

NATIONAL CAPITAL COMMISSION  
COMMISSION DE LA CAPITALE NATIONALE

# Building a Greener Capital

Final Report  
Environmental Strategy  
2009–2017

Canada

# Between 2009 and 2017...



**776.5**

hectares of land in Gatineau Park and the Greenbelt were purchased.

**58%**



of NCC lands were designated high-value ecosystems and habitats.

**45%**



of the NCC's contaminated sites were secured.

**2**

buildings and major renovations were certified



Greenhouse gas emissions were reduced by

**15.4%**

compared with a 2011–2012 baseline year.

**5883 tonnes**



of demolition waste were diverted from landfill.

The waste diversion rate on the Rideau Canal Skateway increased by

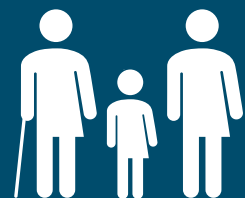


**65.4%**

**34%**



of the vehicle fleet was replaced with more energy-efficient vehicles.



A minimum of

**175,000**

people participated in conservation education programs and activities.



# CEO Message

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In presenting the National Capital Commission's (NCC) Environment Report for 2009–2017, I am pleased to note that this marks the final annual stock-taking on the NCC's environmental strategy—a strategy that has served the Capital well since its inception in 2009.

The new five-year strategy is currently in development and, when finalized later this year, will align the NCC with the Federal Sustainable Development Strategy and United Nations Sustainable Development Goals. This will also align the NCC's environmental efforts with the new Plan for Canada's Capital, 2017–2067, agenda to build a dynamic, sustainable, inspiring and thriving Capital Region.

As the chief planner and steward of the Capital, the NCC fosters environmental sensitivity and responsibility throughout the Capital's built environment, while protecting and preserving its breathtaking natural legacy. And each year we release an annual report to demonstrate how this commitment has been translated into tangible action that contributes to our collective aspiration to being one of the greenest capitals in the world.

Since 2009, with the environmental strategy as its guide, the NCC has made real progress toward this vision. In most cases, its clear focus, supported by public interest and engagement, has resulted in measureable successes—achieving fully three quarters of the strategy's objectives. For example, the NCC has reduced greenhouse gas emissions by 15.4 percent compared with a 2011–2012 baseline year; 70 green demolition projects have diverted 93.7 percent of their waste from landfill sites; 776 hectares of land have been purchased in Gatineau Park and the Greenbelt; and more than 175,000 people have participated in conservation-related programs and activities. In the cases where we have encountered challenges, we have learned valuable lessons that are even now being applied to the new Sustainable Development Strategy.

I would like to offer my warmest thanks to all the NCC staff who are so dedicated to this important work of building a green and sustainable capital that inspires—and sets an example—for Canadians everywhere, as well as to all the partners, stakeholders and citizens who have shared this goal with us over the years.



Dr. Mark Kristmanson  
Chief Executive Officer



△ *Ottawa River*

## Overview

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The 2009–2017 environmental strategy centres around five areas for action that are highly relevant to the NCC’s business areas. The areas for action are reducing waste, protecting biodiversity, preventing pollution, leading in environmental practices and combatting climate change. Each area for action has one priority objective, and a focused set of secondary objectives. The priority objectives are corporate commitments to firm, measurable targets. The secondary objectives support the overall goals in each area for action. The strategy implementation followed four principles.

**Transparency:** Articulate environmental priorities and objectives, and provide ongoing public reporting to measure progress.

**Collaboration:** Work with stakeholders and partners on environmental improvements, and encourage a culture of sharing ideas, solutions and best practices.

**Leadership by example:** Engage staff throughout the organization in green policies, practices and activities, and encourage other parties within the NCC’s sphere of influence to do the same.

**Continuous improvement:** Learn from experience, and strive for greater positive environmental impact.

This report provides an overview of the corporation’s environmental performance for the duration of the environmental strategy, from April 1, 2009, to March 31, 2018. Since this is the final report on the environmental strategy, a different approach has been taken compared with past years. Instead of summarizing the progress made over the past 12 months, this report presents key accomplishments achieved over the life of the strategy for the 23 objectives. These illustrate the NCC’s commitment to protect and improve the environment in the National Capital Region, and go beyond its legal obligations and responsibilities.

