

**BUILDING A
GREENER
CAPITAL**



National Capital Commission

**ANNUAL
ENVIRONMENT
REPORT**

2012–2013



NATIONAL CAPITAL COMMISSION

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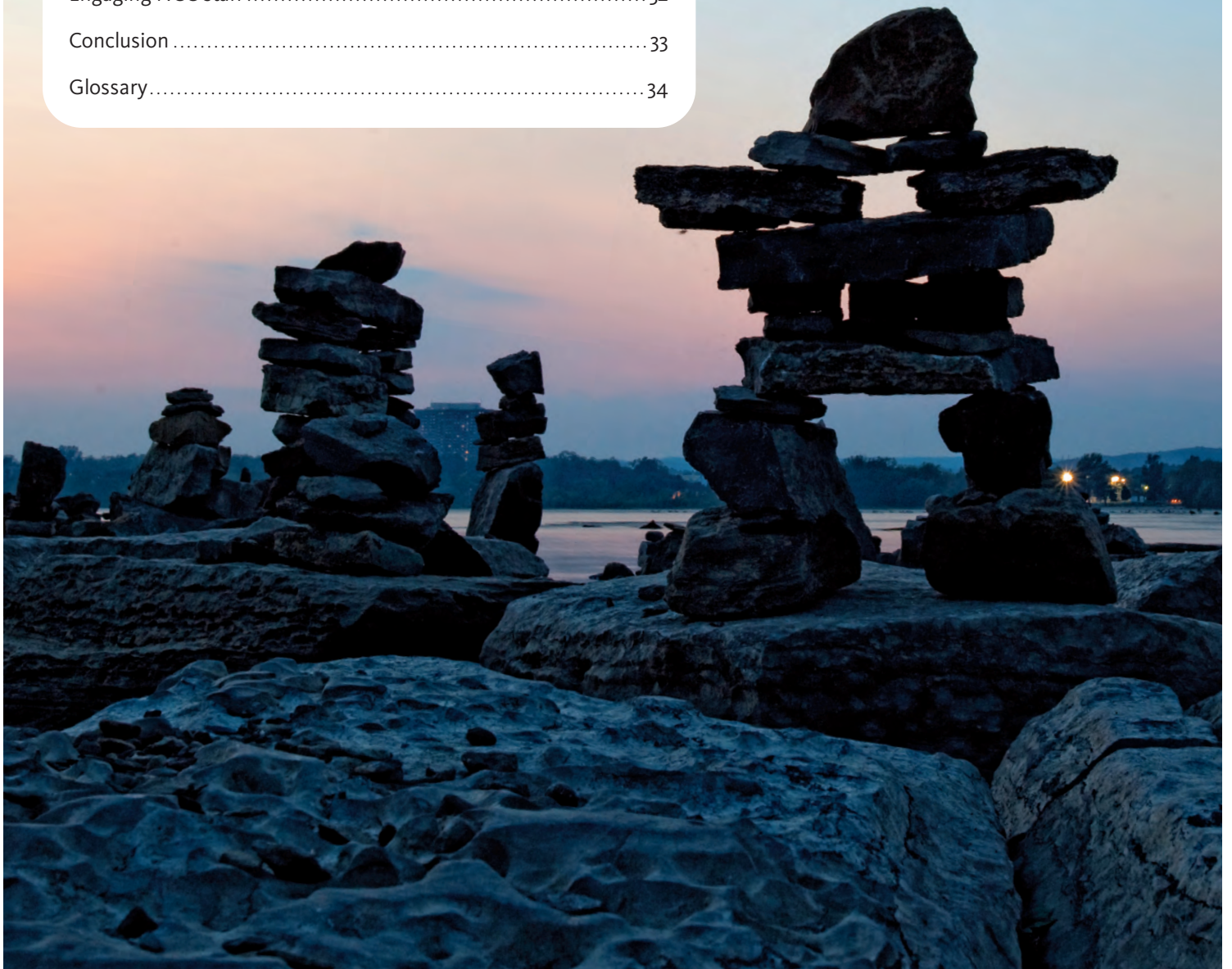
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1. MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

I am pleased to present the National Capital Commission's (NCC) environment report for the 2012–2013 fiscal year. This is the fourth annual report since we launched the NCC's environmental strategy, *Building a Greener Capital*, in June 2009.

This report highlights clear and measurable progress and demonstrates our ongoing commitment to build a greener capital. It also provides an account of the NCC's environmental risks and compliance requirements.

There are many examples of progress highlighted in this report which NCC staff have worked hard to accomplish. For example, this year, we obtained the EcoLogo® certification for Canada Day, Winterlude and the Rideau Canal Skateway. In addition, we finalized the study identifying the extent of invasive plant species located on the NCC's urban lands. We also identified the International Union for the Conservation of Nature's (IUCN) categories for all high-value ecosystems and habitats located on NCC lands for formal land designation within the Greenbelt Master Plan and Capital Urban Lands Master Plan.

I am particularly impressed with the way in which NCC staff have developed innovative and appropriate strategies for ensuring that we reach our targets, building on lessons learned and drawing from best practices. This process of continual learning is clearly helping to build momentum as we work collaboratively with our partners toward building a truly greener capital.



Jean-François Trépanier
Chief Executive Officer
National Capital Commission

2. INTRODUCTION

On June 4, 2009, the National Capital Commission (NCC) launched its first comprehensive environmental strategy, known as *Building a Greener Capital*. This eight-year plan mapped out five key action areas, each with one priority objective and a focused set of secondary targets.

This annual report — the fourth of its kind since the strategy was launched — provides members of the NCC’s Board of Directors and the public with a detailed account of the corporation’s environmental performance in the 2012–2013 fiscal year. It builds on the previous reports to illustrate the progress that the NCC has made toward meeting its objectives in all of the priority action areas. The report also describes how the NCC has managed important environmental regulatory compliance risks and issues during the year.

In 2013–2014, the NCC will work to update the environmental strategy to better reflect the renewed mandate of the NCC and the Federal Sustainable Development Strategy. During this process, some objectives that are no longer relevant may be changed or eliminated. However, this midpoint review is also an opportunity to refresh the environmental strategy and create new objectives to ensure that the NCC remains at the forefront of environmental sustainability as it moves into the future.

The updated strategy will continue to build on the corporation’s long-standing tradition of environmental stewardship, and reflect its core mission to build a great capital for all Canadians.

For more information about the NCC’s environmental stewardship, including the previous annual reports and the strategy itself, please visit the NCC’s website: canadacapital.gc.ca/planning/environmental-strategy.

























BUILDING A GREENER CAPITAL ACTION AREAS:

- ✓ Reduce waste
- ✓ Enhance biodiversity
- ✓ Prevent pollution
- ✓ Lead in environmental practices
- ✓ Combat climate change

3. ENVIRONMENTAL STRATEGY PERFORMANCE OVERVIEW

The following chart summarizes the NCC’s progress toward meeting the objectives of its environmental strategy over the past three years. It highlights accomplishments, notes key environmental indicators, and provides information on obstacles or challenges. More detailed information is provided throughout the report.

