




FEDERATION  
OF CANADIAN  
MUNICIPALITIES

FÉDÉRATION  
CANADIENNE DES  
MUNICIPALITÉS

# Raising the bar

Annual Report 2015–2016

**Green Municipal Fund**



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**Canada**

The Government of Canada endowed FCM with \$550 million to establish the Green Municipal Fund™. The Fund supports partnerships and leveraging of both public and private-sector funding to reach higher standards of air, water and soil quality, and climate protection.

# Letter to Stakeholders

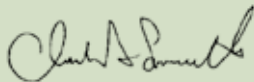
We are pleased to present the 2015–2016 Green Municipal Fund™ (GMF) annual report. A program of the Federation of Canadian Municipalities, GMF helps communities to plan, design and implement sustainability projects, such as those involving waste, drinking water, greenhouse gas (GHG) emissions and energy efficiency. These municipal projects generate environmental, economic and social benefits for residents, along with tangible, lasting impacts for Canada.

A 2016 report by the Commissioner of the Environment and Sustainable Development of the Office of the Auditor General highlighted GMF's strengths. GMF carefully documents, analyzes and shares the results and lessons learned from funded projects. This work, along with efforts to establish and refine effective measures of project performance, enables municipalities to continually raise the bar on sustainability.

This annual report features four principal sections, including the *Leadership* section, which highlights GMF as an innovator and a leader – both in Canada and abroad – in municipal sustainability. The *Triple bottom line* section documents the environmental, economic and social outcomes of GMF-funded projects, along with the impacts of GMF's efforts to improve measurement practices and share lessons learned. The *Support* section describes how GMF works with municipalities to achieve their sustainability goals. Financial assistance provided in 2015–2016, for instance, included nearly \$52 million in loans and grants for 12 capital projects, and more than \$6 million in grants for 59 plans, studies and pilot projects. The fourth section, *Continuous improvement, greater value*, outlines some of the internal initiatives undertaken to enhance GMF's effectiveness and impact.

In recognition of the municipal sector's ability to drive sustainability and innovation, the Government of Canada has recently committed an additional \$125 million to GMF's original endowment, \$75 million to support the development of resilient and low-carbon municipalities, and \$50 million to help municipalities adopt asset management – a more sustainable, holistic approach to infrastructure planning and development. These program investments, combined with GMF's improvements to its operations and funding offer, will enable even more Canadians to reap the benefits of sustainable cities and communities.

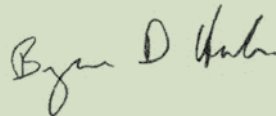
Sincerely,



**Clark Somerville**

FCM President

Councillor, Regional Municipality of Halton



**Ben Henderson**

Chair, GMF Council

Councillor, City of Edmonton



The background of the page is a close-up photograph of several green leaves, likely from a tropical plant, showing detailed vein patterns. Overlaid on the left side are several large, semi-transparent geometric shapes in various shades of green and a small red triangle. In the bottom right corner, there are three thin, parallel white diagonal lines.

# Overview

Municipalities are the primary stewards of the water and sanitation systems, transportation networks and community facilities that comprise much of Canada's physical infrastructure. In addition, local governments have direct or indirect influence over close to 50 per cent of all greenhouse gas emissions in Canada. They also manage systems and implement practices that affect the environment in other ways.

Making progress on sustainability demands innovation and continuous improvement. Municipalities leverage GMF's support and expertise to implement projects and processes that are ever more efficient and that improve Canadians' quality of life.

In 2015–2016, GMF approved \$58 million in loans and grants to municipal sustainability initiatives. Of perhaps greater long-term significance, however, are the improvements GMF made in its suite of knowledge services and funding options. New training and peer learning programs, enhanced client services and resources, and a renewed funding offer all build the capacity of municipalities to design and implement successful projects.

As this report documents, GMF is an increasingly valuable conduit and broker of sustainability knowledge. GMF continually develops and implements new and more effective ways to support municipal sustainability projects, to gather and analyze relevant information, and to transform it into practical, accessible products, networks and learning opportunities. Through these efforts, GMF enables municipalities to raise the bar on sustainability, for the benefit of all Canadians.

- ✓ GMF inspires innovation by sharing best practices, processes and lessons learned.
- ✓ GMF connects leaders and communities with experts, peers and allies across Canada.
- ✓ GMF builds capacity with training tools, resources and funding.
- ✓ GMF helps finance innovative projects with a range of funding solutions.



“Overall, we found that the Federation of Canadian Municipalities was managing the Green Municipal Fund to support innovative municipal projects across Canada... The Federation was also demonstrating a good practice in tracking and reporting the environmental benefits of the projects it has funded.”

***Spring 2016 Report of the Commissioner of the Environment and Sustainable Development:  
Federal Support for Sustainable Municipal Infrastructure, Office of the Auditor General of Canada***



The background of the page is a close-up photograph of several green leaves, likely from a maple tree, showing detailed vein patterns. Overlaid on the left side are several overlapping geometric shapes in various shades of green and a small red triangle. A semi-transparent grey rectangular box is centered horizontally, containing the word "Leadership" in a black serif font. In the bottom right corner, there are two thin, parallel white diagonal lines.

# Leadership

Through the Green Municipal Fund, FCM exercises leadership not only through its innovative support for municipal sustainability and capacity building, but also by developing the tools and measures needed to share results and lessons learned. In 2015–2016, for instance, GMF continued to pioneer new models of peer learning through initiatives such as the Leadership in Asset Management Program (LAMP), Leadership in Brownfield Renewal (LiBRe) and Partners for Climate Protection (PCP).

GMF's peer learning programs foster innovation and collective learning, and facilitate the sharing of best practices between municipalities across Canada. Ultimately, they also build the capacity of municipalities to successfully plan, implement and measure the impacts of sustainability projects.

GMF is also increasingly recognized as a leader in measuring the environmental, social and economic impacts of infrastructure projects. This holistic, triple bottom line approach to measurement considers the tangible improvements in quality of life that projects can produce at the community level through cleaner water, better municipal services and more efficient use of resources such as energy.



## Measuring up

Accurate, relevant data about the performance of sustainability projects are the lifeblood of GMF. Through the careful analysis of data, GMF develops the intelligence that enables municipalities not only to replicate previous projects, but also to set new standards for performance. Throughout its 16-year history, GMF has continually developed and implemented better ways to measure the performance of sustainability projects. For instance, its renewed funding offer, GMF Offer 2015, places greater emphasis on the measurement systems proponents use to monitor project performance. This requirement ensures that future projects benefit from the lessons learned through previous projects, and that the municipal sustainability sector continues to evolve.

“The requirement that recipients track the actual environmental benefits of their projects is an innovative feature of the Fund. This is a good practice that could be applied to other infrastructure funding programs to quantify the results of projects and to promote systematic learning.”

***Spring 2016 Report of the Commissioner of the Environment and Sustainable Development: Federal Support for Sustainable Municipal Infrastructure, Office of the Auditor General of Canada***

# Environmental, economic and social impacts

Municipal officials across Canada and around the world recognize that truly sustainable projects benefit not only the environment, but also the economy and society at large. The combined and often complementary effects of these benefits produce tangible improvements in quality of life at the community level. Cleaner air and water, for instance, improve public health. Savings realized through greater efficiency in water and energy consumption can be spent on recreational facilities and programs. For this reason, FCM promotes triple bottom line reporting and considers criteria from all three areas when measuring the impacts of GMF-funded projects. The renewed funding offer that FCM established in 2015 requires successful applicants to follow the triple bottom line approach when reporting on anticipated and actual project outcomes.

## Environmental

- reduced energy use
- reduced GHG emissions
- reduced water consumption

## Economic

- operational cost savings
- job creation or retention
- new or improved revenue streams

## Social

- health improvements
- community revitalization
- public education and awareness

## Informed, targeted support

GMF carefully tailors its support to meet the specific needs of municipalities. This support includes not only funding, but also resources and initiatives that build the capacity of municipalities, connect them with the appropriate expertise, and inspire the success of their sustainability projects. To ensure that the support it offers evolves alongside the needs of municipalities, GMF regularly surveys clients, stakeholders and municipal officials. These surveys – along with other research – inspired GMF to introduce the LAMP and LiBRe peer learning programs. Similar research informs the design of GMF case studies and workshops, which is why many focus on sharing lessons learned from completed capital projects, plans, studies and pilot projects.

In response to the need expressed by many municipalities for support with wastewater projects, GMF provided a wealth of resources devoted to the topic in 2015–2016. The full-day workshop on best practices in wastewater treatment delivered during the Sustainable Communities Conference included a site visit to the City of Ottawa's innovative new treatment facility. In a follow-up survey, all 22 participants said they would recommend the training to others, while 94 per cent said they were either satisfied or very satisfied with the training.

“The GMF presentations and workshops provide much-needed knowledge to local government elected officials and staff. The real-life case studies identify relevant options for consideration by those who are tasked with upgrading or replacing aging infrastructure and create a network to share knowledge. This is both timely and important, as many communities do not have the in-house knowledge or experience to fully identify the true nature of their infrastructure challenges.”



**Joe McGowan,**  
Director of Public Works,  
City of Cranbrook, BC



# Growing national and international recognition


The Government of Canada's decision to substantially increase its investment in FCM's Green Municipal Fund is compelling evidence of the organization's recognized leadership in municipal sustainability. The investment will be added to the original federal endowment of \$500 million, helping to sustain GMF's capacity to provide grants and loans in support of municipal water, wastewater, energy, transportation, waste and brownfields initiatives.

Other federal investments also recognize FCM's leadership. In March 2016, the Government of Canada announced \$75 million over five years to FCM's climate change mitigation and adaptation programming. This investment complements FCM's support for municipalities seeking to build communities that are more resilient, low-carbon and sustainable. Furthermore, Budget 2016 devoted \$50 million to building the capacity of Canadian municipalities to manage their infrastructure development more strategically. This funding complements FCM programs that target infrastructure, such as Leadership in Asset Management Program.

Other evidence that FCM's Green Municipal Fund is a recognized leader in municipal sustainability comes in the form of invitations

to participate in partnerships and address conferences organized by groups such as Toronto Atmospheric Fund, Natural Resources Canada, QUEST (Quality Urban Energy Systems of Tomorrow) and Réseau Environnement. In addition, GMF staff members are regularly asked to serve as advisors on various working groups.

GMF's reputation for excellence in municipal sustainability also extends well beyond Canada. During COP21 – the 2015 United Nations climate change conference in Paris – the international group ICLEI (Local Governments for Sustainability) included GMF in a list of the world's most effective initiatives, particularly for providing funding and knowledge for community development. The recognition was part of ICLEI's Transformative Actions Program (TAP). Furthermore, members of GMF staff formed an integral part of Canada's representation at COP21. During the conference, representatives of FCM, the Green Municipal Fund and various Canadian municipalities shared information about how sustainability projects improve quality of life, generate jobs and economic activity, and protect communities from the impacts of weather-related disasters. In addition, GMF presented its model for innovation at the Third World Forum of Local Economic Development in Turin, Italy.



/ FCM's representatives at COP21 (From left to right):  
Pauline Quinland, Mayor, City of Bromont,  
Pam McConnell, Deputy Mayor, City of Toronto  
Jenny Gerbasi, Councillor, City of Winnipeg, FCM First Vice-President 2016  
Clark Somerville, Councillor, Regional Municipality of Halton, FCM President 2016  
Brock Carleton, Chief Executive Officer, Federation of Canadian Municipalities  
Raymond Louie, Acting Mayor, City of Vancouver, FCM President 2015  
Ben Henderson, Councillor, City of Edmonton, Chair, GMF Council

# Raising the bar on...

## ...recycling

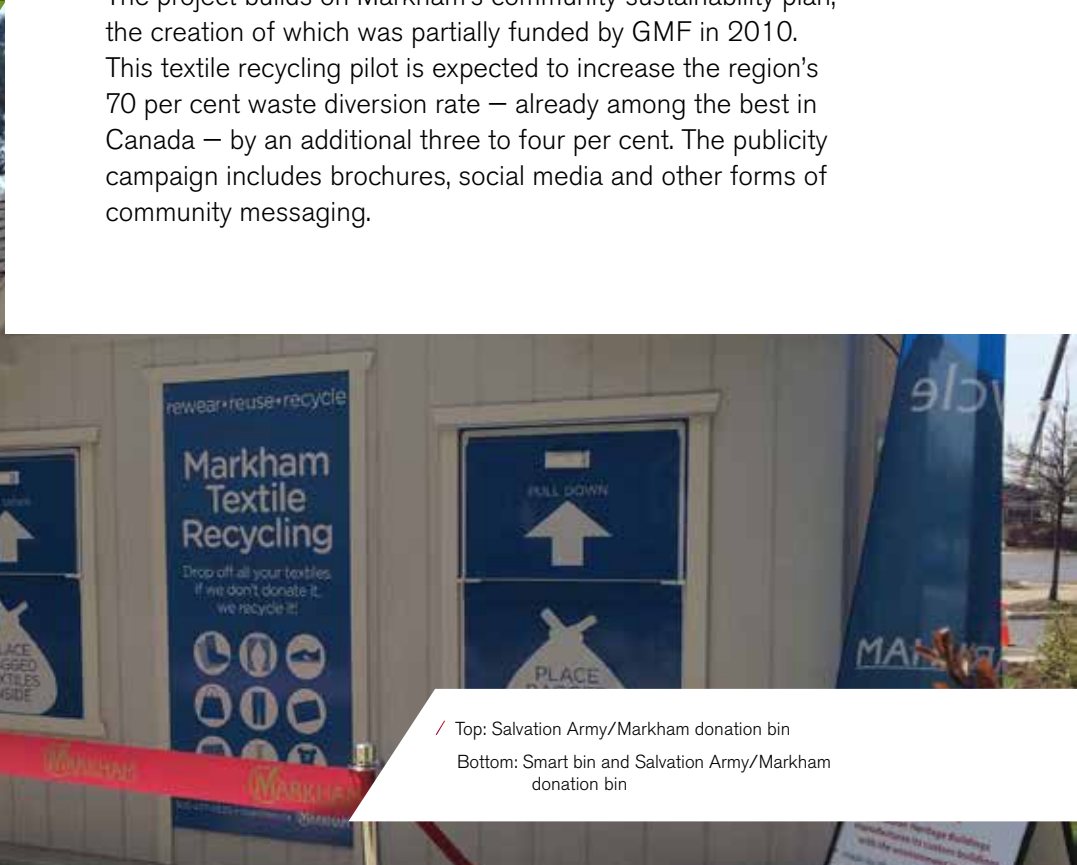
The FCM Board approved a grant of \$67,000 for an innovative pilot project to recycle waste textiles in the City of Markham, ON. A recent study in Ontario found that 85 per cent of discarded textiles end up in landfills and only 15 per cent are recycled or reused.<sup>1</sup> During its first year of operation, the project proposes to divert 10 tonnes of waste from landfill and cut 22 kilograms of GHG emissions.

The project features two SMART containers, each of which is fitted with a solar panel to power nighttime lighting and a sensor that will signal when it is time for pickup. After sorting, the Salvation Army – a key project partner – will sell the textiles through its retail network and in bulk to wholesale buyers, who often resell abroad. Should the pilot meet its initial goals, Markham plans to install eight additional containers. The project also includes a publicity campaign to increase awareness of the potential value of used textiles and other recyclables.

The project builds on Markham's community sustainability plan, the creation of which was partially funded by GMF in 2010. This textile recycling pilot is expected to increase the region's 70 per cent waste diversion rate – already among the best in Canada – by an additional three to four per cent. The publicity campaign includes brochures, social media and other forms of community messaging.



Source:  
City of Markham



/ Top: Salvation Army/Markham donation bin

Bottom: Smart bin and Salvation Army/Markham donation bin



# Raising the bar on...

## ...brownfields redevelopment

The City of Brantford, ON, will revitalize a 21-hectare former industrial site on the edge of downtown with the support of GMF. Known as Greenwich Mohawk, the site is heavily contaminated with petroleum hydrocarbons, volatile organic compounds and heavy metals due to a long history of industrial manufacturing. The FCM Board approved a loan of \$18 million for the initiative, which builds on the completed remediation plan, demonstration project and pilot project that FCM also supported.

The project will prepare the brownfield site for a mix of residential, park, institutional and commercial development. A mix of innovative in-situ and ex-situ remediation techniques will be deployed. Brantford used these methods successfully to treat 1,000 cubic metres of contaminated soil during its demonstration project – a first in Canada. To access the technology, the city partnered with a firm from Holland, where this type of on-site remediation is more common. The remediation will be the first project in Ontario to use the method on a large scale. To build the brownfield remediation capacity of other municipalities, GMF will share existing and future reports on the site's remediation. Brantford plans to complete the project during 2016.



/ From top:  
**Equipment:** Equipment used included a treatment trailer, liquid and air carbon vessels, a heat exchanger and chiller, a generator, and a steam boiler. Before being discharged into the sewer system, treated water was collected in a 2,000-litre holding tank and sampled to verify that it met the City of Brantford sanitary sewer discharge criteria.

**Group photo on site (left to right):** Councillor Marguerite Ceschi-Smith, City of Brantford; Karim Tejani, Senior Advisor, Consulate-General of the Kingdom of the Netherlands; Robert Heling, Project Manager, Groundwater Technology; Jeanine de Vos, Deputy Consul-General, Consulate-General of the Kingdom of the Netherlands; Mayor Chris Friel, City of Brantford; Councillor David Neumann, City of Brantford; Ellen Greenwood, Consultant, Greenwood & Associates

**Manifold:** The patented steam injection manifold by Groundwater Technology, where the steam can be diverted to each of the individual steam injection lines. Each line is equipped with a pressure gauge and needle valve.

**PHCs:** 1,100 litres of petroleum hydrocarbon product were collected during the field demonstration.

**Wellfield:** The well field was installed close to the area where the soil samples were taken for the laboratory feasibility study.



Source (all images):  
City of Brantford



# Raising the bar on...

## ...community energy planning

The Town of Bridgewater, NS, and the surrounding area will transition to a more sustainable energy future through the Partners for Climate Protection (PCP) program. The Bridgewater Community Energy Initiative (BCEI) aims to achieve PCP milestones 2 (setting emission targets) and 3 (developing a local action plan) in the community stream. The FCM Board approved a grant of \$66,600 for the \$190,400 project. A PCP member since 2014, Bridgewater has already achieved the first four milestones in the corporate stream.

BCEI combines best practices in community engagement, knowledge exchange and detailed energy analysis to develop a robust, practical roadmap toward sustainability. The plan relies on broad collaboration among residents, municipal workers and officials, entrepreneurs and even a group of Dalhousie University students, who will develop recommendations for an energy partnership program. The partnership program will provide a forum for local businesses and organizations to engage in energy-efficiency actions. It will also help to promote community-wide monitoring and evaluation of energy reductions.

The initiative supports Bridgewater's long-term goal of carbon neutrality or a reduction in energy consumption of at least 80 per cent by 2050. Other BCEI goals include lower energy bills for residents and businesses, and more jobs and economic activity, along with increased municipal tax revenues. The community also hopes the initiative will help it attract businesses in the environmental and clean technology sectors.



Source:  
Top: Ida Scott, Bridgewater Development Association  
Bottom: Sandy Mair-Dodman, Town of Bridgewater



## Amplifying energy performance

With GMF's 2015 renewed funding offer, proposed energy sector projects must aim for net-zero energy performance — they must demonstrate the potential to produce as much energy as they consume during regular operation over a defined period. Net-zero projects typically incorporate best practices in operational efficiency and satisfy remaining energy demand with renewable sources, such as a solar-photovoltaic, wind or biogas system for electricity, or a solar-thermal system for space and water heating.



The background of the cover is a close-up photograph of a green leaf, showing its veins. Overlaid on this are several geometric shapes: a large dark green triangle on the left, a lighter green triangle on the right, and a small red triangle at the bottom left. A semi-transparent grey rectangle is centered over the leaf, containing the title text. In the bottom right corner, there are three thin, parallel white diagonal lines.

# Triple bottom line



Canadians benefit directly from the support of FCM's Green Municipal Fund for initiatives that provide cleaner air and water, reduce greenhouse gas emissions and solid waste, and increase energy efficiency. GMF also builds the capacity of municipalities to plan and implement sustainability projects that produce environmental, economic and social impacts.

To achieve these goals, GMF continually reviews, analyzes and updates its offerings and processes, and shares results and lessons learned from the initiatives it supports. By connecting municipalities, organizations and networks with the appropriate resources, such as case studies, partnerships and peer-to-peer learning opportunities, GMF enables municipalities to replicate successful projects and push the envelope on sustainability a little further.

## **Gathering intelligence from completed projects**

To maximize the impact of completed projects, GMF gathers the knowledge generated and shares it with other municipalities and the sustainability sector. In 2015–2016, this knowledge included valuable lessons that can foster the success of other municipalities. Many of the most common lessons relate to project planning and flexibility.



# Environmental impacts since inception

As of March 31, 2016, 139 GMF-funded capital projects reported environmental results, including GHG reductions, water savings and waste diverted (among other metrics) through 71 energy projects, 40 water projects, 15 solid waste projects, eight brownfield projects, and five transportation projects. The infographics below provide a sense of what these savings really mean in terms of everyday experience.



