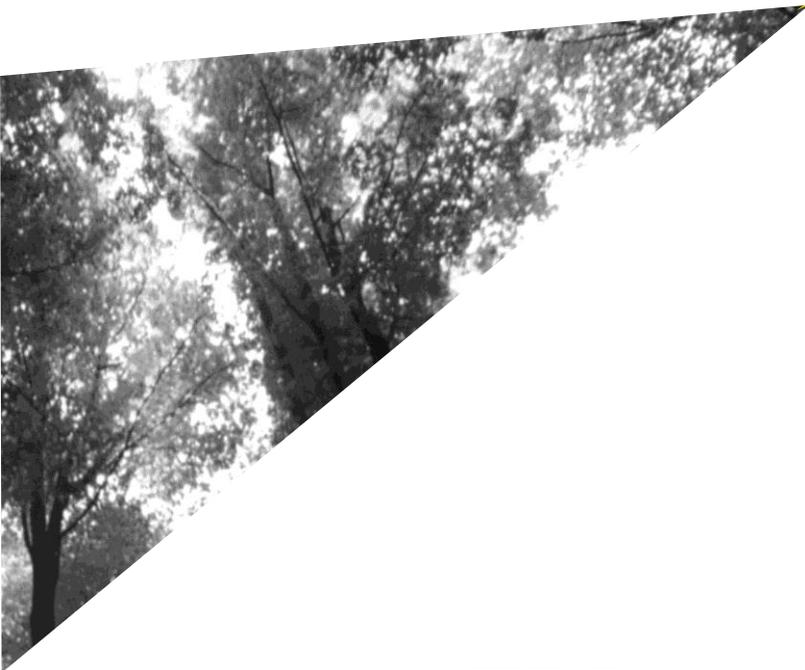


Federation of Canadian Municipalities

Review of the Green Municipal Fund

Final Report

30 September 2014



EY

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Table of contents

Table of contents	2
Executive summary	4
Introduction	4
Background	4
Methodology	5
Management responses	5
Key findings and improvement opportunities	5
Background	8
Review questions and criteria	10
Methodology	11
Management responses	14
Review findings	15
Question 1: Does GMF continue to be aligned with key stakeholder priorities and does it realistically address an actual need?	15
Question 2: What are the environmental, economic, and social benefits that have resulted from GMF-funded initiatives?	18
Question 3: What environmental, economic, and social benefits have GMF Knowledge Services helped promote?	21
Appendix A: Review program	25
Appendix B: Primary environmental results	26
Appendix C: Secondary environmental results	27
Appendix D: Documents reviewed.....	29



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Brock Carlton
Chief Executive Officer
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30 September 2014

Report on the Review of the Green Municipal Fund

Dear Mr. Carlton:

We have now completed the engagement noted above and are pleased to present our report for your consideration. We trust the report will meet with your requirements and needs.

We have debriefed management on our findings and recommendations and have presented the results of our report to the Green Municipal Fund (GMF) Council.

This report is intended solely for the information and use of the Federation of Canadian Municipalities (FCM), parties to the Funding Agreement of the Green Municipal Fund, management, the Ministers and Parliamentarians. While we recognize that this report will be posted on the FCM website, we caution any readers other than those outlined above that it may not be appropriate for their purposes, and that they rely upon it at their own risk.

We would like to thank you and your team for the cooperation, assistance and courtesy extended to the EY team over the course of the project.

If you have questions or would like to discuss, please do not hesitate to contact the undersigned.

Sincerely,

Bill Kessels, CPA, CA, CIA
Partner
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Executive summary

Introduction

This report communicates the findings of the Review of the Green Municipal Fund (GMF) performed by EY between April and July 2014.

The 2005 Funding Agreement between the Federation of Canadian Municipalities (FCM), Natural Resources Canada, and Environment Canada requires FCM to sponsor an independent Review and Performance Audit every five years. FCM engaged EY to conduct both pieces of work following a competitive Request-for-Proposal process that took place between January 30, 2014 and March 7, 2014.

Background

The Government of Canada through Natural Resources and Environment Canada endowed FCM with \$550 million to establish GMF as a long-term reserve of loan and grant financing for municipalities and their private sector partners to promote sustainable infrastructure investment. In addition to project funding, FCM develops educational programming, tools and enablers that promote sound environmental stewardship, sustainable resource management and climate protection initiatives.

Review objectives and scope

The Review and Performance Audit were conducted in tandem and cover the period from April 1, 2009 to March 31, 2014. FCM oversaw and supported the Review and Performance Audit's planning, conduct and reporting.

The Review focuses primarily on the continued relevance of the Fund and outcomes achieved by GMF. The Performance Audit concentrates on the aspects related to the GMF's economy, efficiency and effectiveness as well as overall Funding Agreement compliance. Together, the reports provide a joint portrait of GMF's activities since the last Performance Audit and Review were conducted in 2009.

Through consultation with FCM, interviews and document review, the project team developed three questions to assess GMF's relevance and outcomes, including:

- ▶ Question 1: Does GMF continue to be aligned with key stakeholder priorities and does it realistically address an actual need?
- ▶ Question 2: What are the environmental, economic, and social benefits that have resulted from GMF-funded initiatives?
- ▶ Question 3: What environmental, economic, and social benefits have GMF Knowledge Services helped promote?

Methodology

Five lines of evidence comprise the Review's methodological foundation. Components of all lines of evidence described below were utilized in both the Review and the Performance Audit. These lines of evidence included:

- ▶ Document and file review
- ▶ 20 key informant interviews with FCM staff, GMF Council and FCM Board members responsible for GMF activities
- ▶ Bilingual web-based survey distributed to over 600 recipients and non-recipients, yielding 108 responses (17.3% response rate)
- ▶ 3 case vignettes of completed capital projects
- ▶ Quantitative data analysis

Although distinct, the lines of evidence are mutually reinforcing, i.e. the document and file review informed the interviews, and the interviews, in turn, helped to clarify concepts or questions that emerge out of the document and file review. Multiple lines of evidence were employed to assess each question.

Planning for both the Performance Audit and Review was done in tandem to avoid overlap or duplication of effort.

Management responses

Management responses to the review recommendations have been included in this report. Overall, the Federation of Canadian Municipalities (FCM) is pleased with the results of the Five-Year Performance Audit and Review and is in agreement with Ernst & Young's findings and recommendations. FCM feels that the Performance Audit and Review recommendations will help guide further important improvements to the delivery and continued relevance of our GMF programming to stakeholders. These improvements will be reflected in future Annual Statements of Plans and Objectives.

Key findings and improvement opportunities

Question 1: Does GMF continue to be aligned with key stakeholder priorities and does it realistically address an actual need?

Findings:

GMF's two-tiered governance structure reflects the Fund's stakeholder constituency. FCM monitors GMF stakeholder priorities through a number of venues, including annual conferences, external conferences, ad hoc surveys, focus groups, and one-on-one interactions. Feedback from stakeholders is examined and influences strategic planning exercises and service offerings. Over 80% of survey respondents agreed or strongly agreed that GMF's priorities were aligned with their municipalities' priorities as they relate to sustainability.