TABLE 1: SUMMARY OF PERFORMANCE ON ENVIRONMENTAL STRATEGY

OBJECTIVES	HIGHLIGHTS OF ACCOMPLISHMENTS	STATUS ¹ (2010–2011)	STATUS ¹ (2011–2012)	STATUS ¹ (2012–2013)
Reducing waste				
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.	A total of 3.9 tonnes, 19.5 tonnes and 11.8 tonnes of waste were sent to landfill from Canada Day 2012, Rideau Canal Skateway and Winterlude 2013, respectively. The NCC's objectives for Canada Day is 5 tonnes; for Rideau Canal Skateway, 11.1 tonnes; and for Winterlude, 6.8 tonnes.			 <i>See page 6</i>
The NCC will achieve 70 percent waste diversion (through reducing, reusing, recycling) for all NCC business areas by 2017.	In 2010–2011, the NCC rolled out a refreshed office waste management program. To ascertain the effectiveness of this program, a comprehensive waste audit, originally planned in 2012–2013, will be completed in 2013–2014.			
The NCC will challenge partners hosting events on NCC lands to achieve a 50 percent waste diversion target.	The NCC will support meeting this challenge by adding new clauses to the event partnership agreements for 2013–2014.			
The NCC will develop green procurement guidelines for implementation in 2010, which will include low waste as an important criterion.	Green procurement guidelines have been developed, and they are now available to NCC staff via the intranet.			
The NCC will implement green demolition practices by 2010, which place a strong emphasis on waste diversion and resource conservation.	A total of 30 demolition projects on NCC lands took place over the reporting period, and all of them used green demolition practices. As a result, 97.7 percent of material was diverted from landfill.			 <i>See page 9</i>
Enhancing biodiversity				
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.	Land designations for high-value ecosystems found in the Greenbelt and on the Capital's urban lands have been identified in accordance with the International Union for the Conservation of Nature's (IUCN) categories for protected areas. The designations will be incorporated into the master plans for both portfolios in 2013–2014. The high-value ecosystems and habitats in Gatineau Park are designated as conservation lands in the Gatineau Park Ecosystem Conservation Plan.			 <i>See page 10</i>
The NCC will implement new recovery plans for federally and provincially listed species at risk on NCC lands, within one year of finalization.	Recovery plans were finalized in 2012–2013 for the blunt-lobed woodsia, least bittern and the flooded jellyskin lichen. Further, one management plan was finalized for the Louisiana waterthrush. These plans are now in effect, and their applicable measures will be incorporated into the Gatineau Park Species at Risk Protection Plan.			 <i>See page 13</i>
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.	Critical habitats for three species at risk — the blunt-lobed woodsia, least bittern and Louisiana waterthrush — are found within Gatineau Park. These habitats are protected under the Gatineau Park Ecosystem Conservation Plan. The critical habitat for one species at risk — the flooded jellyskin lichen — is located at Stony Swamp, within the Greenbelt. Because Stony Swamp is a high-value ecosystem, it will be officially designated as an IUCN Category II protected area in the Greenbelt Master Plan to be finalized in 2013–2014.			 <i>See page 13</i>
The NCC will develop a thorough understanding of the biodiversity on NCC lands through the NCC's Natural Resources Research Program.	In the context of the <i>Biodiversity Monitoring Study on NCC Lands</i> , a total of seven biodiversity indicators have been monitored in Gatineau Park and the Greenbelt, and on urban lands sites in the Capital.			 <i>See page 13</i>
The NCC will reduce the amount of NCC urban land infested by aggressive invasive plant species by 10 percent against a baseline by 2014.	An aggressive invasive alien species management study for NCC lands was finalized in February 2013. This study found that invasive alien species were affecting 49 percent of urban lands under NCC stewardship. In 2013–2014, an implementation plan will be established to reduce by 10 percent the area of NCC urban lands infested by these species.			 <i>See page 14</i>

1.  The objective is on track or achieved.  There is some delay in achieving the objective.  There are significant delays, and the objective may not be met.

OBJECTIVES	HIGHLIGHTS OF ACCOMPLISHMENTS	STATUS ¹ (2010–2011)	STATUS ¹ (2011–2012)	STATUS ¹ (2012–2013)
Preventing pollution				
All contaminated sites on NCC lands will be secured by 2017.	Five sites are currently under ongoing remediation, and 67 contaminated sites have been secured.			 <i>See page 17</i>
The NCC will identify and remove or repair all problem underground storage tanks on NCC property by 2011.	The NCC owned five regulated tanks on its lands. Two of the five regulated tanks are non-compliant.			 <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.	The NCC's Pesticide Policy was approved, and an implementation strategy was developed.			 <i>See page 18</i>
Leading in environmental practices				
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.	Renovations to the Dome Building, a heritage building at Rideau Hall, were completed. The Dome Building is expected to obtain LEED® Silver certification. New facilities built at the Wakefield Mill, as part of the Wakefield Mill expansion project, are expected to obtain LEED® Gold certification.			 <i>See page 22</i>
The NCC will use green building practices for the construction of all buildings under 250 square metres.	Green building practices are incorporated in NCC projects. Environmental criteria are used to prioritize projects.			
The NCC will integrate environmental education into all NCC activities, where appropriate.	An Urban BioKit for Ottawa–Gatineau was launched by Environment Canada, with the collaboration of the NCC. This activity kit helps users to explore biodiversity, and familiarize themselves with the natural riches found in Canada's Capital Region.			 <i>See page 25</i>
The NCC will strengthen environmentally sensitive practices in all maintenance contracts.	Operational requirements have been added to maintenance contracts. For example, contracts may require that recycling and composting services be part of events or that action be taken to better control the spread of invasive species.			 <i>See page 26</i>
The NCC will provide and promote environmentally sustainable transportation alternatives.	An assessment was completed to determine the cumulative effects of 30 transportation infrastructure projects on the Greenbelt, and the Gatineau Park Sustainable Transportation Plan was finalized.			 <i>See page 24</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 NCC continued to work with partners in stewardship efforts aimed at improving the water quality of key watersheds in Canada's Capital Region, with the Ottawa River as the first priority.			
The NCC will integrate a green urbanism approach into the 2013 Plan for Canada's Capital.	The NCC will give priority to green urbanism and sustainable development approaches in the planning and management of federal lands in the Capital Region.			
Combatting climate change				
The NCC's signature events and programs will become carbon neutral, starting with Canada Day 2010.	Five of the NCC's six signature events and programs were carbon neutral. The carbon footprint for Christmas Lights Across Canada, Canada Day, the Rideau Canal Skateway, Winterlude and Fall Rhapsody were established and high-quality carbon offsets have been acquired.			 <i>See page 29</i>
The NCC will reduce its overall carbon footprint by 30 percent by 2017, based on a 2011–2012 baseline.	The calculation of the NCC's greenhouse gas inventory for the 2011–2012 reference year will be completed in 2013–2014.			 <i>See page 30</i>
The NCC will seek renewable sources of electricity. By 2013, 25 percent of all NCC electricity purchases will be from renewable sources.	All electricity purchased by the NCC comes directly from the Ontario and Quebec grid systems, which both contain more than 25 percent renewable energy.			
The NCC will advance public understanding of climate change impacts on Canada's Capital Region.	Work to update the 2005 study <i>Climate Change: A Long-Term Strategic Issue for the NCC — Implications for Recreation-Tourism Business Lines</i> has been postponed.			

4. PROGRESS AND PRIORITIES: SUMMARY BY ACTION AREA

4.1 Reducing waste

PRIORITY OBJECTIVE:

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.

Much of the waste generated as a result of Canada Day, Winterlude and the Rideau Canal Skateway is recyclable or compostable. With respect to these events, the NCC has been steadily working toward diverting waste from landfill, employing the principles of continuous learning. For example, the NCC introduced waste stations to promote recycling, but last year found that there was a higher rate of contamination than was expected. During 2012–2013, the NCC applied new approaches to ensure that recyclable and compostable waste from signature events and programs would be accepted by recycling and composting plants.

SIGNATURE EVENTS AND FACILITIES

During 2012–2013, the NCC introduced new measures to ensure that recyclable and compostable materials were well separated. The NCC made sure that waste was sorted before being sent to recycling plants, launched a pilot project that involved a volunteer Green Squad to raise public awareness of waste diversion at events, and tested new waste station prototypes. In addition, a public composting program was offered to visitors.

KEY ENVIRONMENT INDICATORS

A total of 30 green demolition projects were undertaken, diverting 97 percent of material from landfill.

From Canada Day 2012, Winterlude 2013 and the Rideau Canal Skateway 2012–2013 season:

- 32.2 tonnes of waste were sent to landfills
- 6.7 tonnes of compostable material and 11 tonnes of recyclable material were diverted from landfill

Four new waste station prototypes were tested during events.

27 volunteers dedicated 154 hours to reducing event waste.



During Canada Day, waste and recycling was sorted on-site. A team of staff from Consortium Echo-Logique, a private firm that specializes in waste management, sorted materials into the three waste streams. In the case of Winterlude and the Rideau Canal Skateway, the sorting was done off-site. Recyclable materials were sent to Consortium Echo-Logique's facilities, where contamination was eliminated to ensure that recyclables would be accepted by a recycling plant. This practice has proven to be a major factor in reducing the waste going to landfill.

Over the three weekends of Winterlude, 27 volunteers contributed 154 hours of their time to help the NCC achieve its waste diversion objectives. Wearing lime green vests and standing beside the waste bins, they interacted with the public and answered questions on how to best use the NCC's waste-diversion facilities.

