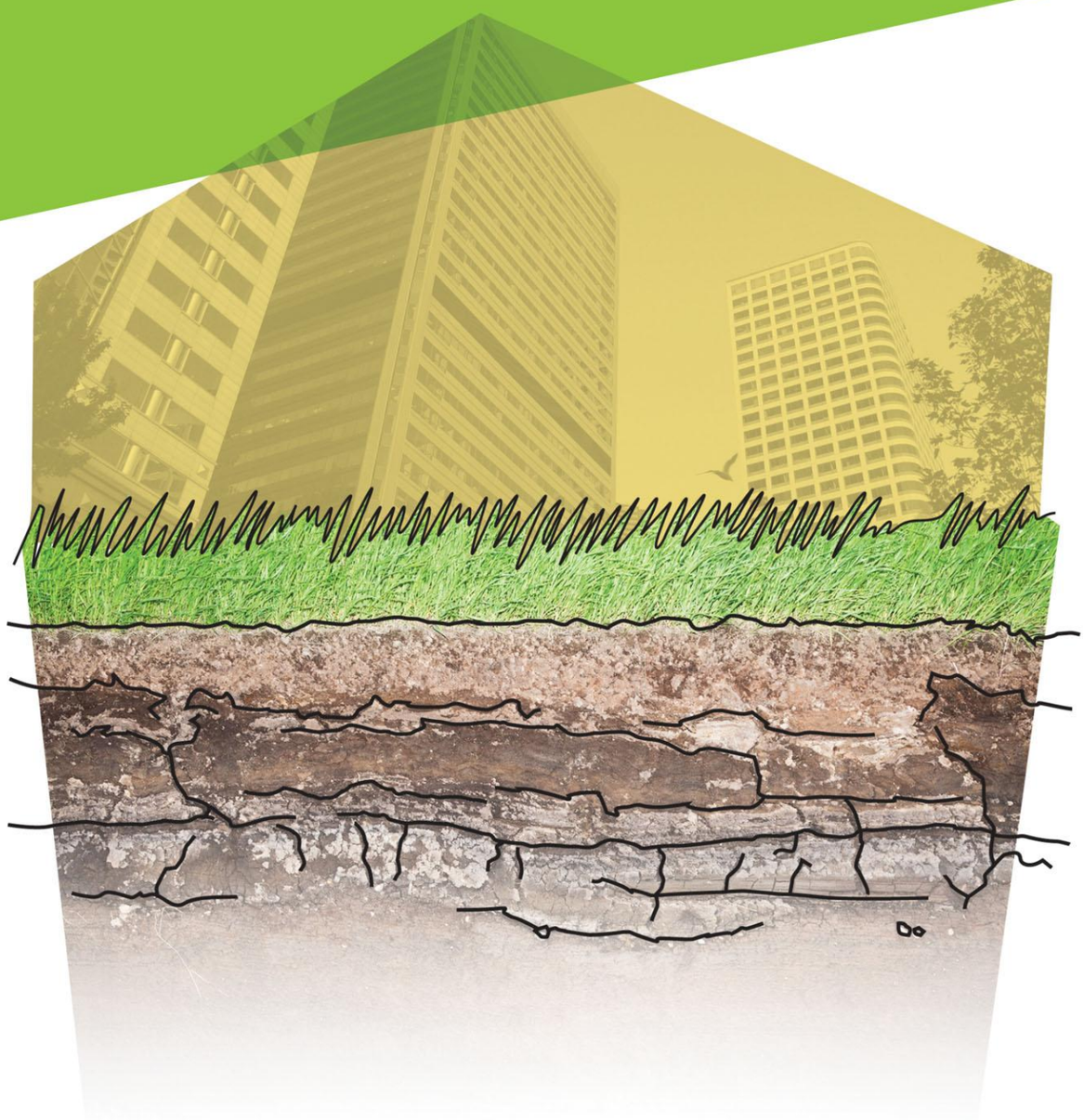
FEDERATION OF CANADIAN MUNICIPALITIES
FÉDÉRATION CANADIENNE DES MUNICIPALITÉS

GREEN MUNICIPAL FUND

Quebec Brownfield Roadmap
2014



www.fcm.ca/gmf

INTRODUCTION

The Federation of Canadian Municipalities' (FCM) Green Municipal Fund™ (GMF) has produced this series of Brownfield Roadmaps to help municipalities and their private-sector partners better understand how to redevelop brownfields in their communities. The roadmaps provide a high-level overview of the brownfield redevelopment process in each province and territory, and link each process step to relevant legislative requirements and potential sources of funding.

