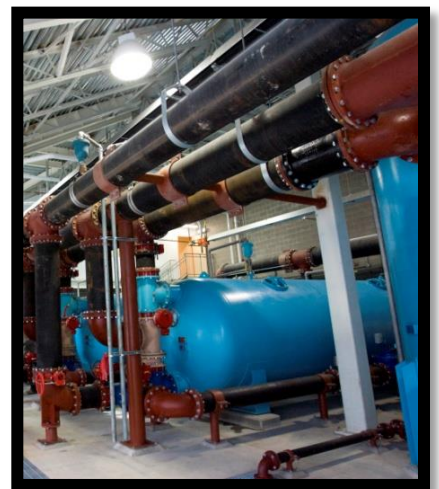


**Canada – New Brunswick  
Agreement on the Transfer of Federal Gas Tax Revenues under the  
New Deal for Cities and Communities  
2005-2015**

**New Brunswick Gas Tax Fund Outcomes Report  
(2009-2012)**



**Prepared by: Department of Environment and Local Government**

**February 2016**

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## Acronyms and Definitions

The following list of acronyms, abbreviations and definitions will assist the reader in fully understanding the content.

### Acronyms and Abbreviations:

CIP	Capital Investment Plan
ESMI	Environmentally Sustainable Municipal Infrastructure
GHG	greenhouse gas
GTF	Gas Tax Fund
LSD	Local Service District
K	thousand
km	kilometre
kWh	kilowatt hour
m	meter
M	million
mg/L	milligram per litre

### Definitions:

Agreement	Canada – New Brunswick Agreement on the Transfer of Federal Gas Tax Revenues under the New Deal for Cities and Communities 2005 – 2015
Canada	Government of Canada
Department	Department of Environment and Local Government
Incorporated Area(s)	Means one or more municipality, rural community, regional municipality and any other public authority responsible for delivering local services in New Brunswick, if that authority has been given the said responsibility by statute.
NB Communities	New Brunswick Communities is inclusive, referring to municipalities, rural communities, regional municipalities and Unincorporated Areas
NB GTF database	New Brunswick Gas Tax Fund database, a database developed by the Department to track NB GTF projects
NB PMF	New Brunswick Performance Measurement Framework
Province	Province of New Brunswick

Report	New Brunswick Outcomes Report
Reporting Period	Results are reported for those GTF projects completed in: <ul style="list-style-type: none"> <li>• Incorporated Areas during the period January 1, 2009 to December 31, 2012 (end of municipal fiscal year); and</li> <li>• Unincorporated Areas during the period April 1, 2009 to March 31, 2013 (end of the provincial fiscal year).</li> </ul>
Total Project Cost	Includes all sources of funding from 2005-06 to 2012-13.
Unincorporated Area(s)	Means an area or areas outside the territorial limits of a municipality, a rural community or a regional municipality, which is established as an Unincorporated Area.

## Executive Summary

The New Brunswick Department of Environment and Local Government (Department) is meeting its Outcomes reporting requirement under the Canada – New Brunswick Agreement on the Transfer of Federal Gas Tax Revenues under the New Deal for Cities and Communities 2005-2015 by submitting its second Provincial Outcomes Report.

The Gas Tax Fund (GTF), the funding program derived from the above-mentioned Agreement, allocates funding to eligible recipients towards the construction, rehabilitation or expansion of local infrastructure under the following project categories:

- 1) Water
- 2) Wastewater
- 3) Solid Waste
- 4) Community Energy Systems
- 5) Local Roads and Bridges
- 6) Public Transit
- 7) Capacity Building

The Department and all eligible recipients of funds agreed on acceptable performance indicators for each project in their Capital Investment Plan (CIP). The Gas Tax Fund (GTF) eligible recipients must submit an annual outcomes report as well as an annual expenditure report on their projects to the Department so all results can be tracked in the NB GTF database for eventual roll-up of the data and reporting of the outcomes at the provincial level.

## Results

New Brunswick Communities have completed a total of 343 projects during the Reporting Period with a total investment of \$159,995,191 (\$108,862,324 federal, \$11,096,410 provincial, \$40,036,457 municipal and other) in all seven categories of the GTF.

We are providing the breakdown for federal funding, total investments and the number of projects for each GTF national objective or objective groups as tracked for all of our projects, in Table 1 below. These figures reveal that NB Communities have invested over 90% of the federal funds, on projects during the Reporting Period, towards the cleaner water and the lower greenhouse gas objectives.

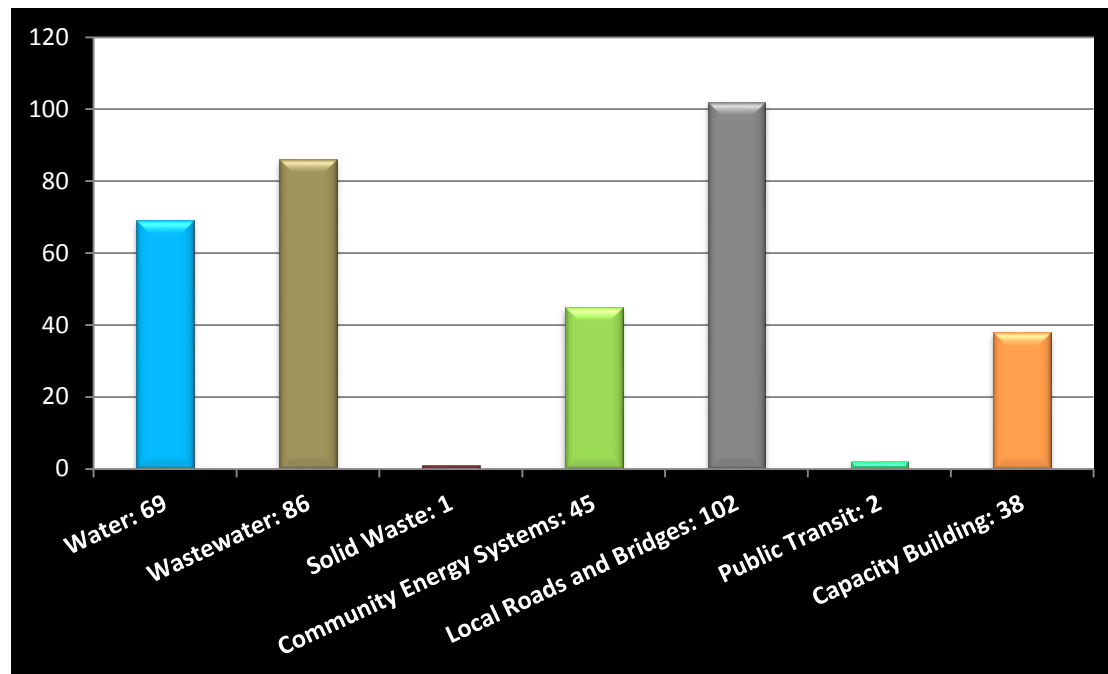
Table 1: Statistics on Projects per Agreement Objective

