

**BUILDING A  
GREENER  
CAPITAL**



National Capital Commission  
**ENVIRONMENT  
REPORT**

2009–2010



**NATIONAL CAPITAL COMMISSION**

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## 1. MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

It is with great pleasure that I present the first annual report on the National Capital Commission's (NCC) environmental strategy, *Building a Greener Capital*.

The environment is a priority for Canadians, for the NCC and for me personally. Canada's Capital Region has always been a reflection of the values Canadians hold dear. It is incumbent upon us to do all that we can through our own actions, individually and as an organization, to protect and enhance our natural environment.

When we launched *Building a Greener Capital* a year ago, we took heart knowing that we were building on a long tradition of good environmental management. We also knew that, in some respects, we were exploring uncharted territory.

There will be challenges. Future generations will ask us what we have done to protect the environment. We must all be concerned by this question and by what our answer will be.

The NCC is already working on this answer. This year, we invested time and effort to gain a better understanding of the impact that our projects have on the environment.

We took action to make concrete, meaningful changes immediately, where it was possible to do so. This year's carbon neutral Canada Day celebration is just one example.

This report demonstrates our ongoing commitment to making measurable environmental progress and leading the way to a greener capital. It also underlines our attention to the prudent management of environmental regulatory risks and compliance requirements.

The NCC will continue to put into action and refine its environmental strategy, while working closely with our employees, our partners, stakeholders and the public. We thank them all for sharing in our long-term goals.



Marie Lemay, P.Eng., ing.  
Chief Executive Officer  
National Capital Commission



## 2. INTRODUCTION

This report provides members of the Board of Directors of the National Capital Commission (NCC) and the public with an account of the NCC's environmental management approach and performance in fiscal year 2009–2010.

Environmental management at the NCC is guided by *Building a Greener Capital*, the corporation's environmental strategy, which was launched on June 4, 2009. This report provides an overview of the strategy and indicates progress toward meeting the environmental objectives set out therein. It also reviews how the NCC has managed key environmental regulatory compliance risks and issues during the year.

### 3. ENVIRONMENTAL STRATEGY

*Building a Greener Capital* is the NCC's blueprint for environmental leadership in Canada's Capital Region. The strategy builds on the corporation's strong tradition of environmental stewardship, and reflects its core mission to build a great capital and create national pride and unity among all Canadians.

The strategy is founded on four core principles.

- **Transparency:** The NCC will clearly articulate its environmental priorities and objectives and will provide ongoing public reporting on key indicators to measure progress and help adjust the strategy's aim, as needed.
- **Collaboration:** The NCC knows that it cannot achieve all of its objectives alone, and will work with stakeholders and partners on environmental improvements, while encouraging a culture of sharing ideas, solutions and best practices.
- **Leadership by example:** The NCC believes that a key aspect of environmental leadership is for staff throughout the organization to be fully engaged in greening the NCC's own policies, practices and activities, and to encourage other parties within its sphere of influence to do the same.
- **Continuous improvement:** The NCC will learn from its experiences and constantly strive for greater positive environmental impact.

The strategy centres around five key areas for action that are highly relevant to the NCC's core business activities, and where the potential positive impacts on the environment are meaningful and clear. The areas for action are as follows:

- **Reducing waste**
- **Enhancing biodiversity**
- **Preventing pollution**
- **Leading in environmental practices**
- **Combatting climate change**

One priority objective and a focused set of secondary objectives are associated with each action area. The priority objectives are corporate commitments to firm, measurable targets. The secondary objectives support the overall goals in each area. Some activities are already under way to meet many of the secondary objectives, while others require further analysis and testing before they can be implemented.

### 4. PERFORMANCE SUMMARY

The past year was the first period of the environmental strategy's implementation. On the whole, the year unfolded as intended, with work focused primarily on measuring baselines, developing implementation plans for each action area, and integrating the strategy's objectives into work plans across the organization. In addition, important steps were taken throughout the NCC to build a greener capital and to engage staff and stakeholders in this large-scale corporate initiative.

Table 1 provides a detailed report on the NCC's accomplishments in terms of the strategy's primary and secondary objectives.

**TABLE 1: SUMMARY OF PERFORMANCE ON ENVIRONMENTAL STRATEGY**

OBJECTIVES	HIGHLIGHTS OF ACCOMPLISHMENTS	INFORMATION
<b>Reducing Waste</b>		
By 2013, the NCC will reduce the waste going to landfills from the activities associated with Canada Day, Winterlude and the Rideau Canal Skateway by 50 percent against a 2009–2010 baseline.	Waste and recycling information has been captured for Canada Day 2009, Winterlude 2010 and the Rideau Canal Skateway 2010.	<i>See page 8</i>
The NCC will achieve 70 percent waste diversion (through reducing, reusing, recycling) from all NCC business areas by 2017.	A review to assess current practices and to develop an action plan to improve waste diversion in all NCC offices has begun.	<i>See page 8</i>
The NCC will challenge partners hosting events on NCC lands to achieve a 50 percent waste diversion target.	This is an ongoing secondary objective, and progress will be reported in future annual reports.	
The NCC will develop green procurement guidelines for implementation in 2010, which will include low waste as an important criterion.	Work is currently under way to develop green procurement guidelines, which are expected to be completed in 2010.	
The NCC will implement green demolition practices by 2010, which place a strong emphasis on waste diversion.	Green demolition specifications are now available at the NCC. The demolition of Borthwick School has demonstrated achievable results.	<i>See page 8</i>
<b>Enhancing Biodiversity</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.	The NCC adopted the Gatineau Park Ecosystem Conservation Plan in March 2010. Appropriate designation for the high-value ecosystems and habitats in the Greenbelt and on urban lands will be identified in their respective master plans.	<i>See page 11</i>
The NCC will implement new recovery plans for federally and provincially listed species at risk on NCC lands, within one year of finalization.	There were no new recovery plans developed for provincially or federally listed species at risk on NCC lands for 2009–2010.	
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.	To date, no critical habitats have been identified on NCC lands under federal or provincial species at risk law.	
The NCC will develop a thorough understanding of the biodiversity on NCC lands, through the NCC's Natural Resources Research Program.	Under the NCC's Natural Resources Research Program, projects in Gatineau Park were completed to better understand the impact of climbing on the Eardley Escarpment and to characterize ecological corridors adjacent to the Park. In the Greenbelt, work was undertaken to determine the impact of deer on vegetation.	
The NCC will reduce the amount of NCC urban land infested by aggressive invasive plant species by 10 percent against a baseline by 2014.	A comprehensive plan to identify and manage invasive species on NCC lands is being developed. Selective control in Gatineau Park and on urban lands is in progress.	<i>See page 13</i>