The NCC has achieved 17 out of 23, or 74 percent of the objectives in its environmental strategy. Although six objectives will not be fully accomplished, considerable progress has been made in every field of activity. The results of the implementation of the environmental strategy are summarized in the dashboard on pages 4 to 6.





^ *Sussex Drive*

## Strengths and Weaknesses of the Environmental Strategy 2009–2017

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A review of this strategy was completed to examine its relevance, design, delivery and results, in order to determine the strengths and weaknesses of the approach. The NCC actively seeks to learn from its experiences, and address the challenges noted below, in order to have an even more positive impact on the environment and society.

### Strengths

Most importantly, 74 percent of the strategy's objectives were achieved, and significant progress was made in key areas of habitat and ecosystem protection, waste reduction and carbon emissions reduction. High levels of transparency and accountability were maintained by reporting on progress annually. The strategy has been able to provide concrete environmental objectives, followed across the organization, and which are not necessarily included in other plans or policies. Environmental stewardship has been integrated into the NCC's corporate architecture. The strategy has created a sense of responsibility for the environment among staff and a sense of accountability to Canadians.

### Weaknesses

Several areas that limited the full achievement of the strategy objectives were identified as follows:

- NCC staff indicated that the strategy should be even more integrated with other corporate planning processes, rather than operating in parallel with higher-level documents, such as the corporate plan and the various master plans.
- Some objectives, such as those related to invasive species, were necessarily established without full knowledge of the context for their implementation and achievability.
- Roles and responsibilities for the actions were not systematically identified, and more consultation with NCC employees and stakeholders during development would have been beneficial.
- Limited resources restricted the full implementation of six of the 23 objectives.
- The NCC found it challenging to apply the strategy objectives to projects undertaken by partners on NCC lands, and would benefit from tools such as design guidelines to guide future developments.
- Because of the strategy's long time frame, momentum was difficult to maintain.
- Although progress was reported annually, the qualitative nature of the secondary objectives and lack of key progress indicators made measuring progress difficult.

# Environmental Strategy Performance Overview

● Objective was met. ● Objective was not met.