The cities of Ottawa and Gatineau also offered support. They provided bins to collect organic waste that was generated during Canada Day, Winterlude and the Rideau Canal Skateway season. Moreover, the cities collected and processed the material free of charge.

It is also worth noting that approximately 3,400 Christmas trees were donated to be reused to adorn the official sites of Winterlude and the Rideau Canal Skateway. Once these events came to a close, the trees were converted into wood chips which can be reused as landscaping material.

In order to achieve even better results, two new waste station prototype models were developed and built. These prototypes are meant to standardize the waste, recycling and composting collection system for signature events and programs, and to offer better signage to visitors. The new waste stations were tested at official sites for Winterlude 2013 and the Rideau Canal Skateway 2013 season. One waste station prototype was installed at Confederation Park; two were set up at Jacques-Cartier Park; and one was placed at the Fifth Avenue rest area on the Rideau Canal Skateway. These prototypes will be tested again at Canada Day 2013. If the prototypes prove effective, they could potentially be fully deployed for the Rideau Canal Skateway 2014 season.

All these initiatives have cumulatively resulted in progress toward the NCC's goals for waste management for Canada Day, Winterlude and the Rideau Canal Skateway. Table 2 (on page 8) indicates the total amount of waste, as well as recyclable and compostable material collected in 2012–2013.

As Table 2 indicates, the reduction target for Canada Day 2012 has been achieved; only 3.9 tonnes of waste were sent to landfill. The 2013 target for this event is to send less than 5 tonnes of waste to landfill. Compared with 2012, the total amount of waste collected decreased, and the amount of recyclable material collected increased.

For Winterlude, the total amount of waste collected increased from 2012 to 2013. This may be attributable to increased public participation in Winterlude as a result of weather that was favourable to the festival. Consequently, the amount of waste sent to landfill and the amount composted also increased, in this case by 2.8 and 3 tonnes from 2012 to 2013, respectively. The amount of material that was recycled diminished by 1.2 tonnes from 2012 to 2013.

TABLE 2: SIGNATURE EVENTS AND FACILITIES WASTE, RECYCLING AND COMPOSTING RESULTS, 2009–2013¹

MEASURED RESULTS	Canada Day				Rideau Canal Skateway				Winterlude			
	2009	2010	2011	2012	2010	2011	2012	2013	2010	2011	2012	2013
Total material collected	12.3	9.0	12.0	8.8	24.1	33.1	14.1	23.4	17.4	11.4	16.1 ²	20.7
Total amount recycled	2.4	2.0	3.4	4.2	1.9	2.3	2.8	2.2	3.8	2.0	5.8 ²	4.6
Total amount composted	0	0	2.2	0.7	0	0	1	1.7	0	0	1.3	4.3
Total sent to landfill	9.9	7.0	6.3	3.9	22.2	30.7	10.3	19.5	13.6	9.4	9.0	11.8
NCC 2013 target for waste sent to landfill	(5.0)				(11.1)				(6.8)			

1. Figures in metric tonnes and rounded to one decimal place.

2. These numbers have been updated from the 2011–2012 Annual Environment Report.

Similarly, for the Rideau Canal Skateway, the total amount of waste material collected in 2013 increased considerably compared with 2012. Consequently, the total amount of waste sent to landfill also increased. The NCC recognizes that the amount of waste that is generated is directly linked to the number of skating days. Table 3 shows that the amount of waste sent to landfill per skating days increased from 2012 to 2013. The NCC will continue to implement new measures and initiatives to work toward meeting its waste reduction targets.

TABLE 3: RIDEAU CANAL SKATEWAY STATISTICS

	2010	2011	2012	2013
Number of skating days	36	53	26	38
Total sent to landfill ¹	22.2	30.7	10.3	19.5
Tonnes of waste to landfill per skating day	0.61	0.58	0.40	0.51

1. Figures in metric tonnes.



GREEN DEMOLITION PROJECTS: CAREFUL DECONSTRUCTION HELPS REDUCE WASTE

The most common image of a building demolition involves the sight of a structure being transformed into a heap of rubble. From window frames to doors, from drywall to shingles, everything is destroyed. The wreckage is then carted off to landfill.

In Canada, construction and demolition waste account for as much as 25 percent of the total waste sent to landfills. The waste produced during building demolitions can be 20 to 30 times that produced during construction!

However, there is another way to demolish buildings — one that involves reusing or recycling materials such as concrete, metal, wood, drywall, shingles and insulation. Green demolition involves deconstructing a building with the goal of diverting at least 90 percent of the materials from landfill.

This year, all 30 of the NCC's demolition projects used green demolition practices. This represents the demolition of 56 buildings. 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 were sent to other NCC construction sites to help reduce the need for new materials.

For example, stone from a demolition on Robertson Road will be reused for reconstruction projects at Rideau Hall.

The NCC takes particular care to maintain the value of buildings that are historic in nature — structures that connect us to our country's past. Green demolitions can support that objective. For example, a log structure on Merivale Road in Ottawa which was considered to have high heritage value was dismantled log by log. It was then brought to another site and rebuilt in its original state.

As the stewards of so many buildings in Canada's Capital Region, the NCC has a responsibility to find ways to divert its demolition waste. For the 30 demolition projects, the diversion rate for wood was as high as 85 percent, and no concrete or metal from any of the projects was sent to landfill. All of the projects achieved at least a 97 percent overall diversion rate.

In all, these projects have helped divert 3,067 tonnes of concrete, 233 tonnes of metal and 1,165 tonnes of wood and, including other material, overall diverted 5,066 tonnes of potential waste.

4.2 Enhancing biodiversity

PRIORITY OBJECTIVE:

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.

As the owner of 11 percent of the land in Canada's Capital Region, which straddles the Quebec–Ontario border, the NCC is the chief steward of federal lands in the region. These rural, urban and wilderness lands are characterized by a high level of biodiversity.

The creation of conservation areas is recognized worldwide as a key strategy for enhancing biodiversity. The NCC has worked to ensure that the high-value ecosystems and natural habitats under its stewardship will be categorized according to an internationally recognized framework for protected environmental management.

To ensure that it practises sound environmental stewardship, the NCC respects environmental plans that are grounded in reliable and current data, such as species at risk management plans, recovery strategies for critical habitats and approaches to address key problems, like invasive alien species.

Further, the NCC is dedicated to protecting the ecological integrity of federal lands. For example, the NCC often acquires land based on a “no net loss” principle. In 2012–2013, 8.9 hectares of land were purchased in order to compensate for the sale of approximately the same amount of land to the City of Ottawa. The City required the NCC property for the Hunt Club interchange on Highway 417. The NCC's acquisition helped protect the ecological integrity of the Greenbelt.

KEY ENVIRONMENT INDICATORS

There are 200 species at risk on NCC lands.

NCC lands include 28 high-value ecosystems and habitats: 9 designated as IUCN Category II protected areas and 19 to be designated within the next two years.

Forty-five invasive alien plant species were observed in Gatineau Park and the Greenbelt, and on the Capital's urban lands.

A total of 211 non-ash trees were planted to replace ash trees affected by the emerald ash borer.



HIGH-VALUE ECOSYSTEMS AND NATURAL HABITATS

There is remarkable variety within the NCC's high-value ecosystems and habitats, including alvars, different types of wetlands, significant forests, and unique habitats for species at risk or species of interest. The ecosystems and habitats also contain a diversity of aquatic resources, ranging from small urban streams to regionally important rivers. Most high-value ecosystems and natural habitats have maintained pockets of natural habitats that have a high level of ecological integrity and some connectivity with surrounding natural habitat.

Every high value ecosystem and habitat — also known as core natural areas — located within the Greenbelt has been identified as conservation land in the Greenbelt Master Plan. The conservation designations follow the framework of protected area management categories developed by the IUCN. The IUCN protected area management categories classify protected areas according to their management objectives. They also facilitate a common understanding of protected areas within and between countries.

The Greenbelt Master Plan is on track to be approved in 2013–2014.

An IUCN category has also been assigned for the high-value habitats located in urban areas under the NCC's stewardship. These habitats will be officially designated as conservation lands within the Capital Urban Lands Master Plan, Phase 1, which should be finalized and approved in 2013–2014.