Developed in close consultation with provincial and territorial governments, each roadmap features an easy-to-follow path through:

- The generic brownfield redevelopment process — a description of the steps that are typically followed when redeveloping a brownfield site in Canada
- Provincial requirements — an overview of provincial legislation and policy requirements associated with each step in the process
- Funding and incentive programs — a list of relevant resources, such as GMF, that are available to support municipalities and their partners as they undertake brownfield redevelopment

The roadmaps feature a flowchart that summarizes the main activities and milestones, illustrates where the steps are connected, and links to further details in the document.

Visit Revitalize Your Brownfields for additional tools, guidance and resources related to brownfield redevelopment.

The information presented is current to the publication date and may not capture all relevant programs. Please contact the responsible organizations to verify up-to-date information.

NOTE: This document summarizes current provincial legislation and must not be regarded as a formal legal interpretation. Please refer to the identified legislation for complete details on legislative requirements, and seek legal advice if necessary.

This publication is available on the FCM Green Municipal Fund website at www.fcm.ca/gmf under "Resources."

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Ottawa, Ontario K1N 5P3

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QUEBEC
2014 Brownfield Roadmap

	Generic Brownfield Redevelopment Process	Provincial Requirements	Funding and Incentive Programs
1 **Plan** 	• Conduct community-wide brownfield planning and engagement activities • Standardize and streamline approval processes for redevelopment proposals • Consider interim land use planning • Compile inventory of brownfield sites; track and showcase redevelopment progress	• Consider adding a brownfield planning component to the municipal community plan (as per the Land Use Planning and Development Act) • Identify contaminated sites within the community (as per the Environmental Quality Act and the Public Sector Accounting Board standard PS 3260)	**Green Municipal Fund (GMF) grants** are available for sustainable neighbourhood action plans or community brownfield action plans (50 per cent of eligible costs; grant maximum of $175,000)
2 **Study** 	• Develop sustainable remediation/redevelopment plan • Complete Environmental Site Assessments • Complete risk assessment (if required) • Determine remedial objective • Conduct remediation/risk management studies/optimization • Develop remedial/risk management action plan that includes sustainable approaches where possible	• Undertake site assessment • Compare contaminant concentrations against generic remediation criteria • Choose the appropriate rehabilitation strategy (based on a clean-up to generic criteria or on a site-specific risk assessment) • Develop and seek Ministry approval for a Rehabilitation Plan	**GMF grants** are available for feasibility studies and field tests (50 per cent of eligible costs; grant maximum of $175,000) Other programs: Sustainable Development Technology Canada offers innovative technology development funding (soil and water treatment, technology development and demonstration) Quebec ClimatSol Program (site assessments, risk assessments, remediation and risk management planning: 50 per cent of eligible costs)
3 **Remediate** 	• Complete building demolition and recycle soil and waste where possible • Remediate site or implement risk management strategies using sustainable approaches where possible • Receive confirmation of compliance/contaminated site closure	• Perform remediation/risk management activities as per the Rehabilitation Plan (as outlined in the Environmental Quality Act and related policies) • Obtain expert certification of Rehabilitation Plan implementation (where applicable) • Submit Notice of Decontamination for filing on the Provincial Land Registry	**GMF loans** are available for brownfield capital projects (up to 80 per cent of eligible costs) Other programs: Quebec ClimatSol Program (remediation/risk management planning, implementation and monitoring: 30–50 or 70 per cent of eligible costs)
4 **Redevelop** 	• Perform ongoing risk management and monitoring as required • Design and construct site infrastructure	• Meet local government permitting requirements as per the Land Use Planning and Development Act (if contamination beyond generic criteria was left in place) • Perform ongoing site management and monitoring, as required	**GMF loans and grants** are available for capital projects in the energy, transportation, waste, and water sectors (up to 80 per cent of eligible costs) Also, consider obtaining private funding from financial institutions, developers