**Cumulative  
GHG**  
reductions since  
the inception of  
the fund



**2.1 million tonnes**  
equivalent to  
**480,000**  
cars off the road  
per year

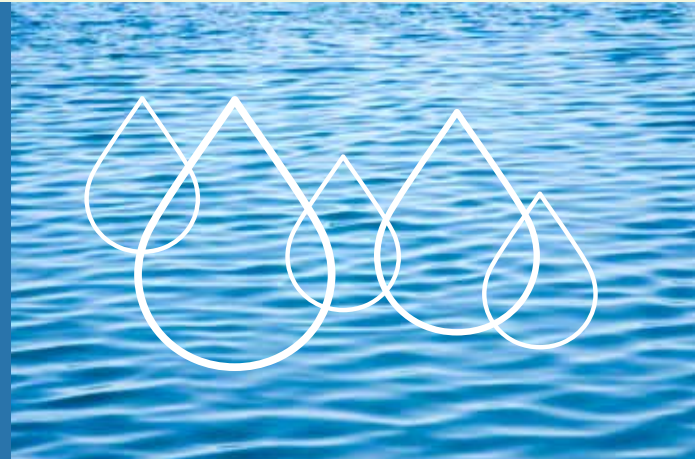
## RAISING THE BAR ON MEASUREMENT

In 2015–2016, GMF updated its method for reporting cumulative reductions of GHG emissions. The new method aligns more closely with international approaches developed for the generation of carbon credits, such as the Clean Development Mechanism (CDM).<sup>2</sup>

**Water saved**

**310,000**  
cubic metres  
per year

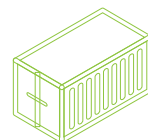
equivalent to the amount of  
drinking water **used by the  
population of the City of  
Fredericton in 22 days**



**Soil remediated**

**69,300** cubic metres of soil remediated<sup>3</sup>

equivalent to the volume of **1780 shipping containers**





Land reclaimed  
**77** hectares of land reclaimed  
equivalent to **129** football fields



equivalent to

equivalent to

Energy savings  
**693,000 GJ**  
of energy savings  
per year

equivalent to one year of power for  
**6600 households**



Wastewater and drinking water treated  
**243** million cubic metres per year  
of wastewater treated  
equivalent to **97,200 Olympic swimming pools**



Waste diverted  
from landfill

**170,000**  
tonnes of waste  
diverted from  
landfill per year

equivalent to  
**24,285 garbage trucks annually**

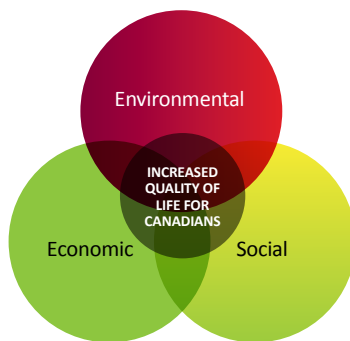


<sup>3</sup> Please see Appendix F for more detailed information.



# Projects reporting in 2015–2016

GMF-funded projects deliver not only environmental benefits, but also social and economic benefits. Environmental outcomes often begin to become evident immediately upon project completion; positive social and economic outcomes sometimes take longer to reveal themselves but tend to build with time.



## Environmental

In 2015–2016, 20 capital projects yielded environmental results, including eight energy projects, eight water projects, two brownfield projects and two solid waste projects. These projects directly led to 132,120 GJ in energy savings; 31,538 tonnes of GHG reductions; 83.8 million cubic metres of wastewater and drinking water treated to Canadian standards or better; 62,000 cubic metres of water saved; 18,500 tonnes of waste diverted from landfill; three hectares of land reclaimed; and 12,700 cubic metres of soil remediated.

## Social

Social benefits reported most often:

- protection and improvement of public health
- improved levels of service
- public education and awareness

## Economic

Economic benefits reported most often:

- reduced operating costs
- reduced maintenance costs
- development of local businesses



## STRENGTHENING THE CASE FOR SUSTAINABILITY PROJECTS

**GMF continues to conduct research to overcome the common misconception that investments in sustainability projects aren't worth it – that they generate inadequate returns.<sup>4</sup> The truth is that sustainability projects outperform standard projects: they deliver greater long-term economic and social value, as well as the same or better levels of service. In 2015–2016, GMF completed research to address this misconception, and to help municipalities build a strong business case for sustainability projects.**

<sup>4</sup> In a 2014 GMF survey of 400 municipal practitioners, financial risk was identified as the most common barrier to completing sustainability projects. The top challenges to undertaking more sustainability projects were identified as funding (53 per cent) and buy-in from political representatives (20 per cent).

## Reporting long-term performance

A survey conducted by GMF in 2015–2016 provided valuable qualitative and quantitative data about the long-term triple bottom line performance of GMF-funded energy projects. Of the 38 completed energy projects funded by GMF since the Fund's inception, 18 municipalities participated in the survey. One of the findings was that most of these projects continue to perform as well as or better than when they first reported their results to GMF. In addition to benefits related to energy and greenhouse gases, the projects had a range of other positive environmental impacts:

- more efficient use of water
- more efficient use of financial and physical resources
- use of sustainable construction practices
- environmental education
- improvements in indoor air quality
- reduced heat island effect
- improved stormwater management
- reduced light pollution



## Project planning

GMF received 20 environmental results reports in 2015–2016. Of those, 16 featured lessons related to project planning. Specifically, the lessons focused on the importance of investing more resources early on in the design stage and taking a flexible and phased approach. For one project, a more thorough review early on would have produced better final outcomes and reduced unexpected delays. It was also noted that enhancing front-end planning with inspections and other on-site construction support fosters success. For another project, the report stated that “preliminary design is essential to the project...and should cover various topics... (i.e., characterization studies, traffic, geotechnical, biological), especially soil characterization studies.” In another case, the municipality visited a number of similar installations to learn about positive and negative experiences before proceeding with the work.

Another lesson emphasized the importance of involving contractors early in the design process. For one project involving the installation of photovoltaic (PV) panels, having the contractor participate in design meetings improved the integration of the PV system into the building's architecture. “This avoids designing the building to accommodate generic PV-system components, such as solar panels, racks and inverter sizes, and later having to change them to a specific PV-supplier's design characteristics,” the report explained.

## Flexibility and phased approach

For a number of projects, a flexible and phased approach — one that can adapt to evolving community needs — was important. From the report of a library project: “Accommodating the fast evolution of reading and library technologies was a design challenge. To ensure long-term relevance, the design of the library space was made as flexible as possible in order to be able to adapt it in the future as necessary.”

Two reports recommended a multi-phased approach to accommodate current and potential future uses. The report about a wastewater project advised a flexible design: “Consider current and future standby-power requirements when implementing different phases of a larger project. Increasing the blower-building footprint would have provided greater flexibility in the design.” The report about a recycling-centre project also emphasized the value of designing for the future: “It’s important to predict exactly what kinds of materials people will want to recycle in the future and how much of it they’ll want to recycle. The site should be modular.”



## Off the drawing board and onto the ground

### THE IMPACTS OF GMF-FUNDED STUDIES AND PILOT PROJECTS

GMF funds studies and pilot projects, which provide crucial information for municipalities seeking to manage the risks associated with proposed sustainability projects. More than 540 GMF-funded feasibility studies and pilot projects are now complete. These analyses help validate key concepts and build compelling business cases for sustainability initiatives.

Many municipalities convert GMF-funded studies and pilots into capital projects. In 2015–2016, GMF conducted an analysis of wastewater “conversions” (completed projects that began with a GMF-funded study or pilot). Using surveys, interviews and reviews of submitted or public reports, the analysis looked at projects that relied on GMF for some capital financing, as well as those that obtained financing elsewhere.

An analysis of the 59 GMF-funded wastewater studies and pilots completed between the inception of the program and March 31, 2015 found that 45 had the potential to become capital projects. GMF was able to follow up with 36 of the 45 projects and learned that 24 had been converted to capital projects — six of these with GMF financing and 18 without. Of the remaining 12 projects for which there was follow-up, seven may still convert and are seeking funding and various approvals. These findings show that GMF feasibility studies and pilots support the development of capital projects beyond those funded by GMF.

GMF also took a closer look at the total value of capital infrastructure built following GMF-funded studies, but without subsequent GMF financing. In other words, how much non-GMF investment was influenced to be more sustainable by GMF’s support at the study stage? GMF found that its total investment of \$1.4 million in 10 studies had enabled \$898 million in externally funded wastewater infrastructure. Eight projects did not have financial information available on the value of the final capital infrastructure investments made by the municipality. For these eight, the total estimated value of the ensuing infrastructure was at least \$178 million, while GMF’s initial contribution to the studies was slightly more than \$1 million.



# Three municipalities, three projects, similar benefits

Wastewater projects have intrinsic environmental and social benefits, such as improvements in ecosystem and public health, and enhanced recreational opportunities. An analysis of three projects provides a better sense of the substantial economic impacts of GMF-funded wastewater studies.<sup>5</sup>

## Yorkton, SK

**GMF number:** 9062  
**Population:** 15,669  
**Grant:** \$277,500 toward a \$580,000 feasibility study  
**Project:** Construction of a filter backwash-treatment system completed in 2012

### Summary of value added for Yorkton

Benefits	NPV <sup>6</sup> at 3% (20 years)
Environmental quality improvement	\$3.9M
Avoided wastewater capital costs	\$3.4M
Avoided wastewater operating costs	\$6.2M
Recharge value of water to aquifer	Significant, unquantified
Total benefits	\$13.5M
Costs (capital and operating over 20 years)	\$2.7M
Benefit/cost ratio	5
Net benefit (benefits minus costs)	\$10.8M

## Arnprior, ON

**GMF number:** 9725  
**Population:** 8,114  
**Grant:** \$72,500 toward a \$145,000 feasibility study  
**Project:** \$22 million upgrade of wastewater facility completed in 2011

### Summary of value added for Arnprior

Benefits	NPV <sup>6</sup> at 3% (20 years)
Avoided biosolids	\$4.9M
Property value	\$14.7M
Water quality improvements and recreation	\$5.7M
Total benefits	\$25.3M
Costs (capital and operating over 20 years)	\$23M
Benefit/cost ratio	1.1
Net benefit (benefits minus costs)	\$2.3M

## Cumberland County, NS

**GMF number:** 3222  
**Population:** 31,353  
**Grant:** \$25,000 toward a \$55,000 feasibility study  
**Project:** Construction of \$1.14 million leachate and septage facilities completed in 2008

### Summary of value added for Cumberland County

Benefits	NPV <sup>6</sup> at 3% (20 years)
Avoided leachate costs	\$4.7M
Environmental quality improvements	\$4.2M
Total benefits	\$8.9M
Costs (capital and operating over 20 years)	\$2.8M
Benefit/cost ratio	3.2
Net benefit (benefits minus costs)	\$6.1M



**For every dollar spent by GMF on 18 wastewater feasibility studies and pilots, municipalities and their partners built in excess of \$400 worth of infrastructure — a ratio of 1:416**

<sup>5</sup> The analysis of quantified benefits was conducted by Dave Sawyer and Seton Steibert of EnviroEconomics.

<sup>6</sup> NPV (net present value) adjusts future dollar amounts to a common year so that different costs and benefits over time can be compared on a common footing.

# From eyesore to thriving community park

## WESTMINSTER PIER PARK RISES FROM DISUSED BROWNFIELD

When the City of New Westminster, BC opened Westminster Pier Park in July 2012, the broad and power impacts of a holistic, sustainable approach to municipal development became readily apparent. The 3.8-hectare section of waterfront with 600 metres of shoreline had hosted multiple industries starting in the 1850s until it was left vacant in 1992, its soil and groundwater contaminated with a long list of toxins. For the approximately 65,000 residents of New Westminster (a member municipality of the Metro Vancouver) the site was both an eyesore and a waste of prime land.

The City of New Westminster turned to GMF for help: an initial grant of \$119,500 for a feasibility study in 2010, followed by a \$2 million loan to help finance site remediation. The city invested money of its own and secured additional funding from the province and the Government of Canada to complete a \$25 million project and create Westminster Pier Park. Approximately 3,500 cubic metres of contaminated soil and 1,800 cubic metres of contaminated sediment were removed and disposed of off-site.

The end result is a beautiful public park along the historic Fraser River, with a boardwalk, gardens, art installation and festival lawn, along with basketball and beach-volleyball courts, playgrounds and a small water park. The park has rapidly become an important centre of community life, earning more than 10 major awards along the way.

Source:  
City of New Westminster

In 2015, FCM commissioned an in-depth study of the project's triple bottom line impacts. A few highlights:


- approximate number of visitors in 2015:  
**317,000**
- equivalent annual value of recreational use of the park<sup>7</sup>:  
**\$9.5 million**
- increase in average annual value of building permits issued in the area immediately adjacent to the park:  
**328 per cent**

The data also suggest that the park may contribute significantly to growth in property tax revenues. From 2005 to 2011, the downtown accounted for an average of 6.1 per cent of the annual increase in total assessed value of the city's taxable properties. From 2012 to 2015, this increased to 23.4 per cent. The project has also helped to attract retailers, restaurants and other economic activity to the downtown and waterfront areas, supporting New Westminster's revitalization goals.



Source:  
City of New Westminster



 **Other municipal organizations and planning associations have contacted New Westminster to learn from the project. The success of Westminister Pier Park — the largest capital project undertaken by the city in recent decades — provides municipal leaders with the experience, tools and confidence to push the sustainability envelope on local development projects.**

Source:  
City of New Westminster

<sup>7</sup> Each visitor to the park derives a benefit in terms of increased quality of life from the recreational experience (recreation value). Since the city does not charge a park entrance fee, no direct estimate of the market value of the recreational benefits of the park is available. This result reflects park users' willingness to pay for their recreational experiences.



The background of the cover is a close-up photograph of green leaves with numerous water droplets. Overlaid on the left side are several overlapping geometric shapes in various shades of green and a small red triangle. A semi-transparent grey rectangle is positioned in the center, containing the word "Support" in a black serif font.

# Support

Through the Green Municipal Fund, FCM provides municipalities with the support needed to design and implement innovative projects, build strong business cases and improve decision-making processes. This support takes many forms. GMF's financial support helps municipalities overcome the funding challenges often associated with sustainability projects and mitigate the risks of innovation.

GMF also designs and delivers cutting-edge training and capacity-building programs, and partners with outside groups that can amplify the impact and value of its support for municipalities. By helping municipalities incorporate, demonstrate and replicate triple bottom line (environmental, economic and social) benefits and results, FCM fosters sound decisions about both current and future projects.



## Inspire, connect and build capacity

To ensure that all municipalities, regardless of size or level of expertise, can plan and implement appropriate sustainability projects, GMF delivers support designed to inspire, connect and build capacity. The broad range of support – from case studies and reports to partnerships, interactive workshops and peer learning programs – caters to the diverse circumstances of Canadian municipalities. The peer-learning programs, LAMP (the Leadership in Asset Management Program), LiBRe (Leadership in Brownfield Renewal) and PCP (Partners for Climate Protection), enable municipal officials to learn from each other as they plan and realize practical sustainability goals. Other elements of GMF's offerings complement these programs, ensuring that all municipalities can access appropriate support.

“In addition to the funding program, an underrated and often overlooked benefit of GMF is the knowledge function. GMF is the best place for knowledge on what municipalities have actually done, and the environmental, economic, and – sometimes – political challenges they have had to overcome. GMF provides knowledge and experience that simply can't be found anywhere else.”



**Paul Nash,**  
Alpine Water and  
Energy, Sechelt, BC

## Funding support

In 2015–2016, FCM approved nearly \$52 million in loans and grants for 12 capital projects and more than \$6 million in grants for 59 plans, studies and pilot projects across the country.

### Approved initiatives by region (sustainable community plans, feasibility studies, pilot projects and capital projects) (for additional detail, refer to Appendix A, Table A5)

Region / Province	2015–2016	Total net approved since inception*
Region / Province	% of total	Total net approved since inception*
Atlantic	2.16%	14.18%
British Columbia	27.68%	19.04%
Northern Territories	0.00%	1.26%
Ontario	43.90%	34.33%
Prairies	1.40%	12.62%
Quebec	24.86%	18.57%
<b>Total</b>	<b>100%</b>	<b>100%</b>

\* Total net approved since inception includes original Board-approved amount plus any additional approved amount, less the amounts withdrawn, closed or cancelled.

### Urban–rural balance of all approved initiatives (sustainable community plans, feasibility studies, pilot projects and capital projects) (for additional detail refer to Appendix A, Table A6) (Dollar figures presented in \$1000s)

		2015–2016		Total net approved since inception*	
		Total (grants & loans)	% of total	Total (grants & loans)	% of total
Small, rural and remote (rural)	18.90%	16,624	28.70%	165,855	21.34%
Towns and cities (urban) <sup>8</sup>	81.10%	41,336	71.30%	611,420	78.66%
<b>Total</b>	<b>100%</b>	<b>57,960</b>	<b>100%</b>	<b>777,275</b>	<b>100%</b>

\* Total net approved since inception includes original Board-approved amount plus any additional approved amount, less the amounts withdrawn, closed or cancelled.

<sup>8</sup> Municipalities with a population of less than 10,000 are classified as rural. In the case of regional municipal governments, to be considered rural each member municipality must have a population of less than 10,000. Urban regional municipalities are those where at least one member municipality has a population of 10,000 or more.



# GMF funding: the deciding factor in many sustainability projects

To learn more about the difference that GMF funding made in the fate of proposed projects, GMF included this question in a survey of successful applicants: "Would the projects have proceeded without GMF funding?"

- Twenty-nine per cent said the initiative would not have proceeded.
- Forty-seven per cent said the initiative would have proceeded either more slowly or on a smaller scale.

For more information about the impacts of GMF-funded studies and pilot projects, see page 18.



Source:  
Town of Qualicum Beach



Source:  
Town of Saint Andrews



Source:  
Projet SAUVeR / City of Plessisville



Source:  
Village of Marwayne





Source:  
City of Edmonton

## LiBRe supports successful brownfield redevelopment

To help municipalities address the difficult challenge of brownfields (former industrial sites that are difficult to redevelop due to perceived or real contamination), GMF applies a full range of methods. In 2015–2016, for instance, GMF introduced its latest peer learning program, Leadership in Brownfield Renewal (LiBRe). Developed following a successful two-year pilot project, LiBRe enables municipalities to overcome common barriers to brownfield redevelopment, including risks and uncertainties associated with remediation costs, complex approval processes, potential liabilities and financing challenges.

GMF shares knowledge on brownfield redevelopment widely, through multiple avenues:

- GMF delivered a full-day seminar on brownfields renewal to 45 delegates during the FCM's Sustainable Communities Conference (SCC) in February 2016.
- The brownfield resources posted on the GMF website – including two webinars – attracted nearly 2,000 users in 2015–2016.



Source:  
City of Nanaimo - Port Drive



“LiBRe has helped immensely to provide an understanding of all the components required to develop a successful brownfield strategy. The city is somewhat limited in our brownfield experience, so having a network to tap into for assistance has been very beneficial. We look forward to growing this relationship in 2016–17.”



**Kase DeVries,**  
Sustainability  
Coordinator,  
City of Grande  
Prairie, AB



Source:  
City of Edmonton



Source:  
City of Nanaimo



Source:  
City of Brantford




## Halifax project sets the PACE for other municipalities

**GMF number:** 12028

**Population:** 390,096

**GMF grant:** \$545,000

**GMF loan:** \$5.45 million

 **The Halifax Solar City project provides technical and administrative oversight to manage risk and ensure quality of installation of solar water-heating equipment. Between March 2013 and July 2015, 381 systems were installed in homes — more than in the rest of Canada combined. Based on data generated by the monitoring systems installed as part of the pilot, the first phase of the project reduced Halifax's carbon footprint by the equivalent of 377 tonnes of carbon dioxide per year, or roughly one tonne per participating household. The project earned FCM's 2015 Sustainable Communities Award in the Energy Program category.**

Thanks to an innovative financing model and support from GMF, a solar-energy project continues to generate valuable results for a growing number of homeowners in Halifax, NS. Under the Solar City pilot project, homeowners finance the installation of solar water-heating equipment through their municipal property taxes. The financing model is known as PACE — Property Assessed Clean Energy. The city extends a loan to pay for the installation, secured by the homeowner's property. The savings in energy and water costs make repayment easier for the homeowner.

Halifax Regional Municipality is the first in Canada to use PACE to create a budget-neutral program that covers administrative and financing costs. The project is designed to be revenue neutral for the municipality and cost-neutral for homeowners (i.e., energy savings pay for the retrofit). To maximize benefits to the local economy, the project used local contractors and locally manufactured equipment.

Many other Canadian municipalities are keen to implement sustainability projects following the PACE model. In 2015, the FCM Board approved \$260,000 for a pilot project that involves residential energy retrofits in three Quebec municipalities (see page 37). The Association québécoise pour la maîtrise de l'énergie (AQME) plans to work with municipalities to develop and implement this project based on PACE. Implementation will include a technical coaching service aimed at maximizing energy-efficiency results.



/ Top: A solar panel is installed on a Halifax residence.  
Left: A solar panel is installed on a Halifax residence.  
Right: Solar City home on the outskirts of Halifax, in Ketch Harbour.

Source (all images):  
Halifax Regional Municipality

## Building asset-management expertise in multiple ways

According to the Canadian Infrastructure Report Card, approximately \$141 billion worth of Canada's municipal infrastructure — such as water and sewage systems, roads and bridges — is in poor condition and nearing the end of its life cycle. With this challenge comes a golden opportunity to make communities more sustainable. Municipalities that renew infrastructure using an approach known as asset management can achieve important long-term goals. Asset management involves considering not only capital, operating and maintenance costs, but also environmental performance and social objectives. To help municipalities build asset management capacity, GMF inspires and connects practitioners, using a mix of tools and best practices. Last year, GMF collated these into a new peer learning pilot program known as LAMP: the Leadership in Asset Management Program.

In late 2015, GMF selected 12 municipalities for the English cohort of LAMP. Developed in collaboration with the Canadian Network of Asset Managers (CNAM), LAMP enables participants to create asset management policies, strategies and governance frameworks linked with corporate sustainability goals. The FCM Board approved just over \$1 million in funding for LAMP.

“Through LAMP, we're able to access the expertise and resources we need to take a better approach to meeting our infrastructure needs over the long term.”



**Murray Jamer,**  
**Deputy CAO,**  
**City of Fredericton, NB**



More than **100 delegates** participated in the **asset management workshop** delivered by GMF (in collaboration with CNAM) at FCM's Annual Conference and Trade Show in June 2015.