<b>GTF National Objective</b>	<b>Federal</b>	<b>Total Project Costs</b>	<b># of Projects</b>
Cleaner Air	\$3,984,364	\$7,314,621	21
Cleaner Water	\$64,829,596	\$84,299,992	134
Lower Greenhouse Gas (GHG)	\$30,244,289	\$54,353,756	121
Cleaner Air & Cleaner Water	\$1,887,877	\$3,522,947	5
Cleaner Air & Lower GHG	\$832,068	\$1,525,095	4
Cleaner Water & Lower GHG	\$5,131,170	\$6,522,762	17
Cleaner Air & Cleaner Water & Lower GHG	\$1,042,284	\$1,042,284	3
<b>Totals</b>	<b>\$108,095,368</b>	<b>\$158,725,177</b>	<b>305</b>

Please note that the Department did not assign any Agreement objective to the 38 Capacity Building projects under the GTF. To perform a reconciliation of the totals of Table 1 with the figures indicated in the first paragraph of the Results heading, add the federal share of \$910,676 and the Total Project Cost of \$1,413,734 to the totals of Table 1.

The number of projects per category for the 343 projects completed by NB Communities is displayed in Figure 1 below. You will notice that the three categories with the most projects are: Local Roads and Bridges, Wastewater, and Water.

Figure 1: Distribution of Projects by Category



The cumulative results of all completed projects that have reported NB PMF indicators are shown in Table 2 below:

Table 2: Summary of Performance Indicators for the Reporting Period

Length of water and wastewater lines	119,659 m
Connections to water and wastewater systems	481 clients
Decreased energy consumption	4,011,557 kWh/year
Increased ridership	97,474 users/year
Increase in walking trail, biking lane or sidewalk usage	295 users/day
Length of walking trails, biking lanes, sidewalks constructed or repaired	46.2 km
Length of roads constructed, resurfaced or reconstructed to Provincial standard, or decrease travel time and or reduce travel distance	113.2 km
Weight of material recycled	50 tons

## Conclusion

This program provides substantial and predictable long-term funding for the Incorporated Areas recipients, which is very useful to help them tackle their infrastructure needs. It is also beneficial for the improvement of the infrastructure priorities in the unincorporated areas of the province. The GTF investments, during the Reporting Period, in NB Communities had a positive and significant impact on the infrastructure in the province. All projects, except for the Capacity Building category, are aimed to improve and have a positive effect on at least one of the three following GTF national objectives: cleaner air, cleaner water, and lower greenhouse gas emissions. The indicators shown in Table 2, on the previous page, are validating the positive impact GTF projects had on the state of the infrastructure in New Brunswick.

## 1 Background

On November 24, 2005, New Brunswick signed the *Canada – New Brunswick Agreement on the Transfer of Federal Gas Tax Revenues under the New Deal for Cities and Communities 2005 – 2015* (Agreement) with the Government of Canada. The first phase of the Agreement (2005 – 2010) provided \$116 M in federal funding to New Brunswick Communities (municipalities, rural communities and Unincorporated Areas) with the Province of New Brunswick (Province) providing an additional \$30 M. On October 2, 2008, the Province and Canada signed an extension to the agreement (2010 to 2014) whereby Canada invested an additional \$178.5 M in New Brunswick Communities. These funds are being devoted for environmentally sustainable infrastructure and capacity building projects that will result primarily in the environmental benefits of cleaner air, cleaner water, and reduced greenhouse gas (GHG) emissions.

The distribution of the above mentioned funds were as shown in the following tables:

Table 3: Distribution of Funding – Phase I

	%	Federal	Provincial	Total
<b>Phase I of GTF (2005-2009)</b>				
Incorporated Areas	67	\$73.58 M	\$19.02 M	<b>\$92.60 M</b>
Unincorporated Areas	33	\$42.48 M	\$10.98 M	<b>\$53.46 M</b>
<b>Totals</b>	<b>100</b>	<b>\$116.06 M</b>	<b>\$30.00 M</b>	<b>\$146.06 M</b>

Table 4: Distribution of Funding – Phase II

	%	Federal	Provincial	Total
<b>Phase II of GTF (2010-2013)</b>				
Incorporated Areas	80	\$142.82 M	N/A	<b>\$142.83 M</b>
Unincorporated Areas	20	\$35.71 M	N/A	<b>\$35.71 M</b>
<b>Totals</b>	<b>100</b>	<b>\$178.53 M</b>	<b>N/A</b>	<b>\$178.53 M</b>

The Agreement requires the Province to file, periodically, an outcomes report to Canada. This report is then made available to the public. It includes information on the cumulative investments under the GTF and how these investments are contributing to the objectives of the Agreement.