OBJECTIVES	HIGHLIGHTS OF ACCOMPLISHMENTS	STATUS
<b>Reducing waste</b>		
<b>Priority objective</b>		
By 2013, the NCC will have achieved and will maintain a 50 percent reduction, in comparison with the 2009–2010 level, in waste sent to landfill sites from activities associated with the Rideau Canal Skateway.	The NCC exceeded the 50 percent reduction target in 2016. The waste diversion rate increased from 7.9 percent in 2010 to 73.3 percent in 2018. When the numbers of skating days are compared, the amount of waste sent to landfill per day of skating dropped from 0.61 metric tonnes in 2010 to 0.08 metric tonnes in 2018, an 87 percent decrease.	●
<b>Secondary objectives</b>		
The NCC will achieve 70 percent waste diversion (through reducing, reusing and recycling) from all NCC business areas by 2017.	In 2009–2010, the NCC undertook a comprehensive assessment of waste at all its corporate offices, with the intent to modernize recycling and waste-handling systems. It then implemented a comprehensive overhaul of its office waste management at its six main office locations in summer 2011. As of 2014, waste diversion was 58 percent at the NCC's main office, and 28 percent at NCC headquarters in Gatineau Park.  <b>Although progress was made, additional resources were required to fully implement the objective.</b>	●
The NCC will challenge partners hosting events on NCC lands to achieve a 50 percent waste diversion target.	In 2015, the NCC added new clauses to event partnership agreements, requiring all partners hosting major events on NCC lands to comply with mandatory waste management criteria. For example, partners hosting major events must provide the facilities necessary for the collection of these materials, including adequate signage, for use by the public, artists, food concessions and employees, and they must provide the NCC with weight tickets for the waste, recyclables and compost generated.	●
The NCC will develop green procurement guidelines for implementation in 2010, which will include low waste as an important criterion.	Green procurement guidelines were adopted in 2010–2011. These guidelines allow the NCC to consider the environmental impacts of goods and services which, in addition to price and quality, play an important role in purchasing decisions.	●
The NCC will implement green demolition practices by 2010, which place a strong emphasis on waste diversion and resource conservation.	Green demolition practices were undertaken for 70 demolition projects on NCC lands during the 2009–2017 period. An average diversion rate of 93.7 percent was achieved as a result. Over 5883 tonnes of waste was diverted from landfill. Non-governmental organizations such as Habitat for Humanity collected salvageable items like windows or doors so that they could be put to good use in building reliable, affordable housing. Other materials (e.g. concrete, metal, wood, plastic ) were sent to other NCC construction sites to help reduce the need for new materials.	●
<b>Protecting biodiversity</b>		
<b>Priority objective</b>		
The NCC will ensure that all 28 high-value ecosystems and habitats found within the Greenbelt and Gatineau Park and on urban lands in the region are designated as conservation lands by 2012.	Since 2014–2015, all high-value ecosystems and habitats in NCC plans have been designated in accordance with the applicable International Union for Conservation of Nature categories. As a result, 312 km <sup>2</sup> or 58 percent of NCC lands are designated as high-value ecosystems and habitats. A total of 776.5 hectares of land in Gatineau Park and the Greenbelt has been purchased since 2009. Eleven biodiversity indicators were used on NCC lands to help monitor the health of all 28 high-value ecosystems and habitats. The NCC completed two studies: <i>Management Recommendations for the Valued Natural Ecosystems and Habitats of the Greenbelt and Urban Lands</i> and <i>Management Recommendations for the Valued Natural Ecosystems and Habitats of Gatineau Park</i> . The recommendations were used to guide NCC efforts to protect, restore and enhance its high-value ecosystems and habitats. The NCC's high-value ecosystems and habitats were added to the Conservation Areas Reporting and Tracking System managed by the Canadian Council on Ecological Areas.	●
<b>Secondary objectives</b>		
The NCC will implement new recovery plans for federally and provincially listed species at risk on NCC lands, within one year of finalization.	The objectives of the recovery program for identified species at risk on NCC lands are taken into consideration during the environmental effects analysis for individual projects, and implemented within land management practices. The NCC has acquired and manages information about species at risk on its lands, which includes maintaining a continually updated database, and mapping the potential and critical habitat of these species. The NCC collaborated with the federal and provincial governments by providing input on more than 25 species at risk management plans and recovery programs.	●
The NCC will protect all critical habitats identified on NCC lands under federal or provincial law for species at risk, within one year of designation.	All critical habitats for the species at risk identified on NCC lands are taken into consideration during the environmental effects analysis for individual projects and are protected within land management practices. Ten projects were completed in the context of the Federal Interdepartmental Recovery Fund Program for the recovery of seven species at risk in Gatineau Park.	●
The NCC will develop a thorough understanding of biodiversity on NCC lands through its Natural Resources Research Program.	The NCC's corporate Natural Resources Research Program was established in 2003 to support projects that increase the understanding of biodiversity under the NCC's stewardship. Its goals are to implement research, inventory and monitoring projects that add to the NCC's knowledge of natural resources in Gatineau Park and the Greenbelt and on NCC urban lands. Over 30 research projects were implemented since 2009 to gather scientific knowledge to support decision making and better management of NCC lands. Approximately 40 scientific permits have been issued annually in Gatineau Park, for a total of approximately 360 permits issued between 2009 and 2017.	●