OBJECTIVES	HIGHLIGHTS OF ACCOMPLISHMENTS	INFORMATION
<b>Preventing Pollution</b>		
<b>All contaminated sites on NCC lands will be secured by 2017.</b>	A systematic review of all NCC properties is under way. Action on priority sites continues.	<i>See page 15</i>
The NCC will identify and remove or repair all problem underground storage tanks on NCC property by 2011.	All underground storage tanks have been identified on NCC lands, and the required work is being assessed and prioritized.	<i>See page 18</i>
The NCC will adopt a policy to confirm the elimination of the cosmetic use of pesticides on NCC lands by 2010.	A policy to confirm the elimination of the cosmetic use of pesticides is currently under development.	<i>See page 18</i>
<b>Leading in Environmental Practices</b>		
<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.</b>	This is a 2013 priority objective.	<i>See page 21</i>
The NCC will use green building practices for the construction of all buildings under 250 square metres.	This is an ongoing secondary objective, and progress will be reported in future annual reports.	<i>See page 21</i>
The NCC will integrate environmental education into all NCC activities, where appropriate.	This is an ongoing secondary objective, and progress will be reported in future annual reports.	
The NCC will introduce environmentally sensitive practices into all maintenance contracts.	Environmental guidelines are now integrated into all new maintenance contracts.	<i>See page 24</i>
The NCC will provide and promote environmentally sustainable transportation alternatives.	The bike share pilot project was introduced in the summer of 2009, and a call for proposals is underway for implementation of long term service in 2011.	<i>See page 23</i>
The NCC will lead the effort to engage partners in improving the water quality of key watersheds in Canada's Capital Region, with the Ottawa River as the first priority.	The Ottawa River Coordinating Group, involving the City of Ottawa, the Ville de Gatineau and the NCC, has been established.	<i>See page 23</i>
The NCC will integrate a green urbanism approach into the 2013 Plan for Canada's Capital.	This is an ongoing priority.	<i>See page 23</i>
<b>Combatting Climate Change</b>		
<b>The NCC's signature events and programs will become carbon neutral, starting with Canada Day 2010.</b>	The carbon footprint of Canada Day 2009 was determined as a first step to developing plans to reduce and/or offset emissions for Canada Day 2010.	<i>See page 25</i>
The NCC will reduce its overall carbon footprint by 30 percent by 2017, based on a 2011–2012 baseline.	This is a 2017 secondary objective, and progress will be reported in future annual reports.	
The NCC will seek renewable sources of electricity. By 2013, 25 percent of all NCC electricity purchases will be from renewable sources.	This is a 2013 secondary objective, and progress will be reported in future annual reports.	
The NCC will advance public understanding of climate change impacts on Canada's Capital Region.	This is an ongoing secondary objective, and progress will be reported in future annual reports.	

## 5. PROGRESS AND PRIORITIES: SUMMARY BY ACTION AREA

### 5.1 Reducing Waste

Sending garbage to landfills is a waste — of materials, energy and money. Diverting waste from landfills reduces greenhouse gases, shrinks the demand for new natural resources and lowers the need for new landfills. It can also save money.

The NCC is working to reduce the waste going to landfills from all aspects of its business, through more aggressive use of the “3 Rs” — reducing, reusing and recycling.

In 2009–2010, baseline data on waste flows and composition for Canada Day, Winterlude and the Rideau Canal Skateway were collected. Analysis revealed that more than 90 percent of all waste generated on the Skateway and at Winterlude could have been diverted through recycling or composting. The figure was considerably less for Canada Day 2009, but the analysis did not factor in compostable waste for this event.

In light of this information, the NCC believes that its objective of reducing the waste sent to landfills by 50 percent for the above-noted events by 2013 is achievable. This will require a more intensive recycling program, coupled with strong support and public participation, as well as the development of a new composting program. This year, the NCC purchased 180 new recycling bins as part of its efforts to enhance recycling at its signature events and programs. In addition, the corporation is reviewing options to implement a new program for compostable waste.

Meanwhile, the NCC is undertaking a comprehensive assessment of waste at all its corporate offices with the intent to modernize recycling and waste-handling systems. The NCC is seeking to adopt the latest waste diversion practices in its workplaces, and ensure that its systems are fully integrated with municipal operations throughout the Capital Region. In addition, the corporation is examining other areas of its operations to see where waste can be reduced or diverted from landfills (*see feature stories on page 9*).



## SAVING PAPER EVERY PAYDAY

Getting serious about waste reduction means taking every opportunity to make use of the 3Rs — reduce, reuse and recycle. While recycling is often the easiest to do, reducing waste can be much more challenging. This year, the NCC's PeopleSoft Core Team (including Human Resources, Payroll and Information Technology staff) rose to the challenge by eliminating paper pay stubs from the NCC's payroll process. This was a big task, requiring the development of new software that allows staff to view, print as needed or save their pay slips electronically. The software was built entirely by in-house personnel in just three months (just in time for the beginning of the new fiscal year). This initiative is expected to save almost 365 kilograms of paper annually, if all NCC staff choose not to print their pay slips — saving the equivalent of about seven mature trees per year!

## GIVING OLD BUILDING MATERIALS A NEW LIFE

Dealing with operational waste can be challenging, because of the diverse array of tasks the NCC performs each year. Last year, when the NCC had to demolish the abandoned Borthwick schoolhouse, located in the Mer Bleue Conservation Area, it was seized on as an opportunity to put waste reduction potential to the test. Most buildings that have reached the end of their lifespan are demolished and hauled off to landfills, leaving a legacy of waste in their wake. However, with Borthwick School, the NCC decided to take a more environmentally friendly approach. Using a process called green deconstruction, the components of the school were selectively dismantled for reuse and recycling, diverting 96.66 percent of the building's materials from landfill. All of the building's concrete was crushed on-site and reused as the primary surface material for a future trailhead parking area. All the metal and wood materials were also recycled. Fir beams were sold to build vintage boats, while other wood materials were ground for mulch, animal bedding or compost, or were milled and reused as an industrial fuel source. In addition, this process saved on carbon emissions, as it eliminated the need to transport 15 loads of crushed gravel to the new parking lot site. Overall, the cost of this green demolition project was less than if the corporation had taken a conventional approach. This successful waste reduction initiative is just one example of what can be accomplished with a little planning, creativity and leadership.

**TABLE 2: SIGNATURE EVENT AND PROGRAM WASTE AND RECYCLING AUDIT RESULTS, 2009–2010**

	Canada Day 2009	Rideau Canal Skateway 2010	Winterlude 2010
<b>MEASURED RESULTS*</b>			
Total material collected	12.3	24.1	17.4
Total sent to landfill	9.9	22.2	13.6
Total amount recycled	2.4	1.9	3.8
<b>Current diversion rate</b>	<b>19.5%</b>	<b>7.8%</b>	<b>21.8%</b>
<b>POTENTIAL RESULTS*</b> (based on comprehensive waste audits)			
Divertible material in all waste streams	6.0	22.3	16.0
Recyclable	6.0	7.3	11.5
Compostable	N/A**	15.0	4.5
<b>Possible diversion rate (% of total material)</b>	<b>48.8%</b>	<b>92.5%</b>	<b>92.0%</b>

\* Figures are in metric tonnes.

\*\* Compostable material was not determined for Canada Day 2009



## 5.2 Enhancing Biodiversity

Conserving biodiversity improves the quality of life in Canada's Capital Region and is an essential element of maintaining a green capital. Habitat change and fragmentation, climate change, pollution, over-exploitation by people and rapid expansion of non-native species are the main threats to biodiversity in the region and around the world. The NCC recognizes both the importance and the necessity of protecting ecosystems, natural processes, and plant and animal species found on its lands, so that they will be preserved for future generations.