GMF addresses an actual need. Interviews and case vignette analyses find that financial hurdles would likely have imperiled capital project developments in rural municipalities in the absence of GMF

support. And while capital projects in urban municipalities (more than 10,000 inhabitants) could have progressed without GMF funding, the nature and scope of the projects would likely have been different and would likely have realized fewer environmental benefits.

There are no recommendations associated with question 1.

Question 2: What are the environmental, economic, and social benefits that have resulted from GMF-funded initiatives?

Findings:

GMF-funded initiatives result in numerous reported environmental, economic and social benefits and are communicated to stakeholders in Annual Reports. The Annual Reports aggregate the benefits reported in Environmental Results Reports (ERRs), which include mandatory environmental benefits reported for each sector and non-mandatory benefits that are reported on a project-by-project basis. ERRs are completed at the conclusion of each capital project. The Environmental Verification Officer validates the ERRs, which are prepared by certified environmental engineers and other professionals. The Review did not validate the data presented in the Environmental Results Reports, which provide the empirical foundation of environmental benefits listed in the Annual Reports. Based on documents reviewed, benefits have been realized across all five sectors.

Although environmental benefits associated with capital projects are a key driver for involvement with GMF, interviews with funding recipients indicated attendant social and economic benefits derived from capital projects are also important and should continue to be emphasized by the organization. Based on interviews and document review, benefit reporting has improved, but remains uneven especially across economic and social benefit categories, a challenge partly due to a longer realization timeline for some benefits.

Recommendation 1:

- ▶ GMF should conduct funding recipient interviews and surveys 3-5 years after GMF receives the project completion and environmental results report to better understand the full spectrum of benefits that GMF-funded projects provide to stakeholders.
- ▶ Management response: FCM agrees with this recommendation. FCM has previously discussed this with GMF Council and plans to implement this for select projects in future years. The results from these interviews and surveys will become part of GMF's performance measurement and will be integrated into GMF's information management framework, which is currently used to track quantitative and qualitative project performance data from the Project Completion and Environmental Results report.

Question 3: What environmental, economic, and social benefits have GMF Knowledge Services helped promote?

Findings:

GMF Knowledge Services have promoted environmental, economic, and social benefits in municipalities across Canada by expanding stakeholders' professional networks, providing a repository of searchable, web-based resources and enabling peer-to-peer learning. Participation in GMF knowledge offerings such as webinars creates hubs of interest that can produce meaningful relationships which have a longer-term impact on municipalities. Nearly 70% of survey respondents believe that GMF Knowledge Services support municipalities' broader sustainability objectives and a similar figure believes their professional network in support of sustainability has expanded because of GMF activities.



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Recommendation 2:

- ▶ As knowledge brokers, Knowledge Services should continue to develop and promote tools and enablers targeted to areas of strategic focus for GMF, encourage local capacity development, and drive leading practices across sectors.
- ▶ Management response: FCM agrees with this recommendation. The development of a Knowledge Services framework, informed by market research and aligned with the GMF logic model and Three-Year Plan, will ensure GMF Knowledge Services delivers programming that integrates GMF funding and knowledge, and delivers focused programming through peer learning cohorts, as well as broad knowledge sharing related to GMF-funded initiatives, to ensure both targeted support and broad uptake of best practices from leading edge, replicable initiatives.

Background

The Government of Canada through Natural Resources and Environment Canada endowed FCM with \$550 million to establish GMF as a long-term source of loan and grant financing for municipalities and their partners to promote sustainable infrastructure investment. In addition to project funding, FCM develops educational programming, tools and enablers that promote sound environmental stewardship, sustainable resource management and climate protection initiatives.

Funding

The Green Municipal Fund (GMF) has expanded the capacity of municipalities to deliver durable improvements to environmentally sustainable Canadian infrastructure. GMF funds initiatives in three clusters—plans, studies and capital projects—across five sectors: energy, transportation, waste, water and brownfields. Summaries of the three clusters described below sketch out the parameters and scope of the current funding offer, which is undergoing a refresh. Eligible initiatives under these clusters have evolved since the previous Audit. For example, sustainable community plans are no longer eligible for funding, and field tests must now be aligned with eligible capital projects. Cluster descriptions of plans, studies and capital projects presented below reflect the current state of GMF's funding approach.

Plans: Municipal governments and their partners may receive grants to support the development of action planning for neighborhood sustainability efforts, brownfields management, or greenhouse gas (GHG) emissions reductions through this GMF funding stream. GMF offers grants, which cover up to 50% of eligible costs to a maximum of \$175,000, to undertake eligible plans.

Studies: Feasibility studies and field tests of all sectors fall into this cluster. Technical or financial feasibility analyses measure a range of potential impacts of a potential municipal environmental project on the local economy, population or environment. A field test pilots, on a small-scale, a potential environmental project in a municipality. Both study types are aligned with eligible capital projects and are candidates for grants under this GMF funding stream. FCM has funded a range of studies including assessments related to district energy systems, zero waste systems, biomass, and the establishment of wastewater treatment systems. Grants for studies follow the same funding formula as plans.

Capital Projects: Capital projects in all sector areas, except those related to brownfields, are eligible for a combination of below-market loans covering up to 80% of eligible costs not to exceed \$10 million and grants of up to 20% of the loan value, but not more than \$1 million. Brownfields capital projects are eligible for up to 80% of eligible costs without any pre-defined loan limit.

Knowledge resources

GMF sponsors, develops and curates knowledge resources specific to each of the five sustainability sectors as well as multi-sector resources. Capacity building through knowledge transfer and expertise is a critical component of GMF.

GMF, through FCM, promotes the dissemination of knowledge through peer-to-peer networking and mentoring, hosts an annual FCM Sustainable Communities Conference, sponsors the Sustainable Communities Awards, and funds the Partners for Climate protection program. FCM also solicits submissions for knowledge resources on its website. FCM has also produced newsletters, sector research reports, sustainability solutions, province tailored brownfield roadmaps and one sustainability snapshot.

Approach and timeline overview

The Review and Performance Audit were conducted in tandem and cover the period from April 1, 2009 to March 31, 2014. FCM oversaw and supported the Review and Performance Audit's planning, conduct and reporting.

The Review focuses primarily on the continued relevance of the Fund and outcomes achieved by GMF. The Performance Audit concentrates on the aspects related to the GMF's economy, efficiency and effectiveness as well as overall Funding Agreement compliance. Together, the reports provide a joint portrait of GMF's activities since the last Performance Audit and Review were conducted in 2009.

Review questions and criteria

A Review plan was developed to address key performance areas related to GMF outcomes, design and relevance. Through consultation with FCM, interviews and document review, the project team developed three questions to assess these areas. Criteria and associated procedures, which appear in Appendix A, aligned to the questions were also developed. The specific review questions and associated criteria appear below.