Gatineau Park's high-value ecosystems and habitats have already been designated by means of the NCC's Gatineau Park Ecosystem Conservation Plan, completed in 2009–2010. This plan offers a consistent approach to conservation that is grounded in concrete actions.

Table 4 (on page 12) indicates the IUCN protected area management categories for the 28 high-value ecosystems and habitats.

In 2012–2013, the NCC completed two studies: *Management Recommendations for the Valued Natural Ecosystems and Habitats of the Greenbelt and Urban Lands* and *Management Recommendations for the Valued Natural Ecosystems and Habitats of Gatineau Park*. These reports will be used to guide NCC efforts to protect, restore, and enhance high-value ecosystems and habitats and their natural elements in the Greenbelt and Gatineau Park, as well as on urban lands.

For each valued natural ecosystem and habitat identified in the study, conservation objectives were set, and management recommendations were identified. The recommendations are based on best practices used in protected natural areas throughout the world, and are in accordance with the identified IUCN category. The recommendations also take into account the NCC's legal obligations regarding species at risk and biodiversity protection. Based on these studies, the NCC will identify priority actions and develop implementation plans in 2013–2014.

TABLE 4: IUCN CATEGORIES FOR THE NCC'S HIGH-VALUE ECOSYSTEMS AND HABITATS

IUCN Category	Ecosystems	Habitats
Gatineau Park		
II ¹	La Pêche Lake Eardley Plateau Eardley Escarpment Pink Lake Plateau Three-Lake Chain	Folly Bog Lac des Fées
Greenbelt		
II ¹	Shirleys Bay Stony Swamp Mer Bleue Bog	
III ²		Pinhey Forest
IV ³		Lester Wetland Chapel Hill's North Forest Green's Creek Pine Grove Forest Black Rapids Creek
Urban Lands		
IV ³		Leamy Lake Champlain Corridor Voyageurs Corridor Mud Lake Champlain Bridge islands and Lemieux Island Rockcliffe Park Canada Aviation and Space Museum Woods (formerly Airbase Woods) Rideau River, Hog's Back McCarthy Woods Carlington Woods Philemon Wright Corridor

1. The primary objective of Category II is to protect the natural biodiversity, along with its underlying ecological structure and supporting environmental processes, and to promote education and recreation.
2. The primary objective of Category III is to protect specific outstanding natural features and their associated biodiversity and habitats.
3. The primary objective of Category IV is to maintain, conserve and restore species and habitats.

SPECIES AT RISK

NCC lands provide habitat for approximately 200 species at risk. The term “species at risk” refers to plant and animal species with special status at the federal or provincial level. It also includes species that are listed by the Committee on the Status of Endangered Wildlife in Canada and those appearing on provincial lists of species likely to be designated as threatened or vulnerable.

The NCC is currently working to ensure that it has up-to-date data regarding species at risk on its lands. A revised database of information will be available in 2013–2014. It will reflect updates and technical revisions to the federal and provincial lists of species at risk, as well as work done by the NCC to ascertain the presence of species at risk on NCC lands.

RECOVERY PLANS AND CRITICAL HABITATS

Plans to ensure the recovery and survival of three species at risk were finalized by Environment Canada during 2012. These species are the blunt-lobed woodsia, a fern that grows in inaccessible places such as steep rock faces; the least bittern, a tiny heron found in marshes; and the flooded jellyskin lichen, a leaf-like lichen that grows at the base of trees near vernal ponds that fill with meltwater in spring, and dry up in summer. The first two species are located in Gatineau Park, while the flooded jellyskin lichen is found only in the Greenbelt.

Also, one management plan was finalized by Environment Canada during 2012 for the Louisiana waterthrush, a bird that is usually found in steep, forested ravines with fast-flowing streams. This bird is known to breed in Gatineau Park.

Annual monitoring and protection measures are in place for the least bittern, the Louisiana waterthrush and the blunt-lobed woodsia. The latter is protected by virtue of its location in the integral conservation zone of Gatineau Park.

In addition, the NCC has been collaborating with the Quebec government on a recovery plan for the Blanding’s turtle, which is known to be present in Gatineau Park. NCC staff are providing input into the draft recovery plan that is currently being developed by Quebec’s Ministère du Développement durable, de l’Environnement, de la Faune et des Parcs.

BIODIVERSITY INDICATORS

In 2012–2013, four biodiversity indicators were monitored in Gatineau Park (small mammals, mosaic of habitats, habitat fragmentation, and fauna and flora potential), and four were monitored in the Greenbelt and on urban lands (birds, small mammals, frogs and toads, and flora at risk).

The NCC has determined that biodiversity in Gatineau Park is stable, after reviewing all the biodiversity indicators monitored over the past eight years. Monitoring results for the Greenbelt and urban lands are still preliminary.

AGGRESSIVE INVASIVE ALIEN SPECIES MANAGEMENT STUDY

Invasive, non-native species represent a serious threat to environmental sustainability. Over the past year, the NCC completed a study to assess the current extent of invasive species on NCC lands and to make recommendations to address the situation. Ultimately, the NCC aims to preserve and protect regional biodiversity, as well as species at risk and their habitats; to restore valued natural ecosystems and habitats to the extent possible; and to minimize the introduction of new invasive alien species on NCC lands.

A total of 45 invasive alien plant species have been observed in Gatineau Park and the Greenbelt, and on urban lands under the stewardship of the NCC. Of these 45 species, 31 can be categorized as aggressive.

A total of 27 invasive alien species were observed on the Capital's urban lands; 20 were observed in the Greenbelt and 16 were found in Gatineau Park.

With this study, the NCC was able to establish the extent of aggressive invasive alien plant species. It was found that 49 percent of the urban land area is affected by the presence of these invasive species, while 6 percent of the Greenbelt and less than 0.1 percent of Gatineau Park are affected. These figures serve as the baseline for the secondary objective, which is to reduce by 10 percent the quantity of aggressive invasive plant species located on urban land by 2014.

Priority actions will be identified, and an implementation plan will be developed in 2013–2014 for urban lands. The focus will be the removal of invasive species in priority areas, including high-value ecosystems and habitats.

EMERALD ASH BORER

The emerald ash borer is an exotic beetle that attacks and kills virtually all species of ash trees. It has spread through the region since July 2008. Last year was the first time that the presence of this destructive insect was confirmed within the limits of Gatineau Park by the Canadian Food Inspection Agency (CFIA). The NCC is now working in collaboration with the CFIA to slow down the rate of infestation by the emerald ash borer in the Park. Because only three percent of the tree cover in Gatineau Park is ash, the NCC is hopeful that the impact of this alien insect will be relatively limited.

However, the proportion of ash trees in the Greenbelt and on NCC urban lands is much higher. On urban lands, roughly 664 ash trees affected by the emerald ash borer were removed in the eastern and core areas in 2012–2013. In order to try and protect the remaining ash trees, 129 of the 238 ash trees in the NCC's inventory were treated with a registered systemic insecticide this year to prevent damage from the emerald ash borer. In addition, about 211 maples, oaks and other non-ash native trees were planted in strategic locations to replace current and future losses of ash trees.

Within the Greenbelt, the NCC has been undertaking monitoring to determine the presence of the insect. A few ash trees were cut down by the NCC in the Greenbelt, but these removals were primarily to address public safety concerns.

GEESE MANAGEMENT

Since 2007, the NCC has worked in collaboration with the cities of Ottawa and Gatineau on a campaign, called “Keep the Wildlife Wild.” The primary aim of this campaign is to reduce the impact of Canada geese on urban lands. For the NCC, this has meant undertaking efforts to modify habitats in order to discourage the presence of geese. For example, geese are attracted to short grass that is located near water, because it provides both high-quality food and clear sight lines. The NCC has therefore installed temporary fences so the geese cannot access the shore from the river. Shrubs have also been planted, and the grass is not being cut as often. The strategies appear to be working; the number of geese has diminished. In addition, the NCC will further strengthen its efforts to discourage people from feeding geese.

Various measures for managing the presence of geese at recreation sites in Gatineau Park have been established. In addition, a study of the number of geese and the removal of droppings at Meech Lake and Philippe Lake were undertaken in 2012.