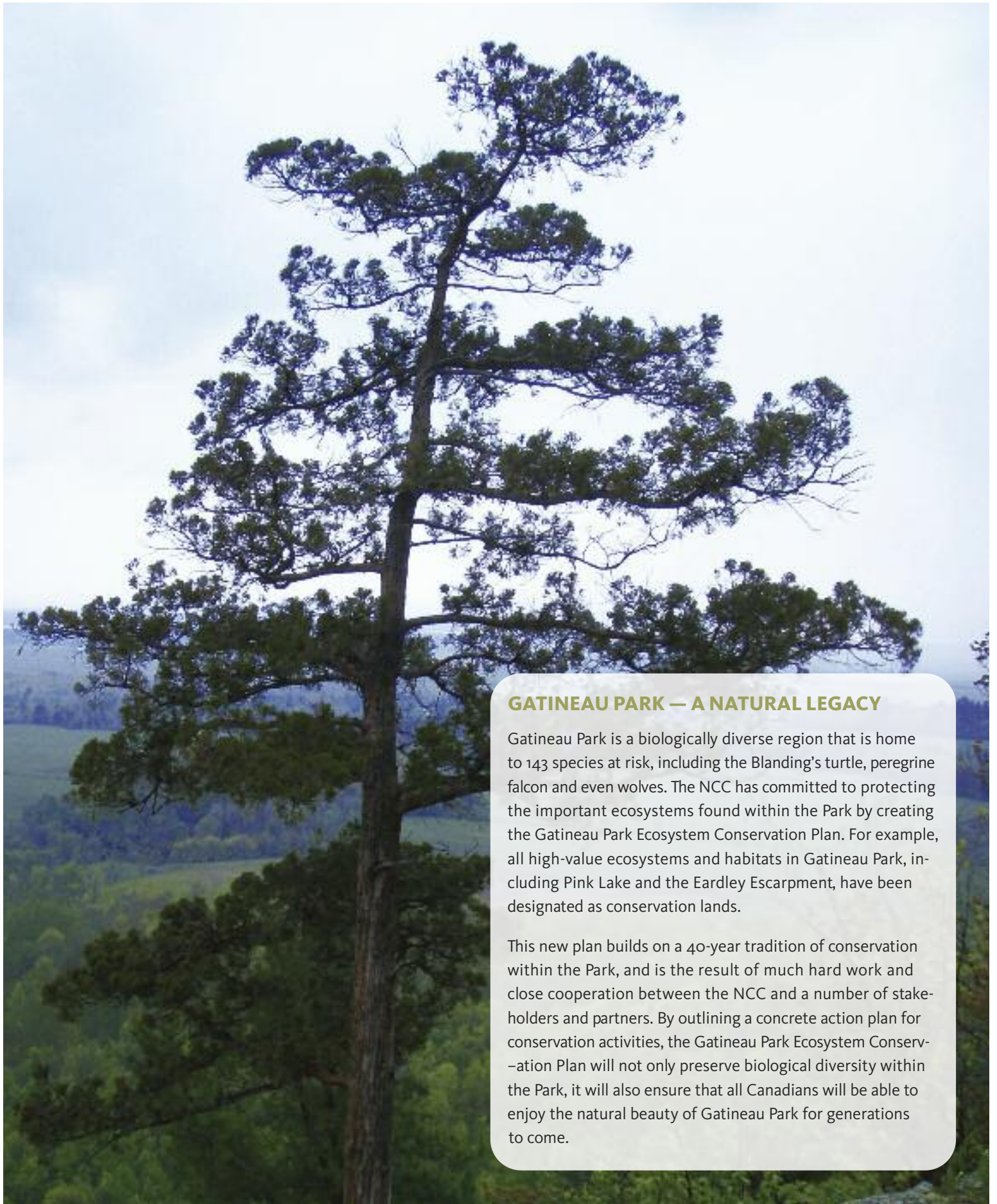
As the owner of 10 percent of the land in the Capital Region, which straddles the Quebec–Ontario border, the NCC is the chief steward of federal lands in the region. Its rural, urban and wilderness lands are characterized by a high level of biodiversity.

The NCC is embarking on work with local municipalities, the provinces and other stakeholders to make the region a model of biodiversity conservation. It aims to ensure that all 28 high-value ecosystems and habitats found within the Greenbelt, Gatineau Park, and on its urban lands are designated as conservation lands by 2012. Not only will protecting these sites make an important contribution to the long-term conservation of biological diversity, it will also allow for education and interpretation about biodiversity in the region.

The NCC took important steps over the year toward achieving this objective. For example, all high-value ecosystems and habitats identified in Gatineau Park have been identified as conservation lands through the NCC's recently released Gatineau Park Ecosystem Conservation Plan (*see the feature story on page 12*). Also, in order to preserve the integrity of Gatineau Park, the NCC acquired 14 properties (103.9 hectares) during the past year. The priority for property acquisition within the boundaries of the Park has been established in the Gatineau Park Master Plan, and is based on a property's strategic importance in terms of its ecological significance.

The review of the Greenbelt Master Plan is well under way, and is expected to be completed by 2011. The NCC's commitment to designate the nine high-value ecosystems and habitats found on Greenbelt lands as conservation lands has been factored into the planning process.

There are 11 high-value ecosystems and habitats found on the NCC's urban lands. The development of the first Urban Lands Master Plan is under way and is expected to be completed by 2012. As a first step in implementing this commitment, the NCC is currently conducting a status assessment of these sites, and will factor the results of this work into the Urban Lands Master Plan.



### **GATINEAU PARK — A NATURAL LEGACY**

Gatineau Park is a biologically diverse region that is home to 143 species at risk, including the Blanding's turtle, peregrine falcon and even wolves. The NCC has committed to protecting the important ecosystems found within the Park by creating the Gatineau Park Ecosystem Conservation Plan. For example, all high-value ecosystems and habitats in Gatineau Park, including Pink Lake and the Eardley Escarpment, have been designated as conservation lands.

This new plan builds on a 40-year tradition of conservation within the Park, and is the result of much hard work and close cooperation between the NCC and a number of stakeholders and partners. By outlining a concrete action plan for conservation activities, the Gatineau Park Ecosystem Conservation Plan will not only preserve biological diversity within the Park, it will also ensure that all Canadians will be able to enjoy the natural beauty of Gatineau Park for generations to come.

**TABLE 3: SPECIES AT RISK IDENTIFIED IN GATINEAU PARK, IN THE GREENBELT AND ON URBAN LANDS**

Portfolio	Gatineau Park	Greenbelt	Urban Lands
Number of species at risk <sup>1</sup>	<b>143</b>	<b>83</b>	<b>73</b>
Mammals	11	8	0
Birds	18	21	18
Fishes	6	0	7
Amphibians	3	1	2
Reptiles	8	5	7
Invertebrates	7	1	0
Flora	90	47	39
Total species at risk on NCC lands <sup>2</sup>		<b>168</b>	

1. The term “species at risk” used in this report refers to plant and animal species with special status at the federal and/or provincial levels. It also includes the species listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and those on the provincial lists of species likely to be designated as threatened or vulnerable.

2. Since a species can be at risk at both the federal and the provincial levels and can occur in more than one land portfolio, the total for the NCC is not the sum of the species identified in Gatineau Park, the Greenbelt and on urban lands.

3. For more information about species at risk in Canada, visit [www.sararegistry.gc.ca](http://www.sararegistry.gc.ca); for those in Quebec, visit [www.mddep.gouv.qc.ca](http://www.mddep.gouv.qc.ca) and for those in Ontario, visit [www.mnr.gov.on.ca](http://www.mnr.gov.on.ca).

### SPECIES AT RISK

Overall, 168 species at risk of extinction were present on NCC lands in 2009–2010. In Gatineau Park, eight new plants and two new animals were added to the list of species at risk found in the Park. To date, no critical habitats have been designated in Gatineau Park under either Quebec or federal species at risk laws. In Ontario, no new species have been added to the list in the Greenbelt. The NCC undertakes protection measures for all species at risk found on its lands, and special measures are provided for the 40 legally protected species present in Gatineau Park.

### INVASIVE PLANT SPECIES

The environmental strategy commits the NCC to the active management of invasive alien plant species. In 2005, the NCC identified 67 alien plant species on its lands; 10 of these are considered extremely invasive.

In 2009–2010, field work was completed in Gatineau Park to investigate the occurrence and expansion of three invasive species: garlic mustard, Japanese knotweed and dog strangling vine. The Park also regularly monitors the status of four invasive plants species: Eurasian watermilfoil, purple loosestrife, garlic mustard and buckthorn.