Approximately **20 members of the Association of Municipal Administrators of New Brunswick** participated in a GMF asset management session in June 2015.



Approximately **50 elected officials and municipal staff** participated in GMF's asset management session at the November 2015 Municipalities Newfoundland and Labrador annual conference.

### **FULL DAY TRAINING WORKSHOPS**

During FCM's Sustainable Communities Conference in February 2016, **35 delegates** participated in the full-day training workshop co-developed by CNAM. Also during the conference, **70 delegates** participated in a 1.5-hour GMF workshop on how to integrate natural assets, such as waterways and parkland, into infrastructure management and design. In 2016, GMF will complete two asset management videos targeting municipal councillors and decision-makers.



# Many hands lighten the load

## PARTNERING TO REDUCE GHG EMISSIONS

GMF continues to support the participation of municipalities in Partners for Climate Protection program (PCP), the collaborative international effort to reduce greenhouse gas emissions. Launched in 1994 with the support of six Canadian municipalities, PCP is a partnership between FCM and ICLEI (Local Governments for Sustainability), which is part of a larger network of more than 1,000 communities worldwide. As of March 31, 2016, 289 local governments in Canada had joined PCP.

Through PCP, municipalities support one another as they work through a five-milestone framework. GMF provides funds for PCP plans and inventories, publishes success stories to share lessons learned, and helps Canadian members access a growing number of practical tools, guidelines and protocols. Along with providing the necessary resources, GMF also brokers strategic connections, linking municipalities with sustainability practitioners and organizations. This is particularly valuable for small communities, which typically lack the resources to act independently.

To help address the challenges, GMF enables municipalities to apply for assistance from third-party organizations in meeting PCP milestones. Eco-West, for example, now coordinates two groups of municipalities in Manitoba and plans to organize similar groups in Saskatchewan and Alberta during 2016. The Association francophone des municipalités du Nouveau-Brunswick (AFMNB) supports a cohort of 17 municipalities working through the PCP milestones in New Brunswick. At the national level, GMF maintains informal collaborative relationships with QUEST (Quality Urban Energy Systems of Tomorrow) — a non-profit research, engagement and advocacy organization — and Simon Fraser University's Renewable Cities Global Learning Forum and Renewable Cities program.

“Addressing climate change requires an unprecedented amount of collaboration, knowledge exchange and partnerships. Networks, such as FCM's Partners for Climate Protection, are helping municipalities make progress much more quickly on climate change, and are fundamental in enabling the federal, provincial and territorial governments to achieve their GHG and energy objectives.”



**Brent Gilmour,**  
Executive Director, QUEST



## Canadian municipalities step up on climate change

In 2015–2016, 32 members completed a total of 82 PCP corporate (municipal) and community milestones.





# Sustainable Communities Conference

FCM's Sustainable Communities Conference (SCC) is the municipal sustainability sector's premier event. Along with showcasing Canada's most innovative projects, the SCC enables municipal officials to connect with and learn from their peers and industry partners, and acquire the knowledge needed to advance their communities' sustainability agendas.

The 2016 SCC attracted 550 delegates from communities of all sizes. A quarter of all delegates represented communities with fewer than 10,000 residents. Among other highlights, the SCC agenda featured training sessions, four plenary sessions, 15 workshops and four study tours.



## Making valuable connections



**Stephen Brunet,**  
Former Mayor, City  
of Bathurst, NB

Stephen Brunet, former Mayor of the city of Bathurst, NB, attended the SCC to learn how to advance a proposed biogas project. In an article published in the *Bathurst Northern Light* on March 15, 2016, Brunet spoke highly of the conference. He noted that he had met a representative of one municipality that uses biogas to heat greenhouses and grow vegetables, and another that compresses the gas for use in municipal trucks and equipment. A third municipal official offered to help Bathurst apply for funding. He also learned about projects that convert biogas into electricity – an idea suggested by the consulting firm Bathurst had engaged for a 2013 feasibility study. Mr. Brunet plans to use what he learned at SCC to push ahead with his community's project.



**Leon de Vreede,**  
Town of Bridgewater, NS

SCC delegate Leon de Vreede is responsible for the GMF-funded community energy plan of the Town of Bridgewater, NS. While at the SCC, he met an elected official from the District of Chester, a neighbouring municipality, and discussed the community's wind-power project. "Even though our communities are close to one another, we wouldn't have had a discussion about sustainability without coming to the SCC," said Mr. de Vreede. "These kinds of connections are really valuable for smaller municipalities like ours."

# Success inspires success

The FCM Sustainable Communities Awards and the Green Champions Awards increase awareness of municipal innovation and promote knowledge sharing.



More than

**200**  
Attendees

at the Sustainable Communities Awards and PCP milestone recognition ceremony during the February 2016 Sustainable Communities Conference (SCC)

**3,818**  
Views

of the Sustainable Communities Awards program and media announcements and web pages



**4,640**  
Views

of the Sustainable Communities Award winners' case studies

During the SCC, award winners delivered **5** presentations

and hosted **9** roundtable discussions



“I was thrilled to hear about the City of Halifax's Solar City program, as this is exactly the sort of initiative we would like to implement in Powell River. It is encouraging that the Province of Nova Scotia changed legislation to allow a program like Solar City to be funded through Local Improvement Charges (LICs), as we are now in the process of asking the Province of BC to allow municipalities and regional districts to also allow this. The Sustainable Communities Awards Program is amazing at highlighting what has worked for successful communities across Canada, inspiring the rest of us to take similar action.”



**CaroleAnn Leishman,**  
Councillor, City of Powell River, BC

# Raising the bar on wastewater treatment

To address factors such as aging infrastructure, more stringent regulations, and climate change impacts, municipalities across Canada are upgrading their wastewater treatment facilities. FCM's Green Municipal Fund continues to develop and provide the support municipalities need to ensure that these projects can deliver an appropriate balance of long-term environmental, social and economic benefits.

This year, GMF held a focus group discussion with an advisory committee of wastewater sector experts, including municipal wastewater operators and supervisors and experts in the private sector, to identify capacity-building needs. GMF subsequently drafted case studies of the results and lessons learned from 11 GMF-funded wastewater treatment systems, as well as a framework for project success. Results of the projects were shared during a full-day SCC workshop on best practices in wastewater treatment, which included a site visit to the City of Ottawa's innovative new wastewater treatment plant.

## Perth, ON

**GMF number:** 15043

**Population:** 5,840

**Grant:** \$670,000

**Loan:** \$4.5 million



Source: Town of Perth

In 2015, the FCM Board approved funding for the Town of Perth, ON, to expand its wastewater treatment facility by adding a Submerged Attached Growth Reactor (SAGR) to its existing lagoon. A cost-effective and innovative technology, SAGR is designed to remove nitrogen and phosphorous from wastewater. Designed to work in cold climates, SAGR consumes less energy and produces less waste than traditional wastewater treatment technologies. The project is expected to decrease the overall levels of contaminants and nutrients that the facility discharges into the Tay River — the primary source of drinking water for Perth and other communities — while accommodating projected population growth. GMF also funded the associated field test in 2012.

## Gore, QC

**GMF number:** 12059 (study)

**Population:** 1,775

**Grant:** \$33,000

**GMF number:** 13121

(capital project)

**Grant:** \$47,000

**Loan:** \$470,000



Source: Canton de Gore

In 2015, the FCM Board supported a multi-phase project by the municipality of the Township of Gore to replace up to 47 obsolete septic systems. A 2013 feasibility study, funded by GMF, found that nearly 50 per cent of the septic systems near local lakes were defective or substandard, posing a significant risk to water quality. Under the project, eligible property owners receive low-interest loans to pay for the installation of advanced septic systems, repaid through property taxes. The project is expected to prevent the eutrophication of lakes (a form of water pollution resulting in excess plant and algal growth). It will also reduce the contamination of drinking water while minimizing the financial burden of water treatment on residents.



## Sechelt, BC

**GMF number:** 13005

**Population:** 9,291

**Grant:** \$1 million

**Loan:** \$7.4 million

The District of Sechelt's new Water Resource Centre uses an innovative odour-free method to turn wastewater into high-quality reclaimed water and biosolids. Located in the middle of this community on BC's Sunshine Coast, the Centre won FCM's 2016 Sustainable Communities Award in the Water Program category.

The centre not only exceeds the treatment capacity of the two plants it replaces, but also uses a superior method to process biosolids that is designed to eliminate long-standing odour problems. The treatment system meets new provincial reuse regulations for indirect re-use of potable water as well as federal ocean-discharge requirements. Reclaimed water will be available for parks and agricultural irrigation, supporting social and economic activity. When running at full capacity,

the new plant will use less energy than current systems operating at 60 per cent capacity. The system is the first of its kind in North America and features a unique partnership with a First Nations company that will mix sludge from the centre with food, garden and wood waste to create and sell high-quality compost.



Source (all photos):  
District of Sechelt, BC

/ Sechelt Water Resource Centre



The background of the page is a close-up photograph of green, pinnate leaves, likely from a plant like Moringa. Overlaid on the left side are several large, semi-transparent geometric shapes in shades of green and yellow. A semi-transparent grey rectangle is centered over the text.

Continuous  
improvement,  
greater value



FCM continually improves its programs, processes and initiatives to maximize the capacity of municipalities to plan and implement successful sustainability projects. GMF continues to raise the bar by providing municipalities with ever more relevant and practical support, such as targeted peer learning initiatives, sector-specific analysis, and current, reliable measurement tools.

The renewed GMF funding offer introduced in April 2015 is a case in point. The offer features updated eligibility criteria and limits for all funding streams, along with an enhanced selection process for capital projects in the energy, transportation, waste and water sectors. Furthermore, the offer's new reporting requirements will generate additional data and lessons learned that will inform future projects. An organization-wide commitment to continuous improvement also maximizes the effectiveness of GMF. The organization incorporates lessons learned into its programs and processes, aligns its priorities with those of clients and stakeholders, and plans for the next generation of sustainability solutions. As a result, GMF helps drive the evolution of the entire municipal sustainability sector.

## Ensuring Fund Sustainability

FCM continued to implement strategies to ensure the sustainability of the Fund in the face of a challenging, low-interest-rate environment and limited availability of high-yielding loans. Although it actively solicited private-sector borrowers, FCM continued to remain selective through its credit review process to ensure that the Fund was not exposed to any undue risk. The Government of Canada's decision to add

\$125 million to GMF's original endowment provides interim support to the sustainability of the fund, while working towards a new financial model to ensure the longevity of the program.

**“Taking action to improve Fund sustainability: We found that the Federation had taken action to address some of the factors under its control.”**

***Spring 2016 Reports of the Commissioner of the Environment and Sustainable Development: Federal Support for Sustainable Municipal Infrastructure, Office of the Auditor General of Canada***

# Making inroads in Quebec

The agreement between FCM and the Government of Canada that created GMF establishes targets for the allocation of funding based on regional population. The larger a region's population, the larger share of GMF funding it should receive for capital projects, plans, studies and pilots. Since GMF's inception, net funding approvals have generally met the targets for all regions except Quebec. In an effort to eliminate the gap, GMF Council approved the Quebec Outreach Strategy in 2013. The strategy includes dedicated outreach staff, collaboration with strategic partners, participation at key events, presentations at municipal council meetings and targeted workshops catering to provincial priorities. The latest figures show that the strategy continues to inspire progress and contributes to bridging the gap in this province.

The rate of cumulative net approved funding is currently 18.6 per cent, a 3.1% increase in the last three years.	
Fiscal year	% of total net approved funding since inception*
2015–2016	18.6%
2014–2015	17.6%
2013–2014	15.5%
* Total Net Approved Since Inception includes original Board-approved amount plus any additional approved amount, less the amounts that were withdrawn, closed or cancelled.	

The following two projects, approved for funding last year, suggest that Quebec municipalities recognize the potential benefits of partnering with GMF.

## Regional electric car-sharing system

**GMF number:** 15054

**Population**

**(six participating municipalities):**

56,000

**Grant:** \$350,000

This pilot project builds on a GMF-funded 2013 feasibility study and involves adding electric vehicles to the fleets of six municipalities scattered across Quebec: Bromont, Nicolet, Plessisville, Témiscouata-sur-le-Lac, Rivière-du-Loup and Sainte-Julienne. With populations of between 6,000 and 19,000, the municipalities struggle to maintain viable public transit systems yet recognize the advantages of community car-sharing systems. Four are members of the Partners for Climate Protection program. The \$932,000 pilot project involves the purchase of 10 electric vehicles and 13 charging stations. During business hours, the vehicles would be part of municipal fleets; after hours, they would be part of public car-sharing services. The project sponsor, Société d'Innovation en Environnement, will track key data and publish a report after two years.

## Innovative financing mechanisms for efficient municipalities

**GMF number:** 15036

**Population**

**(three participating municipalities):**

33,000

**Grant:** \$260,000

This pilot project focuses on residential energy efficiency and involves a consortium of Quebec municipalities — Plessisville, Varennes and Verchères — with a total population of approximately 33,000. Under the project, eligible homeowners can access expert advice and loans of up to \$20,000 to complete energy retrofits. They would then repay the loans through their property taxes, with amortization tied to the expected life cycle of the retrofits — typically 15–20 years. The project also includes an exchange of relevant data between federal and provincial agencies devoted to energy efficiency.

## Better data and analysis means greater effectiveness

Project data are an essential resource for GMF. As the municipal sustainability sector continues to mature and grow, relevant, current project data — particularly data about impacts and outcomes — will only become more important. In 2015–2016, GMF completed a number of initiatives to improve its capacity to collect, analyze and share data related to the projects it funds.

This work was timely because the amount of data GMF receives and analyzes continues to grow steadily. Under GMF's refreshed funding offer, applicants must provide more detailed baseline information, as well as data on environmental, economic and social performance. In addition, the number of previously funded projects that continue to report on performance grows every year. GMF compiles and analyzes all this information to produce and disseminate valuable intelligence, such as lessons learned. The information also improves GMF's understanding of the challenges facing municipalities, and informs the development of new programming and services for municipalities across Canada.

Two key accomplishments in 2015–2016 included the completion of the GMF approved-projects database (now publicly accessible online) and the implementation of new analytical tools. The systems GMF implemented in 2015 significantly improve its capacity to track, analyze and report on the environmental, social and economic performance of the projects it funds. This analysis will inform the development of all GMF offerings — from knowledge-sharing services to funding programs and more.

“We studied a similar project done in Manitoba. We ended up using the consulting firm they used to assist us in developing our application. We also met with staff from the study area and invited them to attend several of our committee meetings.”



**Pat McCallum,**  
Economic  
Development  
Officer, Arborg-  
Bifrost Community  
Development  
Corporation, MB



## Lean exercise improves internal processes

As part of its commitment to continuous improvement, GMF conducted a Lean exercise to value-map all the steps involved in the application and approval processes for plans, studies and pilots. The exercise identified a number of opportunities for process improvement. GMF classified each suggested change based on the amount of work it would take to fully implement it. The process improvements are being implemented based on their classification.



## Sharing the most relevant information at the most opportune time



In 2015–2016, GMF completed an internal pilot project that improved the way it shares the lessons learned from municipal sustainability projects. Many municipalities benefit greatly from information targeted to their needs. Although GMF has a wealth of valuable resources, including hundreds of case studies and reports on completed projects, knowing exactly which materials to share with which municipality can be a formidable challenge. GMF recognizes that sharing appropriate intelligence early on — as municipal officials begin to design and plan sustainability projects — increases the likelihood that the ensuing project will succeed. It also improves the quality of applications to GMF funding programs.

GMF's pilot project involved developing new materials that better meet the needs of municipalities and training front-line staff to share the most practical and relevant resources with new and potential applicants. In the first phase of the pilot, staff developed reference materials related to specific sectors, such as energy and wastewater. During the second phase, outreach, application and program officers were trained to identify which resources would best suit the potential or new applicant's needs. To measure the results of the pilot project, staff carefully tracked key information. Recipients of the service have reported that the resources directly improved their plan, study, pilot or capital project.

“One of GMF's project funding conditions is that accurate data be provided. This is extremely important because it requires municipalities to monitor the long-term value and impact of their infrastructure investments. Accurate data on long-term performance also strengthens the argument in favour of sustainability projects.”



**France Bergeron,**  
Engineer, Ville de  
Lac-Mégantic, QC


## Investing in green bonds

In addition to direct lending, FCM continues to explore indirect options such as investing in green bonds (subject to their meeting the investment guidelines established in the funding agreement). As the universe of green bonds continues to grow, GMF's participation through its investments will provide additional financial support for the transition to a low-carbon economy.

The background of the page is a close-up photograph of water droplets on a green leaf. Overlaid on the left side are several large, semi-transparent geometric shapes in shades of green, yellow, and red. A semi-transparent grey rectangle is centered horizontally, containing the word "Conclusion" in a black serif font.

# Conclusion





In 2015–2016, FCM continued to deliver significant value to Canadians through the Green Municipal Fund by helping municipalities incorporate sustainability practices into their day-to-day operations. Municipalities leverage GMF's support to plan and implement projects that deliver tangible environmental, economic and social benefits. Canadians experience these benefits in the form of cleaner air, water and lands, and in the more efficient use of energy and water. By committing an additional \$125 million to GMF's original endowment, the Government of Canada not only acknowledged its enduring value, but also called on FCM to raise the bar on even further municipal sustainability.





# Appendices

## Appendix A: Funding allocations

**Table A1: Number of applications and approvals for sustainable community plans, feasibility studies and pilot projects**

	2015–2016	Since inception
Applications submitted <sup>1</sup>	91	1,567
Approvals <sup>2</sup>	59	1,045

**Table A2: Number of applications and approvals for capital projects**

	2015–2016	Since inception
Applications submitted <sup>1</sup>	10	587
Approvals <sup>2</sup>	12	298

<sup>1</sup> Number of applications submitted to FCM for GMF funding. The submission year is based on the date FCM received the application.

<sup>2</sup> Number of applications approved by the FCM Board, based on the Board-approved date. Applications approved in a given fiscal year may have been submitted in a previous fiscal year.

**Table A3: Approved sustainable community plans, feasibility studies and pilot projects by region since inception** (Dollar figures presented in \$1000s, with the exception of per capita)

Region/province	Population <sup>4</sup>	% of pop. (%)	2015–2016					Total net approved since inception <sup>3</sup>					
			#	TPV <sup>5</sup> (\$)	Total grant (\$)	% of total (#) (%)	% of total (\$) (%)	#	Grant (\$)	TPV (\$)	% of total (#) (%)	% of total (\$) (%)	Per capita (\$)
<b>Atlantic</b>	<b>2,327,638</b>	<b>6.95</b>	<b>6</b>	<b>1,633</b>	<b>266</b>	<b>10.17</b>	<b>4.40</b>	<b>101</b>	<b>5,139</b>	<b>12,712</b>	<b>10.67</b>	<b>6.46</b>	<b>2</b>
New Brunswick	751,171	2.24	2	235	105	3.39	1.73	41	1,876	4,764	4.33	2.36	2
Newfoundland and Labrador	514,536	1.54	1	1,079	33	1.69	0.54	15	650	1,547	1.58	0.82	1
Nova Scotia	921,727	2.75	2	255	99	3.39	1.64	39	2,088	5,048	4.12	2.63	2
Prince Edward Island	140,204	0.42	1	64	30	1.69	0.50	6	524	1,353	0.63	0.66	4
<b>British Columbia</b>	<b>4,400,057</b>	<b>13.14</b>	<b>7</b>	<b>1,097</b>	<b>622</b>	<b>11.86</b>	<b>10.28</b>	<b>181</b>	<b>13,794</b>	<b>39,173</b>	<b>19.11</b>	<b>17.35</b>	<b>3</b>
<b>Northern Territories</b>	<b>107,265</b>	<b>0.32</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0.00</b>	<b>23</b>	<b>1,561</b>	<b>4,610</b>	<b>2.43</b>	<b>1.96</b>	<b>15</b>
Northwest Territories	41,462	0.12	0	-	-	0.00	0.00	10	914	2,354	1.06	1.15	22
Nunavut	31,906	0.10	0	-	-	0.00	0.00	4	232	912	0.42	0.29	7
Yukon	33,897	0.10	0	-	-	0.00	0.00	9	415	1,345	0.95	0.52	12
<b>Ontario</b>	<b>12,851,821</b>	<b>38.39</b>	<b>23</b>	<b>6,121</b>	<b>2,315</b>	<b>38.98</b>	<b>38.25</b>	<b>308</b>	<b>27,859</b>	<b>76,360</b>	<b>32.52</b>	<b>35.04</b>	<b>2</b>
<b>Prairies</b>	<b>5,886,906</b>	<b>17.59</b>	<b>7</b>	<b>2,619</b>	<b>813</b>	<b>11.86</b>	<b>13.43</b>	<b>158</b>	<b>14,139</b>	<b>49,222</b>	<b>16.68</b>	<b>17.79</b>	<b>2</b>
Alberta	3,645,257	10.89	4	1,860	548	6.78	9.05	93	8,771	25,579	9.82	11.03	2
Manitoba	1,208,268	3.61	1	135	68	1.69	1.12	30	2,207	12,520	3.17	2.78	2
Saskatchewan	1,033,381	3.09	2	623	198	3.39	3.26	35	3,161	11,122	3.70	3.98	3
<b>Quebec</b>	<b>7,903,001</b>	<b>23.61</b>	<b>16</b>	<b>6,170</b>	<b>2,035</b>	<b>27.12</b>	<b>33.64</b>	<b>176</b>	<b>17,005</b>	<b>58,545</b>	<b>18.59</b>	<b>21.39</b>	<b>2</b>
<b>Total</b>	<b>33,476,688</b>	<b>100.00</b>	<b>59</b>	<b>17,639</b>	<b>6,051</b>	<b>100.00</b>	<b>100.00</b>	<b>947</b>	<b>\$79,497</b>	<b>240,622</b>	<b>100.00</b>	<b>100.00</b>	<b>2</b>

<sup>3</sup> "Total net approved since inception" includes original Board-approved amount plus any additional approved amount, less the amounts that were withdrawn, closed or cancelled.