Table 1: Review questions and criteria

Review Questions	Review Criteria
Question #1 - Does GMF continue to be aligned with key stakeholder priorities and does it realistically address an actual need?	1.1. GMF is aligned with key stakeholder priorities
	1.2. GMF addresses an actual need
Question #2 - What are the environmental, economic, and social benefits that have resulted from GMF-funded initiatives?	2.1. GMF-funded initiatives have generated environmental benefits related to air quality, water quality, soil quality, and climate protection
	2.2. GMF initiatives have generated economic benefits
	2.3. GMF initiatives have generated social benefits
Question #3 - What environmental, economic, and social benefits have GMF Knowledge Services helped promote?	3.1. GMF Knowledge Services promote environmental benefits
	3.2. GMF Knowledge Services promote economic benefits
	3.3. GMF Knowledge Services promote social benefits

The complete review program including review criteria and procedures are included in Appendix A.

Our review work included:

- ▶ 20 interviews with representatives of FCM's management and staff and members of the GMF Council and FCM's National Board of Directors
- ▶ An examination and analysis of documentation relevant to each of the audit objectives
- ▶ Review of file documentation associated with eight funded projects approximately encompassing approximately 9.4% of Board approved funding over the past five years, including environmental impact reporting
- ▶ Bilingual web-based survey distributed to over 600 recipients and non-recipients, yielding 108 responses (17.3% response rate) to assess the degree to which they are satisfied with GMF programming
- ▶ Three case vignettes in Haute-Yamaska (Quebec), Sackville (New Brunswick), and Edmonton (Alberta) designed to assess GMF program operations and impact across sectors, and regions
- ▶ Quantitative data analysis of administrative data

The following section outlines the core components of each line of evidence and describes our approach to integrating them.

Methodology

This section describes the lines of evidence used to assess the Review objectives and associated criteria. Although distinct, the lines of evidence are mutually reinforcing, i.e. the document and file review informed the interviews, and the interviews, in turn, helped to clarify concepts or questions that emerged out of the document and file review. As well, findings and recommendations were corroborated by multiple data points across evidence lines, a process referred to as lines of evidence integration. This assessment process is also described below.

Document and file review

FCM's Project Authority provided the project team with an initial round of documents primarily related to governance, i.e. the Funding Agreement, annual reports, and a collection of strategic planning documents. Key informant interviews, an initial document scan, and consultations with the Project Authority identified additional documents, which the project team requested and the Project Authority promptly provided. Documents reviewed by the project team appear in Appendix D.

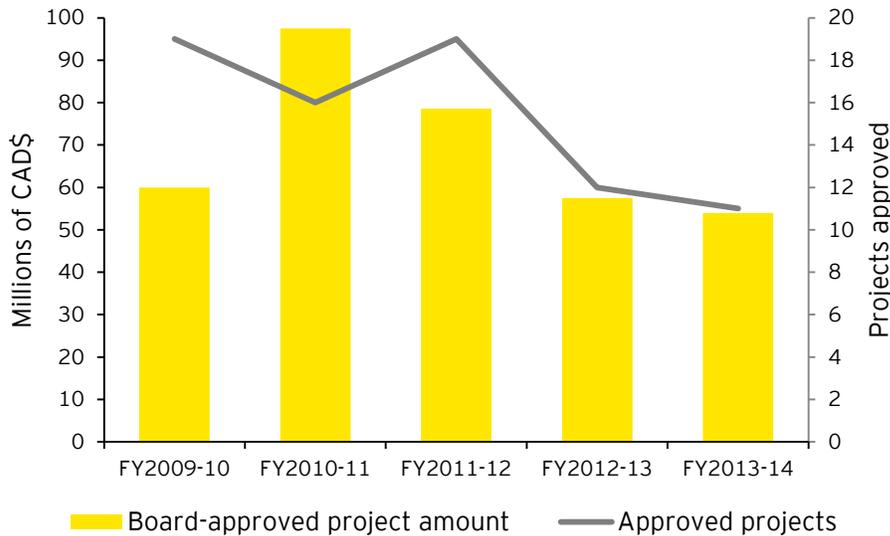
The examination of applicant files, reports and review checklists supported analysis related to relevance, program success and value-for-money analysis. Processing times, review process compliance, and consistent application of the selection criteria across files will be addressed through the file review.

A non-statistical, risk based judgmental sampling strategy was adopted to review GMF project files to evaluate the following criteria:

- ▶ Processes to determine project and recipient eligibility are efficient and effective
- ▶ Processes to assess, evaluate, and approve applications for funding are consistent with GMF's stated objectives
- ▶ GMF has developed service level targets related to applications, contract and disbursement processing to promote efficiency and effectiveness
- ▶ Mechanisms exist and are followed to ensure that GMF is being administered in compliance with Funding Agreement terms and conditions

Similar to the Audit, the risk-based approach to selecting files for review was informed by consultations with GMF and documentation review. GMF provides grants (with the exception of brownfields) and below-market loans to finance sustainable capital projects. Of the 362 Board approved initiatives totaling roughly \$372M, 77 were capital projects totaling roughly \$345M. The following chart depicts the total annual amounts approved in each fiscal year as well as the number of capital projects approved annually during that period.

Figure 1: Approved capital funding and capital projects, FY2009-10 - FY2013-14



A judgmental sampling strategy was used based on attributes associated with capital project risk (high and medium) and materiality (above \$2 million).

Given that over 90% of Board approved funding was for capital projects, the Review team randomly selected 10% of all Board approved capital projects over the past five years (8 capital projects). The eight files selected for review accounted for approximately \$35.3M or roughly 9.4% of total Board-approved funding and 14% of all disbursed funding. As well, the files selected account for 10.25% of Board approved capital project funding and about 16% of disbursed capital project funding for the period under review. Files selected were the same in the Review and the Performance Audit.

Key informant interviews

Key informant interviews were designed to provide qualitative information related to economy, efficiency and effectiveness of GMF. The interviews identified well-performing areas of GMF and opportunities for improvement moving forward. The project team developed an interview guide, which included questions relevant for both the Review and Performance Audit. FCM’s Project Authority reviewed and approved the guide. Interviews were conducted with 20 key informants drawn from FCM’s National Board of Directors, members of the GMF Council, and FCM’s management and staff. The interviews were conducted both in person and by telephone and addressed both strategic and operational items in relation to the Review objectives.

Web-based survey

In order to assess recipients and non-recipients’ experience with GMF’s funding and Knowledge Services, a bilingual, web-based survey was distributed by EY to all lead applicants who applied for GMF funding across all sectors and funding types covered under the scope of this Review. This included 797 GMF recipients and non-recipients. Emails for contacts are maintained through the organization’s CRM database. After accounting for 174 undeliverable emails, the final population was 623. One hundred and eight responses, including 16 in French, were collected following an email invitation sent on behalf of the Chair of the GMF Council, Raymond Louie.

The survey combined open and closed-ended questions to gather information related to satisfaction with GMF Programs, Program design, experience with Program administration, administrative efficiency, service delivery, benefit realization and opportunities for improvement. Results were tabulated anonymously using a randomized identification number for each respondent.

Quantitative data analysis

Quantitative data related to a range of program elements was analyzed to assess patterns related to program relevance, design, and outcomes. Administrative, financial, project, and performance data was provided by FCM either in machine readable format or extracted from annual and quarterly reporting. Relevant summary and descriptive statistics were produced to identify trends as well as to corroborate qualitative information gathered from other lines of evidence.