For urban lands, buckthorn and dog-strangling vine are monitored on a regular basis. Dog-strangling vine is being controlled on four sites, and buckthorn is regularly eradicated on several sites.

The NCC has begun work to systematically identify areas infested by invasive plant species across all of its lands and to set priorities for more aggressive management. This action plan is expected to be completed and launched by 2011.

#### **EMERALD ASH BORER**

In July 2008, the emerald ash borer, an invasive beetle that feeds only on ash trees, was confirmed in the region, and continues to spread. Approximately 25 percent of the trees in urban areas of the region are ash. In April 2009, the Canadian Food Inspection Agency issued an order to control the movement of firewood (all species) and all ash products to contain the spread of the insect. The NCC is working with its partners to slow the spread and manage the impact of the emerald ash borer on all its lands. For instance, campers are informed that it is prohibited to bring in firewood and ash products from infested locations to Gatineau Park.





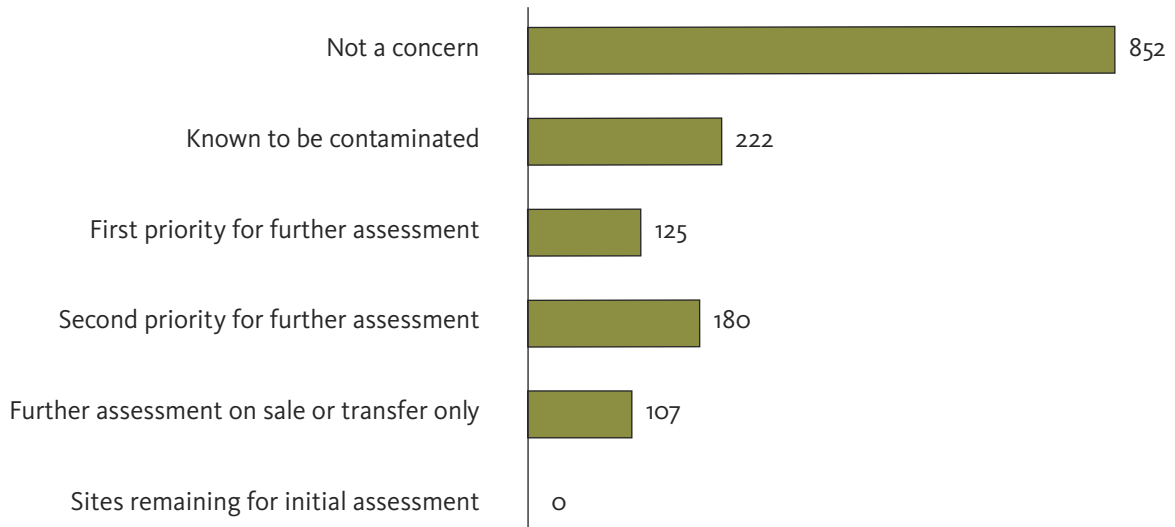
### 5.3 Preventing Pollution

The NCC is committed to protecting human health and the environment from the impacts of pollution. In this area, the NCC is showing continued leadership to prevent the pollution of lands, groundwater and surface water, by applying advanced environmental standards to its operations and practices on its lands and properties.

#### CONTAMINATED SITES

The NCC actively identifies, assesses and manages contaminated sites located on its lands in order to reduce the risks to human health and the environment. In 2009–2010, the NCC conducted 40 environmental site assessments, at the Phase 2 level or above, on sites that were suspected of being contaminated. Phase 2 work generally involves the use of advanced techniques, such as testing groundwater and analyzing soil samples for the presence of oil, heavy metals and other contaminants. As a result of this work, 15 NCC properties were added, in the fiscal year period, to those officially designated as contaminated (*see Figure 1*).

**FIGURE 1: STATUS OF NCC CONTAMINATED SITES, 2009–2010**



Active remediation took place at six sites during the past year. At Stanley Park, the NCC took action to provide a clean cover for areas contaminated with lead and other contaminants. This project is 80 percent completed, and is expected to be finished in fall 2010. At Ridge Road, an engineered wetland was created (*see the feature story on page 16*) and cleanup work was undertaken at the site. At the NCC’s Bayview property, work was undertaken on two projects: newly discovered contamination was removed for disposal, and groundwater remediation for trichloroethylene continued.

## **RIDGE ROAD ENGINEERED WETLAND: USING NATURE'S TOOLS TO PREVENT POLLUTION**

As an important landowner in the National Capital Region, the NCC plays a key role in preventing the pollution of lands and waterways from current and historical land uses. Sometimes, though, preventing pollution requires creativity. When the NCC was faced with preventing contamination from the former City of Ottawa landfill site at Ridge Road in the eastern Greenbelt, an innovative solution was developed: creating an engineered wetland. Wetlands are excellent filters, because they contain plants and bacteria that soak up harmful chemicals and turn them into less harmful ones. As an added bonus, the Ridge Road engineered wetland will also provide important habitat for a myriad of wildlife species, including fish and migratory birds. So, when it came to preventing pollution at Ridge Road, establishing a wetland was a “natural” choice!



At Hurdman North, the pumping and treating of free petroleum is ongoing. However, oil is being removed more slowly than expected, and new techniques are being evaluated. Also, in spring 2009, soils contaminated with heavy metals on NCC lands bordering on Montcalm Street in Gatineau were capped with clean soil and seeded. Finally, contaminated soils were removed from a section of riverfront park near the Canadian War Museum, covered with clean soil and seeded.

Over the past year, the NCC reported an unaudited liability cost of \$39.4 million, \$9.5 million higher than the value reported in the previous year (\$29.9 million). The NCC also reported a contingent liability cost of \$432 million in 2009–2010, down from \$447 million reported for the 2007–2008 fiscal year.

In its environmental strategy, the NCC committed to securing all of its contaminated sites by 2017. Securing a site involves studying it and taking all necessary remediation or other risk management actions consistent with the designated use of the site. By 2017, all NCC contaminated sites will be at the point where only routine monitoring and maintenance are needed.

This approach builds on the work that the NCC has undertaken over the past decade to manage its contaminated sites. The NCC is currently conducting a systematic review of its more than 1,400 properties to determine what would need be done to secure each site. To date, about two thirds of NCC properties have been reviewed from this perspective. Next year, the NCC's reporting on contaminated sites will reflect this new approach.



*Ridge Road Engineered Wetland.*

## FUEL STORAGE TANKS

By the end of the fiscal year, the NCC had 498 active fuel storage tanks, with 60 tanks on NCC lands subject to the federal fuel storage tank regulations. In 2009, all 60 tanks were inspected, and the results are currently being analyzed. It is expected that most regulated tanks will require work in order to be fully compliant by the 2012 compliance deadline.

An additional 93 non-regulated tanks were also inspected in 2009, and the results entered into the NCC's asset management system. A variety of compliance issues were noted, and these are being addressed by the various NCC portfolios on a priority basis. In 2010–2011, the NCC will inspect an additional 69 unregulated priority fuel storage tanks to ensure that they are in good working order.

## PESTICIDES MANAGEMENT

On April 22, 2009, Ontario amended its pesticide legislation to ban the cosmetic use of pesticides. This complements legislation established in Quebec in 2003. The NCC will develop a policy by 2010 to confirm the elimination of the cosmetic use of pesticides on its lands. The NCC has been working toward the elimination of all cosmetic pesticides, but will establish an even stronger commitment in the form of a corporate policy. The policy will ensure that the NCC meets the requirements of the Quebec and Ontario laws, as these represent very advanced pesticide management legislation. Work on developing the specifics of the new policy continues.