FLOODED JELLYSKIN: COOPERATING TO PROTECT A RARE BIOLOGICAL GEM

Flooded jellyskin is a very uncommon sort of lichen. When seasoned naturalist Robert E. Lee, of the Macoun Field Club for young naturalists, spotted flooded jellyskin during a visit to the NCC's Stony Swamp property in the Greenbelt, he knew it was an important discovery. The lichen is globally rare — about 95 percent of the world's population is thought to occur only in Canada. Even in Canada, there are only a few known locations in Ontario and Manitoba where this lichen can be found.

Since flooded jellyskin is listed as threatened under the Canada's Species at Risk Act, Robert immediately reported his discovery to the Canadian Wildlife Service (CWS). The CWS is responsible for the management of species at risk in Canada. A team was quickly assembled to develop a strategy for the management and recovery of flooded jellyskin. The resulting report was a collaborative effort, which drew on Robert's expertise, as well as that of staff from the NCC, CWS, Ontario's Ministry of Natural Resources and Manitoba Conservation.

Flooded jellyskin is a type of foliose (leafy) lichen that grows primarily on the bases of tree and rocks between the high

and low water lines of seasonal pools. The seasonally flooded habitat in Stony Swamp is therefore perfect for flooded jellyskin. Moreover, because Stony Swamp is located in a provincially significant wetland in one of the Greenbelt's core natural areas, this area is already well protected from adverse environmental impacts.

However, flooded jellyskin is still vulnerable to changes in normal flooding and drainage patterns (e.g. from infilling or draining for roads, aggregate extraction, agriculture, and residential or other development), death of its host trees (by cutting or disease), pollution, and other climatic changes. The recovery plan and the relationship that has developed between the NCC, the Macoun Field Club and CWS will ensure that these impacts are monitored and mitigated so that many young naturalists will be able to enjoy this rare species well into the future.

The NCC thanks Robert and the Macoun Field Club for taking the initiative to help preserve the unique character of the National Capital Greenbelt!

4.3 Preventing pollution

PRIORITY OBJECTIVE:

All contaminated sites on NCC lands will be secured by 2017.

CONTAMINATED SITES

In 2012–2013, the NCC focused on conducting 40 high-priority assessments, undertaking remediation of a small number of key contaminated sites and implementing the large remediation project at LeBreton Flats in downtown Ottawa. Securing existing contaminated sites will again be a priority for the NCC in 2013–2014. The NCC is also seeking approval for funding as part of the Federal Contaminated Sites Action Plan for 2014–2015 and 2015–2016.

Active remediation took place at five sites during the past year. Some of these initiatives were a continuation of work initiated in 2011–2012. At Stanley Avenue Park, subsequent to a project to provide a clean cover for areas contaminated with lead and other contaminants, another sector of the park (Stanley Avenue at Sussex Drive) was examined. Further, monitoring, ongoing site maintenance and the capping of part of the former landfill took place at the Ridge Road former landfill site. At the NCC's Bayview property, a long-term project to remediate groundwater for trichloroethylene continued, and planning to expand the remediated area is ongoing. At Hurdman North, new remediation strategies are being developed for the site, while the pumping and treating of free-phase petroleum hydrocarbons is ongoing. At Richmond Landing — the new location of the Royal Canadian Navy Monument — soil and groundwater remediation were undertaken at the same time as the monument construction. Monitoring and risk assessment will continue in 2013–2014.

KEY ENVIRONMENT INDICATORS

The NCC has 67 secured contaminated sites.

There were four minor spills during 2012–2013.

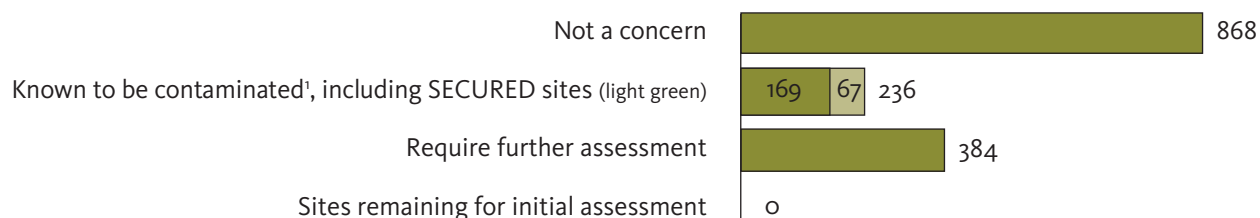
All underground storage tanks, except one, are compliant.

There were no beach closures due to cyanobacteria during 2012–2013.

Forty-six percent of NCC buildings in active use are known to have designated substances.



FIGURE 1: STATUS OF CONTAMINATED SITES, 2012–2013



¹ The sites known to be contaminated and secured are also included in the total number of sites known to be contaminated.

Remediation of a six-hectare site at LeBreton Flats started in fall 2012, and is expected to take approximately 14 months to complete. The objective of this major project is to remediate the lands to residential standards so they can be used for mixed-use redevelopment in the short- to mid-term future.

Over the past year, the NCC reported an audited liability cost of \$27.6 million, \$14.9 million lower than the value reported in the previous year (\$42.5 million). The NCC also reported a contingent liability cost of \$471.2 million in 2012–2013, up from \$465 million reported for the 2011–2012 fiscal year.

FUEL STORAGE TANKS

At the end of fiscal year 2012–2013, there were 49 tanks on NCC lands subject to the federal petroleum products storage tank regulations. In 2012, the majority of these tanks were inspected to monitor progress made toward meeting the compliance requirements.

For the NCC-owned tanks, the following specific information is noted.

- Five of the 49 regulated tanks are owned by the NCC.
- Two regulated tanks owned by the NCC are non-compliant.
 - One is an above-ground tank, which requires a spill emergency plan.
 - The other non-compliant tank is an underground storage tank located at a rented residence that is involved in a legal process.

PESTICIDE MANAGEMENT

The NCC Executive Management Committee approved the NCC’s Pesticide Policy. This policy aims to strictly control the use of pesticides for cosmetic purposes on NCC lands. In so doing, the NCC will follow the Ontario and Quebec pesticide management policies which are both forward-looking and anchored in provincial legislation.

DESIGNATED SUBSTANCES

The NCC currently owns 1,225 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 type of work is required by the *Canada Labour Code*, Part II.

The NCC’s designated substances program was initiated in 2008 to meet the requirements of the *Canada Labour Code*. An initial review of existing documentation identified

NCC-owned buildings that were most likely to pose a risk to occupants, based on the type of building and its use (e.g. workplace, residence, storage building, outbuilding and so on). The buildings were ranked and divided into high-priority buildings and lower-priority buildings for the purposes of assessment. Since the beginning of the program, the NCC has worked toward completing designated substance surveys for all of its high-priority buildings.

In 2012–2013, surveys were completed at 116 buildings, including 40 high-priority buildings and an additional 76 lower-priority buildings. The lower-priority buildings were assessed because of their proximity to the high-priority ones or because the NCC had information indicating that the building may contain a designated substance.

To date, the NCC has determined that 600 buildings are not likely to pose a risk, based on a review of files and the results of designated substance surveys undertaken to this point. Designated substances were found to be present at another 578 buildings. Work on buildings containing designated substances is advancing on a case-by-case basis, primarily under the direction of the various NCC portfolios.

The presence of designated substances in a building does not necessarily indicate a potential risk to occupants. Many designated substances do not pose a risk unless renovation or demolition of the building is undertaken. Other designated substances, such as asbestos or lead in paint, can pose a risk if they are found to be in poor condition, and building occupants are easily exposed. In many cases, the presence of a designated substance is recorded and kept on file, while the condition of the designated substance is monitored to ensure that it remains in good condition. In cases where designated substances are found to be in poor condition, and remediation is considered a higher priority, the managing portfolio is informed.

Of the 47 buildings remaining to be assessed, a minimum of 30 are slated for inspection during 2013–2014. The rest will be scheduled for assessment over the next several years. A case-by-case re-evaluation of buildings previously determined to be unlikely to pose a risk will be undertaken in 2013–2014, which may result in additional surveys being carried out at lower-priority buildings.

TABLE 5: STATUS OF REVIEW OF NCC BUILDINGS FOR DESIGNATED SUBSTANCES, MARCH 31, 2013

Building status	2009–2010 results	2010–2011 results	2011–2012 results	2012–2013 results
Buildings in active use	1,322	1,296	1,284	1,225
Buildings determined to be unlikely to pose a risk	727	714	618	600
Buildings known to have designated substances	248	289	558	578
Buildings remaining to be assessed	347	293	108	47
	<i>Scheduled for assessment in 2013–2014¹</i>			30

1. The buildings scheduled for assessment in the next fiscal year are also included in the buildings remaining to be assessed.