Case vignettes

The case vignettes offer contextual insight into GMF-funded projects through interviews and site visits. Consistent with a risk-based approach that has governed other phases of the Review, the case vignettes targeted capital projects (as opposed to plans, studies, and tests, which consume on average less than 10% of GMF funding annually) completed between fiscal years 2009 and 2014. GMF strategic priorities outlined in various Annual Statements of Plans and Objectives guided the judgmental sample. Selection considerations included: (1) sector focus without duplication, (2) inclusion of one brownfields project, (3) at least one rural project, (4) regional balance between the six distinct regions, (5) the inclusion of at least one project in Quebec, and (6) inclusion of at least one private sector project. Although randomly selecting vignettes would reduce potential case selection bias, such as selection process would reduce the opportunity to explicitly explore areas of strategic interest to GMF, and thus add comparatively less value to the organization going forward.

Capital projects reviewed

- ▶ *GMF 12071 - Icon Fox Towers Brownfield Remediation and Redevelopment.* The City of Edmonton partnered with Icon Fox Developments Ltd. to remediate the petroleum-contaminated site of a former automotive garage and service facility. This private sector-led, urban-based project is located in the Prairies region (Alberta). The project was approved for a \$2.16M loan from GMF (plus an amount for capitalized interest), accounting for 73% of total project funding.
- ▶ *GMF 10383 - Projet d'implantation de deux écocentres sur le territoire.* The Regional County Municipality of Haute-Yamaska completed a waste project involving the development of eco-centres designed to promote responsible and sustainable waste management for the disposal of bulky metal and non-metal waste, household hazardous waste, construction debris, electronic equipment, and agricultural plastics. This urban-based project, located in Quebec, was approved for a \$2.2M loan and a \$440K grant from GMF, and accounted for 73% of total project funding.
- ▶ *GMF 10346 - Sackville Town Hall and Emergency Response Services Building.* The Town of Sackville completed a new, energy-efficient emergency response services and town hall (ERS/TH) facility to replace the existing town hall building and house primary emergency response services for Sackville and surrounding areas. This rural based-project in the Atlantic region (New Brunswick) was approved for a \$9.2M loan and a \$1M grant from GMF, which accounted for 80% of total project funding.

Integration of lines of evidence

Integrating the lines of evidence required a structured, systematic approach to ensure the evidence base adequately addresses the Review criteria. A matrix approach was used to link relevant components of each line of evidence to the Review criteria. Findings against the Review criteria were developed based on the integration of the lines of evidence.

Management responses

Management responses to the review recommendations have been included in this report. Overall, the Federation of Canadian Municipalities (FCM) is pleased with the results of the Five Year Performance Audit and Review and is in agreement with Ernst & Young's findings and recommendations. FCM feels that the Performance Audit and Review recommendations will help guide further important improvements to the delivery and continued relevance of our GMF programming to stakeholders. These improvements will be reflected in future Annual Statements of Plans and Objectives.

Review findings

Question 1: Does GMF continue to be aligned with key stakeholder priorities and does it realistically address an actual need?

Criteria 1.1. GMF is aligned with stakeholder priorities

GMF's stakeholder base is reflected in the composition of its two-tiered governance structure, which includes GMF Council and FCM's National Board of Directors.¹

GMF Council is also representative of GMF's key stakeholders. Council membership is comprised of one third Federal government, one third municipal elected officials and one third experts in public, private and academic sectors relevant to GMF. Based on the cross-section of federal, municipal and private sector representation, interviews and Council meeting minutes reviewed found that priorities from each stakeholder group are regularly communicated.

The 75-member FCM National Board of Directors includes elected municipal officials and affiliate members, representing urban and rural communities across Canada.

Government of Canada representation exists on both the GMF Council and Peer Review Committee which facilitates the alignment of priorities between this key stakeholder and GMF.

GMF is aligned with stakeholder priorities, and funding addresses an actual need.

GMF adapts programming and processes to reflect stakeholder needs

Stakeholder consultation is a core component of GMF activities. Ongoing feedback and consultation through conferences and direct engagement with stakeholders help orient and refine GMF priorities. GMF stakeholder engagement activities during FCM's Annual Conference, Sustainable Communities Conference, and ad hoc focus groups provide insight into changing priorities at the municipal level related to sustainability. GMF records and examines sentiment gathered through these consultations and incorporates them into their Annual Statement of Plans and Objectives. The Three-Year Plan is drafted in concert with GMF Council and, based on interviews and documents reviewed, adjusts planning to reflect shifting sustainability considerations at the municipal level.

GMF adapts, where appropriate, to meet the needs of its stakeholders through its program offerings. Since 2009, GMF developed a number of initiatives in response to stakeholder feedback. GMF is developing a new offer that modifies GMF programming to address the challenges faced by stakeholders under the current GMF funding model.

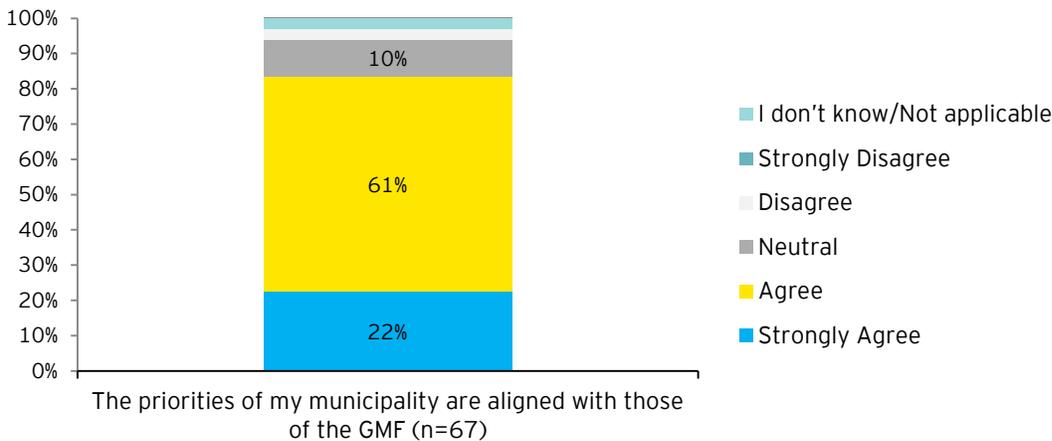
¹ Green Municipal Fund Funding Agreement (2005), Article II, Section 2.02/2.03/2.04.

On the applications and contracting side, the creation of “deal teams” to shepherd prospective applicants through the approval and contracting phases has also been introduced in response to stakeholder feedback. Deal teams are designed to facilitate the timely processing of projects with private sector partners which require more financially complex contracting arrangements.