## DESIGNATED SUBSTANCES

The NCC owns 1,322 buildings in active use, and is implementing a program to identify and assess buildings where designated substances such as asbestos and paint containing lead may be found. This is required under the *Canada Labour Code*, Part II. Surveys were completed at 79 high-priority buildings this year. An additional 25 lower-priority buildings were also completed because of their proximity to the high-priority buildings.

**TABLE 4: STATUS OF REVIEW OF NCC BUILDINGS FOR DESIGNATED SUBSTANCES, MARCH 31, 2010**

Building Status	2009–2010 Results
<b>Total number of buildings in active use</b>	<b>1,322</b>
Buildings determined to be not at risk	727
Buildings with designated substances	248
Buildings remaining to be assessed	347
Scheduled for assessment in 2010–2011	100

To date, the NCC has determined that 727 buildings are not likely to pose a risk, and another 248 buildings revealed the presence of designated substances. The NCC will take steps to determine the potential investment required to manage designated substances in all of its buildings. In the meantime, work on buildings with designated substances is advancing as needed, based on the results of these assessments. Of the 347 priority buildings left to be inspected, 100 are slated for inspection during 2010–2011. The rest will be scheduled for assessment over the next several years.

#### **HAZARDOUS MATERIALS MANAGEMENT / SPILLS AND EMERGENCY RESPONSE**

The NCC documented six spills on its lands in 2009–2010. Five spills were of oil or other petroleum products, four of which were minor and were promptly cleaned up. The fifth spill involved a more significant volume of diesel fuel spilled into the Ottawa River from a City of Ottawa storm sewer that crosses NCC lands at the Rockcliffe Parkway. Although the source of this spill is undetermined, it is known that the spill originated from non-NCC lands. Some of the diesel was captured from the surface of the river, but likely only a small portion. The sixth spill was a minor incident involving untreated sewage that was quickly cleaned up by the city.

During the past year, the NCC offered online training on the Workplace Hazardous Materials Information System (WHMIS) to staff. Also, WHMIS information has been integrated into new staff orientation sessions to provide general information about hazardous materials located at work. In 2010, the inventory of office hazardous materials will be updated for all office spaces.

#### **FEDERAL PCB REGULATIONS**

Owners of equipment that contains PCBs (polychlorinated biphenyls) are required to comply with the federal PCB Regulations, which are part of the *Canadian Environmental Protection Act, 1999*. These regulations include new reporting requirements, labelling and record-keeping requirements, and dates by which PCB-containing equipment must be removed from service and destroyed. NCC staff are currently reviewing the new requirements in order to determine their impact, as well as what actions need to be taken and when.

## WATER AND INDOOR AIR QUALITY

The NCC is responsible for ensuring the quality of water for drinking and swimming at a number of locations on its lands. In 2009–2010, the NCC decommissioned 10 wells and rehabilitated one. Further, the NCC took action to manage radon and uranium issues at residential properties in Gatineau Park. In the previous fiscal year, radon levels were reduced below Health Canada’s guidelines on all sites where elevated radon levels were found. Additional monitoring was undertaken in three homes in Gatineau Park during the fiscal year period. Of these, two met current standards and one requires additional radon mitigation work. In addition, the NCC provided seven tenants in Gatineau Park with bottled water for drinking and cooking, where the water supply has elevated levels of radionuclides.

Only one beach closure was required in the summer of 2009 due to a cyanobacteria bloom. (O’Brien Beach at Meech Lake was closed from August 14 to 22.)

In August 2009, Quebec adopted a regulation on the declaration of surface or ground-water withdrawals. For the NCC, this regulation applies only in Gatineau Park, since it deals with public spaces not connected to a municipal system, such as the Gatineau Park Visitor Centre, Mackenzie King Estate and the Philippe Lake campground. Gatineau Park will have to report the amount of water consumed at the above-mentioned sites on an annual basis.

**TABLE 5: SELECTED POLLUTION PREVENTION INDICATORS**

Pollution Prevention Indicators	2009–2010 Results
Number of active wells	281
Number of wells decommissioned	10
Number of wells rehabilitated	1
Number of rehabilitated or decommissioned fuel storage tanks	0



## 5.4 Leading in Environmental Practices

The activities of the NCC contribute to a better quality of life in the Capital Region. To enhance its contribution, the NCC is looking at ways to green all aspects of its business, from buildings, planning and transportation to workplace guidelines and practices. This includes not only areas where the NCC may have direct control over outcomes, but also areas where the NCC and its staff have influence, through working with partners, suppliers and stakeholders.

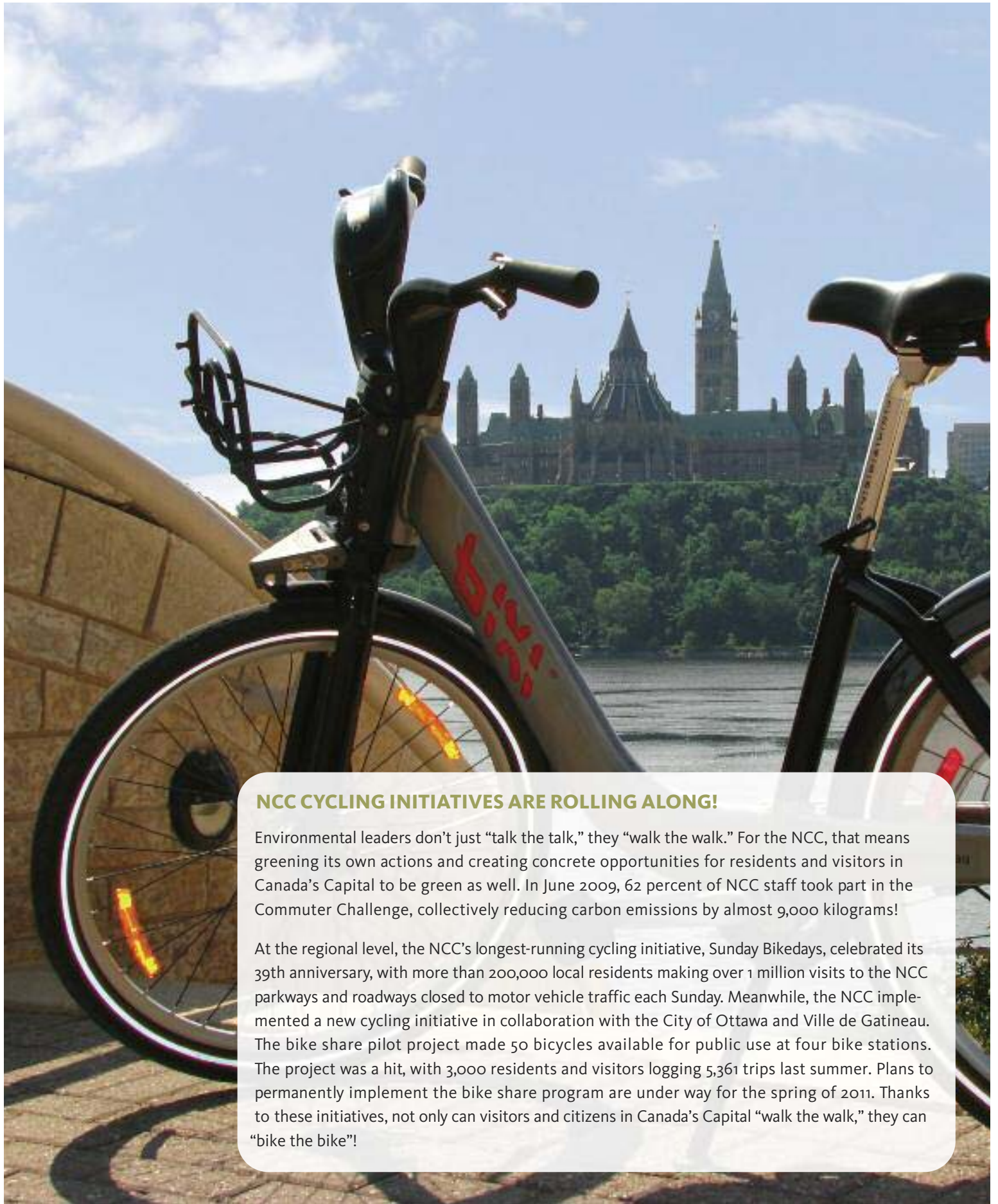
### BUILDINGS

The NCC looks after more than 1,300 buildings on its lands. The way buildings are built and managed has an important impact on the environment. For example, in Canada, buildings account for 37 percent of all primary energy use, and are responsible for 30 percent of greenhouse gas emissions. Higher standards of construction will help conserve energy, reduce the carbon footprint, and enable more efficient use of water and other resources.