<sup>4</sup> Source: Statistics Canada 2011 Census

<sup>5</sup> TPV = total project value reported by applicant



**Table A4: Approved capital projects by region**

(Dollar figures presented in \$1000s, with the exception of per capita)

			2015–2016						Total net approved since inception <sup>6</sup>						
Region/province	Population <sup>7</sup>	% of pop. (%)	#	TPV <sup>8</sup> (\$)	Total grant (\$)	Total loan (\$)	% of total (#) (%)	% of total (\$) (%)	#	Grant (\$)	Loan (\$)	TPV (\$)	% of total (#) (%)	% of total (\$) (%)	Per capita (\$)
Atlantic	2,327,638	6.95	2	1,372	104	883	16.67	1.90	28	11,411	93,672	674,455	14.43	15.06	45
New Brunswick	751,171	2.24	1	\$930	58	576	8.33	1.22	9	3,834	33,448	108,124	4.64	5.34	50
Newfoundland and Labrador	514,536	1.54	0	-	-	-	0.00	0.00	6	3,120	25,847	117,562	3.09	4.15	56
Nova Scotia	921,727	2.75	0	-	-	-	0.00	0.00	11	3,530	34,069	446,606	5.67	5.39	41
Prince Edward Island	140,204	0.42	1	\$442	46	307	8.33	0.68	2	927	307	2,164	1.03	0.18	9
British Columbia	4,400,057	13.14	4	67,072	2,011	13,409	33.33	29.71	30	16,397	117,783	683,310	15.46	19.23	30
Northern Territories	107,265	0.32	0	-	0	0	0.00	0.00	1	750	7,500	37,508	0.52	1.18	77
Northwest Territories	41,462	0.12	0	-	-	-	0.00	0.00	0	-	-	-	0.00	0.00	-
Nunavut	31,906	0.10	0	-	-	-	0.00	0.00	1	750	7,500	37,508	0.52	1.18	259
Yukon	33,897	0.10	0	-	-	-	0.00	0.00	0	-	-	-	0.00	0.00	-
Ontario	12,851,821	38.39	2	41,845	669	22,461	16.67	44.56	65	20,420	218,569	1,368,906	33.51	34.25	19
Prairies	5,886,906	17.59	0	-	0	0	0.00	0.00	31	16,392	67,525	367,395	15.98	12.03	14
Alberta	3,645,257	10.89	0	-	-	-	0.00	0.00	17	11,215	36,597	283,782	8.76	6.85	13
Manitoba	1,208,268	3.61	0	-	-	-	0.00	0.00	7	3,658	20,570	50,964	3.61	3.47	20
Saskatchewan	1,033,381	3.09	0	-	-	-	0.00	0.00	7	1,519	10,358	32,648	3.61	1.70	11
Quebec	7,903,001	23.61	4	17,976	1,125	11,247	33.33	23.83	39	19,364	107,993	416,317	20.10	18.25	16
Total	33,476,688	100.00	12	128,265	3,909	48,000	100.00	100.00	194	84,735	613,043	3,547,890	100.00	100.00	21

<sup>6</sup> "Total net approved since inception" includes original Board-approved amount plus any additional approved amount, less the amounts that were withdrawn, closed or cancelled.<sup>7</sup> Source: Statistics Canada 2011 Census<sup>8</sup> TPV = total project value reported by applicant

**Table A5: Approved initiatives by region (sustainable community plans, feasibility studies, pilot projects and capital projects)** (Dollar figures presented in \$1000s, with the exception of per capita)

			2015–2016						Total net approved since inception <sup>9</sup>						
Region/province	Population <sup>10</sup>	% of pop.	#	TPV <sup>11</sup> (\$)	Total grant (\$)	Total loan (\$)	% of total (#) (%)	% of total (\$) (%)	#	Grant (\$)	Loan (\$)	TPV (\$)	% of total (#) (%)	% of total (\$) (%)	Per capita (\$)
Atlantic	2,327,638	6.95	8	3,005	370	883	11.27	2.16	129	16,550	93,672	687,168	11.31	14.18	47
New Brunswick	751,171	2.24	3	1,165	162	576	4.23	1.27	50	5,710	33,448	112,887	4.38	5.04	52
Newfoundland and Labrador	514,536	1.54	1	1,079	33	-	1.41	0.06	21	3,770	25,847	119,109	1.84	3.81	58
Nova Scotia	921,727	2.75	2	255	99	-	2.82	0.17	50	5,618	34,069	451,653	4.38	5.11	43
Prince Edward Island	140,204	0.42	2	\$05	76	307	2.82	0.66	8	1,451	307	3,518	0.70	0.23	13
British Columbia	4,400,057	13.14	11	68,169	2,633	13,409	15.49	27.68	211	30,192	117,783	722,483	18.49	19.04	34
Northern Territories	107,265	0.32			0	0	0.00	0.00	24	2,311	7,500	42,117	2.10	1.26	91
Northwest Territories	41,462	0.12	0	-	-	-	0.00	0.00	10	914	-	2,354	0.88	0.12	22
Nunavut	31,906	0.10	0	-	-	-	0.00	0.00	5	982	7,500	38,419	0.44	1.09	266
Yukon	33,897	0.10	0	-	-	-	0.00	0.00	9	415	-	1,345	0.79	0.05	12
Ontario	12,851,821	38.39	25	47,966	2,984	22,461	35.21	43.90	373	48,279	218,569	1,445,266	32.69	34.33	21
Prairies	5,886,906	17.59	7	2,619	813	0	9.86	1.40	189	30,531	67,525	416,617	16.56	12.62	17
Alberta	3,645,257	10.89	4	1,860	548	-	5.63	0.94	110	19,985	36,597	309,362	9.64	7.28	16
Manitoba	1,208,268	3.61	1	135	68	-	1.41	0.12	37	5,866	20,570	63,485	3.24	3.40	22
Saskatchewan	1,033,381	3.09	2	623	198	-	2.82	0.34	42	4,680	10,358	43,771	3.68	1.93	15
Quebec	7,903,001	23.61	20	24,146	3,160	11,247	28.17	24.86	215	36,369	107,993	474,862	18.84	18.57	18
Total	33,476,688	100.00	71	145,904	9,960	48,000	100.00	100.00	1,141	164,232	613,043	3,788,513	100.00	100.00	23

<sup>9</sup> "Total net approved since inception" includes original Board-approved amount plus any additional approved amount, less the amounts that were withdrawn, closed or cancelled.

<sup>10</sup> Source: Statistics Canada 2011 Census

<sup>11</sup> TPV = total project value reported by applicant

**Table A6: Urban–rural balance of all approved initiatives (sustainable community plans, feasibility studies, pilot projects and capital projects)** (Dollar figures presented in \$1000s, with the exception of per capita)

			2015–2016					Total net approved since inception <sup>12</sup>					
		% of pop. (%)		TPV <sup>14</sup> (\$)	Total (grant & loan) (\$)	% of total (#) (%)	% of total (\$) (%)			Total (grant & loan) (\$)	% of total (#) (%)	% of total (\$) (%)	Per capita (\$)
Municipality type	Population <sup>13</sup>		#					#	TPV(\$)				
Small, rural and remote (rural) <sup>15</sup>	6,329,414	18.90	27	27,024	16,624	38.03	28.70	325	531,854	165,855	28.48	21.34	26
Towns and cities (urban)	27,147,274	81.10	44	118,880	41,336	61.97	71.30	816	3,256,659	611,420	71.52	78.66	23
Total	33,476,688	100.00	71	145,904	57,960	100.00	100.00	1,141	3,788,513	777,275	100.00	100.00	23

<sup>12</sup> “Total net approved since inception” includes original Board-approved amount plus any additional approved amount, less the amounts that were withdrawn, closed or cancelled.

<sup>13</sup> Source: Statistics Canada 2011 Census

<sup>14</sup> TPV = total project value reported by applicant

<sup>15</sup> Municipalities with a population of less than 10,000 are classified as rural. In the case of regional municipal governments, to be considered rural, each member municipality must have a population of less than 10,000. Urban regional municipalities are those where at least one member municipality has a population of 10,000 or more.



## Appendix B: Fund management

**Table B1: Amount and type of funding disbursed**

	2015–2016 (\$)	Since inception(\$)
Grants for plans, feasibility studies and pilot projects	3,824,454	67,937,967
Grants for capital projects	7,894,249	62,013,945
Project Performance Reporting Grant Agreement (PPRGA) grants for capital projects <sup>1</sup>	39,023	1,289,702
Loans for capital projects	80,081,774	441,560,387
<b>Total</b>	<b>91,839,500</b>	<b>572,802,001</b>

**Table B2: Performance of unallocated funds**

Fiera Capital manages the portion of the Fund that has not yet been disbursed to initiatives. Directives for investments of these unallocated funds are contained in the GMF Investment Policy and Strategy. This document was revised in November 2015 to ensure sufficient returns for the Fund, in line with the Fund's objectives and financial sustainability.

The following table illustrates the rate of return on unallocated funds in 2015–2016 and since inception.

	2015–2016	Since inception
<b>Return on investment</b>	0.84%	5.26%

<sup>1</sup> Approvals under Project Performance Reporting Grant Agreement (PPRGA) grants for capital projects ended in August 2006.

### Table B3: Senior management compensation

GMF senior management consists of one senior director and six senior managers — one for each of the following business units: Funding Services, Knowledge Services, Research and Development, Marketing and Communications, Risk Management, and Governance and Performance Measurement.

Their remuneration for the fiscal year 2015–2016 was based on the salary ranges listed below.

#### From April 1, 2015 to March 31, 2016

Senior director	\$120,000 to \$170,000
Senior managers	\$99,600 to \$127,500

In addition to a salary, employees receive a contribution to a group RRSP (five per cent of their annual salary) and group benefits.

### Compensation for GMF Council members and peer reviewers

GMF Council members, except for federal government appointees and FCM Board members, may claim an honorarium of \$350 for each day of a Council meeting, plus a one-day honorarium to cover preparation time. For teleconference meetings, a half-day honorarium rate of \$175 may be claimed, plus a half-day honorarium to cover preparation time.

GMF peer reviewers may claim fees of \$800 per day (based on a seven-hour work day). A maximum of one hour per application is the set benchmark; however, for more complex files, additional review time may be granted if requested prior to assessment. While the Funding Agreement permits compensation for peer reviewers appointed by the federal government, none have made any claims since GMF's inception.

## Appendix C: GMF Council members

### Members representing the municipal sector

Councillor Ben Henderson, Chair  
City of Edmonton, AB  
*Appointed February 2015*

Councillor Andrea Reimer  
City of Vancouver, BC  
*Appointed April 2015*

Mayor Mark Heyck, Vice-Chair  
City of Yellowknife, NT  
*Appointed August 2007*

Mayor Berry Vrbanovic  
City of Kitchener, ON  
*Appointed April 2015*

Mayor Martin Damphousse  
City of Varennes, QC  
*Appointed January 2014*

### Members representing the private and academic sectors

Andrew Bowerbank, Director  
Sustainable Business Services  
EllisDon Corporation  
*Appointed January 2012*

Karen Nasmith, Managing Director, Co-Founder  
Project Neutral  
*Appointed January 2012*

Nirmalendu Bhattacharya, P.Eng., MCIP  
Professional Engineer and Planner  
*Appointed January 2012*

Guy Burry, Chairman  
Craigellachie Corporation  
*Appointed September 2015*

Alexander Wood, Senior Director  
Policy and Markets, Sustainable Prosperity  
*Appointed January 2012*  
*(Resigned June 2015)*

Marco Perron, CPA, CA, CRMA  
Partner, Raymond Chabot Grant Thornton  
CEO, RCGT Consulting Inc.  
*Appointed September 2015*



## Members representing the federal government

Permanent seat	Alternate
<p>Dr. Gilles Jean, Director General Varennés Research Centre – CanmetENERGY Innovation and Energy Technology Centre Natural Resources Canada <i>Appointed September 2012</i> <i>Appointed as Alternate August 2004</i></p>	<p>Dr. Lisa Dignard, Director Integration of Renewable and Distributed Energy Resources Program Varennés Research Centre – CanmetENERGY Innovation and Energy Technology Centre Natural Resources Canada <i>Appointed September 2012</i></p>
<p>Philippe Morel, Regional Director General Atlantic and Quebec Regions Environment and Climate Change Canada <i>Appointed March 2012</i> <i>Appointed as Alternate November 2010</i> <i>(Resigned November 2015)</i></p>	<p>Susan Humphrey Associate Regional Director General – Ontario Region Environment and Climate Change Canada <i>Appointed November 2014</i></p>
<p>Eric Gagné, Director General Science and Technology Strategies Directorate Environment and Climate Change Canada <i>Appointed November 2013</i></p>	<p>Dr. Charles Lin, Director General Atmospheric Science and Technology Directorate Environment and Climate Change Canada <i>Appointed March 2012</i></p>
<p>Sonya Read, Director Policy and Communications Environmental Initiatives Infrastructure Canada <i>Appointed September 2012</i></p>	<p>No alternate</p>
<p>Permanent seat vacant in 2015-2016</p>	<p>Claude Lefrançois, Senior Chief Communities, Housing Division Office of Energy Efficiency, Energy Sector Natural Resources Canada <i>Appointed September 2012</i></p>

## Appendix D: Assessment and approval process

Eligible GMF funding applications are assessed by the GMF Peer Review Committee against a set of criteria established by GMF Council and approved by the FCM Board of Directors. The criteria, shown in tables D1–D4, are used to assess the expected sustainability performance, knowledge value and management approach of each initiative, with an emphasis on anticipated environmental benefits. In 2015–2016, GMF introduced new criteria for the evaluation of capital projects, to encourage an optimal range of environmental benefits, level of public consultation and approach to measurement. These criteria will push project proponents toward stronger project planning that supports long-term success.



The GMF Peer Review Committee is comprised of approximately 60 independent experts with specific environmental, project management or financial expertise. The FCM Board of Directors selects all members of the committee. One-third of members are selected from a list (provided by the ministers of Natural Resources Canada and Environment and Climate Change Canada) of qualified candidates representing federal departments. The remaining members are selected through a call for applications. Of the other peer reviewers, one-third are experts from municipal governments and one-third are experts from private sector or non-governmental organizations. Members are appointed to the committee for a two-year term and may be reappointed for one or more two-year terms based on participation, turnover and the need for a balance of technical and financial expertise.

A minimum of two peer reviewers assess applications for plans, studies and pilots and a minimum of three peer reviewers assess applications for capital projects.

After peer review assessment, applications are submitted to GMF Council for consideration. During this review, GMF Council considers a number of factors, including the independent peer review score, GMF funding priorities as outlined in FCM's Funding Agreement with the Government of Canada, regional balance, level of innovation, and available funding. GMF Council recommends only the most exceptional projects for funding, and submits these recommendations to the FCM Board of Directors.

### **Funding sectors and objectives**

FCM offers GMF funding for five sectors: brownfield, energy, transportation, water and waste. Following are the overall objectives for each sector:

-  Promote the redevelopment of brownfield sites and avoid “greenfield” development.
-  Reduce energy consumption and GHG emissions through measures such as efficiency, conservation, demand management and energy recovery, and by promoting renewable or waste energy use.



- Reduce fossil fuel consumption and emissions for transportation, through projects that encourage modal shift away from single-occupancy vehicles or that encourage fleet fuel efficiency or fleet fuel switching.
- Reduce potable water use and loss, or protect local water bodies through measures such as demand management, water efficiency, water recovery, or stormwater or wastewater treatment.
- Reduce, reuse or recycle material that would otherwise enter the waste stream (also reducing GHG emissions from landfills).

## Plans, feasibility studies and pilots

Table D1: Assessment criteria for plans

Rated criteria	Maximum score
Sustainability considerations	15
Linkages to existing plans and policies	15
Systems approach	20
Innovative practices and technologies — beyond business as usual	10
Potential for replication and lessons learned	10
Management capacity (project management)	10
Work plan	10
Budget	10
<b>Total</b>	<b>100</b>

Table D2: Assessment criteria for feasibility studies and pilots

Rated criteria	Maximum score
Expected environmental benefits	25
Links to existing plans and policies	10
Systems approach	10
Community Benefits	5
Innovative practices and technologies — beyond business as usual	10
Replication potential and lessons learned	10
Project management	10
Work plan	10
Budget	10
<b>Total</b>	<b>100</b>



## Capital projects

Table D3: Assessment criteria for capital projects — energy, transportation, water, waste

Rated criteria	Maximum score
<b>Environmental performance</b>	
Primary sector: Water or energy performance or waste reduction	20
Secondary sector: Water or energy performance or waste reduction	5
Secondary sector: Water or energy performance or waste reduction	5
Sustainable design, procurement and construction	10
<b>Total (environmental performance)</b>	<b>40</b>
<b>Other benefits</b>	
Financial performance and sustainability	10
Community benefits	10
Community engagement	5
Alignment with supportive plans, policies, programs and investment	10
Measurement systems	10
Replication potential	15
<b>Total (other benefits)</b>	<b>60</b>
<b>Total score</b>	<b>100</b>
<b>Project management</b>	<b>"Traffic light" rating system<sup>1</sup></b>
Project team	red, yellow, green
Risk management and timelines	red, yellow, green
Finance	red, yellow, green

<sup>1</sup> Project management is scored according to three ratings — red, yellow and green — similar to traffic lights. A **red light** means the peer reviewers identified serious issues, such as inadequacies in planning, project team or budget, or major gaps in the design that could prevent the project from being successfully completed on time and within budget or from delivering expected benefits. A **yellow light** means the reviewers identified some weaknesses or minor issues. The applicant would benefit from addressing them, but they should not prevent the project from being completed or delivering the expected benefits. A **green light** means the peer reviewers identified no notable concerns.

Table D4: Assessment criteria for capital projects — brownfields

Rated criteria	Maximum score
<b>Environmental performance</b>	
Brownfield remediation, risk management and brightfields — direct environmental benefits	30
Sustainable practices	10
<b>Total (environmental performance)</b>	<b>40</b>
<b>Other benefits</b>	
Financial performance and sustainability	10
Community benefits	10
Community engagement	10
Alignment with supportive plans, policies, programs and investment	10
Measurement systems	10
Potential for replication by other municipalities	10
<b>Total (other benefits)</b>	<b>60</b>
<b>Total score</b>	<b>100</b>
<b>Project management</b>	
	<b>“Traffic light” rating system<sup>2</sup></b>
Project team	red, yellow, green
Risk management and timelines	red, yellow, green
Finance	red, yellow, green

<sup>2</sup> Project management is scored according to three ratings — red, yellow and green — similar to traffic lights. A **red light** means the peer reviewers identified serious issues, such as inadequacies in the planning, project team or budget, or major gaps in the design that could prevent the project from being successfully completed on time and within budget or from delivering expected benefits. A **yellow light** means the reviewers identified some weaknesses or minor issues. The applicant would benefit from addressing them, but they should not prevent the project from being completed or delivering the expected benefits. A **green light** means the peer reviewers identified no notable concerns.

## Appendix E: GMF initiatives approved in 2015–2016

The FCM Executive Committee approved the following initiatives in 2015–2016. These initiatives were assessed to have the potential to result in significant environmental improvements in air, water and soil quality, including reductions in GHG emissions.

Project information	Lead applicant	GMF grant	GMF loan	Total project value
<b>Alberta</b>				
LAMP — City of Airdrie (GMF 15019)	City of Airdrie	\$175,000	-	\$900,296
LAMP — City of Edmonton (GMF 15031)	City of Edmonton	\$150,000	-	\$375,000
Town of Drayton Valley's Aquatic Facility Net Zero Design (GMF 15005)	Town of Drayton Valley	\$47,500	-	\$95,000
Victoria Park Complex Enhanced Irrigation Pilot (GMF 13137)	Town of Raymond	\$175,000	-	\$490,000
<b>British Columbia</b>				
LAMP — City of Nanaimo (GMF 15025)	City of Nanaimo	\$175,000	-	\$378,500
City of Nelson (Nelson Hydro) Biomass District Energy System (GMF 15045)	City of Nelson	\$613,280	\$4,088,400	\$6,146,500
LAMP — City of Revelstoke (GMF 15027)	City of Revelstoke	\$69,500	-	\$140,070



Project information	Lead applicant	GMF grant	GMF loan	Total project value
Minoru Complex Neighbourhood Energy Utility Solar Feasibility Study (GMF 15060)	City of Richmond	\$69,000	-	\$138,000
Micro-Sewer Heat Recovery District Energy Utility Feasibility Study (GMF 15061)	City of Richmond	\$83,000	-	\$166,000
Terrace Co-op Site Brownfield Investigation and Subdivision (GMF 13126)	City of Terrace	\$72,100	-	\$144,200
LAMP — City of Vancouver (GMF 15030)	City of Vancouver	\$32,500	-	\$65,000
South Regional Wastewater Management and Resource Recovery (GMF 15048)	Comox Valley Regional District	\$933,700	\$6,225,000	\$56,473,000
Saanich Gordon Head Recreation Centre Boiler Replacement (GMF 15046)	District of Saanich	\$125,490	\$836,630	\$1,202,650
Until We Meet Again Waste Heat Recovery — City of North Vancouver (GMF 15049)	Lonsdale Energy Corporation	\$338,900	\$2,259,100	\$3,250,000
Supplemental Detailed Site Investigation and Remediation Plan, 1235 Esquimalt Road, (GMF 13112) <sup>1</sup>	Township of Esquimalt	\$88,350	-	n/a
LAMP — Township of Langley (GMF 15029)	Township of Langley	\$32,500	-	\$65,000

<sup>1</sup> “The total grant amount approved in 2015–2016 for British Columbia includes an additional grant amount that was approved as a scope change request for this project (the application was originally approved in 2014–2015).”