Interviews with staff and Council and documents reviewed indicate that stakeholder consultations are a GMF priority. Interviews reflected an appreciation of the need to align GMF objectives and processes with stakeholder needs. Quebec municipalities have submitted a historically lower number of applications on a per capita basis. In response, GMF implemented in 2012 the Quebec Outreach Strategy to drive uptake in applications and project funding to Quebec municipalities on par with other regions across Canada. The Quebec Strategy also endeavored to tailor GMF knowledge resources and content to the Quebec market. Developing the Quebec strategy required significant stakeholder consultation, including interviews and a focus group.² The resulting strategy recommended “nine initiatives organized under three streams: building close relations with key stakeholders, creating relevant content and processes adapted to Quebec, and improving communications.”³

Alignment is reflected among GMF recipients and non-recipients. Survey data shows over 80% of survey respondents strongly agree or agree that the priorities of their municipality are aligned with those of GMF.

Figure 2: Alignment of GMF and stakeholder priorities



Source: GMF Recipient and Non-recipient Survey (2014).

Criteria 1.2. GMF funding addresses an actual need

GMF funding endeavors to meet the needs of municipalities in three ways: providing funding for their environmental projects that would otherwise experience difficulty accessing funds such as projects in small municipalities and in the Brownfield sector, enabling municipalities to include more design elements in capital projects that produce environmental benefits, and creating the opportunity for GMF funding recipients to leverage GMF funding to access other funding sources.

² 2012 GMF Quebec Outreach Strategy, pg. 30

³ Ibid., pg. 1

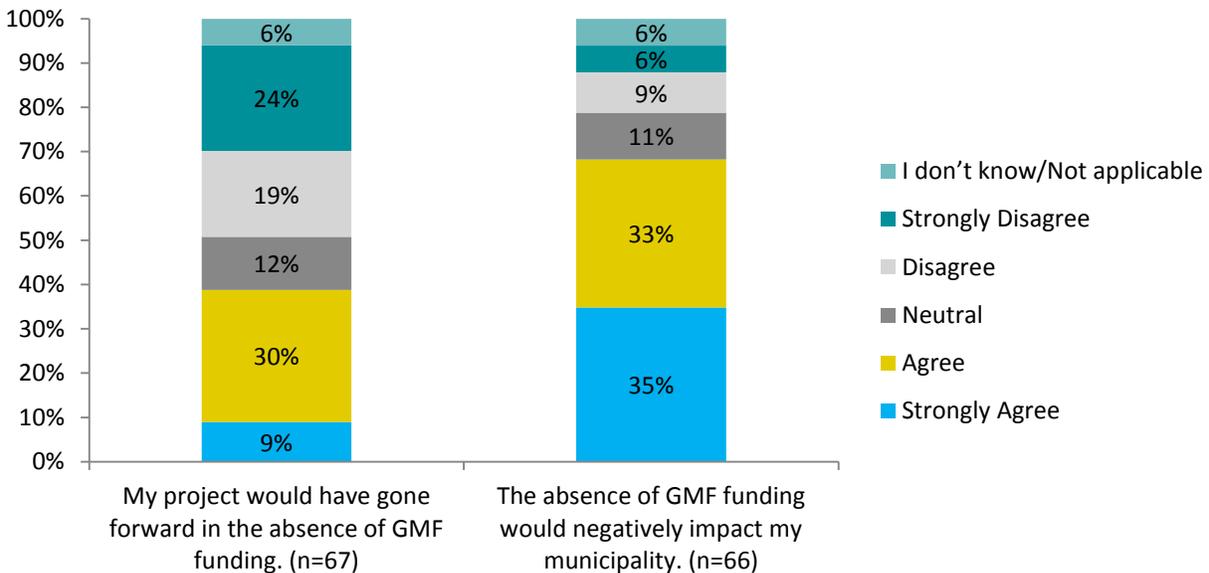
Interviews with GMF project officers suggest that GMF-funded projects in small municipalities would likely not be realized without GMF funding. While GMF-funded projects in large municipalities are more likely to be completed in the absence of GMF funding, these projects would likely not include the same environmental considerations and mandated reporting as they would if they received GMF funding.

The need for GMF funding is particularly acute in the Brownfield sector.

Because of the increased risks associated with Brownfield remediation projects, there are few financing opportunities available to municipalities that would enable their participation in Brownfield remediation.⁴ GMF funding specifically addresses this gap in the market. Interviews with GMF personnel found that fewer such projects would be conducted without GMF funding.

Survey results in this area are also compelling. Fewer than 40% of survey respondents representing all funding sectors believe that their project would have gone forward in the absence of GMF funding. Over 65% of survey respondents strongly agree or agree that the absence of GMF Funding would negatively impact their municipality.

Figure 3: GMF funding addresses an actual need



Source: GMF Recipient and Non-recipient Survey (2014).

Interviews with GMF project officers and with GMF funding recipients found that GMF funding incentivized recipients to “raise the bar” of their projects by altering the design of their original initiatives to incorporate elements that enhance first and foremost the environmental as well as the social and economic co-benefits for their municipality. Without access to GMF funding, these design elements would likely not have been incorporated due to financial constraints. GMF funding recipients interviewed as a part of the case vignettes revealed that GMF funding has also provided additional value by opening doors to other sources of funding. These GMF funding recipients confirm that they are able to leverage GMF funding to gain access to other sources of funding.

There are no recommendations associated with question 1.

⁴ GMF Annual Report 2012-2013., pg. 25-26.

Question 2: What are the environmental, economic, and social benefits that have resulted from GMF-funded initiatives?

Criteria 2.1. GMF-funded initiatives result in numerous environmental, economic and social benefits that are reported to GMF and communicated to stakeholders in Annual Reports.

GMF's Annual Reports aggregate benefits found in Environmental Results Reports, which are completed at the conclusion of each capital project. The Environmental Results reports include the mandatory or primary environmental indicators that the projects are required to report against. The Environmental Verification Officer validates the reports, which are prepared by certified environmental engineers and other professionals. The Review did not validate the data presented in the Environmental Results Reports, which provide the empirical foundation of environmental benefits listed in the Annual Reports.

While environmental benefits are the key driver for involvement with GMF, interviews with funding recipients reveal that economic and social co-benefits are also important to municipalities.

Environmental results:

The environmental results reported over the past 5 years include results from projects that were approved prior to 2009 when the environmental results framework was still being developed.

Annual Reports produced by GMF from 2009–2013 report on the anticipated and actual primary environmental benefits realized in the following areas:

Brownfields:

- ▶ Total land recovered;
- ▶ Contaminated soil managed;

Energy:

- ▶ Carbon dioxide equivalent per year of greenhouse gas (GHG) emissions avoided;
- ▶ Criteria air contaminants (CACs) avoided;

Waste:

- ▶ Waste diverted from landfill;

Water:

- ▶ Water and wastewater treated to Canadian Council of Ministers of the Environment (CCME) or Canadian Drinking Water Quality (CDWQ) Guidelines;

Transportation:

- ▶ Carbon dioxide equivalent per year of greenhouse gas (GHG) emissions avoided;
- ▶ Criteria air contaminants (CACs) avoided

A complete listing of the primary environmental benefits reported over the past five years appears in Appendix B.