In New Brunswick, the impact of the use of the funds is being measured through a set of performance indicators developed by the Department for the first six of the seven categories identified below:



## Project Categories:

- |                             |                            |
|-----------------------------|----------------------------|
| 1) Water                    | 5) Local Roads and Bridges |
| 2) Wastewater               | 6) Public Transit          |
| 3) Solid Waste              | 7) Capacity Building       |
| 4) Community Energy Systems |                            |

This is the second New Brunswick Gas Tax Fund Outcomes Report (Report). It provides an analysis of performance indicators generated by those projects that were completed during the Reporting Period and that have filed their annual project outcomes report with the Department:

- Incorporated Areas during the period January 1, 2009 to December 31, 2012 (end of municipal fiscal year); and
- Unincorporated Areas during the period April 1, 2009 to March 31, 2013 (end of the provincial fiscal year).

## 2 Purpose and Scope

The Department is designated as responsible for all reporting under the Agreement on behalf of the Province and is submitting its second New Brunswick Gas Tax Fund Outcomes Report.

### 2.1 Purpose

The purpose of the Report is to inform Canada, the eligible recipients and the general public of the environmental benefits being achieved through the investments made under the GTF. It is designed to fulfill the commitment of the Province to prepare and deliver an outcomes report. This Report may be used by Canada to prepare a roll-up national report on the benefits of the GTF investments being made across the country.

The GTF provides funding to New Brunswick Communities in support of the construction, refurbishment, life extension and/or expansion of publicly owned infrastructure required for the supply or management of:

- Potable Water
- Wastewater Collection and Treatment
- Solid Waste
- Energy Efficiency and Clean Energy
- Local Roads and Bridges (Active Transportation)
- Public Transit

Projects undertaken in these categories, with the support of the GTF, are referred to as Environmentally Sustainable Municipal Infrastructure (ESMI) projects.

The GTF also funds capacity building projects to enable NB Communities to better plan, manage, operate and report on the infrastructure for which they are responsible, and to maximize the environmental benefits they deliver through these systems.

## **2.2 Scope**

This is the second Provincial Outcomes Report that the Department prepares under this Agreement. It presents the environmental outcomes from the GTF investments in New Brunswick Communities. The GTF investments are important in ensuring continued movement toward environmental sustainability across the Province.

The outcomes attributed to the individual GTF projects are critical in supporting a milieu of policies and activities that contribute to environmental sustainability. These policies and activities include environmental and general sustainability policy, regulatory and voluntary air and water quality improvement, and GHG emission reduction initiatives, all being undertaken as part of the provincial initiative to become self-sufficient.

For example, the *Climate Change Action Plan 2007 – 2012* sets the policy framework and establishes GHG emission reduction objectives. Fourteen New Brunswick municipalities are members of the Federation of Canadian Municipalities *Partners for Climate Protection* program and have undertaken to lower their GHG emissions.

New Brunswick Communities are subject to environmental regulations and strategies, but also work with the Province to improve water and air quality and to reduce GHG emissions. They regularly apply to the Environmental Trust Fund and other funding sources so that they or their partners may undertake environmental initiatives, often with similar objectives as the GTF projects. As an example, under the Canada-wide Strategy for the Management of Municipal Wastewater Effluent, entities that own wastewater collection and treatment systems are required to conduct Environmental Risk Assessments as well as monitor and report on a regular basis on the quality of the effluent being discharged.

## **3 Goal and National Objectives – Gas Tax Fund Investments**

The major goal of the GTF Agreement is to assist New Brunswick Communities to improve their infrastructure in ways that will more effectively and reliably provide services to their residents while reducing the effect of the targeted infrastructure systems that they improve/replace, on the environment.

The GTF national objectives are the provision of cleaner air, cleaner water, and reduced GHG emissions.

## 4 Outcome Measurement Methodology

The Department has developed a New Brunswick Performance Measurement Framework (NB PMF) that allows for the analysis of the outcomes that are accomplished or to be achieved by each authorized GTF project. The eligible party must report these parameters and any others that may support the objectives of the Agreement as part of each project funding agreement. The measurement methodology developed for this Report relies on the information collected on each project and tracked in the NB GTF database.

The NB GTF database organizes each project into its appropriate project category. The Department developed a series of indicators for each category. These indicators became the NB PMF, and have been previously accepted by Canada. For each project, the NB GTF database tracks one or more performance indicators, and they are the subject of this Report.

### *Descriptions – Performance Indicators*

The performance indicators identified by the Department inform on each of the projects by category. There are two types of projects described in the Agreement:

- Environmentally Sustainable Municipal Infrastructure (ESMI) projects; and
- Capacity Building projects.

The ESMI projects result in new or improved facilities or infrastructure while the Capacity Building projects result in knowledge and skill building.

The Agreement further defines these two types of projects.

### **ESMI Projects include:**

#### 1) Water:

Drinking water supply; purification and treatment systems; distribution systems; and metering.

#### 2) Wastewater:

Sanitary, storm water, and combined sanitary and storm water sewer systems; and treatment facilities.

#### 3) Solid Waste:

Waste diversion; material recovery facilities; organics management; collection depots; waste disposal landfills; thermal treatment and landfill gas recuperation.

4) Community Energy Systems:

Combined heat and power; district heating and cooling; and energy efficiency.

5) Local Roads and Bridges:

Active transportation infrastructure, including local roads and bridges, that enhance sustainability outcomes.

6) Public Transit

Rapid transit, including tangible capital assets and rolling stock (includes light rail, heavy rail additions, subways, ferries, transit stations, park and ride facilities, grade-separated bus lanes and rail lines); public transportation vehicles such as transit buses/vans, bus rolling stock, transit bus stations; Intelligent Transport System (ITS) and transit priority capital investments; ITS technologies to improve transit priority signalling, passenger and traffic information, and transit operations; and capital investments, such as transit queue-jumpers and High Occupancy Vehicle (HOV) lanes.

**Capacity Building Projects include:**

1) Collaboration:

Building partnerships and strategic alliances; participation; consultation; and outreach.

2) Knowledge:

Use of new technology; research; monitoring, training, risk management; best practices; and evaluation.

3) Integration:

Planning, policy development and implementation (environmental management systems and life cycle assessments).

4) Skills:

Water resource management.