SPILLS AND EMERGENCY RESPONSE

Four minor spills were reported on NCC lands in 2012–2013. Three were petroleum product spills: two took place in the Greenbelt and one happened at the Mackenzie King Estate in Gatineau Park. The fourth spill was a release from a chemical toilet at Leamy Lake Park. None of these spills were serious enough to require them to be reported to provincial authorities. As of March 2013, all the spills had been cleaned up.

FEDERAL PCB REGULATIONS

Owners of equipment that contain polychlorinated biphenyls (PCBs) are required to comply with the federal PCB regulations, which came into effect in 2008 and are part of the *Canadian Environmental Protection Act, 1999*. These regulations include reporting requirements, labelling and record-keeping requirements, as well as end-of-use dates by which PCB-containing equipment must be removed from service and destroyed. One key date is December 31, 2025. All PCB-containing equipment, including fluorescent light ballasts, must be removed by this date.

The NCC is gradually compiling information to complete an inventory of PCB-containing equipment. To ensure efficiency, some of the information is collected when designated substances and hazardous materials surveys are completed.

OZONE-DEPLETING SUBSTANCES

The NCC owns equipment containing ozone-depleting substances, which are subject to the federal Ozone-Depleting Substances Regulations, 1998. The regulations are intended to reduce emissions of ozone-depleting substances by managing the use of hydrochlorofluorocarbons and chlorofluorocarbons, halons, methyl chloroform and carbon tetrachloride. As it has for the PCB-containing equipment, the NCC is gradually compiling information to complete an inventory of equipment that contains ozone-depleting substances.

WATER QUALITY

The NCC is responsible for overseeing the quality of water for drinking and swimming at a number of locations on its lands. The NCC manages six beaches in Gatineau Park and one at Leamy Lake Park. No beach closures due to outbreaks of cyanobacteria were required in the summer of 2012.



LEBRETON FLATS REMEDIATION PROJECT: USING WASTE AS A RESOURCE

As part of its commitment to securing contaminated sites by 2017, the NCC is currently undertaking a project to remediate a 6.5-hectare parcel of land slated for development at LeBreton Flats in central Ottawa. In an effort to minimize the environmental impact of this work, 100,000 m³ of contaminated LeBreton soil will be reused instead of being sent to landfill. The contaminated soil is not suitable for use as part of a residential development where people live, work and play. However, careful modelling and environmental studies have demonstrated that the soil would be suitable for use as a landfill cap.

The LeBreton soil will therefore be used to help secure another of the NCC's contaminated sites: the former Ridge Road landfill site. LeBreton soil will be used to regrade and cap the former landfill. This will provide a secure and stable enclosure that will improve drainage and reduce soil erosion, leachate and garbage surfacing. A layer of clean soil will be placed on top of the LeBreton soil to provide a clean soil cap, which will then be landscaped with indigenous vegetation in order to re-naturalize the site. Along with the engineered wetland that has already been constructed at Ridge Road, this revitalized area will help to further reduce pollution and provide habitat for birds and other wildlife.

4.4 Leading in environmental practices

PRIORITY OBJECTIVE:

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.

Some of the structures under the NCC's responsibility are considered heritage assets. However, regardless of the age of structures, the NCC is nonetheless striving to be forward-looking when it comes to the environmental sustainability of its buildings.

According to Natural Resources Canada, our built environment — consisting of houses, buildings and the communities they form — accounts for approximately 50 percent of all energy consumed in Canada. It therefore makes sense to optimize the use of energy and to integrate clean energy into houses and buildings. Further, new urban planning and building design practices, supported by the introduction of innovative technologies can capture, store, distribute and optimize renewable energy.

BUILDINGS

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 Dome Building rehabilitation project, a heritage building located on the grounds of Rideau Hall, was registered for the LEED® Silver designation in 2012–2013. It is expected that the certification confirmation will be obtained once the project is finalized and the building's operation has been evaluated for one full year.

KEY ENVIRONMENT INDICATORS

The NCC has two upcoming master plans that emphasize the conservation of green and blue assets: the Greenbelt Master Plan and the Capital Urban Lands Master Plan.

The NCC has finalized the Gatineau Park Sustainable Transportation Plan.

A total of 43,612 cycling trips were taken with the BIXI bike share program in the Capital.

New bike lanes and recreational pathways were built.

Canada Day, Winterlude and the Rideau Canal Skateway were EcoLogo® certified in 2012–2013.



The NCC undertook one major building renovation project in 2012–2013: the Rideau Hall Foot Guard House. Although the renovation of the Foot Guard House took into account LEED® standards, this building is ineligible for LEED® certification, because it does not have full-time occupants.

The NCC did not construct any new buildings over 250 m² in 2012–2013. However, a private sector business located on NCC property, the Wakefield Mill Hotel and Spa, did construct new facilities last year. Prior to construction, the Wakefield Mill was required to submit plans for expansion to the NCC for approval. The proposed building was designed to include, for example, solar heating, as well as energy-efficient lighting and water systems. The business owners are currently waiting for confirmation of a LEED® Gold Standard certification for their newly opened guest lodge.

On November 30, 2012, the NCC was recognized as one of Hydro Ottawa’s 2012 Companies for Conservation for outstanding energy conservation efforts. This was in large measure a result of the NCC’s work to improve energy efficiency at the official residences.

In particular, the NCC participated in Hydro Ottawa’s saveONenergy Retrofit Program. The NCC secured incentives that have offset a portion of the project costs for upgrading 556 light bulbs to LED lighting at the following locations: Stornoway, 7 Rideau Gate, and the private garden and Rideau Cottage at Rideau Hall. These projects will save 329,000 kWh and \$72,000 over the life cycle of the LED bulbs.

TABLE 6: SUMMARY OF OFFICIAL RESIDENCES ENERGY EFFICIENCY PROJECTS

Official Residence	No. of Bulbs	Simple Payback (years)	Project Cost	SaveON Energy Incentive	Life Cycle Savings (kilowatt hours)	Life Cycle Savings
Stornoway	184	4.3	\$4,600	\$1,440	97,000	\$23,000
7 Rideau Gate	158	3.4	\$5,600	\$1,720	55,000	\$18,000
Rideau Hall – Private Garden	75	1.3	\$2,300	\$0	106,000	\$16,000
Rideau Hall – Rideau Cottage	139	4.0	\$2,900	\$0	71,000	\$15,000
Total	556	2.8	\$15,400	\$3,160	329,000	\$72,000

PLANNING

During 2012–2013, the strategic framework for the Capital Urban Lands Master Plan was further elaborated. It incorporates the protection, conservation, and enhancement of both green and blue assets and spaces. These include high-value ecosystems and habitats. This master plan framework is expected to be finalized in 2013–2014. The sector plans will be developed and finalized afterward, and are expected to be available in 2014–2015.

The Greenbelt Master Plan articulates a new vision in which the Greenbelt serves as an environmental showcase for Canada’s Capital. The plan puts the natural environment front and centre, and emphasizes the importance of sustainable agriculture.

The NCC will support and work with stakeholders to identify and explore ways to conserve regional ecological corridors outside the Greenbelt that will connect to and strengthen the Greenbelt natural environment. Transportation infrastructure projects are viewed through a more stringent sustainability lens, taking into account the importance of corresponding cumulative effects on sensitive natural areas and linkages. This includes a more collaborative approach — one that will involve NCC engagement in the preliminary plans for any transportation infrastructure planning that will have an impact on the Greenbelt. A stricter “no net loss” perspective is also being taken.

The Greenbelt Master Plan is expected to receive final approval in 2013–2014.

SUSTAINABLE TRANSPORTATION

As previously noted, a joint study with the City of Ottawa took place to assess the cumulative effects of 30 transportation infrastructure projects on the Greenbelt. The effects of individual projects and combined effects of various projects were assessed using a geographic information system approach. The study identified projects with potential adverse cumulative effects. It also recommended that the City and the NCC conduct a collaborative, project-specific review of the projects that require additional consideration, taking into account their status within the applicable environmental assessment approval processes and implementation status.