Project information	Lead applicant	GMF grant	GMF loan	Total project value
<b>Manitoba</b>				
Arborg-Bifrost-Riverton Sustainable Community Development Plan (GMF 15040)	Arborg-Bifrost Community Development Corporation Inc.	\$67,650	-	\$135,300
<b>New Brunswick</b>				
LAMP — City of Fredericton (GMF 15012)	City of Fredericton	\$49,775	-	\$99,550
Downtown Community Improvement Plan — A Master Plan for the “Downtown Core” Revitalization (GMF 15062)	City of Moncton	\$55,000	-	\$135,000
Former Kings County Court House Energy Retrofit and Renewal (GMF 13138)	Town of Hampton	\$57,575	\$575,760	\$930,380
<b>Newfoundland and Labrador</b>				
LAMP — Town of Marystown (on behalf of towns of Burin, St. Lawrence, Fortune and Grand Bank) (GMF 15023)	Town of Marystown	\$32,500	-	\$1,079,359
<b>Nova Scotia</b>				
LAMP — Municipality of the County of Kings (GMF# 15020)	County of Kings	\$32,500	-	\$65,000
Bridgewater Community Energy Initiative (GMF 15055)	Town of Bridgewater	\$66,600	-	\$190,400
<b>Ontario</b>				
Stormwater Management for Exhibition Place, Toronto (GMF 13146)	Board of Governors of Exhibition Place	\$132,495	-	\$264,990

Project information	Lead applicant	GMF grant	GMF loan	Total project value
Burton Sanitation Redevelopment — Risk Assessment and Risk Management Plan <i>(GMF 15004)</i>	BPE Development	\$40,381	-	\$80,762
Bruce Street Redevelopment Feasibility Study for the City of Oshawa <i>(GMF 13118)</i>	Bruce Street Developments Limited	\$155,100	-	\$322,700
Energy Reduction Feasibility Study for the Brampton Fire Station #204 <i>(GMF 15059)</i>	City of Brampton	\$8,250	-	\$16,500
Greenwich Mohawk Brownfield Remediation — Full-Scale Implementation <i>(GMF 15000)</i>	City of Brantford	-	\$18,000,000	\$35,432,700
Burlington Integrated Community Energy Systems Feasibility Study <i>(GMF 13130)</i>	City of Burlington	\$162,250	-	\$324,500
Using Permeable Paving and Bioswales to Protect Wetlands in the Huron Natural Areas <i>(GMF 13136)</i>	City of Kitchener	\$175,000	-	\$597,580
Using Source-Separated Organics to Create Renewable Natural Gas for Vehicle Fuel <i>(GMF 13139)</i>	City of London	\$12,760	-	\$43,920
Markham Textile and Clothing Reuse and Recycle Initiative <i>(GMF 15003)</i>	City of Markham	\$67,100	-	\$134,200
Environmental Due Diligence at 70 Front Street North in Orillia <i>(GMF 15033)</i>	City of Orillia	\$40,350	-	\$85,100
LAMP — City of Ottawa <i>(GMF 15013)</i>	City of Ottawa	\$120,000	-	\$244,720
LAMP — City of Windsor <i>(GMF 15015)</i>	City of Windsor	\$65,000	-	\$150,000



Project information	Lead applicant	GMF grant	GMF loan	Total project value
Windsor's PCP Corporate and Community Climate Change Action Plan (GMF 15010)	City of Windsor	\$148,300	-	\$297,200
Flood and Erosion Control Project on Stoney Creek Mountain (GMF 13144)	Hamilton Conservation Authority	\$175,000	-	\$429,000
McMaster Innovation Park — District Energy System Expansion (GMF 15058)	Hamilton Utilities Corporation	\$175,000	-	\$1,060,400
LAMP — Municipality of North Grenville (GMF 15026)	Municipality of North Grenville	\$94,100	-	\$197,000
Red Lake Events Centre Feasibility Study (GMF 13129)	Municipality of Red Lake	\$75,050	-	\$150,100
Phase II ESA for the McKellar Street Brownfield Redevelopment Project (GMF 13131)	Municipality of Southwest Middlesex	\$8,800	-	\$17,600
Concession Street Energy-Efficient Affordable Housing (GMF 15034)	Tillsonburg Properties for Community Living	\$172,600	-	\$349,500
Energy retrofit for Bradford West Gwillimbury Wastewater Treatment Plan (GMF 15051)	Town of Bradford-West Gwillimbury	\$56,050	-	\$112,100
Caledon Pilot SNAP (Sustainable Neighbourhood Retrofit Action Plan) (GMF 15069)	Town of Caledon	\$149,875	-	\$378,250
Urban Centre Wastewater Servicing Class Environmental Assessment (GMF 15042)	Town of Erin	\$175,000	-	\$600,000
Innovation Park Development (Environmental Assessment) (GMF 13125)	Town of Laurentian Hills	\$16,000	-	\$84,510

Project information	Lead applicant	GMF grant	GMF loan	Total project value
Perth Submerged Attached Growth Reactor (GMF 15043)	Town of Perth	\$669,130	\$4,460,870	\$6,412,500
Feasibility Studies for Proposed Net Zero Fire Hall and Affordable Net Zero Energy Housing Project (GMF 15006)	Township of Middlesex Centre	\$90,090	-	\$180,180
<b>Prince Edward Island</b>				
Montague Sludge Dewatering System (GMF 15038)	Town of Montague	\$46,090	\$307,270	\$441,700
Stratford Community Energy and Greenhouse Gas Reduction Plan (GMF 15063)	Town of Stratford	\$30,000	-	\$63,500
<b>Quebec</b>				
Wastewater Heat Recovery Feasibility Study, Connaught Eco-Neighbourhood (GMF 15035)	City of Gatineau	\$15,950	-	\$31,900
Wastewater collection and treatment – Lac-Sergent (GMF 13135)	City of Lac-Sergent	\$577,178	\$5,771,782	\$10,307,600
Master Plan for Sustainable Redevelopment of the Roland-Therrien sector (GMF 13133)	City of Longueuil	\$73,462	-	\$415,843
Land Use and Sustainable Development Master Plan for the Place Charles-Le Moyne Hub (GMF 13142)	City of Longueuil	\$175,000	-	\$753,405
Master Plan for Sustainable Development (MPSD ) of the Longue Rive sector (GMF 13141)	City of Longueuil	\$175,000	-	\$726,775

Project information	Lead applicant	GMF grant	GMF loan	Total project value
Mobility Study, Longue Rive and Place Charles-Le Moyne Hub (GMF 13143)	City of Longueuil	\$175,000	-	\$392,531
Development and Testing of Two All-Electric Police Motorcycle Prototypes (GMF 15041)	City of Longueuil	\$186,600	-	\$373,200
Construction of a Net-Zero Energy Waterfront Site and Visitor Centre on Parours Gouin (GMF 13122)	City of Montreal – Ahuntsic-Cartierville Borough	\$321,380	\$3,213,800	\$4,419,000
Innovative Financing Mechanisms for Efficient Municipalities (FIME) (GMF 15036)	Comité de promotion industrielle de Plessville (Committee to promote the industrial zone of Plessisville)	\$260,000	-	\$1,121,000
Use of Phytoremediation to Revitalize Former Industrial Sites in Montreal-East (GMF 15068)	Institut de recherche en biologie végétale (Institute for research in plant biology)	\$350,000	-	\$862,600
Sustainable Municipality Action Plan (GMF 13134)	Municipality of Chelsea	\$15,000	-	\$33,000
Feasibility Study of Bike Lanes and a Multi-Use Path (GMF# 15032)	Municipality of Chelsea	\$64,900	-	\$129,800
Energy-Efficient Renovation of the Saint-Valérien Community Centre (GMF 13128)	Municipality of Saint-Valérien	\$179,142	\$1,791,418	\$2,463,200
The Haut-Pays Mobilized: Joint Sustainability Action Plans for Four Rimouski-Neigette Municipalities (GMF 13140)	Neigette Community Development Corporation	\$59,067	-	\$120,135
Responsible Development for the Municipality of Sainte-Louise (GMF 13132)	Parish of Sainte-Louise	\$22,100	-	\$45,200



Project information	Lead applicant	GMF grant	GMF loan	Total project value
Particle-size sorting of household waste — field test (GMF 13124)	Regional municipality of Haute-Côte-Nord	\$50,324	-	\$74,200
Regional Electric Car-Sharing System (SAUVÉR) Pilot Project (GMF 15054)	Société d'innovation en environnement (Society for Environmental Innovation)	\$350,000	-	\$932,970
EcoLoan Program for Replacing Septic Systems (GMF 13121)	Township of Gore	\$47,018	\$470,182	\$785,700
Making L'Isle-Verte the First Responsible Northern Eco-Municipality in Quebec (GMF 15037)	Village of L'Isle-Verte	\$32,835	-	\$87,270
Strategic Sustainability Planning (Reinvent Your Space!) (GMF 15008)	Corporation de développement économique et industriel de Weedon (Weedon Economic and Industrial Development Corporation)	\$30,250	-	\$70,300
<b>Saskatchewan</b>				
LAMP — City of Melville (GMF 15009)	City of Melville	\$32,500	-	\$65,000
Regional Aerated Lagoon Feasibility Study (GMF 15047)	Rural Municipality of Frenchman Butte No. 501	\$165,000	-	\$558,000
<b>Total</b>		<b>\$9,959,897</b>	<b>\$48,000,212</b>	<b>\$145,904,046</b>

## Appendix F: Environmental results

**Table F1: Anticipated environmental benefits of approved capital projects that have not yet reported results, from inception to 2015–2016 (inclusive)**

		Indicators							
GMF sector		# of projects	Land recovered (ha)	Contaminated soil managed (m <sup>3</sup> )	Greenhouse gas emissions avoided (tonnes CO <sub>2</sub> e/yr) <sup>1</sup>	Criteria air contaminant (CAC) emissions avoided (kg/yr) <sup>2</sup>	Waste diverted (tonnes/yr)	Wastewater treated (m <sup>3</sup> /yr)	Reductions in water use (m <sup>3</sup> /yr)
Brownfields	Approved in 2015–2016	1	21	115,905	0	0	0	0	0
	Since inception	4	51	359,084	0	0	0	0	0
Energy	Approved in 2015–2016	6	0	0	3,016	1,356	0	0	1,123
	Since inception	25	4	0	112,288	155,471	1,523	0	14,812
Transportation	Approved in 2015–2016	0	0	0	0	0	0	0	0
	Since inception	2	0	0	3,440	18,169	0	0	0
Waste	Approved in 2015–2016	0	0	0	0	0	0	0	0
	Since inception	8	0	0	447,732	155,594	313,361	0	0
Water	Approved in 2015–2016	5	0	0	667	-24	15	3,348,025	0
	Since inception	17	0	0	721	157	15	12,551,786	32,919
Total	Approved in 2015–2016	12	21	115,905	3,683	1,332	15	3,348,025	1,123
	Since inception	56	55	359,084	564,181	329,391	314,899	12,551,786	47,731

<sup>1</sup> GHG emissions for energy projects are calculated based on provincial average electrical emissions intensities. GMF supports energy efficiency and conservation, which are not always reflected in significant GHG emission changes. This is because of differences in provincial electricity sources.

<sup>2</sup> Criteria Air Contaminant (CAC) emissions include nitrogen oxides (NO<sub>x</sub>), sulphur oxides (SO<sub>x</sub>), volatile organic compounds (VOCs), and particulate matter (PM<sub>10</sub>).

**Table F2: Anticipated versus actual environmental benefits reported for capital projects in 2015–2016<sup>3</sup>**

		Sectors						
		Brownfields	Energy	Transportation	Waste	Water		Total
Number of projects		2	8	0	2	8	20	
Indicators	Land recovered (ha)	Anticipated	3	0	0	0	0	3
		Actual	3	0	0	0	0	3
	Contaminated soil managed (m³)	Anticipated	10,394	0	0	0	0	10,394
		Actual	12,680	0	0	0	0	12,680
	Greenhouse gas emissions avoided (tonnes CO <sub>2</sub> e/yr)	Anticipated	0	3,978	0	16,338	1,510	21,826
		Actual	0	3,837	0	23,634	4,067	31,538
	CAC emissions avoided (kg/yr)	Anticipated	0	2,867	0	0	14,038	16,905
		Actual	0	39,841 <sup>4</sup>	0	0	2,752	42,593
	Waste diverted (tonnes/yr)	Anticipated	0	0	0	16,337	0	16,337
		Actual	0	0	0	18,506	0	18,506
	Wastewater treated (m³/yr)	Anticipated	0	0	0	0	93,914,975	93,914,975
		Actual	0	0	0	0	83,775,074	83,775,074
	Reductions in water use (m³/yr)	Anticipated	0	0	0	0	52,000	52,000
		Actual	0	0	0	0	61,990	61,990

<sup>3</sup>Two capital projects (one in wastewater and one in the energy sector) reported some environmental results through progress reports, but were unable to complete the project or the final reporting, or both. These projects were cancelled after partial disbursement, but some of the environmental results are reported here.

<sup>4</sup>One project installed an electrostatic precipitator, which was not part of the initial design but which significantly reduced particulate matter emissions.



**Table F3: Anticipated vs. actual environmental benefits reported for capital projects since inception (updated for 2015–2016)**

			Sectors					
			Brownfields	Energy	Transportation	Waste	Water	
# of projects			8	71	5	15	40	139
Indicators	Land recovered (ha)	Anticipated	77	0	0	0	0	77
		Actual	77	0	0	0	0	77
	Contaminated soil managed (m³)	Anticipated	63,194	0	0	0	0	63,194
		Actual	69,308	0	0	0	0	69,308
	Greenhouse gas emissions avoided (tonnes CO <sub>2</sub> e/yr)	Anticipated	0	214,540	27,249	380,409	7,398	629,596
		Actual	0	176,412	28,390	160,877	12,955	378,634
	CAC emissions avoided (kg/yr)	Anticipated	0	456,778	133,822	8,137	18,482	617,220
		Actual	0	295,870	141,065	8,073	7,031	452,039 <sup>5</sup>
	Waste diverted (tonnes/yr)	Anticipated	0	0	0	245,215	0	245,215
		Actual	0	1,543	0	168,119	0	169,662
	Wastewater treated (m³/yr)	Anticipated	0	0	0	0	273,930,800	273,930,800
		Actual	11,863	0	0	0	242,600,507	242,612,370
	Reductions in water use (m³/yr)	Anticipated	0	8,824	0	0	477,797	486,622
		Actual	0	41,637	0	0	267,865	309,502 <sup>6</sup>
	Solid waste treated (m³)	Anticipated	0	0	0	0	7,000	7,000
		Actual	0	0	0	0	35,000	35,000

It should be noted that over time some projects do not achieve their expected performance. This is reflected in the differences between actual and anticipated results in the table above. In most cases, however, projects have achieved or exceeded their anticipated performance.

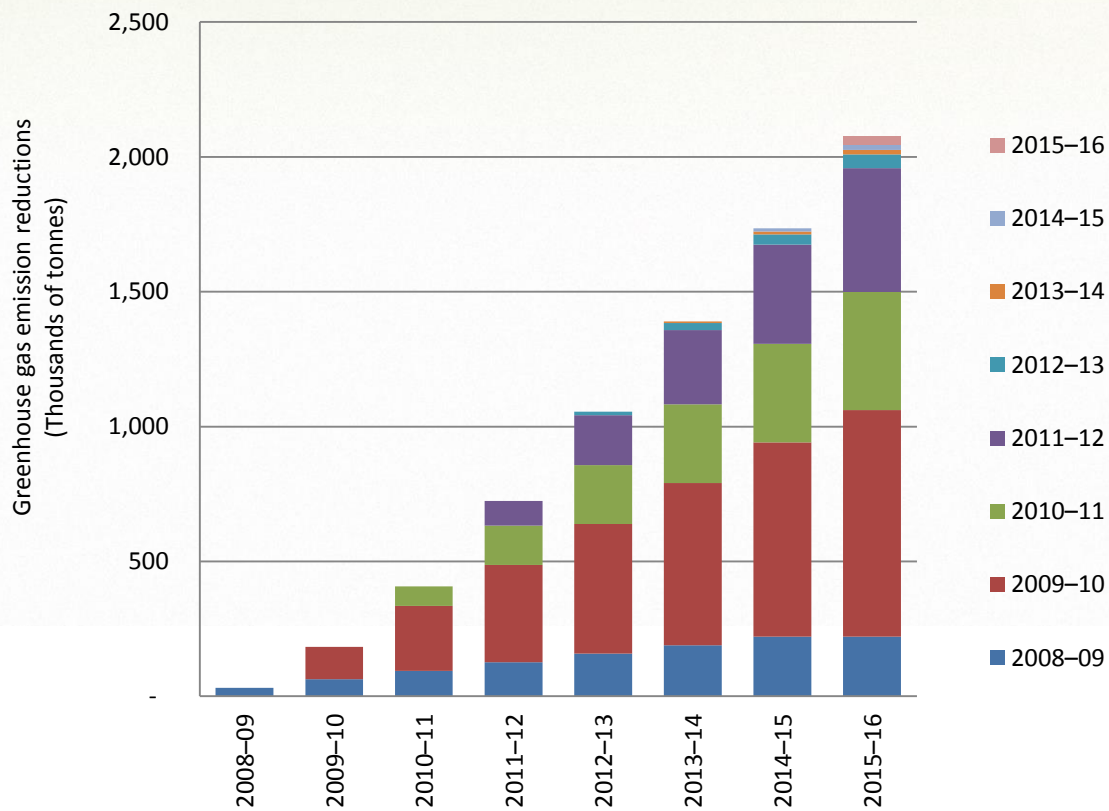
<sup>5</sup> A review of the environmental results identified a miscalculation of CAC emissions avoided from a project that reported in 2011–2012. The data has been recalculated, resulting in actual results since inception being reduced by about 40,000 kg.

<sup>6</sup> A review of the environmental results identified a miscalculation in the reduction of water use from a project that reported in 2011–2012. The data has been recalculated, resulting in a reduction of actual results since inception by about 78,000 cubic meters.

## A new approach to GHG reporting

Based on a review of internationally accepted standards for reporting greenhouse gas (GHG) emissions, GMF is adopting a new approach to reporting cumulative GHG emissions avoided. A key assumption of the approach is that GMF funds projects that are better than business as usual (BAU) even after the first year of operation. Based on this assumption, GMF will determine the cumulative GHG emissions avoided based on these better than BAU benefits, continuing for seven years — the same length of time as the crediting period of the United Nations' Clean Development Mechanism. On an annual basis, any changes to the carbon profile of electricity consumed from the grid will be incorporated into the reduction for that given year. This new approach will provide a better picture of the overall positive GHG impacts generated by GMF-funded projects. As is shown in Figure F1, based on this approach, the total cumulative greenhouse gas emission reductions from all GMF projects that have reported to date is **2.1 million tonnes**. This is several times larger than the cumulative annual (one-time-only) figure, shown in Table F3, of **378,634 tonnes**.