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Generic Brownfield Redevelopment Process

This section outlines the steps that are typically undertaken in planning, assessing, remediating and redeveloping brownfield sites. Not all of the steps may be required for every project. Some steps are suggested best practices and some steps can be performed concurrently. The process is described using universal site remediation terminology.

Plan

Community-wide brownfield planning activities

This step includes planning activities associated with brownfield redevelopment, such as sustainable community plans, community improvement plans (CIPs), neighbourhood plans, brownfield redevelopment strategies, and stakeholder and community engagement. **Parties typically involved:** municipal planning department, planning consultants.

Standardize and streamline approval processes for brownfield redevelopment proposals

Municipalities should standardize and streamline approval processes to ensure that brownfield redevelopment proposals are treated in an efficient, consistent and timely manner. Long approval processes can have a significant impact on a project's bottom line and jeopardize its financial viability. The streamlining process should include consultations with stakeholders, such as the public and developers. **Parties typically involved:** municipal planning department, consultants.

Interim land use planning

Municipalities may consider undertaking interim land uses for sites that cannot be redeveloped immediately — for financial or other reasons. In this case, rather than leaving sites vacant, temporary or interim uses (such as parking lots, community gardens, or temporary commercial/industrial uses) could be more economically and socially beneficial to the community. However, the interim land use should not increase risks to human health and the environment, nor should it impede future redevelopment to a desirable end use. **Parties typically involved:** municipal planning department, planning consultants.

Identification and inventories of brownfield sites

In some provinces and territories, information related to brownfields or contaminated sites is compiled into databases or site registries. These inventories may be made available to the public. Municipalities can reference this information to identify contaminated sites and create a municipal brownfield inventory. Municipalities can also use this information to showcase progress on brownfield redevelopment in their community.

Municipalities should also note that the standard on Liability for Contaminated Sites, Section PS 3260, contained in the Public Sector Accounting Handbook of Chartered Professional Accountants Canada, comes into effect for fiscal periods commencing on or after April 1, 2014. Section PS 3260 contains standards for municipalities on how to account for and report a liability associated with the remediation of contaminated sites for which they are responsible. Specifically, it establishes when to recognize and how to measure a liability for remediation. To properly estimate and track the associated liabilities, municipalities may need to develop an inventory of contaminated or potentially contaminated sites. Careful consideration should be given to the scope of Section PS 3260. A liability generally results from contamination at sites that are no longer in productive use or contamination arising from an unexpected event, such as a natural disaster. The standard does not apply to liabilities associated with retiring long-lived tangible capital assets in productive use (e.g. operation of a solid waste landfill site). For more information, contact CPA Canada. **Parties typically involved:** municipal treasury, property, planning, and engineering and works departments, auditors and provincial officials.

Study

Sustainable remediation and redevelopment

Sustainable remediation considers the full picture when making decisions about brownfield remediation and redevelopment projects. It ensures that all aspects of the project — from assessment to redevelopment — are managed in a way that optimizes and balances environmental, social and economic benefits. A range of remediation and risk management techniques may be considered, such as administrative controls (e.g. zoning and land use restrictions); physical barriers or ground covers (e.g. asphalt); in-situ techniques, which are applied in the ground or in water; and ex-situ techniques, which involve excavating contaminated soil or pumping out groundwater.