In addition, the NCC is finalizing the Gatineau Park Sustainable Transportation Plan. The Park is a popular attraction, and the sheer volume of cars travelling through it can cause environmental problems. The Gatineau Park Master Plan aims to reduce the impact of transportation on the Park’s environment, while also allowing visitors the opportunity to enjoy recreational activities. This plan will propose a list of measures that could help influence the way in which people get to the Park and travel within it. Its content will be considered in the next revision of the Gatineau Park Master Plan.



CYCLING

The Capital Pathway network is made up of more than 300 kilometres of multi-use pathways that link natural areas, parks, gardens, museums and attractions across the region. Increasingly, these pathways are used not only for recreation, but also for commuting. This is one of the reasons that the NCC believes that cycling can play a crucial role in reducing air pollution in the Capital. Moreover, cycling can help make the region a more sustainable urban area.

The NCC has undertaken a range of initiatives to promote cycling in Canada's Capital Region.

The Capital BIXI bike share program provides a convenient way to get around downtown Ottawa and Gatineau. Users can pick up a bike at one location and return it to another location close to their destination. In 2012, there were 25 stations where Capital BIXI bikes could be obtained or returned. A total of 250 bikes were available. In total, the program generated 43,612 cycling trips, stemming from 305 monthly and yearly subscribers and 8,692 distinct occasional users. This represents an average of 205 trips per day.

In 2012–2013, the NCC and the City of Ottawa worked together to improve the bicycle commuting experience in the core of the Capital, as well as to provide safer access to both sides of Wellington Street, at the Portage Bridge intersection. A bike box painted onto the roadway now gives cyclists the opportunity to go to the front of the lane in order to turn more safely onto Wellington Street. Pedestrians have also benefited from new crosswalks at the intersection linking Wellington Street and the Portage Bridge.

Other initiatives undertaken in 2012–2013 include the following.

- As part of the Park and Cycle program, a total of 10 parking lots in Gatineau and Ottawa, mostly along the NCC's parkways, were available to the public free-of-charge, in order to facilitate active commuting to work.
- Work was completed on an extra 1.4-kilometre section of the Greenbelt Pathway, a planned 56-kilometre-long multi-use pathway.
- For the second consecutive year, the cities of Ottawa and Gatineau collaborated with the NCC to produce an Ottawa–Gatineau cycling network map which covers the area's off-road multi-use pathways, as well as on-road cycling infrastructure.

ENVIRONMENTAL EDUCATION

The NCC continues to have many opportunities to interact with the public on topics related to the environment. In November 2012, the Biosphere (Environment Canada), in collaboration with the NCC, launched the Ottawa–Gatineau Urban BioKit. BioKits are nature observation guides designed primarily for children over six years of age and their parents. Through a series of interactive outdoor activities, families can explore biodiversity, and learn more about the natural riches found in Canada's Capital Region.

In Gatineau Park, a number of themed, seasonal guided activities were offered to the public to help increase public awareness of the importance of protecting the Park's biodiversity. The activities also aim to increase understanding of how visitors to the Park can enjoy recreational activities, while also respecting the environment. At Philippe Lake alone, 93 activities were offered between June 23 and August 25, 2012.

In addition, the NCC offers environmental awareness activities to schools. In 2012–2013, a new activity entitled “Gatineau Park Animals Tell It Like It Is!” was offered to a total of 58 classes which represents more than 1,400 students.

MAINTENANCE OPERATIONS

The NCC continuously works toward ensuring that environmentally sensitive practices are reflected in its maintenance contracts. Over the course of 2012–2013, the NCC introduced contract clauses to address the following:

- operational requirements for recycling and compost services during NCC events and programs;
- adjustments to grass-cutting dates and areas in order to respect the *Migratory Birds Convention Act* and the *Species at Risk Act*, and to better facilitate the management of geese and invasive alien species.

At the official residences, a mulcher was purchased to allow rapid, on-site production of high-grade garden compost to be reused on the grounds. Moreover, the NCC took action to reduce the runoff of rock salt from the grounds of Rideau Hall into the Ottawa River. Instead of using rock salt as an anti-icing agent, the NCC grounds maintenance crew started using brine. This approach was recommended as a best practice by the Smart About Salt Council. Using a newly purchased electric utility vehicle, equipped with a brine storage tank and sprayer, the maintenance crew applied brine to walkways and entrances. Not only is this process better for the environment, it is also more effective. Brine is better than rock salt at preventing ice buildup across a larger range of temperatures.



ECOLOGO® CERTIFICATION

Canada Day, Winterlude and the Rideau Canal Skateway program were granted the EcoLogo® certification. The EcoLogo® Program is designed to support a continuing effort to maintain or improve environmental quality by reducing the consumption of energy and materials and by minimizing the impact of pollution generated by the production, use and disposal associated with goods and services. EcoLogo® is a Government of Canada official mark used under licence from Environment Canada.

Only the official NCC sites for Canada Day, Winterlude and the Skateway were certified. The EcoLogo® standard lists a number of green practices for the event organizer to implement, and each practice is worth a number of points. There are three categories of practices: waste, materials and energy, and carbon and transport.

The NCC was awarded points for the following green practices, some of them having been established a few years ago: provision of water stations, valet bike parking service, paper products made of recycled materials, recycling and composting program for the public, single-use tableware that is 100 percent recyclable, bus shuttle between sites, and measuring and offsetting of carbon emissions.

ENVIRONMENTAL ASSESSMENT

Following the introduction of the new *Canadian Environmental Assessment Act, 2012* (CEAA 2012), the NCC developed and implemented a new interim process to evaluate environmental effects, as required by this law. This process allows the NCC to determine if a project will cause significant adverse environmental effects as required under Section 67 of CEAA 2012. A formal process will be adopted in 2013, following the implementation of the new NCC Environmental Assessment Policy.

In 2012–2013, no project evaluated under Section 67 of the new Act was deemed likely to cause significant adverse environmental effects. Further, none of the projects proposed on NCC lands were considered designated projects under Section 13 and Section 14 of the new Act. However, a transitional screening was completed on July 13, 2012, with respect to the Ottawa light rail transit system. This system will cross the downtown core, underground, from east to west. After reviewing the screening report and taking into account the mitigation measures that will be implemented, the federal government (Transport Canada, Parks Canada, the NCC, and Public Works and Governmental Services Canada) concluded that the project is not likely to cause significant adverse environmental effects. No follow-up program is required for this project.

The NCC acted as the project manager for the joint federal–provincial (Ontario and Quebec) environmental assessment study for future interprovincial crossings. The NCC will not be pursuing this study but, rather, will recognize the work completed to this point in the planning of Canada's Capital.



WATERWAY RESTORATION AT PHILIPPE LAKE CAMPGROUND: AN OPPORTUNITY ARISING FROM A HOLE IN THE GROUND

A few summers ago, a camper in Gatineau Park noticed a sink hole forming within the campground at Philippe Lake. An examination of the hole by the NCC revealed an extensive underground culvert system. Originally constructed in the 1970s and realigned several times to allow for development, the culvert was clearly in need of repair. Instead of simply replacing the ailing culvert, the NCC took the opportunity to return the waterway to its natural state. The original drainage pipes were removed, and a new stream bed was constructed using natural channel design. The creek beds were reinforced with boulders, pebbles and sand, and the creek banks were seeded or replanted with riparian and aquatic plants. New

berms and upland areas were also seeded, and a new pathway was constructed. This wider, more natural stream will be less susceptible to erosion and flooding and will be better able to take up and transform pollutants, thereby improving water quality. The pebbles in the creek bed were specially chosen to increase fish spawning habitat and the surrounding revegetated landscape will provide more habitat for reptiles, amphibians and other animals. The open nature of the creek will also make it easier to monitor, a job that will be undertaken by summer students. Campers will also enjoy the aesthetic quality of this new habitat, which will provide opportunities for environmental education and a chance for campers to connect with nature.

4.5. Combatting climate change

PRIORITY OBJECTIVE:

The NCC's signature events and programs will become carbon neutral, starting with Canada Day 2010.

Last year, the NCC took actions to reduce its carbon footprint.