OBJECTIVES	HIGHLIGHTS OF ACCOMPLISHMENTS	STATUS
The NCC will reduce the amount of NCC urban land infested by invasive plant species by 10 percent by 2017.	<p>In 2013, the NCC completed an extensive study, <i>Aggressive Invasive Alien Species Management Strategy for National Capital Commission Lands</i>. A total of 45 invasive alien species were identified on NCC lands, and it was estimated that aggressive plant species cover 49 percent of urban lands. Maintenance contracts require contractors to devote time to invasive species removal over the life of the contract, and contractors also receive training on the identification and removal of invasive species. Dedicated projects have focused on controlling buckthorn, wild parsnip, garlic mustard, Eurasian milfoil and dog-strangling vine. The NCC collects information about invasive species during environmental effects analyses. During project implementation, proponents are required to remove invasive species as part of their projects, as appropriate. Internal and external guidelines for the management of invasive plant species have also been developed.</p> <p><b>When the environmental strategy was launched, the extent of invasive species on urban lands was unclear. In addition, the spread of invasive species has increased quickly in recent years, and resources are limited. For these reasons, this objective has been difficult to achieve.</b></p>	●
<b>Preventing pollution</b>		
<b>Priority objective</b>		
All contaminated sites on NCC lands will be secured by 2017.	<p>In 2009–2010, the NCC conducted a systematic review of its properties to determine what would need to be done to secure each contaminated site. Since 2009, 45 percent of the NCC's contaminated sites have been secured. The following indicates the status of contaminated sites as of March 2018:</p> <ul style="list-style-type: none"> <li>• Secured sites: 109</li> <li>• Non-secured sites: 129</li> <li>• Sites requiring further assessment: 206</li> </ul> <p>Since 2009, 90 percent of the buildings in the NCC's portfolio have been assessed for lead and asbestos, and remediation actions have been taken to remove these substances.</p> <p><b>The NCC is securing sites based on risk to the public, the environment at the site and organizational requirements. Available financial resources were not sufficient to complete this objective in full.</b></p>	●
<b>Secondary objectives</b>		
The NCC will identify and remove or repair all problem underground storage tanks on NCC property by 2011.	In 2009, all 60 underground tanks on NCC lands subject to the federal fuel storage tank regulations were inspected. All storage tanks on NCC property were deemed compliant as of 2014.	●
The NCC will adopt a policy to eliminate the use of pesticides for cosmetic purposes by 2010.	The NCC launched a policy governing pesticide use on its lands in 2012, and continues to uphold it. This policy bans the cosmetic use of pesticides on NCC lands.	●
<b>Leading in environmental practices</b>		
<b>Priority objective</b>		
All new building construction on NCC lands, for buildings over 250 square metres, will be certified LEED® (Leadership in Energy and Environmental Design) Gold by 2013 and all major building renovations will meet LEED® certification standards.	<p>The NCC built one new LEED® building—7 Clarence (Gold) and completed one LEED® certified major renovation (the Dome Building restoration project [Silver]). The renovation of the Foot Guard House took LEED® standards into account; however, this building is ineligible for LEED® certification, because it does not have full-time occupants. Although not constructed by the NCC, the Wakefield Mill expansion project is LEED® (Gold) certified and the project at 3500 Carling Avenue is LEED® (Silver) certified.</p> <p><b>The high cost of LEED® certification has been the main obstacle to achieving this objective.</b></p>	●
<b>Secondary objectives</b>		
The NCC will use green building practices for the construction of all buildings under 250 square metres.	<p>Green building practices are incorporated into NCC projects, and environmental criteria are used to prioritize projects. Significant upgrades to the following buildings have resulted in fuel cost savings, water savings and greenhouse gas reductions:</p> <ul style="list-style-type: none"> <li>• Vincent Massey Park service building: Net-zero energy and carbon neutral building, through the use of low-flow toilets and sinks, rain harvesting technology, 27 solar panels, local materials, and site-specific design.</li> <li>• Moore Farm: Home to the NCC's first ground-source heating and cooling system. In addition, insulation was added to increase the building's energy efficiency.</li> <li>• Hog's Back Park service building: Thirty solar panels were installed to power the service building.</li> <li>• Renaud Shelter in Gatineau Park: Constructed to use passive solar heating, and the high-performance building envelope keeps it warm in winter and cool in summer. In addition, it was built primarily from locally sourced wood.</li> </ul>	●
The NCC will integrate environmental education into all NCC activities, where appropriate.	The NCC delivered various environmentally themed activities and programs on its lands to at least 175,000 participants, including school groups, private groups and the general public since 2009. The NCC also held a number of events on the environment, sustainability and natural resource management for NCC staff and the general public at its Urbanism Lab, a creative forum launched in 2014, where leaders, experts and the public can share knowledge and ideas about how to build a great capital. The NCC collaborated with Environment and Climate Change Canada in the creation of the Ottawa-Gatineau Urban BioKit, an observation guide to explore urban biodiversity.	●
The NCC will strengthen environmentally sensitive practices in all maintenance contracts.	Environmental management guidelines have been integrated into maintenance contracts to provide contractors with operational information. For example, workers will avoid wilfully disturbing any wildlife at sites, minimize unnecessary idling of vehicles, respect a minimum distance of two metres from any trees when excavating or installing structures, implement an erosion and sediment control plan and an emergency response plan for activities near watercourses or wetlands.	●