Environmental site assessments

Known or suspected contaminated sites must be assessed to determine the type, concentration, location and extent of contamination. This information is gathered by using specific contaminated site assessment approaches, usually performed in phases and with more detailed information collected in each phase. The phases are typically defined as follows:

- ***Phase I Environmental Site Assessment:*** a preliminary assessment to characterize a site by evaluating current and historical land uses or activities, potential areas of contamination, and surrounding land uses or activities.
- ***Phase II Environmental Site Assessment:*** a preliminary assessment during which field samples are analyzed to determine contaminant types and concentrations.
- ***Detailed or Delineation Environmental Site Assessment:*** in some cases, a more detailed assessment is performed to confirm contaminant types and concentrations, and to delineate contaminated areas.

Following the site assessment, the generic provincial remedial objectives (i.e. the concentrations of contaminants allowed in the soil or groundwater based on the specific land use) should be reviewed to determine the feasibility of meeting these objectives. In some provinces, remedial objectives are called remedial or remediation standards or criteria. **Parties typically involved:** municipal engineers and planners, environmental consultants.

Risk assessment

If, based on the site assessment results, it is not feasible to meet the generic provincial remedial objectives, there is an option in most provinces to perform a detailed risk assessment to develop site-specific or risk-based remediation objectives. The risk assessment must demonstrate that the site-specific objectives will protect both the environment and human health to the same extent as the generic objectives, if those objectives could have been met. **Parties typically involved:** municipal engineers and planners, environmental consultants, risk assessors.

Remedial objective determination

The final remedial objectives for the site are determined in this step. These could be either generic remedial objectives set by the province or territory, or the equally protective site-specific or risk-based remedial objectives. **Parties typically involved:** municipal engineers and planners, environmental consultants.

Remediation/risk management feasibility studies/optimization

In this step, remediation or risk management options for the site are evaluated. This could entail a study evaluating the feasibility of various options, based on available literature or based on past experience. It could also include an in-depth bench- or field-scale analysis to support the selection of a specific technology or method, or to optimize the operating parameters for a specific technology or method. **Parties typically involved:** municipal engineers and planners, environmental consultants, remediation contractors.

Remedial/risk management action planning

Based on the review of the remediation and risk management options applicable to and viable for the site, the final options are selected and a remedial action plan is developed to outline how these options will be implemented. Where possible, this plan should include the use of sustainable approaches. **Parties typically involved:** municipal engineers and planners, environmental consultants, remediation contractors.

Remediate

Building demolition and soil and waste recycling

This step involves building and infrastructure demolition and soil and waste removal (e.g., utilities, roads, above-ground or underground storage tanks). Where possible, soil and waste should be recycled on-site or reused for other purposes. **Parties typically involved:** municipal engineers and planners, environmental consultants, remediation contractors, waste management contractors.

Remediation/risk management implementation

In this step, the site remediation, risk management actions, or both, are carried out as described in the remedial action plan. Where possible, sustainable remediation or risk management approaches should be used. These activities are performed until the contamination is removed, altered, contained or destroyed to meet the provincial remedial objectives or the site-specific, risk-based objectives. **Parties typically involved:** municipal engineers and planners, environmental consultants, remediation contractors.

Confirmation of compliance/contaminated site closure

This step results in official verification that the site has met the established remediation or risk management objectives. The regulatory documentation required at this stage typically states:

- whether the site meets the regulatory requirements
- whether ongoing monitoring is required
- whether continued risk management is required

At this stage, typically, the results of the remediation or risk management actions and the next steps for redevelopment are communicated to stakeholders and the community. **Parties typically involved:** municipal engineers and planners, environmental consultants, provincial officials.

Redevelop

Ongoing risk management and monitoring

Once remediation is complete or risk management activities have been implemented, long-term monitoring or risk management may be required, depending on the restrictions placed on the site. This could involve periodic sampling of soil or groundwater, or other restrictions placed on the site (e.g., limitations on excavation or on land use, or access controls). **Parties typically involved:** municipal engineers and planners, environmental and planning consultants, developers, construction contractors.

Design and construction of infrastructure

This step involves redevelopment activities, including the design and construction of infrastructure on the site. **Parties typically involved:** municipal engineers and planners, environmental and planning consultants, developers, construction contractors.