To accelerate the pace of moving to high-performance sustainable building construction, the NCC has made a commitment to LEED® standards. LEED® is a third-party certification program administered by the Canada Green Building Council for the design, construction and operation of high-performance green buildings.

The NCC has placed priority on the integration of LEED® standards into its plans for 2010–2011 and subsequent years. In the meantime, the NCC has embarked on numerous projects to improve the environmental performance of its building stock, while saving money, as described in the following examples.

- An energy efficiency audit for several properties on Sussex Drive and St. Patrick Street was conducted to identify opportunities to improve environmental performance and reduce building operating costs. Eleven measures were identified, such as improving lighting and heating, ventilating and air conditioning systems; reducing water consumption; and adding a rooftop photovoltaic system. These measures can potentially achieve savings of 50,000 to 75,500 kilowatt hours of electricity per year, about 3,400 cubic metres of water per year and significant volumes of natural gas. Three of these projects are currently being implemented, and will yield net savings of about \$3,700 per year.
- Similar studies, geared at improving environmental performance and saving money, on other NCC properties are planned for 2010–2011, including buildings at Rideau Hall, the Gatineau Park Visitor Centre and several buildings on Sussex Drive.
- The ongoing Vincent Massey Park washroom rehabilitation construction project includes a 6-kilowatt photovoltaic panel array that will feed into the electrical grid, rather than draw electricity. Photovoltaic panel arrays are also being designed for the Hog's Back Park building rehabilitation project, for implementation in 2010–2011. In addition, 90 percent of all materials removed from the Vincent Massey Park washroom pavilion during the demolition phase of this project were recycled.
- Ground-source heat pump systems (also known as “geothermal systems”) have been designed into the Moore Farm building rehabilitation project, with implementation slated for 2010.



### **NCC CYCLING INITIATIVES ARE ROLLING ALONG!**

Environmental leaders don't just "talk the talk," they "walk the walk." For the NCC, that means greening its own actions and creating concrete opportunities for residents and visitors in Canada's Capital to be green as well. In June 2009, 62 percent of NCC staff took part in the Commuter Challenge, collectively reducing carbon emissions by almost 9,000 kilograms!

At the regional level, the NCC's longest-running cycling initiative, Sunday Bikedays, celebrated its 39th anniversary, with more than 200,000 local residents making over 1 million visits to the NCC parkways and roadways closed to motor vehicle traffic each Sunday. Meanwhile, the NCC implemented a new cycling initiative in collaboration with the City of Ottawa and Ville de Gatineau. The bike share pilot project made 50 bicycles available for public use at four bike stations. The project was a hit, with 3,000 residents and visitors logging 5,361 trips last summer. Plans to permanently implement the bike share program are under way for the spring of 2011. Thanks to these initiatives, not only can visitors and citizens in Canada's Capital "walk the walk," they can "bike the bike"!



## PLANNING

A key corporate priority over the next several years involves the review and update of the NCC's Plan for Canada's Capital. This plan will look 50 years into the future, and will incorporate sustainability and green urban planning principles. It will also promote policies that strengthen and protect the region's green and blue (i.e. water) assets, and contribute to good long-term environmental management. The NCC also advocates green urban planning practices for all federal land use approval.

The Choosing Our Future initiative, a joint NCC–Gatineau–Ottawa sustainability visioning project for the National Capital Region advanced during the past year. The project has focused on developing sustainable goals and principles to guide future plans and to describe the long-term aspirations and collective vision for a sustainable, resilient and liveable Capital Region.

The health of the Ottawa River is an environmental and planning priority for the NCC. The first Ottawa River Summit is being planned for August 2010 to discuss the health and future of the Ottawa River and its tributaries. In addition, the Ottawa River Coordinating Group was formed, under the leadership of the NCC, to share information and coordinate actions between the NCC and the cities of Ottawa and Gatineau. This group met twice in 2009–2010, and in the future will meet three times annually. A statement of requirements was also developed for an area plan of the Ottawa River waterfront, from the Ottawa Locks to Rideau Falls.

The NCC is currently undertaking sustainable transportation work in the form of Gatineau Park's Green Transportation Plan and the NCC Parkway Policy Review. Also, as part of the NCC's Sustainable Urban Mobility Strategy, the NCC is organizing an Urban Sustainable Mobility Forum for the fall of 2010. Finally, the NCC participated in the seventh Capitals Alliance meeting in March 2010 to explain and promote its new environmental strategy, as well as the Sustainable Urban Mobility Strategy.

## CYCLING

Bicycling in the Capital Region makes an important contribution to reducing urban air pollution and greenhouse gas emissions, and plays a key role in making the region a sustainable urban area. The region is home to one of North America's largest networks of recreational pathways: the Capital Pathway network. More than 200 kilometres of recreational pathways link superb natural areas, parks, gardens, museums and attractions across the region. Last year, a pilot project involving 50 bikes and four stations was undertaken between the cities of Ottawa and Gatineau and the NCC to examine the possibility of establishing a permanent bike-sharing service in the region. The project was a success, and a full service was judged to be feasible. The three partners have launched a request for proposals to implement a bike share service, which is planned to begin in the spring of 2011 (*see feature story on page 22*).

The need for more and safer cycling facilities to support both recreation and utilitarian uses across the region is an NCC priority. This need is being factored into many areas of NCC planning and activity.

## MAINTENANCE OPERATIONS

The NCC's environmental guidelines for maintenance contracts have been updated, with the intent of minimizing the environmental impact of contractor work on NCC lands through the use of best practices. These guidelines are now being included in all new maintenance contracts and renewals of existing contracts. They include information and requirements on the following: air emissions, waste water discharge, solid waste management, hazardous materials management, contaminated sites management, designated substances, fuel storage tank management, spills and emergency response, environmental assessments, soil erosion and sedimentation, construction, water crossings, water quality, species at risk and protected habitats, and vegetation and wildlife management.

In 2009, the NCC completed the final elements of a raw water irrigation system that serves the official residences of the Government of Canada, including the prime minister's residence (24 Sussex Drive), the governor general's residence (Rideau Hall) and the official guest house for visiting heads of state (7 Rideau Gate). The new irrigation system has reduced potable water use by an estimated 30 percent, while allowing the NCC to maintain the beauty of the grounds. The system serves 58 acres in total, which requires a water demand comparable to the treated water supply needs of 500 homes. On average, this system has led to savings of about \$30,000 per year on the NCC's water bill.

## ENVIRONMENTAL ASSESSMENT

The NCC is required to comply with the provisions in the *Canadian Environmental Assessment Act* (CEAA). The NCC reviews approximately 100 project files per year to determine if an environmental assessment is required under the CEAA. In 2009–2010, 30 environmental assessments were completed for NCC-led projects. The NCC also participated as an expert adviser in 20 external project environmental assessments that affect NCC lands.