OBJECTIVES	HIGHLIGHTS OF ACCOMPLISHMENTS	STATUS
<b>Secondary objectives (continued)</b>		
The NCC will provide and promote environmentally sustainable transportation alternatives.	<p>The NCC has many forms of infrastructure, events and initiatives to support and promote the use of sustainable transportation. The following are some examples of successful initiatives implemented since 2009.</p> <ul style="list-style-type: none"> <li>• About 20 km of multi-use pathways were added to the Capital Pathway network, and several pathway improvements for pedestrians and cyclists were made.</li> <li>• Bicycle counters were installed at five locations around the National Capital Region to count the number of cyclists who pass by. Since 2013, these counters have recorded 8.9 million bicycle trips.</li> <li>• A total of 15 Park and Cycle parking lots were created.</li> <li>• The regional cycling network map, created in collaboration with the City of Ottawa, Ville de Gatineau and regional tourism organizations, has been published since 2011–2012.</li> <li>• The Capital BIXI bike share program, which was hosted by the NCC from 2011 to 2013, generated a total of 109,635 cycling trips, made by 783 monthly and yearly subscribers and 25,891 daily users, over the duration of the program.</li> <li>• The EcoMobility Initiative was launched in June 2013 to encourage staff to use sustainable forms of transportation for their commute to work.</li> <li>• The Fall Rhapsody shuttle service has brought over 30,000 people to Gatineau Park over three years (2015–2017).</li> </ul>	●
The NCC will implement best practices for water quality management in projects and activities taking place on NCC lands, and will encourage its partners and stakeholders to do the same.	<ul style="list-style-type: none"> <li>• The NCC implemented measures in support of responsible water quality management, particularly through shoreline and wetland restoration projects. For example, the wetlands upstream of Black Rapids Creek were restored, which has increased wetland areas from 3,444 to 7,000 square metres. Also, Smith Creek was daylighted and restored at Philippe Lake campground. A part of the shoreline was restored at Meech Lake.</li> <li>• Studies on flooding, erosion and stormwater management have been completed, including studies at Green's Creek watershed and at Stillwater Creek and Watts Creek in the Greenbelt</li> <li>• The NCC has collaborated with the Greenbelt farming community and various conservation organizations to help improve water and soil quality.</li> </ul>	●
In carrying out its planning mandate, the NCC will place priority on sustainable development approaches.	The NCC completed over 534 environmental assessments under the <i>Canadian Environmental Assessment Act</i> . Five strategic environmental assessments were completed, and have informed the development of NCC land use plans.	●
<b>Combatting climate change</b>		
<b>Priority objective</b>		
The NCC will reduce its overall carbon footprint by 30 percent by 2017, based on a 2011–2012 baseline.	<p>The NCC has reduced its scope 1 and 2 greenhouse gas emissions by 15.4 percent (329 tonnes of CO<sub>2</sub> equivalent) compared with a 2011–2012 baseline year.</p> <ul style="list-style-type: none"> <li>• Many energy efficiency measures were taken at Rideau Hall: <ul style="list-style-type: none"> <li>- Installation of a ground-source heating and cooling system.</li> <li>- Commercial energy audits were completed for 16 buildings at Rideau Hall campus.</li> <li>- Mechanical systems were recommissioned at the Stable Building and Main Building at Rideau Hall campus.</li> <li>- High-flow toilet fixtures were replaced with low-flow toilet fixtures, and old light bulbs were updated to LED bulbs at official residences.</li> <li>- Several old air conditioning systems that utilized potable municipal water for cooling were replaced with new energy efficient models that do not consume water.</li> </ul> </li> <li>• A total of 34 percent of the vehicle fleet (15 vehicles) was replaced with new, more energy-efficient vehicles.</li> <li>• From 2009–2013, five out of six of the NCC's signature events and programs achieved carbon neutrality, offsetting a reported 1,804 tonnes of CO<sub>2</sub> equivalent.</li> <li>• Although residential buildings are not currently included in the greenhouse gas inventory, 24 energy efficiency audits have been conducted on the NCC's residential properties since 2015. The subsequent building improvements have resulted in reductions in greenhouse gas emissions and energy cost savings for tenants.</li> </ul> <p>Although significant improvements were made in terms of energy efficiency in several buildings and the NCC's vehicle fleet, limitations on the resources available and the NCC's operational control over its greenhouse gas emissions have meant that the objective was not fully met.</p>	●
<b>Secondary objectives</b>		
The NCC will seek renewable sources of energy. By 2013, 25 percent of all NCC electricity purchases will be from renewable sources.	The NCC did not need to alter its energy purchases, as 36 percent of the energy produced in Ontario and 99 percent of the energy produced in Quebec comes from renewable sources.	●
The NCC will continue to broaden its knowledge of the effects of climate change on its operations.	<p>The NCC created partnerships with the University of Ottawa and Université Laval to conduct short- and long-term studies on the impacts of changing climate on several populations of spring-flowering perennials, the impact of the 2012 drought on tree vegetation in Gatineau Park, and the dynamics and functions of Quebec's main forest ecosystems. In 2015, the NCC commissioned a study, <i>Natural Capital: The economic value of National Capital Commission green spaces</i>, in partnership with the Université du Québec en Outaouais and David Suzuki Foundation. The study estimated the total economic value of NCC green spaces at \$5 billion over 20 years. This study helps the NCC understand how this value could potentially be impacted by climate change.</p> <p>A study of the impacts of climate change on all NCC operations, assets and programs was deferred to 2018–2019.</p>	●