GMF includes in its annual reporting of project results any other environmental results that the projects achieve that are included in the supporting documentation, but are not mandatory as well as environmental results that GMF can calculate based on the mandatory reporting. Secondary environmental indicators are determined at the reporting stage, and there are therefore no anticipated results for these indicators. Examples of secondary environmental indicators include: greenhouse gas emissions avoided from waste diverted from the landfill, reduced water consumption in green buildings; waste diversion associated with district energy systems and reduced greenhouse gas emissions from water projects which also reduce energy use. A complete listing of the secondary environmental benefits reported over the past five years appears in Appendix C.

For a complete picture of the results delivered by GMF projects including five year cumulative results, the primary results reported need to be considered along with the results from the secondary environmental indicators.

While environmental benefits associated with capital projects are a key driver for involvement with GMF, interviews with funding recipients indicated that attendant social and economic benefits derived from capital projects are also important and should continue to be emphasized by the organization.

Economic results:

Annual Reports produced by GMF from 2009-2013 have reported on the following economic benefits resulting from GMF-funded initiatives:

- ▶ The number of projects approved for funding;
- ▶ The expected number of jobs created since 2000;
- ▶ Expected economic activity generated since 2000;
- ▶ Future cost savings from reduction of energy and/or water usage;
- ▶ Future cost savings from reduction in landfill fees due to less waste being sent to landfills; and,
- ▶ The expected GDP generated since 2000.

Interviews with GMF project officers and GMF funding recipients report the creation of new sources of revenue as an additional economic benefit resulting from GMF-funded projects.

In the case vignette conducted with Sackville who received funding to build an energy-efficient Town Hall and Emergency Response Services Building, they were able to report the following economic benefits resulting from GMF funding:

- ▶ Sackville was not required to pay a commission related to a public offering
- ▶ For projects that receive funding from GMF, the New Brunswick Municipal Financing Corporation (NBMFC) has waived its usual fee of .0015 per \$1,000 borrowed

If Sackville had financed the \$9,223,000 through the last NBMFC debenture issue, the following additional costs would have been incurred:

- ▶ Sackville would have paid commissions of approximately \$117,000;
- ▶ Sackville would have paid a fee to NBMFC of approximately \$13,800; and,
- ▶ Over the 20 year period, Sackville would have been required to pay approximately \$1.52 million more in total costs. This works out to roughly \$76,000 per year in additional costs. These additional costs are a result of the following factors: first is that GMF allows Sackville to repay more principal earlier on in the repayment schedule making interest payments on outstanding debt lower than if borrowed from NBMFC. Second, in contrast to GMF which offers a stable interest rate, NBMFC interest rates are lower in the earlier years of the loan lifecycle and rise in the later years.

Social benefits:

Annual reports from 2009–2013 list the following social benefits resulting from GMF activities: number of awards won by GMF-funded projects, number of applicants to and winners of FCM Sustainable Communities Awards, the number of GMF interactive and educational webinars hosted, the number of new Members to Partners for Climate Protection (PCP) Program, the number of publications produced. These activities generate knowledge sharing and enable networking which further enhance sustainable infrastructure development in municipalities.

Additional social benefits resulting from GMF-funded projects reported through interviews with GMF project officers and GMF funding recipients include: providing public education on sustainability, enhancing community spirit, improving walkability, reducing congestion, and improving public health outcomes.

GMF-funded projects have contributed an environmental, economic and social benefit to the municipality in which they are located.

Survey data shows that 80% of survey respondents confirm that their completed GMF-funded project contributed environmental, social and economic benefits to their municipality. The file review confirmed that funded projects submit a Project Completion Report including an assessment of realized social and economic benefits and an independently validated Environmental Results Report to GMF prior to disbursement of funds.

Interviews and file review observed challenges in consistently measuring secondary environmental, social and economic benefits associated with GMF-funded initiatives.

Based on discussions with the management team and review of Project Completion Reports submitted to GMF, there is a variance as to the level of detail provided to GMF regarding secondary environmental results, social and economic results. GMF typically receives Project Completion and Environmental Results Reports between 1 and 2 years after the capital project has been completed. For many social and economic benefits, this is not sufficient time for them to be realized.

Recommendation 1: GMF should conduct funding recipient interviews and surveys 3-5 years after GMF receives the Project Completion and Environmental Results report to better understand the full spectrum of benefits that GMF-funded projects provide to stakeholders.

Management response 1: FCM agrees with this recommendation. FCM has previously discussed this with GMF Council and plans to implement this for select projects in future years. The results from these interviews and surveys will become part of GMF's performance measurement and will be integrated into GMF's information management framework, which is currently used to track quantitative and qualitative project performance data from the Project Completion and Environmental Results report.

In addition to the Environmental Results Reports, conduct regular funding recipient interviews and surveys to better understand the longer term environmental, social and economic impact of the GMF-funded projects. GMF-funded projects provide a full spectrum of benefits to stakeholders and may require a longer time horizon to be realized and understood.

Question 3: What environmental, economic, and social benefits have GMF Knowledge Services helped promote?

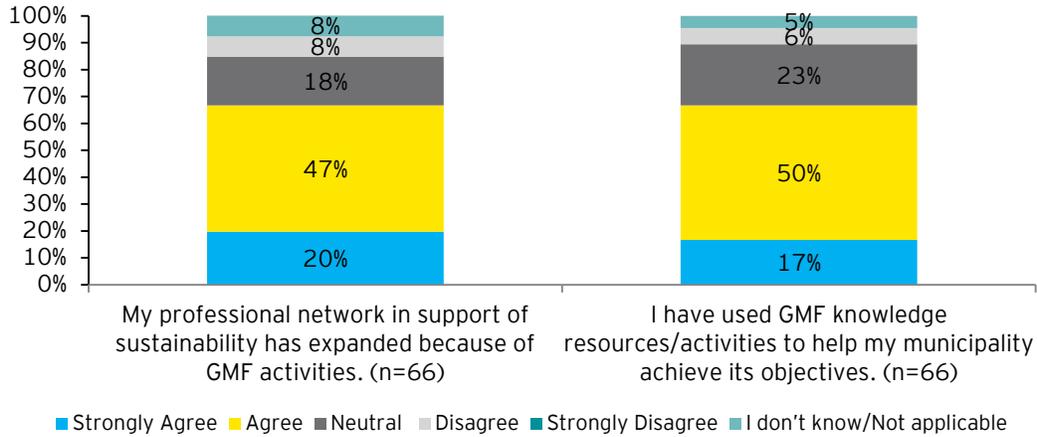
Criteria 3.1. GMF Knowledge Services have promoted environmental, economic, and social benefits in municipalities across Canada through expanding the professional networks of stakeholders, providing a repository of searchable resources and enabling peer-to-peer learning.

GMF is uniquely positioned to promote peer-to-peer learning both across municipalities and within FCM. The cross-pollination of best practices facilitated by GMF enables collaboration, facilitates networking and leverages available expertise. Knowledge Services facilitates networking across municipalities.