The performance indicators developed for each category must be reported by the eligible recipients as part of their funding agreements. These metrics, therefore, have a number of important attributes in that they:

- Are accurately and feasibly measureable for each project;

- Provide timely estimates and final measurements as the project is completed and continues operation into the future;
- Are easily understood by the project owner and the public;
- Allow similar types of projects to be easily aggregated; and
- Are applicable to projects undertaken in any New Brunswick Community.

The NB GTF database can thus be readily updated as information from new projects is provided and as milestones of existing projects are accomplished. The data are rolled up for each type of infrastructure project being undertaken, and then into a grand total. The Department itself tracks and reports the indicators from projects undertaken in Unincorporated Areas.

The NB PMF indicators reported by eligible participants for their projects, tracked by the Department, and reported herein for each project category include:

#### Water

- Length of water main repaired, replaced or added
- Number of new connections to municipal or regional water systems
- Decrease in energy consumed

#### Wastewater

- Length of wastewater collection lines repaired, replaced or added
- Number of new connections to municipal or regional wastewater treatment system
- Decrease in energy consumed

#### Solid Waste

- Weight of material recycled or diverted from landfill
- Number of power generation plants
- Volume of methane captured

#### Community Energy Systems

- Decrease in energy consumed

#### Local Roads and Bridges (including Active Transportation)

- Length of highway improved to meet Provincial standards
- Length of improved or realigned highway that reduce travel time
- Travel distance reduced
- Increase in walking trail, biking lane or sidewalk usage
- Length of walking trails, biking lanes, sidewalks constructed or repaired

## Public Transit

- Increased public transit ridership or capacity
- Number of reduced vehicle use
- Reduction in fuel consumption

There are projects being undertaken that clearly fit within the goals of the GTF Agreement but that do not readily produce performance indicators that fit within the foregoing approved NB PMF list. Here are a few examples of such indicators:

- Level of iron (mg/L) in drinking water before and after
- Volume of increase capacity (gallon/minute) of the new well
- Break index for the water mains
- Level of chlorine free residual concentration
- Volume of sediment in catch basins
- Comparison of biochemical oxygen demand and solid in suspension testing before and after
- Reduction in annual overflow events

The NB GTF database is used to track all PMF indicators. These indicators are summed up by categories and are associated with the appropriate national objective for this Reporting Period in Appendix A.

## 5 Analysis of Results

The results of the NB GTF investments by eligible participants are for those projects completed during the Reporting Period.

### 5.1 Incorporated Areas

330 (296 ESMI & 34 Capacity Building) projects were completed in the Incorporated Areas. Of these 296 ESMI projects, 233 have reported performance indicators that fall within the NB PMF. Of the remaining 63 ESMI projects, some were completed late in 2012 and the NB PMF compliant performance indicators were to be reported in their 2013 outcomes report. In addition, some projects are tracking other indicators that still support the goals and objectives of the Agreement, but are not included in the NB PMF as the Department has only included the most common indicators reported.

The financial investments in the 330 completed projects and the NB PMF performance indicators for the 233 completed and reported projects are summarized by category.

## Water

The Incorporated Areas completed 67 potable water projects with a total investment of \$30,257,408. Of these projects, 44 have reported on the NB PMF indicators. Projects identified in this category are of the following types in terms of their primary purposes:

1. Improved quality
2. Improved safety
3. Improved use and volume
4. Added clients to systems
5. Reduced energy consumption

The results from the water projects achieved during the Reporting Period are summarized in the table below:

Table 5: Results for Water category in Incorporated Areas

<b>Water</b>			
Completed Projects			67
Federal Contribution			\$23,485,946
Provincial Contribution			\$2,875,931
Municipal and Other			\$3,895,531
<b>Total</b>			<b>\$30,257,408</b>
<b>Performance Indicators</b>	<b>Quantity</b>	<b>Units</b>	<b>Projects with PMF Indicators</b>
Length of water main repaired, replaced or added	45,377	m	40
New connections to municipal water systems	159	clients	10
Decrease in energy consumed	(3,277)	kWh per year	3

**Note:** Please note that several projects reported results on more than one performance indicator listed above. This explains the disparity between the 44 out of the 67 projects that reported indicators and the total of projects with PMF indicators which adds up to 53 (as shown in the table above).

Please be advised that one of the three projects reporting on the “Decrease in energy consumed” indicator has stated an increase in kWh consumption in 2012 as compared to 2010. This increase was due to additional processing capacity of fish plants which required a larger volume of water from the well in 2012 compared to 2010. It is important to mention that this increase had minimal impact on all completed Incorporated Areas projects as they have reduced the consumption of electricity by over 4 million kWh (see Table 12 on page 14).

## Wastewater

Eighty wastewater projects, at a total cost of \$33,709,326, were completed in the Incorporated Areas. Of these projects, 55 have reported on the NB PMF indicators. Wastewater projects are of the following types in terms of their primary purposes:

1. Improved sewage collection and treatment
2. Improved storm water management
3. New connections to sewage collection and treatment
4. Reduced energy consumption

The results from the wastewater projects undertaken during the Reporting Period are summarized in the table below:

Table 6: Results for Wastewater category in Incorporated Areas

<b>Wastewater</b>			
Completed Projects			80
Federal Contribution			\$23,374,361
Provincial Contribution			\$1,729,581
Municipal and Other			\$8,605,384
<b>Total</b>			<b>\$33,709,326</b>
<b>Performance Indicators</b>	<b>Quantity</b>	<b>Units</b>	<b>Projects with PMF indicators</b>
Length of wastewater collection lines repaired, replaced or added	27,900	m	47
New connections to municipal wastewater treatment systems	86	clients	11
Decrease in energy consumed	39,403	kWh per year	9

**Note:** Please note that several projects reported results on more than one performance indicator listed above. This explains the disparity between the 55 out of the 80 projects that reported indicators and the total of projects with PMF indicators which adds up to 67 (as shown in the table above).



### Solid Waste

The Incorporated Areas completed one solid waste project at a total cost of \$13,000 which promotes recycling.