**Figure F1: Cumulative GHG emission reductions by project year**



**Table F4: Details on projects that reported environmental results in 2015–2016**

Project information	Anticipated results	Actual results	Comments
<p>(1) St. John's, NL, 2004</p> <p>Sector: Water</p> <p><b>Harbour Sewage Treatment Plant</b></p> <p><i>Construction of a primary wastewater treatment plant</i></p>	43.7 million cubic meters of wastewater treated to primary standards	37.2 million cubic meters of wastewater treated to primary standards	<p>There were a number of operational challenges associated with the project.</p> <p>This was one of the first projects approved by FCM. At that time, none of GMF's grant funding was tied to environmental results reporting. Because it was not required, the municipality did not provide full, final, independent third-party-verified environmental results for the project. FCM determined the actual environmental results of this project, based on progress reports and other supporting documentation.</p>
<p>(2) Prince George, BC, 2006</p> <p>Sector: Energy</p> <p><b>Community Energy Project</b></p> <p><i>Construction of a new hot water community district energy system</i></p>	<p>Greenhouse gas emissions reduced by 1,795 tonnes per year</p> <p>Natural gas energy use decreased by 35,900 GJ per year</p> <p>22,900 GJ of energy generated from residual biomass</p>	<p>Greenhouse gas emissions reduced by 1,820 tonnes per year</p> <p>Natural gas energy use decreased by 36,400 GJ per year</p> <p>24,300 GJ of energy generated from residual biomass</p>	<p>The municipality originally anticipated that the district energy system would connect to 23 public and privately owned buildings. For a number of reasons, including the economic recession of 2008, the timing of the project, high initial connection costs, and a confusing rate structure, the owners of the private-sector buildings did not participate in the project. Consequently, the project only connected to eight public-sector buildings. Since project completion, Prince George has revised the pricing structure and is in discussion with the private building owners regarding connecting their buildings to the district energy system.</p> <p>The community district energy system is now in operation, providing heat to eight buildings. The environmental results are in line with the anticipated results for the revised project scope.</p>



Project information	Anticipated results	Actual results	Comments
<p>(3) Sunshine Coast Regional District, BC, 2006</p> <p>Sector: Water</p> <p><b>Securing Drinking Water Quality and Quantity in Electoral Area A Sunshine Coast</b>  <i>Construction of water main extensions, construction of water treatment facilities, installation of water-efficient fixtures and universal metering for seven communities</i></p>	0.7 million m <sup>3</sup> of drinking water treated to Canadian drinking water quality guidelines per year	0.8 million m <sup>3</sup> of drinking water treated to Canadian drinking water quality guidelines per year	<p>The project met expectations and performed well in the following areas:</p> <ul style="list-style-type: none"> <li>• connecting water systems to the treatment facility</li> <li>• treating drinking water to Canadian Drinking Water Quality Guidelines</li> <li>• installing universal metering and user-pay pricing</li> </ul> <p>While the project met expectations, the baseline data provided at the outset was conservative, as the municipality had a weak understanding of the water consumption of the seven targeted communities. As a result, the municipality was not able to provide a good estimate of expected reductions in the consumption of drinking water. In addition, the installation of the meters took longer than expected. It is expected that, as more meters are installed and user-pay pricing is established, water consumption will be reduced in the community, as has been experienced in other jurisdictions.</p>
<p>(4) Rimouski-Neigette RMC, QC, 2007</p> <p>Sector: Waste</p> <p><b>Establishment of an eco-centre in the Rimouski-Neigette MRC</b></p>	<p>11,337 more tonnes of waste diverted from landfill (a waste diversion rate of 50.2%)</p> <p>Greenhouse gas emissions reduced by 16,338 tonnes per year as a result of less waste going to the landfill</p>	<p>8,440 more tonnes of waste diverted from landfill (a waste diversion rate of 51.3%)</p> <p>Greenhouse gas emissions reduced by 12,020 tonnes per year as a result of less waste going to the landfill</p>	<p>Through the project, the municipality achieved a waste diversion rate of 51.3%, which is above the anticipated diversion rate of 50.2% and GMF's threshold of 50%.</p> <p>Although the total tonnage of waste diverted from landfill was less than anticipated, this is because the community generated less waste overall. Of the total amount of waste generated, the proportion diverted from landfill (the waste diversion rate) was higher than anticipated. Because less total waste was diverted than anticipated, there were also fewer GHG reductions than anticipated.</p>
<p>(5) Montreal, QC, 2008</p> <p>Sector: Energy</p> <p><b>Energy Efficiency Improvement Project at the Montreal Insectarium</b></p>	<p>Greenhouse gas emissions reduced by 1 tonne per year</p> <p>Electricity use reduced by 1,216 GJ per year (a 31% reduction in energy use compared to baseline)</p>	<p>Greenhouse gas emissions reduced by 1.5 tonnes per year</p> <p>Electricity use reduced by 1,890 GJ per year (a 37% reduction in energy use compared to baseline)</p>	<p>The Insectarium in Montreal was successfully retrofitted. Part of the reason for this project meeting its energy reduction goals was because the contractor was paid based on an energy performance contract, where payment was tied to the project meeting specific performance goals.</p>

Project information	Anticipated results	Actual results	Comments
(6) Montreal, QC, 2008  Sector: Energy  <b>Energy Efficiency Improvement Project at the Montreal Biodôme</b>	Greenhouse gas emissions reduced by 1,592 tonnes per year  Energy use reduced by 36,500 GJ per year (an increase in electricity of 2,300 GJ and a decrease in steam and cooling water of 38,900 GJ) (a 35% reduction in energy use compared to baseline)	Greenhouse gas emissions reduced by 1,515 tonnes per year  Energy use reduced by 71,795 GJ per year (a decrease in electricity of 3491 GJ and a decrease in steam and cooling water of 68,300 GJ) (a 52% reduction in energy use compared to baseline)	The Biodôme in Montreal was successfully retrofitted. Part of the reason for this project meeting its energy reduction goals was because the contractor was paid based on an energy performance contract, where payment was tied to the project meeting specific performance goals.
(7) Region of Waterloo – Kitchener, ON, 2008  Sector: Water  <b>Region of Waterloo - Kitchener Wastewater Treatment Plant Centrate Management Upgrade Project</b>	29.2 million m <sup>3</sup> of wastewater treated to CCME water quality standards per year	27.3 million m <sup>3</sup> of wastewater treated to CCME water quality standards per year	The upgraded plant successfully treated all the wastewater generated by the community to CCME wastewater standards (although the actual volume of water treated was slightly lower than expected). In addition, the project reduced total ammonia nitrogen, one of the parameters of concern, by 82.5%. The project also reduced chlorine and phosphorous and reduced GHG emissions by 3,690 tonnes per year. These emission reductions are attributed to new processes: dewatering liquid waste and applying more of the biosolids to land instead of sending them to the landfill.
(8) Leamington, ON, 2008  Sector: Water  <b>Leamington Wastewater Treatment Plant — Primary and Secondary Treatment Upgrade</b>	7.8 million m <sup>3</sup> of wastewater treated to CCME water quality standards per year	6.2 million m <sup>3</sup> of wastewater treated to CCME water quality standards per year	The project performed well and in many ways better than expected. The level of treatment for the key parameters was better than anticipated. In addition, the project design included ways to better manage wet weather flows, which resulted in a significant reduction in the frequency and number of sewage bypasses.  The amount of wastewater treated by the facility was less than what was anticipated, as a local food processing plant, the Heinz ketchup facility, had recently closed. Shortly after the closure, the facility was opened by another corporation, which produces only one-third the amount of wastewater as its predecessor.



Project information	Anticipated results	Actual results	Comments
(9) Lambton Shores, ON, 2009  Sector: Energy  <b>Municipality of Lambton Shores LEED Silver Legacy Recreation Centre</b>	Greenhouse gas emissions reduced by 152 tonnes per year	Greenhouse gas emissions reduced by 98 tonnes per year	Lambton Shores' Legacy Recreation Center project performed well in reducing energy use by 40% compared to MNECB. Although the municipality committed to pursuing LEED® SILVER certification, the building exceeded expectations, achieving LEED® GOLD certification in 2013.
	Energy use reduced by 3,610 GJ per year (a decrease in electricity of 1,105 GJ and a decrease in natural gas of 2,390 GJ)	Energy use reduced by 2,526 GJ per year (a decrease in electricity of 1113 GJ and a decrease in natural gas of 1299 GJ)	The actual reduction in energy use (determined through measurement) was 40% — a smaller reduction than the anticipated figure (which was based on modelling). This difference occurred for a number of reasons, including the following:
	115 GJ per year of renewable energy generated	115 GJ per year of renewable energy generated	<ul style="list-style-type: none"> <li>• The model did not take into account the frequency of doors opening and closing and the impact on heat loads.</li> <li>• Auxiliary heating systems have been put in place to improve human comfort (i.e. radiant heaters in the arena). These systems cannot be adequately modelled and they may be consuming considerable energy that was not accounted for in the modelled anticipated results.</li> </ul>
	The above results are equal to a 57% reduction in energy use compared to MNECB.	The above results are equal to a 40% reduction in energy use compared to MNECB.	
(10) Pictou, NS, 2011  Sector: Water  <b>Town of Pictou Wastewater Treatment and Conveyance Project</b>	0.7 million m <sup>3</sup> of wastewater treated to CCME water quality standards per year	0.9 million m <sup>3</sup> of wastewater treated to CCME water quality standards per year	<p>The project performed well, treating all the wastewater generated in the reporting year to standards exceeding regulatory requirements and achieving 99% reduction in key parameters. The harbour is cleaner and there is evidence that more fishing is taking place. The municipality anticipates that a cleaner harbour will ultimately lead to an increase in tourism to the area.</p> <p>The municipality also reported that the facility's water consumption reduced by about 46,000 cubic meters per year through the use of treated water instead of potable water.</p>



Project information	Anticipated results	Actual results	Comments
<p>(11) Kamloops, BC, 2010</p> <p>Sector: Water</p> <p><b>City of Kamloops Sewage Treatment Plant Upgrade</b></p>	<p>11.2 million m<sup>3</sup> of wastewater treated to CCME water quality standards per year</p>	<p>10.8 million m<sup>3</sup> of wastewater treated to CCME water quality standards per year</p>	<p>The project performed better than expected. The upgrades have resulted in higher-quality effluent than anticipated. Fewer contaminants are being released into the environment.</p> <p>Additional environmental benefits include:</p> <ul style="list-style-type: none"> <li>• Elimination of the use of chlorine in treatment.</li> <li>• Reduced greenhouse gas emissions, from reduced truck transport of biosolids and chlorine and alum used in treatment.</li> <li>• Energy savings in the aeration lagoons, from the replacement of coarse diffusers with fine bubble diffusers.</li> <li>• Methane gas captured and flared while the municipality explores how it can be used as a future energy source.</li> <li>• Elimination of odours as a result of the methane gas capture.</li> <li>• Less land being used by the new treatment process.</li> <li>• Treated effluent used on site for cleaning and other purposes, reducing the demand for treated potable water from the city's utility.</li> <li>• Protection from 200-year floods and potential release of raw sewage into the Thompson River as a result of bolstered dikes.</li> </ul>
<p>(12) Montreal, QC, 2010</p> <p>Sector: Energy</p> <p><b>City of Montreal New LEED Gold Library with Exhibition Centre and Museum Space</b></p>	<p>Greenhouse gas emissions reduced by 3.4 tonnes per year</p> <p>Electricity use reduced by 4,257 GJ per year (a 62.7% reduction in energy use compared to MNECB)</p>	<p>Greenhouse gas emissions reduced by 3.1 tonnes per year</p> <p>Electricity use reduced by 3,906 GJ per year (a 57.6% reduction in energy use compared to MNECB)</p>	<p>The project was successfully implemented, achieving LEED Gold Certification. The project did not reduce energy use as much as was expected because the facility extended its hours and more energy was required for dehumidification to meet the needs of the library and museum.</p>

Project information	Anticipated results	Actual results	Comments
<p>(13) Elora, ON, 2010</p> <p>Sector: Water</p> <p><b>Town of Elora Wastewater Treatment Plant and Clyde Street Sewage Pumping Station Upgrading and Expansion</b></p>	0.6 million m <sup>3</sup> of wastewater treated to CCME water quality standards per year	0.6 million m <sup>3</sup> of wastewater treated to CCME water quality standards per year	<p>The amount of wastewater treated by the project met expectations. The upgrade improved the quality of the wastewater effluent for many parameters by at least 90%. Tertiary treatment reduced contaminant concentrations and loadings to meet revised Ministry of Environment Certificate of Approval requirements. The upgrade is permitting continued urban growth, providing economic benefits for the entire municipality, and helping to protect water quality in the Grand River, a Canadian Heritage River and tourist attraction that also provides drinking water for downstream communities.</p> <p>The new wastewater treatment plant has also resulted in reduced odours, which was one of the complaints regarding the old system. Furthermore, modifications to the sewage pumping station have reduced the potential for raw sewage bypasses directly to the Grand River during peak flow events. No bypass events have been reported since the project was completed.</p>
<p>(14) Regional Municipality of Waterloo, ON, 2011</p> <p>Sector: Energy</p> <p><b>RM of Waterloo Grand River Transit North Depot LEED Silver Building</b></p>	<p>Greenhouse gas emissions reduced by 301 tonnes per year</p> <p>Energy use reduced by 6,739 GJ per year (a decrease in electricity of 1,591 GJ and a decrease in natural gas of 5,149 GJ)</p> <p>1,693 GJ per year in renewable energy generated</p> <p>The above figures are equal to a 65.6% reduction in energy use compared to MNECB.</p>	<p>Greenhouse gas emissions reduced by 341 tonnes per year</p> <p>Energy use reduced by 9,421 GJ per year (a decrease in electricity of 5,527 GJ and a decrease in natural gas of 3,895 GJ)</p> <p>1,301 GJ per year in renewable energy generated</p> <p>The above results are equal to a 58.8% reduction in energy use compared to MNECB.</p>	<p>The project performed well and exceeded the anticipated results, which were updated to reflect the revised project design. The revised design included fewer solar panels, since the project did not qualify for the Government of Ontario's feed-in-tariff program.</p> <p>With these modifications, the project still reduced energy consumption by 59% (calculated based on energy modelling of the new building).</p>



Project information	Anticipated results	Actual results	Comments
(15) Sault Ste. Marie, ON, 2011  Sector: Energy  <b>Sault Ste. Marie Energy Efficiency Retrofit of the Water Treatment Plant</b>	Greenhouse gas emissions reduced by 201 tonnes per year	Greenhouse gas emissions reduced by 14 tonnes per year	This project was only partially completed, because the water treatment facility developed operational problems related to significant water quality issues.
	Electricity use reduced by 4,267 GJ	Electricity use reduced by 659 GJ per year	The municipality installed solar photovoltaic (PV) panels and energy-efficient lighting, but did not proceed with variable frequency drives and heat pump installation. The municipality reported the actual energy savings to GMF in a final progress report prior to the project being cancelled. (The figures were not third-party verified.)
	476 GJ per year of renewable energy generated	559 GJ per year of renewable energy generated	Resolving the water quality issues became the priority and all the municipality's attention and efforts in 2013, 2014 and most of 2015 were focused on addressing these issues. As a result, the remaining conservation measures could not be implemented. Based on additional energy assessment work, the municipality determined that the savings associated with other elements were going to be significantly less, which also impacted the business case associated with the energy retrofit. The municipality decided to postpone the additional retrofits indefinitely.
	The above figures are equal to a 37% reduction in energy use.	The above figures are equal to a 6.5% reduction in energy use.	
(16) Gatineau, QC, 2012  Sector: Waste  <b>Town of Gatineau Eco - centre Development in the Environmental Industrial Park</b>	5,000 tonnes more waste diverted from the landfill per year	10,066 tonnes more waste diverted from the landfill per year	The municipality achieved a total waste diversion rate of 52.8%, which exceeds the anticipated diversion rate of 51.9% and GMF's threshold of 50%.
	51.9% of waste diverted from the landfill (based on anticipated total waste generation of 117,000 tonnes)	Total waste diversion rate of 52.8% (based on actual total waste generation of 127,000 tonnes)	
	Information not available	Greenhouse gas emissions reduced by 11,614 tonnes per year as a result of less waste going to the landfill	



Project information	Anticipated results	Actual results	Comments
(17) Halifax, NS, 2012  Sector: Water/Energy  <b>Halifax Solar City</b> <i>Project to install solar hot water systems with efficient water fixtures and energy-efficiency measures in residential homes</i>	Domestic water consumption reduced by 52,000 cubic meters per year (a reduction of 25%)	Domestic water consumption reduced by 16,000 cubic meters per year (a reduction of about 6%)	<p>The two components to this project, reducing water use and reducing energy consumption, were both mostly successful.</p> <p>Although 26.5% more homes participated in the water reduction component of the project than had been anticipated (a total of 1,265 homes compared to an estimate of 1,000), the amount of water reduced was less than expected for two reasons:</p> <ul style="list-style-type: none"> <li>• The anticipated water savings per fixture were overestimated.</li> <li>• The municipality assumed that the water-saving measures would be applied to all water fixtures in each participating home; however, many homes had pre-existing upgrades. Improvements were only needed in about 50% of the homes.</li> </ul>
	Greenhouse gas emissions reduced by 1,510 tonnes per year	Greenhouse gas emissions reduced by 377 tonnes per year	<p>For the energy component of the project, the project design and estimate of results were based on an anticipated enrollment of 1,000 households. The program was only successful in enrolling 381 households. This is the primary factor affecting the actual results. On a per-household basis, the energy component of the project was successful, coming within 15% of meeting per-household targets for energy and greenhouse gas emission reductions.</p>
	Energy use reduced by 11,181 GJ per year (a decrease in electricity of 4,370 GJ, a decrease in propane of 178 GJ and a decrease in light fuel oil of 6,633 GJ per year)	Energy use reduced by 4,048 GJ per year (a decrease in electricity of 761 GJ, an increase in natural gas of 10 GJ, a decrease in propane of 55 GJ and a decrease in light fuel oil of 3242 GJ per year)	
	7,924 GJ per year of renewable energy generated	4,048 GJ per year of renewable energy generated	
(18) Region of Niagara, ON, 2014  Sector: Energy  <b>Niagara Region's 1st Social Housing LEED Building</b>	Greenhouse gas emissions reduced by 72 tonnes per year	Greenhouse gas emissions reduced by 44 tonnes per year	<p>After changes to the project design, the project performed well, reducing energy consumption by 48.4%. The amount of energy reduced was less than anticipated, because of changes in the building design and the fact that the comparable MNECB building also uses less overall energy on a day-to-day basis.</p>
	Energy use reduced by 2,383 GJ per year (a decrease in electricity of 2,143 GJ and a decrease in natural gas of 240 GJ) (a 51% reduction in energy use compared to MNECB)	Energy use reduced by 1,467 GJ per year (a decrease in electricity of 1,025 GJ and a decrease in natural gas of 442 GJ) (a 48.4% reduction in energy use compared to MNECB)	<p>The overall reduction in greenhouse gas emissions was also less than anticipated because less energy was saved through the revised design and the greenhouse gas emissions factor for electricity (or GHG intensity from the grid) was lower than in the application year.</p>

Project information	Anticipated results	Actual results	Comments
(19) Cornwall, ON, 2014 Sector: Brownfields <b>City of Cornwall Cotton Mill Brownfield Remediation</b>	25,900 square meters of land reclaimed for productive use  2,069 cubic meters of contaminated soil or water remediated or risk managed	25,900 square meters of land reclaimed for productive use  2,069 cubic meters of contaminated soil or water remediated or risk managed	The remediation of the Cotton Mill site was successfully completed. Since projects are allowed to start incurring costs as soon as they enter the GMF application process, the project was almost complete by the time it was approved by FCM. As a result, the client knew the extent and type of contamination before the application was approved. This is why the anticipated results are exactly the same as the actual results.
(20) Edmonton, AB, 2014 Sector: Brownfields <b>City of Edmonton Icon Fox Towers Brownfield Remediation and Redevelopment — Phase II</b>	2,100 square meters of land reclaimed for productive use  8,325 cubic meters of contaminated soil or water remediated or risk managed	1,856 square meters of land reclaimed for productive use  10,612 cubic meters of contaminated soil or water remediated or risk managed	Phase II of the remediation and redevelopment of the Icon Fox Towers was successfully completed. The entire site has been reclaimed for productive use.  The site's size was initially overestimated. This has been corrected in the final project results.

CCME: Canadian Council of Ministers of the Environment

GJ: Gigajoules

MNECB: Model National Energy Code for Buildings



## Appendix G: Knowledge resources and activities

FCM's Green Municipal Fund delivered workshops and webinars and developed several case studies and other educational resources in 2015–2016. A notable enhancement of GMF's collection of knowledge resources was a major updating of the [Approved Projects Database](#) — a web resource that makes information on approved GMF projects, and available results reports, available as a public resource. This work complements other efforts to mobilize GMF project knowledge and enable broader replication.

GMF has also been tracking the reach of activities and knowledge resources developed and mobilized in its three areas of focus: asset management, brownfields renewal and climate change. These knowledge resources were disseminated through e-bulletins and at presentations during key events. They were also used as learning tools at workshops throughout the year. See [our knowledge resources](#) on the FCM website.

### Replication-focused activities

Initially launched in 2014, the Approved Projects Database (APD), is an online tool making information accessible to municipalities and the general public on GMF-funded initiatives (pilot projects, feasibility studies, action plans and capital projects). This database showcases the impact of GMF funding over the past 16 years. It provides useful information, including the scope of the project (a brief overview, financial information, timelines, etc.), contact information and lessons learned (as summarized in the final reports submitted to GMF by the municipalities). The database is user-friendly and allows for refined searches according to sector or sub-sector, province, and municipality name or size, among other variables.

In 2015–2016, GMF improved the APD by completing a major quality control and information update. The gaps addressed included a backlog of unpublished projects, and missing resources such as summaries, case studies, reports and photos. The database update required the involvement of different GMF units to identify and establish business processes within GMF and to inform various actors of the resources available online. Overall, the work gives the APD increased value as a high-quality, up-to-date knowledge-sharing platform.

This year, FCM's Green Municipal Fund also developed and mobilized knowledge in the area of wastewater management and treatment. FCM has targeted this area as its first priority for disseminating knowledge to support the replication of innovative and promising initiatives with the potential to transform the sector. GMF selected wastewater as a priority because recent federal regulations have made improving treatment system performance and effluent quality a national priority. GMF drafted case studies that included project results, lessons learned and triple bottom line benefits from 11 GMF-funded



wastewater treatment systems, as well as tips for project success. These resources will be mobilized in 2016–2017.

### Focus area: asset management

This year, GMF capacity building in the area of asset management focused primarily on supporting peer learning. GMF selected a first cohort of 12 Anglophone municipalities to participate in the Leadership in Asset Management Program (LAMP), and supported their efforts to develop or refresh their asset management strategies and create policy and governance frameworks that are well-integrated with the municipalities' sustainability goals and strategies. In addition, GMF reached a total of about 300 people in three workshops aimed at building awareness of asset management and its linkages to sustainability. The workshops were delivered at the FCM Annual Conference and Trade Show and the 2016 FCM Sustainable Communities Conference (SCC). GMF also made presentations at the annual meetings of Municipalities Newfoundland and Labrador and the Association of Municipal Administrators of New Brunswick.

#### Webinars

- **Advantages of participating in the Leadership in Asset Management Program (French)** (November 19, 2015: 21 participants)

### Focus area: brownfield renewal

This year, GMF capacity building in the area of brownfield renewal focused primarily on supporting peer learning among the 21 municipal members of the Leadership in Brownfield Renewal Program (LiBRE), launched in June. Overall, GMF reached a total of about 300 people through activities geared to increasing municipal capacity to renew brownfields sites. GMF delivered two webinars, one full day training session at the 2016 FCM SCC and presentations in two workshops hosted by external organizations. In addition, the following brownfield resources were developed, mobilized and posted on FCM's website.

#### Webinars

- **How to build partnerships to help revitalize your brownfields (English)** (October 6, 2015: 79 participants)
- **Ideas to move brownfield projects forward (English)** (March 24, 2016: 64 participants)

#### Knowledge resources

- **Leadership in Brownfield Renewal Program: Best Practices Framework** (accessed by 85 people)
- **Guidebook: Devising and implementing an effective brownfield strategy** (accessed by 301 people)
- **Guidebook: Getting started on your brownfield sites: Committing to action** (accessed by 52 people)
- **Compendium of case studies: Taking Action on Brownfields** (accessed by 90 people)

## Focus area: climate change

This year, working through the Partners for Climate Protection (PCP) Program, GMF continued to deliver several activities and developed 12 new resources to support municipalities undertaking climate action. GMF reached over 200 people through two workshops and a plenary session at the 2016 FCM SCC, and made presentations or contributions in three externally organized workshops that reached 107 people.