The NCC is fully engaged in environmental assessment work on Ville de Gatineau and City of Ottawa transit projects. The Société de transport de l'Outaouais is working on one project that potentially affects NCC lands, and OC Transpo has five such projects, in addition to the Downtown Ottawa Transit Tunnel.

This year, reviews have been required for several NCC projects funded through the Economic Action Plan, which are required to be completed by March 31, 2011. Special attention has also been brought to Phase 2 of the Highway 5 extension in Quebec, which has implications for Gatineau Park boundary protection.

The NCC also continues to lead a joint federal–provincial (Ontario and Quebec) environmental assessment study for future interprovincial crossings. The detailed environmental assessment of the three preferred potential corridors that were previously identified is scheduled for completion in 2013.

## 5.5. Combatting Climate Change

Emissions of carbon dioxide (CO<sub>2</sub>) and other greenhouse gases associated with human activities are increasingly understood to be the main cause of climate change. The NCC is committed to reducing the carbon footprint of all aspects of its business and has made it a priority to render its signature events and programs carbon neutral (i.e. having a net zero carbon footprint). This will be achieved by reducing emissions through increased energy efficiency and other good environmental stewardship initiatives, as well as by offsetting residual emissions.

### CARBON NEUTRAL SIGNATURE EVENTS AND PROGRAMS

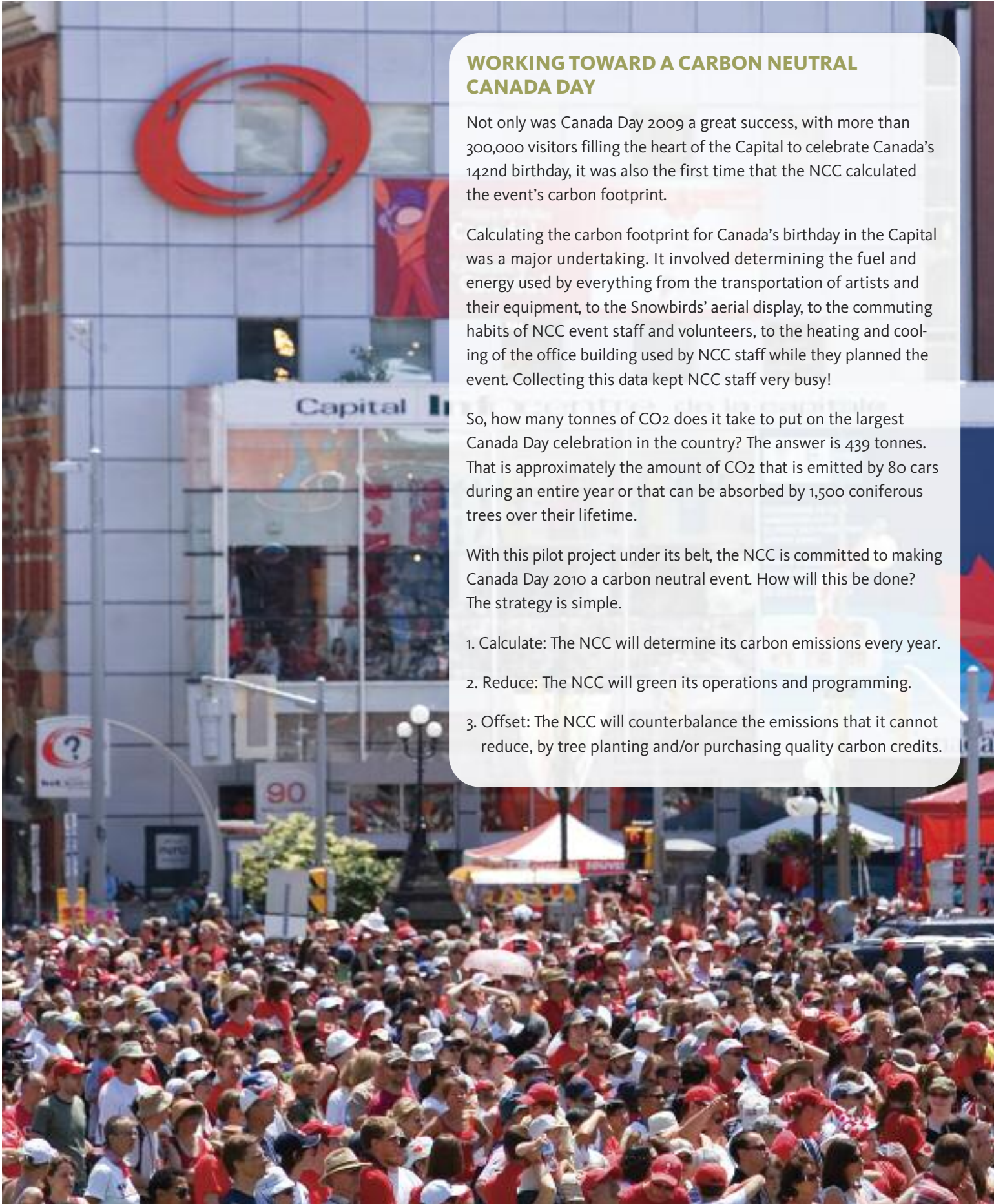
In 2009–2010, the NCC focused on assessing the carbon footprint of its signature events and began planning for upcoming carbon neutral events, beginning with Canada Day 2010.

As a first step, the NCC calculated the carbon footprint for Canada Day 2009 with the help of an experienced consultant, Planetair. The process followed the Greenhouse Gas Protocol developed by the World Resources Institute and the World Business Council for Sustainable Development.

Total emissions for Canada Day were determined to be 438.66 tonnes of CO<sub>2</sub> equivalent. The calculation of carbon emissions included all waste generated at NCC sites; the travel and accommodations of invited artists, performers and contractors; site electrical consumption; NCC building heating and electrical costs; NCC staff and volunteer commuting habits; fireworks; and the Snowbirds' displays. Essentially, all emissions related to the event were factored in, except those associated with the travel and accommodations of spectators. This practice and calculation method follows international standards (ISO 14064-1) in determining emissions associated with events, and is predicated on principles such as relevance, completeness, consistency, accuracy and transparency.

Carbon footprint evaluations are currently under way for three of the NCC's other signature events and programs: Christmas Lights Across Canada, the Rideau Canal Skateway and Winterlude. Reports detailing the CO<sub>2</sub> emissions associated with these events and programs will be completed by the summer of 2010.

The NCC is currently evaluating how best to reduce emissions associated with its signature events and programs, without undermining the desired character of the event, as well as how to offset residual emissions. For example, for Canada Day 2010, visitors will be encouraged to use bicycles to get to the event sites, with extended bike parking and valet services. Shuttle buses will also be available for spectators to travel between the event sites. In addition, a new recycling program and water distribution stations are being planned to increase waste diversion and dramatically reduce the use of single-use plastic bottles. Options under consideration for offsetting any residual emissions include tree planting, purchasing offsets or undertaking dedicated offset projects. The NCC is analyzing options for offsetting residual emissions, and expects to have an offset plan in place by fall 2010 (*see feature story on page 26*).



## WORKING TOWARD A CARBON NEUTRAL CANADA DAY

Not only was Canada Day 2009 a great success, with more than 300,000 visitors filling the heart of the Capital to celebrate Canada's 142nd birthday, it was also the first time that the NCC calculated the event's carbon footprint.

Calculating the carbon footprint for Canada's birthday in the Capital was a major undertaking. It involved determining the fuel and energy used by everything from the transportation of artists and their equipment, to the Snowbirds' aerial display, to the commuting habits of NCC event staff and volunteers, to the heating and cooling of the office building used by NCC staff while they planned the event. Collecting this data kept NCC staff very busy!