The result for this project is presented in the table below:

Table 7: Results for Solid Waste category in Incorporated Areas

<b>Solid Waste</b>			
Completed Project			1
Federal Contribution			\$10,330
Provincial Contribution			\$2,670
Municipal and Other			\$0
<b>Total</b>			<b>\$13,000</b>
<b>Performance Indicator</b>	<b>Quantity</b>	<b>Unit</b>	<b>Project with PMF indicator</b>
Weight of material recycled or diverted from landfill	50	Tons per year	1

### Community Energy Systems

Forty-five community energy projects, at a total cost of \$14,329,118, were completed in the Incorporated Areas. Of these projects, 37 have reported on the NB PMF indicators. All of these projects promote reductions in energy consumption.

The results from the community energy projects completed during the Reporting Period are summarized in the table below:

Table 8: Results for Community Energy System category in Incorporated Areas

<b>Community Energy Systems</b>			
Completed Projects			45
Federal Contribution			\$6,406,722
Provincial Contribution			\$1,336,301
Municipal and Other			\$6,586,095
<b>Total</b>			<b>\$14,329,118</b>
<b>Performance Indicators</b>	<b>Quantity</b>	<b>Unit</b>	<b>Projects with PMF indicators</b>
Decrease in energy consumed	3,975,431	kWh per year	37

### Local Roads and Bridges

The Incorporated Areas completed 101 local roads and bridges (including active transportation), projects at a total cost of \$48,757,207. Of these, 87 projects have reported their NB PMF indicators. Projects in this category have the following primary purposes:

1. Improved local roads and traffic circulation
2. Developed active transportation

The results from the transportation projects achieved during the Reporting Period are summarized in the table below:

Table 9: Results for Local Roads and Bridges category in Incorporated Areas

<b>Local Roads and Bridges (including Active Transportation)</b>			
Completed Projects			101
Federal Contribution			\$27,475,526
Provincial Contribution			\$4,892,086
Municipal and Other			\$16,389,595
<b>Total</b>			<b>\$48,757,207</b>
<b>Performance Indicators</b>	<b>Quantity</b>	<b>Units</b>	<b>Projects with PMF Indicators</b>
Length of roads constructed, resurfaced or reconstructed to Provincial standard, or decrease travel time and or reduce travel distance	99.8	km	63
Increase in walking trail, biking lane or sidewalk usage	295	users per day	14
Length of walking trails, biking lanes, sidewalks constructed or repaired	46.2	km	30

**Note:** Please note that several projects reported results on more than one performance indicator listed above. This explains the disparity between the 87 out of the 101 projects that reported indicators and the total of projects with PMF indicators which adds up to 107 (as shown in the table above).

### **Public Transit**

Two public transit projects with a total investment of \$1,065,809 were completed in the Incorporated Areas. All reported their NB PMF indicators. Projects in this category are of the following types in terms of their primary purposes:

1. Increase public transit ridership
2. Number of reduced vehicle use
3. Reduce fuel consumption

The results from these projects are summarized in the table below:

Table 10: Results for Public Transit category in Incorporated Areas

<b>Public Transit</b>			
Completed Projects			2
Federal Contribution			\$663,365
Provincial Contribution			\$171,471
Municipal and Other			\$230,973
<b>Total</b>			<b>\$1,065,809</b>
<b>Performance Indicator</b>	<b>Quantity</b>	<b>Unit</b>	<b>Projects with PMF Indicator</b>
Increased ridership	97,474	users per year	2

### Capacity Building

The Incorporated Areas completed 34 capacity building projects at a total cost of \$1,218,978. Projects identified in this category were related to the planning of municipal infrastructure.

Table 11: Results for Capacity Building category in Incorporated Areas

<b>Capacity Building</b>		
Completed Projects		34
Federal Contribution		\$715,920
Provincial Contribution		\$88,370
Municipal and Other		\$414,688
<b>Total</b>		<b>\$1,218,978</b>
<b>Project Types</b>		<b>Projects per Type</b>
Projects increasing collaboration		1
Projects increasing knowledge		20
Projects promoting integration		1
Projects increasing information for water resource management		12

### Incorporated Areas Total

The purpose of Table 12, on next page, is to summarize the investments and all PMF indicators for the Incorporated Areas projects during the Reporting Period.

Please be advised that since we have limited the display of PMF Indicators in the respective category table in the previous pages to show a direct comparison with the dollars invested in each category, the table below will show all PMF indicators reported during the Reporting Period even if it was not in the category that corresponds to the actual indicator.

Some local governments chose to complete more than one improvement to their infrastructure under one project. For example, during a street resurfacing project under the Local Roads and Bridges (LRB) category, in addition to reporting that 500 m of a street was reconstructed, a section of an old water main and sanitary sewer pipe of the same length were also replaced. The length of those pipes are not shown as an indicator in the LRB category result table but is included in the table below to show globally what the total indicators are for the amount invested in all of the Incorporated Areas.

Table 12 : Results for the Incorporated Areas

<b>Incorporated Areas Total</b>			
Completed Projects			330
Federal Contribution			\$82,132,170
Provincial Contribution			\$11,096,410
Municipal and Other			\$36,122,266
<b>Total Investment</b>			<b>\$129,350,846</b>
<b>Performance Indicators</b>	<b>Quantity</b>	<b>Units</b>	<b>Projects with PMF Indicators</b>
Length of water main repaired, replaced or added	52,137.8	m	53
New connections to municipal water systems	166	clients	11
Length of wastewater collection lines repaired, replaced or added	35,267.8	m	69
New connections to municipal wastewater treatment systems	86	clients	11
Decrease in energy consumed	4,011,557.4	kWh per year	49
Increased ridership	97,474	users per year	2
Increase in walking trail, biking lane or sidewalk usage	295	users per day	14
Length of walking trails, biking lanes, sidewalks constructed or repaired	46.2	km	30
Length of roads constructed, resurfaced or reconstructed to Provincial standard, or decrease travel time and or reduce travel distance	103.2	km	70
Weight of material recycled or diverted from landfill	50	Tons per year	1

## 5.2 Unincorporated Areas

All completed GTF projects in the Unincorporated Areas were either managed directly by the Department, a project partner (a municipality or utilities commission) and the Department or another provincial department. There were four capacity building and 9 ESMI projects that were finished in the Unincorporated Areas of the Province during the Reporting Period. As of March 31, 2013, there has been a total of 27 ESMI and 9 capacity building projects authorized for Unincorporated Areas, therefore a total of 36 projects.