### Webinars

- **Small town approaches to achieving climate protection milestones** (June 23, 2015: 58 participants)
- **Having the Climate Change Conversation: Tools and Techniques to Engage Council and the Community** (September 15, 2015: 172 participants)
- **COP21 and the International Local Government Climate Movement — A Briefing for Canadian Local Governments** (October 21, 2015: 97 participants)

### Knowledge resources

- **National Measures Report 2015: Local climate action across Canada** (accessed by 289 people)
- **The PCP Milestone Tool: milestones 1 and 2** (approximately 75 registered users)
- **Compendium: Alternative Financing Mechanisms** (originally published in 2014–2015, accessed 362 times in 2015–2016)
- **10 PCP Milestone 5 success stories:**
  - City of Surrey, BC (accessed by 38 people)
  - Comox Valley Regional District, BC (accessed by 126 people)
  - Resort Municipality of Whistler, BC (accessed by 82 people)
  - City of Regina, SK (accessed by 95 people)
  - City of Mississauga, ON (accessed by 99 people)
  - City of Pickering, ON (accessed by 68 people)
  - Town of Richmond Hill, ON (accessed by 80 people)
  - City of Thunder Bay, ON (accessed by 128 people)
  - City of Halifax, NS (accessed by 112 people)
  - City of Whitehorse, YT (accessed by 63 people)



## 2016 FCM Sustainable Communities Awards case studies

In 2015–2016, FCM developed case studies to profile the winners of its 2016 Sustainable Communities Awards, listed below by sector (\* Indicates initiatives supported through GMF):

### **Brownfields Program:**

City of Edmonton, AB

[Brownfields Redevelopment Grant Program](#)  
(200 case study views)

### **Brownfields Project:**

Region of Waterloo, ON

[Breithaupt Block](#)  
(229 case study views)

### **Energy Plan:**

Region of Waterloo, ON

[A Climate Action Plan for Waterloo Region: Living Smarter in 2020](#)  
(152 case study views)

### **Energy Program:**

City of Toronto, ON

[Home Energy Loan Program \(HELP\) and High-rise Retrofit Improvement Support Program \(Hi-RIS\)](#) (175 case study views)

### **Neighbourhood Development Plan:**

Municipality of Austin, QC

[Action Plan for Sustainable Development in the Rural Municipality of Austin \(2015–2017\)](#)  
(285 case study views)

### **Neighbourhood Development Project:**

Village of Marwayne, AB

[Center Street Revitalization: From the Bottom Up!](#)  
(284 case study views)

### **Transportation Project:**

City of Vancouver, ON

[Seaside Greenway Completion, South End Burrard Bridge, and York Bikeway Project](#)  
(130 case study views)

### **Waste Project:**

City of St. Hyacinthe, QC

[Biomethanation Project](#)  
(251 case study views)

### **Water Project:**

District of Sechelt, BC

[Sechelt Water Resource Centre](#)  
(609 case study views)



## **Appendix H: Financial Statements**

Following, in bilingual format, are the financial statements for 2015–2016, as prepared by KPMG.

Financial Statements of the États  
financiers de la

**FEDERATION OF CANADIAN MUNICIPALITIES -  
GREEN MUNICIPAL FUND**

**FÉDÉRATION CANADIENNE DES MUNICIPALITÉS -  
FONDS MUNICIPAL VERT**

Year ended March 31, 2016

Exercice clos le 31 mars 2016

**FEDERATION OF CANADIAN MUNICIPALITIES - GREEN MUNICIPAL FUND**  
**FÉDÉRATION CANADIENNE DES MUNICIPALITÉS - FONDS MUNICIPAL VERT**

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## INDEPENDENT AUDITORS' REPORT

To the National Board of Directors and Members of  
the Federation of Canadian Municipalities

We have audited the accompanying financial statements of the Federation of Canadian Municipalities - Green Municipal Fund, which comprise the statement of financial position as at March 31, 2016, the statements of operations, changes in fund balance and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

### *Management's Responsibility for the Financial Statements*

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

### *Auditors' Responsibility*

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

## RAPPORT DES AUDITEURS INDÉPENDANTS

Au Conseil national d'administration et aux membres de la  
Fédération canadienne des municipalités

Nous avons effectué l'audit des états financiers ci-joints de la Fédération canadienne des municipalités - Fonds municipal vert, qui comprennent l'état de la situation financière au 31 mars 2016, les états des résultats, de l'évolution du solde du fonds et flux de trésorerie pour l'exercice clos à cette date, ainsi que les notes, qui comprennent un résumé des principales méthodes comptables et d'autres informations explicatives.

### *Responsabilité de la direction pour les états financiers*

La direction est responsable de la préparation et de la présentation fidèle de ces états financiers conformément aux Normes comptables canadiennes pour les organismes sans but lucratif, ainsi que du contrôle interne qu'elle considère comme nécessaire pour permettre la préparation d'états financiers exempts d'anomalies significatives, que celles-ci résultent de fraudes ou d'erreurs.

### *Responsabilité des auditeurs*

Notre responsabilité consiste à exprimer une opinion sur les états financiers, sur la base de notre audit. Nous avons effectué notre audit selon les normes d'audit généralement reconnues du Canada. Ces normes requièrent que nous nous conformions aux règles de déontologie et que nous planifions et réalisons l'audit de façon à obtenir l'assurance raisonnable que les états financiers ne comportent pas d'anomalies significatives.

Un audit implique la mise en œuvre de procédures en vue de recueillir des éléments probants concernant les montants et les informations fournis dans les états financiers. Le choix des procédures relève de notre jugement, et notamment de notre évaluation des risques que les états financiers comportent des anomalies significatives, que celles-ci résultent de fraudes ou d'erreurs. Dans l'évaluation de ces risques, nous prenons en considération le contrôle interne de l'entité portant sur la préparation et la présentation fidèle des états financiers afin de concevoir des procédures d'audit appropriées aux circonstances, et non dans le but d'exprimer une opinion sur l'efficacité du contrôle interne de l'entité. Un audit comporte également l'appréciation du caractère approprié des méthodes comptables retenues et du caractère raisonnable des estimations comptables faites par la direction, de même que l'appréciation de la présentation d'ensemble des états financiers.





We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

*Opinion*

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Federation of Canadian Municipalities - Green Municipal Fund as at March 31, 2016, and its results of operations, changes in fund balance and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

Chartered Professional Accountants,  
Licensed Public Accountants

June 5, 2016  
Ottawa, Canada

Nous estimons que les éléments probants que nous avons obtenus sont suffisants et appropriés pour fonder notre opinion d'audit.

*Opinion*

À notre avis, les états financiers donnent, dans tous leurs aspects significatifs, une image fidèle de la situation financière de la Fédération canadienne des municipalités - Fonds municipal vert au 31 mars 2016, ainsi que des résultats de son exploitation, de l'évolution du solde du fonds et de ses flux de trésorerie pour l'exercice clos à cette date, conformément aux Normes comptables canadiennes pour les organismes sans but lucratif.

Comptables professionnels agréés,  
experts-comptables autorisés

Le 5 juin 2016  
Ottawa (Canada)

**FEDERATION OF CANADIAN MUNICIPALITIES - GREEN MUNICIPAL FUND**  
**FÉDÉRATION CANADIENNE DES MUNICIPALITÉS - FONDS MUNICIPAL**  
**VERT**

Statement of Financial Position  
 État de la situation financière

March 31, 2016, with comparative information for 2015  
 31 mars 2016, avec informations comparatives de 2015

	2016	2015	
<b>Assets</b>			<b>Actifs</b>
Current assets:			Actifs à court terme
Cash	\$ 8,034,900	\$ 5,167,500	Encaisse
Short-term investments (note 3)	100,735,500	123,968,500	Placements à court terme (note 3)
Interest receivable	3,926,100	3,646,700	Intérêts à recevoir
Other receivables	211,100	82,700	Autres débiteurs
Interfund receivable (note 4)	198,300	176,600	Débiteurs interfonds (note 4)
Current portion of loans receivable (note 5)	21,209,400	30,006,100	Prêts à recevoir échéant à moins d'un an (note 5)
Prepaid expenses	17,900	19,800	Frais payés d'avance
	134,333,200	163,067,900	
Long-term investments (note 3)	254,871,300	281,847,800	Placements à long terme (note 3)
Loans receivable (note 5)	243,630,200	190,769,400	Prêts à recevoir (note 5)
Tangible capital and intangible assets (note 6)	577,800	789,000	Immobilisations corporelles et actifs incorporels (note 6)
	\$ 633,412,500	\$ 636,474,100	
<b>Liabilities and Fund Balance</b>			<b>Passifs et solde du fonds</b>
Current liabilities:			Passifs à court terme
Accounts payable and accrued liabilities (note 7)	\$ 888,100	\$ 1,006,200	Créditeurs et charges à payer (note 7)
Grants payable (note 8)	32,990,100	39,456,600	Subventions à payer (note 8)
	33,878,200	40,462,800	
Fund balance:			Solde du fonds
Invested in tangible capital and intangible assets	577,800	789,000	Investi en immobilisations corporelles et actifs incorporels
Reserve for non-performing loans (note 9)	13,480,100	12,874,900	Réserve pour prêts délinquants (note 9)
Externally restricted	585,476,400	582,347,400	Affecté d'origine externe
	599,534,300	596,011,300	
Commitments (note 11)			Engagements (note 11)
	\$ 633,412,500	\$ 636,474,100	

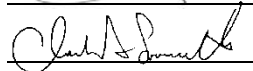
See accompanying notes to financial statements.

Se reporter aux notes afférentes aux états financiers.

On behalf of the Board: / Au nom du conseil,



Raymond Louis, President / Président



Clark Somerville, First Vice-President / Premier Vice Président

**FEDERATION OF CANADIAN MUNICIPALITIES - GREEN MUNICIPAL FUND**  
**FÉDÉRATION CANADIENNE DES MUNICIPALITÉS - FONDS MUNICIPAL**  
**VERT**

Statement of Operations  
 État des résultats

Year ended March 31, 2016, with comparative information for 2015  
 Exercice clos le 31 mars 2016, avec informations comparatives de 2015

	2016	2015	
Revenue:			Revenus
Investments	\$ 12,103,500	\$ 14,401,100	Placements
Interest on loans	5,914,500	5,430,200	Intérêts sur prêts
Other	45,400	30,300	Autres
	18,063,400	19,861,600	
Operating expenses:			Dépenses d'exploitation
Personnel costs	5,107,300	4,870,200	Frais de personnel
Other operating expenses	3,326,000	3,352,400	Autres dépenses d'exploitation
Amortization of tangible capital and intangible assets	245,600	278,900	Amortissement des immobilisations corporelles et actifs incorporels
Occupancy costs	570,300	547,100	Frais d'occupation
	9,249,200	9,048,600	
Excess of revenue over expenses before grants	8,814,200	10,813,000	Excédent des revenus sur les dépenses avant subventions
Grants (note 8)	5,291,200	6,802,500	Subventions (note 8)
Excess of revenue over expenses	\$ 3,523,000	\$ 4,010,500	Excédent des revenus sur les dépenses

See accompanying notes to financial statements.  
 Se reporter aux notes afférentes aux états financiers.



**FEDERATION OF CANADIAN MUNICIPALITIES - GREEN MUNICIPAL FUND**  
**FÉDÉRATION CANADIENNE DES MUNICIPALITÉS - FONDS MUNICIPAL VERT**

Statement of Changes in Fund Balance  
 État de l'évolution du solde du fonds

Year ended March 31, 2016, with comparative information for 2015  
 Exercice clos le 31 mars 2016, avec informations comparatives de 2015

	Invested in tangible capital and intangible assets/ Investis en immobilisations corporelles et actifs incorporels	Reserve for non- performing loans/ Réserve pour prêts délinquants	Externally restricted/ Affecté d'origine externe	Total 2016	Total 2015	
Balance, beginning of year	\$ 789,000	\$ 12,874,900	\$ 582,347,400	\$ 596,011,300	\$ 592,000,800	Solde au début de l'exercice
Excess of revenue over expenses	–	–	3,523,000	3,523,000	4,010,500	Excédent des revenus sur les dépenses
Amortization of tangible capital and intangible assets	(245,600)	–	245,600	–	–	Amortissement des immobilisations corporelles et des actifs incorporels
Purchase of tangible capital and intangible assets	34,400	–	(34,400)	–	–	Acquisitions d'immobilisations corporelles et d'actifs incorporels
Transfer to Reserve for non-performing loans (note 9)	–	605,200	(605,200)	–	–	Transfert à la Réserve pour prêts délinquants (note 9)
Balance, end of year	\$ 577,800	\$ 13,480,100	\$ 585,476,400	\$ 599,534,300	\$ 596,011,300	Solde à la fin de l'exercice

See accompanying notes to financial statements.  
 Se reporter aux notes afférentes aux états financiers.

**FEDERATION OF CANADIAN MUNICIPALITIES - GREEN MUNICIPAL FUND**  
**FÉDÉRATION CANADIENNE DES MUNICIPALITÉS - FONDS MUNICIPAL**  
**VERT**

Statement of Cash Flows  
 État des flux de trésorerie

Year ended March 31, 2016, with comparative information for 2015  
 Exercice clos le 31 mars 2016, avec informations comparatives de 2015

	2016	2015	
Cash provided by (used in):			Provenance (utilisation des fonds)
Operating activities:			Activités d'exploitation
Excess of revenue over expenses	\$ 3,523,000	\$ 4,010,500	Excédent des revenus sur les dépenses
Items not affecting cash:			Éléments sans incidence
Amortization of premium/discount on investments	(1,883,500)	(5,062,400)	Amortissement des primes/escomptes sur les placements
Net realized loss on sales of investments	623,700	370,400	Perte nette réalisée sur cession de placements
Amortization of tangible capital and intangible assets	245,600	278,900	Amortissement des immobilisations corporelles et des actifs incorporels
Gain on disposal of tangible and intangible assets	(1,700)	–	Gain sur cession d'immobilisations corporelles et d'actifs incorporels
Changes in non-cash operating working capital items	(7,012,200)	(3,702,200)	Variation des éléments hors caisse du fonds de roulement d'exploitation
	(4,505,100)	(4,104,800)	
Investing activities:			Activités d'investissement
Purchase of investments	(460,521,200)	(241,425,100)	Acquisition de placements
Sale of investments	511,990,500	235,552,400	Cession de placements
Net decrease (increase) in loans receivable	(44,064,100)	9,956,100	Diminution (augmentation) nette des prêts à recevoir
Purchase of tangible capital and intangible assets	(32,700)	(156,700)	Acquisitions d'immobilisations corporelles et d'actifs incorporels
	7,372,500	3,926,700	
Increase (decrease) in cash	2,867,400	(178,100)	Augmentation (diminution) de l'encaisse
Cash, beginning of year	5,167,500	5,345,600	Encaisse au début de l'exercice
Cash, end of year	\$ 8,034,900	\$ 5,167,500	Encaisse à la fin de l'exercice

See accompanying notes to financial statements.  
 Se reporter aux notes afférentes aux états financiers.

# FEDERATION OF CANADIAN MUNICIPALITIES - GREEN MUNICIPAL FUND

Notes to Financial Statements

Year ended March 31, 2016

# FÉDÉRATION CANADIENNE DES MUNICIPALITÉS - FONDS MUNICIPAL VERT

Notes afférentes aux états financiers

Exercice clos le 31 mars 2016

## 1. Purpose of the organization:

On March 18, 1937, the Federation of Canadian Mayors and Municipalities (FCMM) was created from the merger of the 36-year old Union of Canadian Municipalities and the Dominion Conference of Mayors, formed two years earlier. On February 2, 1967, the FCMM was incorporated by letters patent under Part II of the Canada Corporations Act. At that time, charitable status was sought and obtained from Canada Revenue Agency. Supplementary Letters Patent changed the name of the organization to Federation of Canadian Municipalities (FCM) on August 9, 1976. Effective August 6, 2014, FCM continued its incorporation to the Canada Not-for-profit Corporations Act. Owing to its charitable status, FCM is not subject to income taxes.

FCM is the national leader and voice of local governments, shaping the national agenda and fostering strong and effective local governments. FCM membership includes Canada's largest cities, the major provincial and territorial municipal associations, and rural and urban communities.

In April 2000, FCM received from the Government of Canada \$100,000,000 to set up the Green Municipal Investment Fund (GMIF) and \$25,000,000 for the Green Municipal Enabling Fund (GMEF). Both funds were established to stimulate investment in innovative municipal projects and practices to improve the environmental performance of Canadian municipalities. In April 2002, FCM received an additional \$100,000,000 for the GMIF and \$25,000,000 for the GMEF. As of March 31, 2005, the GMIF and GMEF have been merged into one fund called Green Municipal Fund (GMF). In July 2005, FCM received another \$300,000,000.

## 1. Nature des opérations et mission

La Fédération Canadienne des Maires et des Municipalités (FCMM) a été créée le 18 mars 1937 suite à la fusion de l'Union Canadienne des Municipalités, datant de 36 ans, et de la Conférence des maires du Dominion, créée deux ans auparavant. Le 2 février 1967, la FCMM a été incorporée par lettres patentes en vertu de la partie II de la Loi sur les corporations canadiennes. À ce moment là, FCMM a demandé et obtenu le statut d'organisme de charité de l'Agence canadienne du revenu. Le 9 août 1976, des lettres patentes supplémentaires ont été obtenues afin de changer le nom de l'organisme pour la Fédération canadienne des municipalités (FCM). À compter du 6 août 2014, FCM a poursuivi son incorporation à la Loi canadienne sur les organisations à but non lucratif. Étant un organisme de charité, la FCM est exonérée de l'impôt sur le revenu.

La FCM est le leader et la voix des gouvernements locaux à l'échelle nationale, façonnant l'ordre du jour national et favorisant des gouvernements locaux forts et efficaces. La FCM se compose de représentants des plus grandes villes du Canada, les associations municipales provinciales et territoriales, et communautés rurales et urbaines.

La FCM a reçu 100 000 000 \$ du gouvernement du Canada en avril 2000 pour l'établissement du Fonds d'investissement municipal vert (FIMV) et 25 000 000 \$ pour l'établissement du Fonds d'habilitation municipal vert (FHMV). Ces fonds ont été créés afin de stimuler l'investissement dans des projets et des pratiques municipales novateurs dans le but d'améliorer l'efficacité environnementale des municipalités canadiennes. La FCM a reçu en avril 2002 des montants supplémentaires de 100 000 000 \$ pour le FIMV et 25 000 000 \$ pour le FHMV. Le 31 mars 2005, le FIMV et le FHMV ont été fusionnés pour former le Fonds municipal vert (FMV). La FCM a reçu un montant supplémentaire de 300 000 000 \$ en juillet 2005.



# FEDERATION OF CANADIAN MUNICIPALITIES - GREEN MUNICIPAL FUND

Notes to Financial Statements (continued)

Year ended March 31, 2016

# FÉDÉRATION CANADIENNE DES MUNICIPALITÉS - FONDS MUNICIPAL VERT

Notes afférentes aux états financiers (suite)

Exercice clos le 31 mars 2016

## 2. Significant accounting policies:

The financial statements have been prepared by management in accordance with Canadian accounting standards for not-for-profit organizations and include the following significant accounting policies:

### (a) Basis of presentation:

FCM follows the restricted fund method of accounting for contributions for not-for-profit organizations.

These financial statements report the activities of the Green Municipal Fund only. They do not report on the other funds of the FCM.

### (b) Fund accounting:

In accordance with the principles of fund accounting, FCM maintains its accounting records to ensure that limitations and restrictions placed on the use of available resources are observed. Under this method, resources are classified for accounting and reporting purposes into funds that are in accordance with specific activities or objectives. Accordingly, separate accounts are maintained for the General Fund and the externally restricted Green Municipal Fund.

#### *Green Municipal Fund (GMF):*

GMF supports through grants and loans the implementation of innovative environmental projects undertaken by Canadian municipalities and other public and private sector partners.

## 2. Principales conventions comptables

Les états financiers ont été dressés conformément aux Normes comptables canadiennes pour les organismes sans but lucratif et tiennent compte des principales conventions comptables suivantes.

### a) Mode de présentation

La FCM comptabilise les contributions selon la méthode de la comptabilité par fonds affectés s'appliquant aux organismes sans but lucratif.

Ces états financiers présentent les activités du Fonds municipal vert seulement. Ils ne rendent pas compte des autres fonds de la FCM.

### b) Comptabilité par fonds

Conformément aux usages de la comptabilité par fonds, FCM tient ses registres comptables afin d'assurer que les limites et les restrictions qui s'appliquent aux ressources disponibles soient respectées. Selon cette méthode, toutes les ressources sont présentées dans des fonds distincts selon l'activité ou les objectifs poursuivis. Par conséquent, des fonds séparés sont maintenus pour les activités du Fonds général et pour le affecté d'origine externe Fonds municipal vert.

#### *Fonds municipal vert (FMV)*

FMV permet la réalisation de projets environnementaux innovateurs par le biais de subventions et prêts aux municipalités canadiennes ou de leurs partenaires publics ou privés.

**FEDERATION OF CANADIAN  
MUNICIPALITIES - GREEN MUNICIPAL  
FUND**

Notes to Financial Statements (continued)

Year ended March 31, 2016

**FÉDÉRATION CANADIENNE DES  
MUNICIPALITÉS - FONDS MUNICIPAL  
VERT**

Notes afférentes aux états financiers (suite)

Exercice clos le 31 mars 2016

**2. Significant accounting policies (continued):**

**(c) Financial instruments:**

Financial instruments are recorded at fair value on initial recognition. Equity instruments that are quoted in an active market are subsequently measured at fair value. All other financial instruments are subsequently recorded at cost or amortized cost, unless management has elected to carry the instruments at fair value. FCM has not elected to carry any such financial instruments at fair value.

Transaction costs incurred on the acquisition of financial instruments measured subsequently at fair value are expensed as incurred. All other financial instruments are adjusted by transaction costs incurred on acquisition and financing costs, which are amortized using the straight-line method.