Provincial Requirements

This section outlines the key pieces of Quebec's brownfields legislation and policy positions related to each generic step.

Key legislation and sources of information[1]

The main piece of legislation related to brownfield redevelopment in Quebec is the *Environmental Quality Act* (EQA), which includes sections specific to the management of contaminated sites that apply to the following individuals:

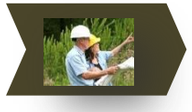
- Landowners or lessees who are engaged in industrial activities specified in the *Land Protection and Rehabilitation Regulations* where contamination exceeds regulatory limits (EQA, s. 31.52).
- Landowners or lessees wishing to change land use where a regulated industrial activity is known to have taken place (EQA, s.31.53).
- Anyone wishing to voluntarily rehabilitate a site but who wishes to leave contamination above regulatory limits and use risk management methods to protect human health and the environment (EQA, s.31.57).

In these cases, the company engaged in the industrial activities, the land owner, or the developer is required to perform the prescribed site characterization and remediation/risk management activities outlined in the Act and described in this section.

General guidance and policies related to managing contaminated sites in Quebec and appropriate links to regulations under the EQA are available through the Ministry of Sustainable Development, Environment and Parks.

For regional contact information: Ministry of Sustainable Development, Environment and Parks (in French only).

[1] NOTE: This document summarizes current provincial legislation and must not be regarded as a formal legal interpretation. Please refer to the identified legislation for complete details on legislative requirements, and seek legal advice if necessary.



Plan

Brownfield redevelopment plan

To develop a consistent and effective process for managing brownfields, municipalities should consider developing community-wide brownfield plans. These can be stand-alone plans or form part of the legislated community plans prescribed under Sections 2.23 and 2.24 of the *Land Use Planning and Development Act*. The Act requires community plans to include sustainable development components, including the protection and enhancement of natural and built environments and landscapes. The Act also includes building permit requirements.

Identify contaminated sites within the community

As a result of the Standard on Liability for Contaminated Sites, Section PS 3260, municipalities may need to develop an inventory of contaminated or potentially contaminated sites in order to estimate and track the liabilities associated with them. In developing the inventory, careful consideration should be given to the scope of the Section PS3260. Guidance and additional information on the application of PS3260 in Quebec can be found on Quebec Municipal website.

Understanding the extent of contaminated or potentially contaminated land within their community will also help municipalities to plan for brownfield redevelopment. Landowners regulated under articles 31.51, 31.53 and 31.57 of the EQA must register a Contamination Notice on the land title for the site and submit specific contamination documentation, such as Site Characterizations and Rehabilitation Plans, to the Ministry of Sustainable Development, Environment and Parks. If the land has been rehabilitated without being cleaned up to the regulatory value, a Use Restriction Notice must also be registered on the land title and provided to the Ministry. The Ministry files portions of this information on its Land Registry (in French only) and sends copies of the Contamination and Use Restriction Notices to the municipality where the site is located. As per the *Environmental Quality Act* (s.31.68), municipalities must use this information to maintain an inventory of lands within their boundaries that have known contamination or have use restriction notices registered on land titles.

Study

Site Characterization

Site Characterization must be performed as per the EQA (s.31.49, s.31.51, s.31.53, s.31.58, s.31.66) and as outlined in the *Soil Protection and Contaminated Sites Rehabilitation* Policy. Under the law (article 31.65), expert certification must confirm that the Site Characterization and the characterization summary attached to the Contamination Notice registered on the land title conform to sections 31.58, 31.66 and 31.67 of the EQA. Experts must also confirm that the rehabilitation carried out on the site has been done in accordance with the approved Rehabilitation Plan (article 31.48) . Sample analysis undertaken as part of the Site Characterization must be performed using an accredited analytical laboratory as per the EQA s.118.6. The *Centre d'expertise en analyse environnementale du Québec* maintains a list of accredited analytical laboratories and contaminated site experts (in French only) approved by the Ministry of Sustainable Development, Environment and Parks. All Site Characterizations must be submitted to the Ministry for inclusion in the Land Registry.