The financial investments in the 13 completed projects and the NB PMF performance indicators for the 9 reporting projects are summarized by category.

### Water

Two potable water projects, with a total investment of \$8,106,901, were completed in the Unincorporated Areas. These projects were undertaken to improve water safety for residents and add new connections to the system.

The results are summarized in the table below:

Table 13: Results for Water category in Unincorporated Areas

<b>Water</b>			
Completed Projects			2
Federal Contribution			\$7,106,901
Provincial Contribution			\$0
Municipal and Other			\$1,000,000
<b>Total</b>			<b>\$8,106,901</b>
<b>Performance Indicators</b>	<b>Quantity</b>	<b>Units</b>	<b>Projects with PMF Indicators</b>
New connections to regional water systems	117	clients	2
Length of water main repaired, replaced or added	12,566	m	2

## Wastewater

The Unincorporated Areas completed six wastewater system projects at a total cost of \$18,560,212. Of these, NB PMF indicators were filed on five projects. Wastewater projects are of the following types in terms of their primary purposes:

1. Improved sewage collection and treatment
2. Improved storm water management
3. New connections to sewage collection and treatment
4. Reduced energy consumption

The results are displayed in the table below:

Table 14: Results for Wastewater category in Unincorporated Areas

<b>Wastewater</b>			
Completed Projects			6
Federal Contribution			\$15,979,354
Provincial Contribution			\$0
Municipal and Other			\$2,580,858
<b>Total</b>			<b>\$18,560,212</b>
<b>Performance Indicators</b>	<b>Quantity</b>	<b>Units</b>	<b>Projects with PMF indicators</b>
Length of wastewater collection lines repaired, replaced or added	19,687	m	5
New connections to regional wastewater systems	112	clients	3

### **Local Roads and Bridges**

One local roads and bridges project, at a total cost of \$3,782,476, was completed in the Unincorporated Areas. Projects in this category have the following primary purposes:

1. Improved local roads and traffic circulation
2. Developed active transportation

The result is shown in the table below:

Table 15: Results for Local Roads and Bridges category in Unincorporated Areas

<b>Local Roads and Bridges (including Active Transportation)</b>			
Completed Project			1
Federal Contribution			\$3,449,143
Provincial Contribution			\$0
Municipal and Other			\$333,333
<b>Total</b>			<b>\$3,782,476</b>
<b>Performance Indicator</b>	<b>Quantity</b>	<b>Unit</b>	<b>Project with PMF Indicator</b>
Length of roads constructed, resurfaced or reconstructed to Provincial standard, or decrease travel time and or reduce travel distance	10	km	1



### Capacity Building

The Unincorporated Areas completed four capacity building projects at a total cost of \$194,756. Projects identified in this category were related to the planning of infrastructure in local service districts.

Table 16: Results for Capacity Building category in Unincorporated Areas

<b>Capacity Building</b>		
Completed Projects		4
Federal Contribution		\$194,756
Provincial Contribution		\$0
Municipal and Other		\$0
<b>Total</b>		<b>\$194,756</b>
<b>Project Types</b>		<b>Projects per Type</b>
Projects increasing collaboration		0
Projects increasing knowledge		2
Projects promoting integration		0
Projects increasing information for water resource management		2

### **Unincorporated Areas Total**

The table below summarizes the investments and PMF indicators for the Unincorporated Areas projects for the Reporting Period.

Table 17: Results for the Unincorporated Areas

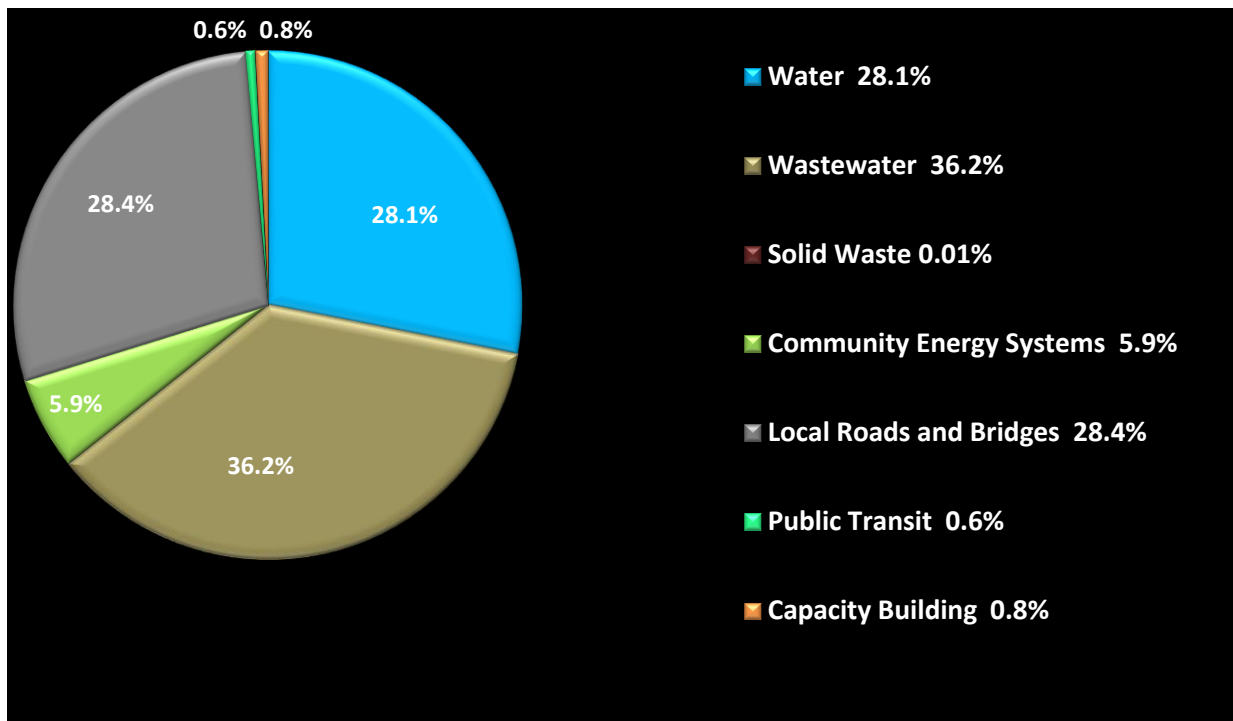
<b>Unincorporated Areas Total</b>			
Completed Projects			13
Federal Contribution			\$26,730,154
Provincial Contribution			\$0
Municipal and Other			\$3,914,191
<b>Total Investment</b>			<b>\$30,644,345</b>
<b>Performance Indicators</b>	<b>Quantity</b>	<b>Units</b>	<b>Projects with PMF Indicators</b>
Length of water main repaired, replaced or added	12,566	m	2
New connections to regional water systems	117	clients	2
Length of wastewater collection lines repaired, replaced or added	19,687	m	5
New connections to regional wastewater systems	112	clients	3
Length of roads constructed, resurfaced or reconstructed to Provincial standard, or decrease travel time and or reduce travel distance	10	km	1