Participation in GMF knowledge offerings such as webinars creates hubs of interest that can produce meaningful relationships which have a longer-term impact on municipalities. Nearly 70% of survey respondents believe that GMF knowledge resources/activities support municipalities to achieve their broader objectives and a similar number believe their professional network in support of sustainability has expanded because of GMF activities. Network development through a combination of direct and web-based GMF educational services will continue to be an FCM priority in the new offer.

GMF is the only environmental program in Canada with a national scope that collects and shares knowledge and practical lessons-learned related to infrastructure projects

Figure 4: Benefits from GMF Knowledge Services



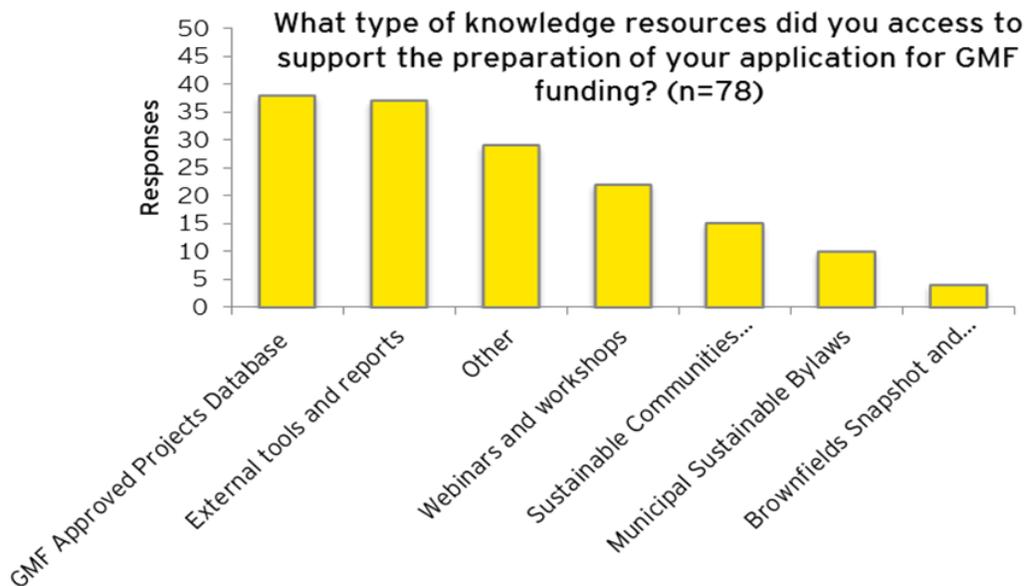
Source: GMF Recipient and Non-recipient Survey (2014).

GMF monitors and reports on the following social benefits relating to knowledge services which increase municipalities' ability to network with their peers and provide the opportunity to share best and leading practices: the number of and participants in PCP milestone training workshops, the number of and participants in webinars, number of new PCP members and the number of case studies and reports on GMF-funded initiatives.

GMF Knowledge Services provides support to applicants for GMF funding.

GMF Knowledge Services also complement GMF funding. Access to a repository of thought leadership, best practices and lessons learned have proved to be a valuable resource to applicants for GMF funding. Respondents report accessing the GMF Approved Projects Database (case studies, project reports, etc.) and external tools and reports more often than other knowledge resources during the GMF funding application process. The following chart depicts what types of knowledge resources were accessed during the applications process.

Figure 5: Knowledge resources accessed during GMF funding application process



Municipalities that have completed GMF-funded projects often become ambassadors for GMF. Interviews with GMF funding recipients show that these municipalities are often approached by other municipalities outside their network to discuss the GMF process, best practices and lessons learned. This opportunity for mentorship enables informal peer-to-peer learning across municipalities.

In 2014, GMF commissioned a review of its Knowledge Services. The review involved the collection of quantitative and qualitative data through individual interviews, an online survey and a review of key documents. The review found that GMF resources, with the exception of resources on brownfields redevelopment and the Partners for Climate Protection case studies, “are not accessed as much as they should be” given the size of GMF’s target audience and number of products available. The review recommended that GMF knowledge objectives align with objectives defined in the GMF Three-Year Plan 2014–2017.

Key informants interviewed at FCM indicated a deeper link between Knowledge Services and GMF funding activities could be forged. The new offer, currently in development, aims to bolster the relationship between funding and knowledge service delivery, focusing on local capacity building and targeted areas of knowledge development that would integrate with GMF project funding for greater collective impact.

Case vignette research and interviews found support for the continued development of practical tools and enablers.

To support GMF Knowledge Services and GMF funding progressing towards becoming mutually reinforcing GMF services, GMF should focus on formatting existing content into practical tools and enablers that can be more easily leveraged by GMF stakeholders to prepare more fulsome applications for funding. Interviews with GMF staff and case vignette interviewees found that the GMF repository is robust but could be improved by producing targeted offerings to better highlight best practices and lessons learned.



Recommendation 2: As knowledge brokers, Knowledge Services should continue to develop and promote tools and enablers targeted to areas of strategic focus for GMF, encourage local capacity development, and drive leading practices across sectors.

Management response 2: FCM agrees with this recommendation. The development of a Knowledge Services framework, informed by market research and aligned with the GMF logic model and Three-Year Plan, will ensure GMF Knowledge Services delivers programming that integrates GMF funding and knowledge, and delivers focused programming through peer learning cohorts, as well as broad knowledge sharing related to GMF-funded initiatives, to ensure both targeted support and broad uptake of best practices from leading edge, replicable initiatives.

Appendix A: Review program

Lines of evidence					
Review Objectives	Review Criteria	Document and File Review	Analysis	Interview and Case Vignettes	Survey
Question #1 - Does GMF continue to be aligned with key stakeholder priorities and does it realistically address an actual need?	1.1. GMF is aligned with key stakeholder priorities	X	X	X	X
	1.2. GMF addresses an actual need		X	X	X
Question #2 - What are the environmental, economic, and social benefits that have resulted from GMF-funded initiatives?	2.1. GMF-funded initiatives have generated environmental benefits related to air quality, water quality, soil quality, and climate protection	X	X	X	X
	2.2. GMF initiatives have generated economic benefits	X	X	X	X
	2.3. GMF initiatives have generated social benefits	X	X	X	X
Question #3 - What environmental, economic, and social benefits have GMF Knowledge Services helped promote?	3.1. GMF Knowledge Services promote environmental benefits	X			X
	3.2. GMF Knowledge Services promote economic benefits	X		X	X
	3.3. GMF Knowledge Services promote social benefits	X		X	X
	3.4. Recipients of GMF Knowledge Services are satisfied with the GMF	X		X	X

Appendix B: Primary environmental results

The following table depicts mandatory environmental indicators reported annually to GMF between fiscal years 2009-2010 and 2013-2014. At the time field work was completed, the 2013-2014 GMF Annual Report and associated environmental results had not been published.