Contamination concentration comparison

To determine the remedial criteria for the site, contaminant concentrations identified by the Site Characterization should be compared against the generic criteria for soils and groundwater outlined in the EQA's *Land Protection and Rehabilitation Regulations* and in the *Soil Protection and Contaminated Sites Rehabilitation Policy* Appendix 2.

Risk assessment

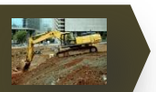
If the landowner wishes to allow contamination that is above the generic soil and groundwater standards to remain on the site, then site-specific standards can be developed if a Risk Assessment is performed as per s.31.45, s.31.55 of the EQA. Guidelines for Risk Assessments can be found in the *Soil Protection and Contaminated Sites Rehabilitation Policy* (Appendix 3).

Rehabilitation Plan

A Rehabilitation Plan outlining the remediation activities for the site must be developed. If site-specific objectives are being used, the plan must also outline the risk management activities to be performed or the controls that will be put in place to meet these objectives. As per the EQA (s.31.43, s.31.46, s.31.51, s.31.54, s.31.57, s.31.60), the plan must be approved by the Ministry of Sustainable Development, Environment and Parks.

Environmental assessments

An environmental assessment must be undertaken for any remediation activities covered by Quebec's *Regulation Respecting Environmental Impact Assessment and Review*. Specifically, Section 2 (y) indicates that thermal treatment of soils containing organic substances above prescribed concentrations could also require an environmental assessment.



Remediate

Remediation/Risk management activities

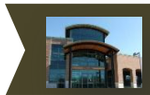
Remediation, risk management activities or both must be undertaken as outlined in the approved Rehabilitation Plan and in keeping with any applicable regulations under the EQA s.31.69 (5). If contamination is to remain on-site, risk management activities must be performed as per s.31.45 and s.31.55 of the Act.

Expert certification

As per s.31.48 of the EQA, the landowner must obtain expert certification for the Rehabilitation Plan implementation. Where contamination above generic standards is being left on-site and a risk management approach is being used to meet the site objectives, expert certification is also required as per the EQA's *Land Protection and Rehabilitation* Regulations, sections 120 and 121.

Notice of Decontamination

Once the site has been remediated to generic standards and has received expert certification, the Ministry will file a Notice of Decontamination on the Land Registry, as per s.31.59 of the EQA.



Redevelop

Local government planning approval and permitting requirements

If contamination exceeding the regulated limit values has been left in place, local government permitting requirements must be met before redeveloping the site. The *Land Use Planning and Development Act* includes building permit requirements.

Ongoing site management and monitoring

If site-specific objectives were established during remediation, there may be a requirement for ongoing risk management, monitoring and control activities, and land use restrictions may be registered on the land title.

Funding and Incentive Programs

This section details funding and incentive programs shown in the flowchart on page 1:

- *FCM's Green Municipal Fund™ (GMF) brownfield funding opportunities*
- *Federal programs that fund some aspect of brownfield redevelopment*
- *Provincial programs that fund some aspect of brownfield redevelopment*

Plan

GMF grants for plans

Through GMF, FCM provides grants for plans, including community brownfield action plans (e.g. community brownfield strategies, community improvement plans or revitalization plans). FCM will provide up to 50 per cent of eligible project costs to a maximum of $175,000. In most cases, GMF funding can be combined with federal and provincial funding.

Status: Currently accepting applications.

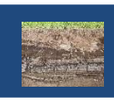
Contact:

Federation of Canadian Municipalities

Green Municipal Fund

1-877-997-9926 • gmf@fcm.ca

For more information: FCM's Green Municipal Fund



Study

GMF grants for feasibility studies and field tests

Through GMF, FCM provides grants for feasibility studies (including Phase II environmental site assessments and remedial action planning) and field tests for remediation techniques. FCM will provide up to 50 per cent of eligible project costs to a maximum of $175,000. In most cases, GMF funding can be combined with federal and provincial funding.