### 5.3 Summary of All New Brunswick Projects

The GTF has authorized a total of 773 projects under this GTF Agreement by the end of this Reporting Period. In our first outcomes report, 153 projects were completed, including three in Unincorporated Areas. During this Reporting Period, 343 projects (44%) were completed, with 330 of the completed projects being in Incorporated Areas and 13 projects in the Unincorporated Areas of the Province. At the end of this Reporting Period, New Brunswick communities had completed 496 (64%) projects and 277 (36%) were still in progress. All GTF projects were divided among all seven eligible categories.

The total investment for these 343 projects is \$160 M, including \$108.9 M federal and \$11.1 M provincial contributions from the GTF, while leveraging \$40 M from municipalities and other sources of funding.

Figure 2: Percentage of Federal Investments by Category



As shown in Figure 2 above, the majority of the federal funds which totals \$108.9 M have been devoted to projects in the Wastewater (\$39.4 M), Local Roads and Bridges (\$30.9 M), and Water (\$30.6 M) categories. The balance of \$8 M has been invested in the other four categories. These figures demonstrate what NB Communities selected as their priorities amongst the seven eligible categories for the period in question.

## 6. Project Examples

The categories of eligible GTF projects undertaken during the Reporting Period are analyzed in the foregoing. However, it is useful to consider a sample of individual projects that were completed to bring additional reality to some of the categories, to illustrate their conformance with the objectives of the program, and also to show the challenges in fully quantifying the range of environmental benefits being achieved.

The following projects are examples of those eligible projects undertaken during the Reporting Period, identifying their NB PMF and/or other expected or achieved performance indicators.

### 6.1 Water Main Cleaning and Lining (Saint John) - \$2.52 M in Federal Funding

Unlined cast iron water mains that were installed in the late 1800's and early 1900's (up until about 1960), are subject to a phenomenon called tuberculation. This build-up reduces the internal diameter of the pipe which in turn leads to a decrease in water pressure and available fire flows. In addition, tuberculation is a major contributor to water quality problems such as colour, increased iron content and reduced chlorine residual. Unlined cast iron water mains that exhibit good structural integrity can be rehabilitated using a cleaning and lining process.

#### Expected Outcome:

The City is expecting to extend the life of water mains, improve the water quality and water pressure in the sector where the cleaning and lining work was performed.

#### NB PMF Indicator:

- 15,200 m of water main has been cleaned and lined.

#### Other Indicators:

Before: Iron levels were in the range of 0.32 to 2.27 mg/L.

After: Iron levels are between 0.10 to 0.24 mg/L.

All samples taken after the project showed the new iron level to be below the recommended maximum level of 0.3 mg/L as per the Canadian Drinking Water Guidelines.

## **6.2 Water and Sewer Upgrade - St. John Street, York Street, and St. Andrew Street (Bathurst) - \$2.68 M in Federal Funding**

To upgrade the water, sanitary sewer and storm sewer systems on St. John Street, York Street and St. Andrew Street. Most of the infrastructure on these streets is over 50 years old and is in need of replacement. The sanitary and storm sewer systems are combined which increases the amount of surface water which is sent to the Wastewater Treatment Plant.

### Expected Outcome:

The residents of the area will benefit by receiving an upgraded water distribution system which will improve water quality in the area.

### NB PMF Indicators:

- 1,178 m of water main were installed.
- 1,036.5 m of sanitary sewer main were installed.
- 1,096 m of storm sewer pipe were installed.

## **6.3 Energy improvements at the municipal pool and arena (Tracadie-Sheila) - \$577 K in Federal Funding**

Several improvements were made in order to reduce energy consumption at the municipal arena and indoor pool. Here is a list of improvements to the arena: A reflecting panel was installed on the ceiling, the existing lighting system was changed to a fluorescent one, some heat recovery fans were installed, ventilation units with built-in dehumidifiers were installed, exterior wall insulation, a heat exchanger unit will transfer the heat that is accumulated by the ice refrigeration system to other areas where needed such as changing rooms, canteen area, washrooms, etc. The surplus of energy not used at the arena will be transferred to the municipal indoor pool via an in ground pipe to help reduce energy consumption. Other energy efficient enhancements were also completed at the pool, like insulating exterior walls and upgrades to the electrical and mechanical systems to reduce the energy loss and lower operational costs.

### Expected Outcome:

The Town is expecting a significant reduction in electricity consumption for these buildings.

### Performance Indicator:

- An annual decrease of 357,080 kWh

#### **6.4 Scoudouc Industrial Park – Direct Access to Route 15 (Scoudouc LSD) - \$3.45 M in Federal Funding**

The Scoudouc Industrial Park is located in the Scoudouc LSD and is home to approximately 16 industries, most of which fall into the category of manufacturing or processing. There is a mandate to expand the Park with the approximately 130 acres of available land. However it has been determined that in order to make this expansion viable there is a need to construct a direct access road to the Moncton-Shediac Hwy (Rte.15). Current access to the park is achieved by Rte. 132 and residential streets. The construction of a 1 km direct access road would eliminate several kilometers of excess driving to enter and exit the Park.