Financial assets are assessed for impairment on an annual basis at the end of the fiscal year if there are indicators of impairment. If there is an indicator of impairment, FCM determines if there is a significant adverse change in the expected amount or timing of future cash flows from the financial asset. If there is a significant adverse change in the expected cash flows, the carrying value of the financial asset is reduced to the highest of the present value of the expected cash flows, the amount that could be realized from selling the financial asset or the amount FCM expects to realize by exercising its right to any collateral. If events and circumstances reverse in a future period, an impairment loss will be reversed to the extent of the improvement, not exceeding the initial impairment change.

**2. Principales conventions comptables (suite)**

**c) Instruments financiers**

Les instruments financiers sont comptabilisés à leur juste valeur au moment de la comptabilisation initiale. Les instruments de capitaux propres cotés sur un marché actif sont ultérieurement évalués à la juste valeur. Tous les autres instruments financiers sont ultérieurement comptabilisés au coût ou au coût après amortissement, sauf si la direction a décidé de comptabiliser les instruments à la juste valeur. La FCM n'a pas choisi de comptabiliser ces instruments financiers à leur juste valeur.

Les coûts de transaction engagés dans le cadre de l'acquisition d'instruments financiers évalués ultérieurement à la juste valeur sont imputés aux résultats à mesure qu'ils sont engagés. Tous les autres instruments financiers sont ajustés en fonction des coûts de transaction engagés au moment de l'acquisition et des frais de financement, qui sont amortis selon la méthode de l'amortissement linéaire.

Les actifs financiers sont soumis à un test de dépréciation à la fin de chaque exercice lorsque des faits ou des circonstances l'indiquent. Le cas échéant, la FCM détermine s'il y a un changement défavorable important dans le calendrier ou le montant prévu des flux de trésorerie futurs de l'actif. Si tel est le cas, la valeur comptable de l'actif est réduite à la valeur la plus élevée entre la valeur actualisée des flux de trésorerie prévus, la somme pouvant être obtenue de la vente de l'actif, et la somme qu'elle prévoit d'obtenir si elle exerce son droit à l'égard d'une garantie financière. Ultérieurement, en cas de renversement des faits ou des circonstances, la FCM comptabilise une reprise de perte de valeur dans la mesure de l'amélioration, qui n'excède pas la charge de dépréciation initiale.

**FEDERATION OF CANADIAN  
MUNICIPALITIES - GREEN MUNICIPAL  
FUND**

Notes to Financial Statements (continued)

Year ended March 31, 2016

**FÉDÉRATION CANADIENNE DES  
MUNICIPALITÉS - FONDS MUNICIPAL  
VERT**

Notes afférentes aux états financiers (suite)

Exercice clos le 31 mars 2016

**2. Significant accounting policies (continued):**

(d) Revenue recognition:

Receipts in restricted funds and unrestricted receipts in other funds are recognized as revenue in the appropriate fund when received or receivable.

Interest revenue is recognized in the particular fund to which it applies on an accrual basis.

(e) Loans receivable:

Loans are determined to be impaired when payments are contractually past due or where FCM's management is of the opinion that the loan should be regarded as impaired. An exception may be made where management determines that the loan is well secured and the collection efforts are reasonably expected to result in either repayment of the loan or its restoration according to the terms of the contract.

Actual write-offs, net of recoveries, are expensed and then applied against the internally restricted Reserve for non-performing loans. The Reserve for non-performing loans is described in note 9.

(f) Tangible capital and intangible assets:

Tangible capital and intangible assets are recorded at cost. Repairs and maintenance costs are charged to expense. Betterments which extend the estimated life of an asset are capitalized. When a capital asset no longer contributes to FCM's ability to provide services, its carrying amount is written down to its residual value.

**2. Principales conventions comptables (suite)**

d) Constatation des revenus

Les rentrées de trésorerie dans les fonds affectés et les rentrées de trésorerie non affectées dans d'autres fonds sont constatées comme revenus dans les fonds appropriés lorsque reçues ou à recevoir.

Les revenus d'intérêts sont constatés dans le fonds auquel ils se rapportent selon la comptabilité d'exercice.

e) Prêts à recevoir

Un prêt est jugé douteux lorsque, selon l'accord contractuel, les paiements sont en retard ou lorsque la direction de la FCM est d'avis que le prêt devrait être considéré douteux. Une exception peut être faite lorsque la direction détermine que le prêt est bien garanti et qu'on peut raisonnablement prévoir que les efforts de recouvrement permettront le remboursement du prêt ou sa restauration selon les termes contractuels.

Les radiations de l'exercice, nettes des recouvrements, sont passés en charge et ensuite appliquées à la Réserve affecté d'origine interne pour prêts délinquants. La Réserve pour prêts délinquants est décrite à la note 9.

f) Immobilisations corporelles et actifs incorporels

Les immobilisations corporelles et les actifs incorporels sont comptabilisés au prix coûtant. Les coûts de réparation et d'entretien sont passés en charges. Les améliorations qui prolongent la durée estimative d'un bien sont capitalisées. Lorsqu'une immobilisation ne contribue plus aux activités de la FCM, sa valeur comptable nette est amortie à sa valeur résiduelle.



**FEDERATION OF CANADIAN  
MUNICIPALITIES - GREEN MUNICIPAL  
FUND**

Notes to Financial Statements (continued)

Year ended March 31, 2016

**FÉDÉRATION CANADIENNE DES  
MUNICIPALITÉS - FONDS MUNICIPAL  
VERT**

Notes afférentes aux états financiers (suite)

Exercice clos le 31 mars 2016

**2. Significant accounting policies (continued):**

(f) Tangible capital and intangible assets (continued):

Tangible capital and intangible assets are amortized on a straight-line basis using the following annual rates:

<u>Asset</u>	<u>Term</u>
Tangible capital:	
Furniture and equipment	5 years
Leasehold improvements	period of lease
Computer hardware	3 to 5 years
Intangible assets:	
Computer software	3 to 5 years
Customer relations management	10 years

(g) Grants:

Grants are recognized as an expense in the period in which the Board approval process has been completed.

(h) Use of estimates:

The preparation of the financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the year. Actual results could differ from those estimates. These estimates are reviewed annually and, as adjustments become necessary, they are recognized in the financial statements in the period they become known.

**2. Principales conventions comptables (suite)**

f) Immobilisations corporelles et actifs incorporels (suite)

Les immobilisations corporelles et les actifs incorporels sont amortis selon la méthode linéaire aux taux annuels suivants :

<u>Actif</u>	<u>Durée</u>
Immobilisations corporelles	
Mobilier et équipement	5 ans
Améliorations locatives	durée du bail
Équipement informatique	3 à 5 ans
Actifs incorporels	
Logiciels	3 à 5 ans
Gestion des relations-clients	10 ans

g) Subventions

Les subventions sont constatées comme dépense dans l'exercice au cours duquel le processus d'approbation a été complété par le Conseil.

h) Utilisation d'estimations

La préparation d'états financiers selon les principes comptables généralement reconnus du Canada exige de la direction qu'elle fasse des estimations et qu'elle pose des hypothèses qui ont une incidence sur les montants déclarés d'actif et de passif, sur la présentation des actifs et passifs éventuels à la date des états financiers ainsi que sur les montants déclarés des produits et des charges de la période. Les résultats réels pourraient différer de ces estimations. Ces estimations font l'objet d'une révision annuelle et si des rajustements sont nécessaires, ceux-ci sont inscrits aux états financiers dans la période au cours de laquelle ils deviennent connus.

**FEDERATION OF CANADIAN  
MUNICIPALITIES - GREEN MUNICIPAL  
FUND**

Notes to Financial Statements (continued)

Year ended March 31, 2016

**FÉDÉRATION CANADIENNE DES  
MUNICIPALITÉS - FONDS MUNICIPAL  
VERT**

Notes afférentes aux états financiers (suite)

Exercice clos le 31 mars 2016

**3. Investments:**

*Short-term investments:*

	2016	2015	
Short-term bonds	\$ 100,735,500	\$ 123,968,500	Obligations à court terme

*Long-term investments:*

Supranational bonds	\$ 998,100	\$ —	Obligations supranationales
Federal bonds	6,350,700	5,104,300	Obligations fédérales
Provincial bonds	56,938,900	69,971,000	Obligations provinciales
Corporate bonds	178,679,600	188,480,500	Obligations corporatives
Municipal bonds	11,904,000	18,292,000	Obligations municipales
Long-term investments	\$ 254,871,300	\$ 281,847,800	Placements à long terme

GMF's fixed income notes have interest rates ranging from 0.0% to 9.0% and maturity dates ranging from April 5, 2016 to December 31, 2108.

**4. Interfund receivable and payable:**

These balances are without defined terms of repayment and are non-interest-bearing.

**3. Placements**

*Placements à court terme*

*Placements à long terme*

Les billets à revenu fixe du FMV ont des taux d'intérêt qui varient entre 0,0% et 9,0% avec des dates d'échéance qui vont du 5 avril 2016 au 31 décembre 2108.

**4. Interfonds - débiteurs et créditeurs**

Ces soldes sont sans modalités de remboursement et sans intérêts.

**FEDERATION OF CANADIAN  
MUNICIPALITIES - GREEN MUNICIPAL  
FUND**

Notes to Financial Statements (continued)

Year ended March 31, 2016

**FÉDÉRATION CANADIENNE DES  
MUNICIPALITÉS - FONDS MUNICIPAL  
VERT**

Notes afférentes aux états financiers (suite)

Exercice clos le 31 mars 2016

**5. Loans receivable:**

**5. Prêts à recevoir**

	2016	2015	
Municipalities and Municipal Corporations	\$ 239,706,900	\$ 208,728,000	Municipalités et corporations municipales
Corporations	25,132,700	12,047,500	Corporations
	264,839,600	220,775,500	
Less current portion	21,209,400	30,006,100	Moins la tranche échéant à moins d'un an
	\$ 243,630,200	\$ 190,769,400	

*Maturities and interest rates/Maturités et taux d'intérêts*

	1 to 5 years/ 1 à 5 ans	Rate/ Taux	Greater than 5 years/ Plus de 5 ans	Rate/ Taux	
Municipalities and Municipal Corporations	\$ 13,635,900	0.6% to/à 3.04%	\$ 226,071,000	0.3% to/à 4.25%	Municipalités et corporations municipales
Corporations	5,844,400	3.85% to/à 6.5%	19,288,300	1.85% to/à 7.5%	Corporations
	\$ 19,480,300		\$ 245,359,300		

Loan repayments expected over the next five years based on the same terms and conditions are as follows:

Les remboursements en capital prévu au cours des cinq prochains exercices selon les mêmes termes et conditions sont les suivants :

2017	\$ 21,209,400
2018	20,741,200
2019	24,703,700
2020	20,970,000
2021	17,428,600
	\$ 105,052,900



**FEDERATION OF CANADIAN  
MUNICIPALITIES - GREEN MUNICIPAL  
FUND**

Notes to Financial Statements (continued)

Year ended March 31, 2016

**FÉDÉRATION CANADIENNE DES  
MUNICIPALITÉS - FONDS MUNICIPAL  
VERT**

Notes afférentes aux états financiers (suite)

Exercice clos le 31 mars 2016

**6. Tangible capital and intangible assets:**

**6. Immobilisations corporelles et actifs incorporels**

		2016		2015	
	Cost/ Coût	Accumulated amortization/ Amortissement cumulé	Net book value/ Valeur nette	Net book value/ Valeur nette	
Tangible capital assets:					Immobilisations corporelles :
Furniture and equipment	\$ 498,600	\$ 491,400	\$ 7,200	\$ 71,100	Mobilier et équipement
Leasehold improvements	924,600	495,900	428,700	505,700	Améliorations locatives
Computer hardware	87,300	55,800	31,500	17,300	Équipement informatique
Intangible assets:					Actifs incorporels :
Computer software	179,400	108,100	71,300	79,500	Logiciels
Customer relations management	138,700	99,600	39,100	115,400	Gestion des relations - clients
	\$1,828,600	\$ 1,250,800	\$ 577,800	\$ 789,000	

GMF's cost and accumulated amortization at March 31, 2015 amounted to \$1,795,800 and \$1,006,800, respectively.

Le prix coûtant et l'amortissement cumulé du FMV au 31 mars 2015 s'élevaient respectivement à 1 795 800 \$ et 1 006 800 \$.

**7. Accounts payable and accrued liabilities:**

**7. Créditeurs et charges à payer**

As at year end, GMF had \$Nil payable for government remittances.

À la fin de l'exercice, le FMV n'avait aucun somme à payer au titre des remises gouvernementales.

**FEDERATION OF CANADIAN  
MUNICIPALITIES - GREEN MUNICIPAL  
FUND**

Notes to Financial Statements (continued)

Year ended March 31, 2016

**FÉDÉRATION CANADIENNE DES  
MUNICIPALITÉS - FONDS MUNICIPAL  
VERT**

Notes afférentes aux états financiers (suite)

Exercice clos le 31 mars 2016

**8. Grants payable:**

**8. Subventions à payer**

	2016	2015	
Balance, beginning of year	\$ 39,456,600	\$ 41,585,300	Solde au début de l'exercice
Approvals	5,291,200	6,802,500	Approbations
Disbursements	(11,757,700)	(8,931,200)	Décaissements
Balance, end of year	\$ 32,990,100	\$ 39,456,600	Solde à la fin de l'exercice

Management cannot reasonably estimate the amounts that will be disbursed in future years, as such the total balance is reported as current.

La direction ne peut déterminer raisonnablement le montant qui sera décaissé au cours du prochain exercice; ainsi, le solde total est présenté à court terme.

**9. Reserve for non-performing loans:**

GMF, under terms of the funding agreement, transfers to this reserve annually an amount equivalent to five per cent of its annual investment revenue for the purpose of managing risk from potentially non-performing loans.

**9. Réserve pour prêts délinquants**

En vertu de l'accord de financement, le FMV verse annuellement à cette réserve un montant équivalant à cinq pour cent de ses revenus annuels de placement afin de pourvoir aux prêts qui pourraient devenir délinquants.

**10. Fund balance:**

GMF's objectives when managing capital are to continue to comply with the external capital requirements specified in the agreement with the Government of Canada Capital consists of fund balance. The funds held are only available for the operations of the GMF.

**10. Soldes de fonds**

Les objectifs du FMV quant à la gestion de son capital, sont de continuer à se soumettre aux exigences en matière de capital d'origine externe spécifiées dans l'entente avec le gouvernement du Canada. Le capital du FMV se compose du solde du fonds. Les fonds Menus ne sont disponibles que pour les opérations du FMV.

GMF shall maintain the nominal value of the Fund Assets of at least \$500,000,000 excluding the value of the reserve for non-performing loans and the reserve for guarantees. As of March 31, 2016 this balance was equal to \$586,054,200 (2015 - \$583,136,400). From the \$500,000,000 dedicated to stimulate innovative municipal projects and practices or to improve the environmental performance of Canadian municipalities, a minimum amount of \$150,000,000 is restricted for the remediation and redevelopment of brownfields. GMF complies with the requirements of these externally restricted funds.

Le FMV doit maintenir la valeur nominale de l'actif du fonds à une somme d'au moins 500 000 000 \$ l'exclusion de la valeur de la réserve pour les prêts délinquants et de la réserve pour les garanties. Au, 31 mars 2016 ce solde était de 586 054 200 \$ (583 136 400 \$ en 2015). Du 500 000 000 \$ dédié à stimuler l'investissement dans des projets et des pratiques municipales novatrices, dans le but d'améliorer l'efficacité environnementale des municipalités canadiennes, un montant minimum de 150 000 000 \$ est restreint à la restauration et la remise en valeur de friches industrielles. Le FMV s'est conformé aux exigences de ces fonds affectés.

# FEDERATION OF CANADIAN MUNICIPALITIES - GREEN MUNICIPAL FUND

Notes to Financial Statements (continued)

Year ended March 31, 2016

# FÉDÉRATION CANADIENNE DES MUNICIPALITÉS - FONDS MUNICIPAL VERT

Notes afférentes aux états financiers (suite)

Exercice clos le 31 mars 2016

## 10. Fund balance (continued):

There have been no changes to the GMF's capital requirements and its overall strategy to capital remains unchanged from the prior year.

## 11. Commitments:

### (a) GMF loans:

As at March 31, 2016, GMF had loans approved by the Board but undisbursed for a total amount of \$171,482,200 (2015 - \$235,241,200).

### (b) Leases:

FCM and GMF are committed under operating leases for the office space and equipment over the next five years as follows:

		Office Space/ Espace de bureau		Total/ Total	
2017	\$	592,000	\$	592,000	2017
2018		605,500		605,500	2018
2019		626,700		626,700	2019
2020		649,000		649,000	2020
2021		330,200		330,200	2021
	\$	2,803,400	\$	2,803,400	

### (c) Services:

In connection with its operations, GMF regularly enters into agreements for the purchase of services. Certain of these agreements extend beyond the end of the 2016 fiscal year. In the opinion of management, these agreements are in the normal course of GMF's operations, are not abnormal in amount or nature and do not include a high degree of speculative risk. The total commitment at March 31, 2016 is \$58,000.

## 10. Soldes de fonds (suite)

Il n'y a pas eu de changement aux exigences en matière de capital du FMV et sa stratégie générale relative à son capital n'a pas changé par rapport à l'exercice précédent.

## 11. Engagements

### a) Prêts de FMV

Au 31 mars 2016, FMV avait des prêts approuvés par le Conseil mais non encore déboursés pour un montant total de 171 482 200 \$ (235 241 200 \$ en 2015).

### b) Contrats de location-exploitation

La FCM et le FMV se sont engagés en vertu de contrats de location-exploitation pour de l'espace de bureau et de l'équipement pour les cinq prochains exercices de la façon suivante :

### c) Services

Dans l'exercice de ses activités, le FMV conclut périodiquement des accords pour l'achat de services. Certains de ces accords s'étendent au-delà de la fin de l'exercice 2016. De l'avis de la direction, ces accords s'inscrivent dans le cours normal des activités de le FMV, leur montant et leur nature ne sortent pas de la normale et ils ne posent pas un risque spéculatif élevé. L'engagement total au 31 mars 2016 est de 58 000 \$.



**FEDERATION OF CANADIAN  
MUNICIPALITIES - GREEN MUNICIPAL  
FUND**

Notes to Financial Statements (continued)

Year ended March 31, 2016

**FÉDÉRATION CANADIENNE DES  
MUNICIPALITÉS - FONDS MUNICIPAL  
VERT**

Notes afférentes aux états financiers (suite)

Exercice clos le 31 mars 2016

**12. Retirement benefits:**

FCM matches employee RRSP contributions up to 5% of their salaries. Total employer contributions for the year were \$221,600 (2015 - \$218,800), which are recorded in personnel expenses.

**13. Allocation of expenses:**

During the year, a total amount of \$71,500 (2015 - \$69,300) was charged to GMF for its participation in various FCM events. These transactions were carried out in the normal course of operations and are recorded at fair market value.

FCM allocated administrative overhead costs as follows:

**12. Avantages de retraite**

L'employeur effectue des contributions aux REER des employés égales aux contributions de ceux-ci jusqu'à un maximum de 5 % du total du salaire annuel. Le total des contributions de l'employeur pour l'exercice sont de 221 600 \$ (218 800 \$ en 2015), qui sont comptabilisées en frais de personnel.

**13. Ventilation des dépenses**

Au cours de l'exercice, un montant total de 71 500 \$ (69 300 \$ en 2015) a été chargé par le FMV pour sa participation à différents événements organisés par la FCM. Ces transactions ont été effectuées dans le cours normal des activités et ont été mesurées à leur valeur marchande.

Les frais administratifs généraux engagés par la FCM se présentent comme suit :

	2016			2015			
	General Fund/ Fonds général	Green Municipal Fund/ Fonds municipal vert	Total/ Total	General Fund/ Fonds général	Green Municipal Fund/ Fonds municipal vert	Total/ Total	
Administrative overhead	\$ 2,758,400	\$ 1,451,900	\$ 4,210,300	\$ 2,931,200	\$ 1,446,900	\$ 4,378,100	Frais administratifs
	66%	34%	100%	67%	33%	100%	

**FEDERATION OF CANADIAN  
MUNICIPALITIES - GREEN MUNICIPAL  
FUND**

Notes to Financial Statements (continued)

Year ended March 31, 2016

**FÉDÉRATION CANADIENNE DES  
MUNICIPALITÉS - FONDS MUNICIPAL  
VERT**

Notes afférentes aux états financiers (suite)

Exercice clos le 31 mars 2016

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**14. Financial risks:**

(a) Currency risk:

FCM believes that it is not exposed to significant foreign currency and liquidity risks arising from its financial instruments.

(b) Interest rate risk:

FCM is exposed to interest rate risk with respect to its interest-bearing investments, as disclosed in note 3.

(c) Credit risk:

Credit risk refers to the risk that a counterparty may default on its contractual obligations resulting in a financial loss. FCM is exposed to credit risk with respect to the loans receivable and other receivables. FCM assesses, on a continuous basis, loans and other receivables and provides for any amounts that are not collectible in the allowance for doubtful accounts. At year end, there were no amounts allowed for in receivables.

**14. Instruments financiers**

a) Risque de change

La FCM estime ne pas courir de risque de change ou de liquidité important relativement à ses instruments financiers.

b) Risque de taux d'intérêt

La FCM est exposée à un risque de taux d'intérêt relativement à ses placements porteurs d'intérêt, comme il est indiqué à la note 3.

c) Juste valeur

Le risque de crédit est le risque qu'une contrepartie ne respecte pas ses obligations contractuelles, entraînant une perte financière. FCM s'expose à un risque de crédit sur ses prêts en cours et autres sommes à recevoir. La FCM évalue continuellement ses prêts et autres sommes à recevoir et tient compte des montants irrécouvrables dans la provision pour créances douteuses. À la fin de l'exercice, les débiteurs ne comportaient aucune provision pour créances douteuses.



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