		GMF Annual Report 2009-2010	GMF Annual Report 2010-2011	GMF Annual Report 2011-2012	GMF Annual Report 2012-2013
Brownfields	Land recovered (ha)	65	3.1*	no brownfields projects reported in 2011-2012	3
	Contaminated Soil Managed (m ³)	1,990	6,470*		7,696
Energy	CO ₂ e/yr of GHG emissions avoided (tonnes)	1,969	70,262*	47,704	7,826
	CACs avoided (kgs/year)	0.04	26,860*	217,653	3,247
Waste	Waste diverted from landfill (tonnes)	52,720	no waste projects reported in 2010-11	19,999	4,773
Water	Water and wastewater treated to CCME or CDWQ Guidelines (m ³)	not included as a reporting category until 2010-11	36,219,080*	100,349,060	472,488
Transportation	CO ₂ e/year of GHG emissions avoided (tonnes)	249	997*	no transportation projects reported in 2011-2012	no transportation projects reported in 2012-2013
	CACs avoided (kgs/year)	3.41	11,220*		

* Environmental results reported were derived by subtracting the environmental results since GMF inception reported in the 2009-2010 Annual Report from environmental results since inception reported in the 2010-2011 Annual Report.

Appendix C: Secondary environmental results

The following table depicts secondary environmental indicators reported to GMF between fiscal years 2009-2010 and 2013-2014. At the time field work was completed, the GMF Annual Report 2013-2014 and associated environmental results had not been published. These indicators are not required to be reported for funding recipients to GMF and are done so on a voluntary, project-by-project basis. As such, fewer secondary environmental results are reported on an annual basis compared to primary environmental results.

		GMF Annual Report 2009-2010	GMF Annual Report 2010-2011	GMF Annual Report 2011-2012	GMF Annual Report 2012-2013
Brownfields	Water and wastewater treated to CCME or CDWQ Guidelines (m ³)	not reported	not reported	no brownfields projects reported in 2011-2012	2,700
Energy	Waste diverted from landfill (tonnes)	not reported	not reported	not reported	479
	Reduction in water consumption (m ³ /year)	24,980	not reported	not reported	16,020
Waste	CO ₂ e/year of GHG emissions avoided (tonnes)	65,036	no waste projects reported in 2010-11	63,827	5,766
	CACs avoided (kgs/year)	n/a		not reported	not reported
Water	CO ₂ e/year of GHG emissions avoided (tonnes)	-15*	not reported	4,343	29
	CACs avoided (kgs/year)	not reported	not reported	3,860	87
	Waste diverted from landfill (tonnes)	-790*	not reported	not reported	not reported



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	Reduction in water consumption (m ³ /year)	73,783	not reported	not reported	not reported
	Change in organic load (kg/L of effluent)	n/a	not reported	not reported	not reported

*Negative values are from projects which improved wastewater treatment or the quality of biosolids. These improvements required additional energy and as a result, increased greenhouse gas emissions or led to the biosolids now meeting requirements for land application which included additional biosolids going to the landfill.

Appendix D: Documents reviewed

We would like to acknowledge that the documentation review was facilitated by numerous GMF staff who undertook a significant level of effort to assist in the provision of documentation in a timely manner throughout the engagement. The project team reviewed these documents, which included:

- ▶ Governing Documents:
 - ▶ GMF Funding Agreement
 - ▶ Governance Manual
 - ▶ GMF Annual Reports
 - ▶ GMF Annual Statements of Plans of Objectives (ASPO)
 - ▶ Board Minutes
 - ▶ Council Minutes
 - ▶ GMF Investment Policy, and Investment Committee By-law
 - ▶ Previous Performance and Compliance Audits and Reviews
 - ▶ GMF Logic Model
 - ▶ GMF Governance Committee - Year at a Glance
 - ▶ Draft Performance Measurement Framework
 - ▶ Council Meeting Checklists
- ▶ Organizational Structure:
 - ▶ GMF Council Member Committee Membership for 2014-2015
 - ▶ Current Status and Expiry Date of GMF Council Members
 - ▶ FCM Board of Directors
 - ▶ FCM Executive Management - Organizational Chart
 - ▶ FCM National Programs - Organizational Chart
- ▶ Strategic Plans:
 - ▶ FCM Strategic Plan 2012-2017
 - ▶ GMF Council Strategic Plan 2011-2014
 - ▶ GMF Three Year Plan 2014-2017
- ▶ Fund Sustainability:
 - ▶ Audited Financial Statements of FCM: GMF
 - ▶ Fund Sustainability - Audit Committee and Council Meeting
- ▶ Risk Management Documentation:
 - ▶ Credit Risk Policy
 - ▶ Credit Risk Methodology for Municipalities
 - ▶ Market Risk Policy
 - ▶ Operational Risk Policy

- ▶ Pricing Procedures Quarterly Memo
- ▶ Information Management:
 - ▶ GMF & Information Management Presentation
 - ▶ Information Management Framework
 - ▶ Information Management Framework Example
- ▶ Documentation of Application and Disbursement Processes:
 - ▶ Eligibility Questionnaire
 - ▶ Application Form
 - ▶ Denied at Council Letter to Applicant
 - ▶ Denied at Council Letter to Applicant: Competitive Process
 - ▶ Claims Summary Form (re: disbursements)
 - ▶ Capital Project Contract Template
 - ▶ Plan, Study, and Test Contract Template
 - ▶ Capital Project Audit Requirements (re: disbursements)
- ▶ Peer Review Documentation:
 - ▶ Peer Review Scorecard
 - ▶ Peer Review Consensus Scorecard
 - ▶ GMF Evaluation Criteria for a Plan
 - ▶ GMF Evaluation Criteria for a Feasibility Study or Field Test
 - ▶ Peer Review Committee Orientation Manual
 - ▶ Peer Review Committee Orientation Session Presentation
- ▶ Impact Reports:
 - ▶ Impact of GMF Funding Beyond Capital Project
 - ▶ Green Municipal Impact: A Summary
 - ▶ Environmental Benefits 2013
- ▶ GMF Stakeholder Engagement Tools:
 - ▶ Quebec Outreach Strategy
 - ▶ 2014 Brownfield Strategy
 - ▶ FCM: Strengthening Municipal Capacity
 - ▶ Staff Consultation Workshops
 - ▶ Municipal Consultation: Sustainable Communities Conference
- ▶ Knowledge Services:
 - ▶ Review of GMF Knowledge Resources
 - ▶ Knowledge Services Framework
 - ▶ Knowledge Brokering Report
 - ▶ Brownfields Peer Learning Boot Camp
 - ▶ FCM GMF Webinar Series - Annual Webinar Evaluation
 - ▶ Partners for Climate Protection - Annual Report



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- ▶ Communications:
 - ▶ Marketing and Communications Strategy
 - ▶ Communication Guidelines and Protocols
 - ▶ GMF Website
 - ▶ Press Releases
- ▶ Monitoring Reports
- ▶ Human Resources:
 - ▶ Annual HR Plans from 2009 to 2014
- ▶ Conversion Reports:
 - ▶ Brownfields Conversion Report
 - ▶ Capital Project Conversion Highlight Report
 - ▶ Plans, Studies and Tests Conversion Report
- ▶ Case Vignette Documentation:
 - ▶ GMF 10346 - Town of Sackville Documentation
 - ▶ GMF 12071 - City of Edmonton Documentation
 - ▶ GMF 10383 - MCR Haute-Yamaska Documentation



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