crossings, as well as the site's prominence within the region.

Objective: A renewed and strengthened collaboration between Parks Canada, and partners such as the City of Peterborough and Canadian Canoe Museum, in the areas of interpretation, promotion and programming ensures the Peterborough Lift Lock site remains a must-see destination for visitors to the Trent–Severn Waterway.

Targets

- The Peterborough Lift Lock is maintained in fair to good condition in the next state of the site assessment through regular monitoring, maintenance and renewal.
- By 2025 develop and implement interpretative initiatives in collaboration with partners to highlight the Peterborough Lift Lock, the Trent–Severn Waterway, and Parks Canada's sites nationally.

Map 3: Peterborough Lift Lock National Historic Site



8.0 Summary of Strategic Environmental Assessment

The purpose of a strategic environmental assessment is to incorporate environmental considerations into the development of public policies, plans, and program proposals, to support environmentally sound decision making. In accordance with the *Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals* (2010), a strategic environmental assessment (SEA) was conducted on the *Trent–Severn Waterway and Peterborough Lift Lock National Historic Sites of Canada Management Plan*.

Many positive effects will occur as a result of the implementation of the plan, for example: developing and implementing a species at risk action plan is expected to improve the protection of biodiversity and species at risk at the Trent–Severn Waterway. Modernizing the administrative tools, including the in-water and shoreline works policies, will permit more effective management of activities that could negatively affect the natural environment. Developing a cultural resource management strategy and implementing new asset management plans will support better protection of cultural resources that recognizes the risks of a changing climate. Overall, these updates are anticipated to benefit cultural resources, natural resources, visitor experience, and improve operations. The management plan also supports the Federal Sustainable Development Strategy goals of Greening Government and Pristine Lakes and Rivers.

Strategies/objectives/targets identified in the management plan that could potentially result in negative environmental effects include: the development of new land-based visitor offers and increased visitation to lockstations, as well as the construction work that would be associated with new low-carbon buildings and small-scale hydroelectric power generation. However, these targets support positive long-term effects by reducing the carbon footprint of operations, and the effects of construction can be minimized by proactively incorporating strategic input from natural resource conservation and cultural resource management experts early in project planning, and by using project-level impact assessment to mitigate more short-term construction effects. Done properly, this can augment positive results and avoid or minimize negative effects.

Indigenous peoples, partners, stakeholders and the public were consulted on the draft management plan, including a summary of the draft strategic environmental assessment. Engagement and consultation occurred over various phases between 2019 and 2022. Feedback received has informed the final version of the management plan and strategic environmental assessment.

There are no important negative environmental effects anticipated from the implementation of the management plan. Individual projects at the sites will be evaluated separately under the *Impact Assessment Act* (2019), or successor legislation, as necessary.