Status: Currently accepting applications.

Contact:
Federation of Canadian Municipalities
Green Municipal Fund
1-877-997-9926 • gmf@fcm.ca

For more information: FCM's Green Municipal Fund

Quebec ClimatSol Program

The Province of Quebec established the $60-million ClimatSol funding program in 2007 to encourage the use of sustainable remediation and redevelopment techniques for contaminated sites. In accordance with the Province's Sustainable Development Strategy, the program's main objective is to provide incentives for contaminated site remediation and redevelopment techniques that reduce greenhouse gas emissions and promote energy efficiency. Costs associated with site assessment, risk assessment, remediation (including planning as well as on-site and off-site treatment and disposal) and site monitoring are eligible. ClimatSol

encourages the use of proven technologies for soil treatment by covering a higher percentage of these costs than for excavation and landfill disposal.

Status: Funding is available until March 2015.

Contact:

Ministère du Développement durable, de l'Environnement et des Parcs

Pôle d'expertise régionale – Secteur industriel

418-521-3830 or toll-free in Quebec 800-561-1616

info@mddep.gouv.qc.ca or contact the regional representatives

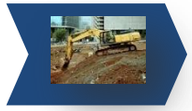
For more information: ClimatSol (in French only)

Sustainable Development Technology Canada — Innovative Technology Development Funding

Sustainable Development Technology Canada (SDTC) is a federally funded, not-for-profit foundation. SDTC finances and supports the development and demonstration of clean technologies that provide solutions to issues of climate change, clean air, water quality and soil, and deliver economic, environmental and health benefits to Canadians. On average, SDTC funds 33–50 per cent of eligible project costs.

Status: Currently accepting applications.
Contact:
Sustainable Development Technology Canada
Screening and Evaluations Manager
613-234-6313

For more information: Sustainable Development Technology Canada



Remediate

GMF loans for brownfield capital projects

Through GMF, FCM provides loans for remediation and risk management activities at a brownfield site. Up to 80 per cent of eligible project costs are covered. In most cases, GMF funding can be combined with federal and provincial funding.

Status: Currently accepting applications.

Contact:
Federation of Canadian Municipalities
Green Municipal Fund
1-877-997-9926 • gmf@fcm.ca
For more information: FCM's Green Municipal Fund — brownfields capital projects

Quebec ClimatSol Program

The Province of Quebec established the $60-million ClimatSol funding program in 2007 to encourage the use of sustainable remediation and redevelopment techniques for contaminated sites. In accordance with the Province's Sustainable Development Strategy, the program's main objective is to provide incentives for contaminated site remediation and redevelopment techniques that reduce greenhouse gas emissions and promote energy efficiency. Costs associated with site assessment, risk assessment, remediation (including planning and in situ, on-site and off-site treatment and disposal) and site monitoring are eligible. ClimatSol encourages the use of proven technologies for soil treatment by covering a higher percentage of these costs than for excavation and landfill disposal.

Status: Funding is available until March 2015.

Contact:

Ministère du Développement durable, de l'Environnement et des Parcs

Pôle d'expertise régionale – Secteur industriel

418-521-3830 or toll-free in Quebec 800-561-1616
info@mddep.gouv.qc.ca or contact the regional representatives

For more information: ClimatSol (in French only)

Redevelop

GMF loans and grants for redevelopment capital projects

Through GMF, FCM provides loans and grants for redevelopment activities related to energy, water, waste and transportation. Funding is provided for up to 80 per cent of eligible project costs. The loan maximum is $10 million, and the grant amount is set at up to 20 per cent of the loan to a maximum of $1 million. In most cases, GMF funding can be combined with federal and provincial funding.

Status: Currently accepting applications.

Contact:
Federation of Canadian Municipalities
Green Municipal Fund
1-877-997-9926 • gmf@fcm.ca
For more information: FCM's Green Municipal Fund

Private funding from financial institutions, developers

Municipalities should also seek information on private funding sources to assist with brownfield redevelopment activities.