## Future Directions

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In the fall of 2016, the NCC began the process of renewing its environmental strategy. Consultations were held with NCC staff, stakeholders and the general public to review the current strategy and obtain ideas for the new strategy.

The upcoming NCC Sustainable Development Strategy adopts the framework of the Federal Sustainable Development Strategy (FSDS), the Government of Canada's primary vehicle for sustainable development planning and reporting. Aligning with the FSDS will ensure that the NCC's environmental objectives and programs remain relevant and timely, and will provide a visible and transparent reporting mechanism for tracking progress toward sustainability goals. The NCC's future strategy will ensure the integration of environmental and social perspectives into daily decision-making, and reflect its commitment to working with partners, stakeholders and the public to continue building together one of the world's greenest capitals.

^ Gatineau Park

## Get Involved

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Everyone in the National Capital Region has a role to play in building a greener and more sustainable capital. Whether you're involved in the local business community, active in your neighbourhood or interested in greening your own home, your efforts are essential to our shared success. If you're not already involved, we hope that you will join us.

For more information, please visit [ncc-ccn.gc.ca/our-plans/sustainable-strategy](http://ncc-ccn.gc.ca/our-plans/sustainable-strategy). We welcome any and all feedback as to how the NCC's sustainability efforts might be strengthened or improved upon. For more information, to learn more or to get involved in this work, please contact us at [info@ncc-ccn.ca](mailto:info@ncc-ccn.ca).



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