So, how many tonnes of CO<sub>2</sub> does it take to put on the largest Canada Day celebration in the country? The answer is 439 tonnes. That is approximately the amount of CO<sub>2</sub> that is emitted by 80 cars during an entire year or that can be absorbed by 1,500 coniferous trees over their lifetime.

With this pilot project under its belt, the NCC is committed to making Canada Day 2010 a carbon neutral event. How will this be done? The strategy is simple.

1. Calculate: The NCC will determine its carbon emissions every year.
2. Reduce: The NCC will green its operations and programming.
3. Offset: The NCC will counterbalance the emissions that it cannot reduce, by tree planting and/or purchasing quality carbon credits.

**TABLE 6: CANADA DAY 2009 CARBON FOOTPRINT BREAKDOWN<sup>1</sup>**

Category	Tonnes of CO <sub>2</sub> Equivalent	Percentage of Total Emissions
NCC fleet vehicles	0.72	0.2%
NCC building heating and cooling	81.16	18.5%
Canada Day site electricity (includes generators)	13.24	3.0%
Waste and recycling (NCC and Jazz Festival sites)	10.93	2.5%
Travel and accommodations (artists and performers)	163.60	37.3%
Travel and accommodations (contractors, includes equipment)	49.22	11.2%
NCC business travel	8.96	2.1%
Staff and volunteer commuting to work	15.43	3.5%
Fireworks	3.07	0.7%
Aerial display (Snowbirds)	92.32	21.1%
Total emissions	438.66	100% <sup>1</sup>

1. Columns may not add due to rounding.

#### OTHER CLIMATE CHANGE INITIATIVES

While the primary focus over the past year was working toward carbon neutral events and programs, work will now also begin on other initiatives to reduce the NCC's carbon footprint. For example, the NCC will work with staff to analyze their transportation needs so that a plan can be implemented to encourage the use of alternative modes of transportation. The NCC will also improve its measurement of energy consumption, identify CO<sub>2</sub> emissions related to its operations and seek new energy efficiency solutions. Finally, by quantifying its electricity usage, the NCC wishes to develop a corporate approach to purchasing renewable energy.



### THE NCC GOES “BACK TO THE TAP”

Did you know that an estimated 2.4 million metric tonnes of plastic are used worldwide to bottle water each year? Producing that plastic takes millions of barrels of oil and produces millions of tonnes of carbon dioxide emissions annually.

In March 2009, the NCC implemented the “Back to the Tap” campaign to reduce the number of plastic water bottles used by NCC staff. Through this initiative, staff were given the opportunity to purchase reusable stainless steel water bottles with all funds collected going to the Government of Canada Workplace Charitable Campaign. In total, more than 600 water bottles were sold — the equivalent of one for almost every NCC staff member, including student employees. The “Back to the Tap” campaign not only raised consciousness about the environment, it also raised \$1,235.00 for charity!

## 6. ENGAGING NCC STAFF

In the spirit of leadership by example, the NCC believes that staff engagement is fundamentally important to achieving the objectives set out in its environmental strategy. Since the strategy's release in June 2009, the NCC has undertaken a series of initiatives and events to inform staff about the strategy and to engage them in achieving its objectives.

The following are just some of the activities that engaged staff during the past year.

- An EnviroInfo page was launched on the NCC's intranet site in January 2010. The site includes a calendar of special environmental days to be celebrated, information about upcoming initiatives and a mechanism for employee feedback.
- The NCC formed a Green Team made up of energized, environmentally conscious staff from across the organization who share ideas and tips for adopting greener corporate business practices.
- Three environmental information sessions were held for NCC staff. Each highlighted a particular area for action presented in the environmental strategy.
- Three "speaker series" sessions on environmental issues were held.
- A portable kiosk was created for use at various stakeholder and staff events to share information about the environmental strategy.
- Safe cycling and good bike maintenance practices were promoted during the "2 Wheels to Work" initiative in May 2009.
- The "Back to the Tap" campaign rolled out during the summer of 2009 to encourage staff to use alternatives to single-use plastic water bottles at the NCC's workplaces. Over 600 reusable stainless steel bottles were sold to staff, raising \$1,235 for the Government of Canada Workplace Charitable Campaign (*see feature story on page 28*).
- Sixty-two percent of NCC employees participated in the annual corporate Commuter Challenge in June 2009.
- An Earth Day Café was held in April 2010 to provide staff, building occupants and others with tips on green practices at home and work.

## 7. CONCLUSION

The NCC is proud of the considerable foundational work accomplished since the launch of its environmental strategy a year ago. The initial emphasis has been on establishing solid benchmarks against which to measure future progress, taking action on environmental priorities and continuing to ensure alignment with broader government regulatory requirements.

The year also saw the NCC seize on clear and immediate opportunities for positive environmental change. The success of a number of pilot initiatives, both internal to the NCC and those involving partners and the broader community, has generated momentum and infused a level of enthusiasm among staff and others that is critical for meeting key milestones in the year ahead.

This is only the beginning. In the coming year, the NCC is poised to make greater strides toward meeting its objectives in all five action areas. The NCC looks forward to further engaging staff, suppliers, regional partners and the public in working jointly toward the ultimate goal of building a greener capital.





## 8. GLOSSARY

**Biodiversity:** The full range of animals, plants and other living things, and the places where they live on the planet.

**Carbon dioxide (CO<sub>2</sub>):** A greenhouse gas produced in part by human activities, whose emissions are largely responsible for climate change.

**Carbon footprint:** The total set of carbon-containing emissions (mainly CO<sub>2</sub>) caused directly and indirectly by an individual, organization, event or product.

**Carbon neutral:** Having a net zero carbon footprint by balancing the greenhouse gas emissions created with an equivalent amount sequestered or offset.

**Carbon offset:** An investment in a project or activity elsewhere that reduces greenhouse gas emissions, or sequesters carbon from the atmosphere, that is used to compensate for unavoidable greenhouse gas emissions created by one's own activities.

**Conservation land:** Land specially designated by federal, provincial/territorial or local bodies to protect fragile ecosystems, habitats and species at risk.

**Contaminated site:** Areas of land that contain chemical substances (e.g. heavy metals or petroleum products) that may pose a hazard to human health or the environment, or that exceed the levels set out in policies and regulations.

**Critical habitat:** The habitat that is necessary for the survival of a species at risk and that is identified under law in a recovery strategy or action plan for that species.

**Ecosystem:** A unit of interdependent organisms that share the same habitat.

**Energy efficiency:** Refers to how effectively energy is being used for a given purpose. For example, performing a similar function or providing a similar (or better) level of service with less energy consumption on a per unit basis is considered an improvement in energy efficiency.

**Greenhouse gas:** Emissions of gases such as nitrous oxide (N<sub>2</sub>O), methane (CH<sub>4</sub>), and especially carbon dioxide (CO<sub>2</sub>) that accumulate in the atmosphere and act to retain atmospheric heat, thus contributing to climate change.

**High-value ecosystem or habitat:** An ecosystem or habitat that is considered important for the maintenance of biodiversity because it has some combination of the following characteristics: a large diversity of species, habitat for species at risk and/or migratory species, and intact natural processes likely to support increased genetic diversity.

**LEED®**

**(Leadership in Energy and Environmental Design):** A third-party certification program administered by the Canada Green Building Council for the design, construction and operation of high-performance green buildings.

**Secured site:** A contaminated site where all necessary study, remediation and other risk management actions have been taken, consistent with the designated use of the site.

**Waste diversion:** The reduction, reuse and recycling of waste leading to a reduction of waste being sent to the landfill.