CARBON NEUTRAL SIGNATURE EVENTS AND PROGRAMS

In the 2012–2013 fiscal year, Fall Rhapsody joined Canada Day, Christmas Lights Across Canada, Winterlude and the Rideau Canal Skateway as a carbon neutral program, making a total of five out of six NCC signature events and programs that are carbon neutral. Calculations were completed and high-quality offsets were acquired to counterbalance the greenhouse gases emitted during these events and programs. A total of 1,075 tonnes of carbon dioxide (CO₂) equivalent were purchased for the following events and programs: Christmas Lights Across Canada 2011–2012, Rideau Canal Skateway 2012, Winterlude 2012, Canada Day 2012 and Fall Rhapsody 2012.

The NCC worked with CarbonZero, a respected carbon offsets vendor, in order to acquire offsets from a variety of Canada-based offset projects for energy efficiency, methane gas recovery and tree planting. The purchased offsets respect the highest standards and practices. Investments were made in the following projects: a landfill gas capture project in Fredericton, New Brunswick; a landfill gas to energy project in Niagara, Ontario; a social housing retrofit project in Montréal, Quebec; and the McPhee Creek afforestation project in Prince George, British Columbia. These investments have a direct impact on local job creation and environmental sustainability, while also encouraging the development of new green technologies within Canada.

The NCC is currently calculating the carbon footprint for Christmas Lights Across Canada 2012–2013, Winterlude 2013 and the Rideau Canal Skateway 2013.

KEY ENVIRONMENT INDICATORS



Five out of six events and programs in 2012–2013 were carbon neutral.

A total of 1,075 tonnes of carbon dioxide emissions were offset by investing in Canadian green technology projects in 2012–2013.

Table 7 shows the NCC's progress toward meeting its carbon neutral goals for its signature events and programs. It also indicates the carbon footprint for each event. It is important to take into consideration the following factors for the variation in carbon footprint for each event and program between years: more local/specific emission factors become available for calculation each year; emission factors are updated as new information becomes available; and event programming and logistics vary each year.

TABLE 7: PROGRESSION OF NCC SIGNATURE EVENTS AND PROGRAMS TOWARD CARBON NEUTRALITY¹

NCC Event or Program	Carbon Neutral Year	Calculation of Emissions and Offset Acquired by NCC	Carbon Footprint (tonnes CO ₂ equivalent)
Canada Day	2010	✓	415
	2011	✓	292
	2012	✓	290
Christmas Lights Across Canada	2010–2011	✓	22
	2011–2012	✓	25
	2012–2013	Under way, 2013	N/A
Rideau Canal Skateway	2012	✓	313
	2013	Under way, 2013	N/A
Winterlude	2012	✓	285
	2013	Under way, 2013	N/A
Fall Rhapsody	2012	✓	162
Sunday Bikedays	2013	2013	N/A

1. A check mark indicates that this step has been completed. A year indicates when it will be completed. N/A means not yet available.

NCC GREENHOUSE GAS INVENTORY

Data collection continued during 2012–2013 in order to calculate the NCC's overall greenhouse gas inventory. The aim of this work is to measure emissions from NCC operations using the 2011–2012 fiscal year as a reference level. The resulting figure will serve as a baseline for the NCC's efforts to reduce greenhouse gas emissions by 30 percent by 2017.

Following strict standards, the Greenhouse Gas Protocol and ISO 14064-1, the boundaries of the NCC footprint were defined. Scope 1 (direct greenhouse gas emissions) and scope 2 (electricity indirect greenhouse gas emissions) were identified in the reference level.

As a result, the focus has been to collect data for scope 1 and scope 2 emissions only. The emissions under these two scopes are as follows: electricity consumption at NCC offices; electricity, energy and wastewater consumption by NCC buildings and lands (excluding leased buildings and lands); fuel consumption by NCC fleet vehicles and equipment; methane emitted by contaminated sites; and staff business travel. Due to

data availability and reliability matters, scope 3 (other indirect greenhouse gas emissions) may be compiled and calculated in a subsequent phase of the project. These emissions are related to the goods and services contracted by the NCC.

The calculations of the carbon footprint for the scope 1 and 2 emissions will be completed during 2013–2014. A greenhouse gas emissions reduction action plan will be created in order to reach the reduction target. Once the action plan is implemented, the NCC greenhouse gas inventory will be recalculated to evaluate progress toward the objective.



5. ENGAGING NCC STAFF

The NCC believes that engaging staff across the organization is fundamentally important to achieving the objectives set out in its environmental strategy. The following are some highlights of the activities that the NCC undertook to engage staff over the course of 2012–2013.

- In order to encourage the use of bicycles as a sustainable and ecological means of transportation for business travel, the NCC finalized its “Guidelines on safe use of bicycles while on duty.” The objectives of these guidelines are to promote the safe use of bicycles, to avoid injury and property/equipment damage, and to minimize any other associated risk that employees may face.
- On April 20, 2012, the NCC Green Team joined the Governor General and the Rideau Hall Green Team to plant trees on the Rideau Hall property. With the participation of Tree Canada, 30 native trees were planted for Earth Day.
- In order to ensure a healthy and safe workplace with best environmental practices, the NCC began using only one unscented, ecologically friendly all-purpose cleaner for its offices. This cleaner replaces the array of scented and chemical cleaning products that were previously used.
- With the adoption of the NCC pesticide policy, training sessions were offered to staff. Specialists were invited to lead discussions about the Ontario and Quebec provincial pesticide regulations.
- In addition to the information technology waste program launched in 2011–2012, the NCC started to offer a writing instrument recycling station. Pens, mechanical pencils, markers and highlighters can all be recycled. The staff now have even more options to divert this type of waste from landfill.



6. CONCLUSION

This year, the NCC took further strides forward, making measurable environmental progress. As detailed in this report, the NCC's actions have been underpinned by research, planning and collaboration.

The next fiscal year will be a particularly important one, as the environmental strategy is updated to better reflect federal government priorities and the new structure of the NCC. However, the NCC will continue to undertake concrete actions to reduce waste sent to landfills from its operations; reduce the impact of invasive plant species; officially designate the high-value ecosystems and habitats as conservation lands to protect the Capital Region's biodiversity; secure contaminated sites; and work toward reducing energy consumption for NCC buildings, land maintenance and events.

Moreover, the NCC will continue to ensure compliance with government regulatory requirements, ensure environmental conservation and continue to be at the forefront of environmental sustainability.

The NCC also recognizes that the work to make progress on environmental issues necessarily involves other stakeholders — as is detailed in the report, municipal governments, the private sector and even the general public have all played, and will continue to play, an important role in creating momentum toward a greener capital.



7. GLOSSARY

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

Capital BIXI: A public bike share system that promotes alternative urban transportation. Bikes are available for hire, or on a subscription basis, 24 hours a day, seven days a week, with pickup and drop-off stations located around downtown Ottawa and Gatineau.

Carbon dioxide (CO₂): 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 CO₂) 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 or important 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.

EcoLogo®: North America's most recognized environmental standard and certification mark for products and services that demonstrate environmental leadership.

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.

Green demolition: The process of dismantling a building in such a way as to ensure that as many of its elements as possible can be recycled or reused, rather than sent to landfills.

Greenhouse gas: Emissions of gases such as nitrous oxide (N₂O), methane (CH₄) and especially carbon dioxide (CO₂) that accumulate in the atmosphere and act to retain atmospheric heat, thus contributing to climate change.

Greenhouse Gas Protocol: The most widely used international standard, the Greenhouse Gas Protocol is an accounting tool for understanding, quantifying and reporting corporate greenhouse gas emissions.

Green procurement: An approach to business purchasing in which the environmental impacts of goods and services, in addition to price and quality, play an important role in purchasing decisions.

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.

IUCN (International Union for the Conservation of Nature) category: Internationally recognized designations that classify protected areas according to their management objectives and take into account the following aspects: wilderness level; scientific, spiritual, educational and recreational opportunities; significant cultural, geological or natural features; species and habitat management; and sustainable use of natural resources.

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.

Recovery strategy: A detailed plan that outlines short-term objectives and long-term goals for protecting and recovering a specific species at risk.

Renewable energy: Energy derived from sources that are either inexhaustible, such as the sun (solar energy), wind or waves (tidal energy), or can be naturally replenished before being exhausted, such as biomass and river flow (hydroelectric power).

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.

Species at risk: Plant and animal species with special status at the federal or provincial levels because they are vulnerable to extinction. Species may be listed as special concern, threatened, endangered, extirpated or extinct.

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

Capitale 

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