##### Expected Outcome:

A direct access road to and from the Industrial Park would result in a number of kilometers saved in driving and would reduce greenhouse gas emissions for every vehicle that used it.

##### Performance Indicator:

- A total of 10 km were saved in travel distance after the construction of the access road.

#### **6.5 Capacity Building – Potable Water Supply Improvement Phase I and II (Rivière-Verte) - \$21 K in Federal Funding**

The Village of Rivière-Verte is taking its potable water directly from the river. Two studies have been undertaken under the GTF in order to identify ways of protecting their potable water supply.

The first study consisted in identifying and implementing the best solution to prevent taking water from the river at times when the City of Edmundston is opening their hydroelectric gates as the water level rises in their reservoir. During such events, the water turbidity rises to a point where people are complaining of colored water. A computerized system has been installed at the Edmundston dam to give the signal to stop taking water from the river when the gates are opened and to restart when the gates are closed with a delayed time for the water to return within acceptable turbidity levels.

The second study consisted in finding the best alternative to treat the water in conjunction with UV treatment during heavy rains or snow melt in order to avoid boiling orders. A nanofiltration system has been identified as the best alternative for them.

These two studies were done in conjunction with a broader project under Building Canada Fund – Community Component which consisted of a new water reservoir and water treatment plant. In fact these studies helped achieving the goal of having a better potable water for Rivière-Verte citizens.

## 7 Conclusion

The Department of Environment and Local Government is proud of the progress toward improved sustainability in New Brunswick Communities as a result of the implementation and management of the Gas Tax Fund Agreement. The development of the New Brunswick Gas Tax Fund database and the Performance Measurement Framework has allowed the Province to track results from all of the projects that are being undertaken. This information will inform the partners – Canada and New Brunswick – as well as the eligible participants and the general public as to the environmental benefits of these investments, especially their contribution toward cleaner air, cleaner water and reduced GHG emissions.

The GTF program has now over 60% of the initial Agreement projects completed and all eligible recipients have had both their capital investment plans for the 2005-2009 and the 2010-2013 phases approved by the Department. They are incorporating their own resources as well as those from the GTF to do larger projects more efficiently, thus providing even greater benefits to their residents and clients.

The Federal government announcement to make the GTF a permanent program, starting in 2014, was very well received in our province. Our local governments will benefit from permanent and foreseeable funding to be invested towards the renewal of aging infrastructure, the construction of new infrastructure and a better management of their assets.

## APPENDIX A: New Brunswick Performance Measurement Framework Results

Project Category	Project Type	Number of Projects with type	Number of Communities with type	Indicator for Aggregation	Indicator Total Value	GTF National Objective	Number of Projects with Outcome	Number of Communities with Outcome
1. Water	1) Projects improving water quality	39	21	# of metres of water main repaired, replaced or added	64,704	Cleaner Water	66	38
	2) Projects improving water safety	5	5					
	3) Projects improving drinking water use and volume (i.e. metering)	5	4					
	4) Projects adding connection to a drinking water system	17	12	# of new connections to municipal or regional water systems	283			
	5) Projects reducing energy consumption (i.e. new pumps, lift stations, turbines)	3	3	Decrease in kWh consumed	(3,277)	Lower GHG	7	6
2. Wastewater	1) Projects improving and increasing wastewater collection and treatment systems	49	34	# of metres of wastewater collection lines repaired, replaced or added	54,955	Cleaner Water	76	43
	2) Project improving storm sewer drainage, collecting and treatment systems	19	10					
	3) Projects adding connection to a sewage collection system	8	8	# of new connections to municipal or regional wastewater treatment systems	198			
	4) Projects reducing energy consumption (i.e. new pumps, lift stations, turbines)	10	7	Decrease in kWh consumed	39,403	Lower GHG	19	13
3. Solid Waste	1) Project related to recycling, composting, solid waste reduction or other diversion activities	1	1	Tons of recycled material	50	Cleaner Air	1	1
	2) Project promoting solid waste power generation	N/A	N/A	Number of power generation plants	N/A	Cleaner Water	N/A	N/A
	3) Methane gas recapturing projects	N/A	N/A	Volume of recaptured methane	N/A	Lower GHG	N/A	N/A



Project Category	Project Type	Number of Projects with type	Number of Communities with type	Indicator for Aggregation	Indicator Total Value	GTF National Objective	Number of Projects with Outcome	Number of Communities with Outcome
4. Community Energy	1) Projects promoting a reduction in energy consumption	45	31	Decrease in kWh consumed	3,975,431	Lower GHG	45	32
	2) Resource recovery and energy production and cogeneration projects	N/A	N/A			Cleaner Air	N/A	N/A
5. Public transit	1) Project establishing new, or expanded systems to interconnect communities	N/A	N/A	Increase ridership	97,474	Cleaner Air	2	2
	2) Project increasing ridership and capacity of transit system	2	2					
	3) Projects that encourage car pooling	N/A	N/A	# of reduced vehicle use	N/A	Lower GHG	N/A	N/A
	4) Upgrading existing transit system to be more energy efficient	N/A	N/A	reduction in fuel consumption	N/A			
6. Local Roads and Bridges (Active Transportation)	1) Projects improving local roads and traffic circulation	73	39	# of km improved to prov. standard; # of km built to reduce travel time; # of km of travel distance saved	110	Lower GHG	73	41
	2) Projects developing active transportation alternatives (paths, trail for walking, biking, side walks)	25	18	Increase in walking trail, biking lane or sidewalk usage	295	Cleaner Air	31	22
				# of km of walking trails, biking lanes, sidewalks constructed or repaired	46			
7. Capacity Building	1) Projects increasing collaboration (i.e. building partnerships and strategic alliances, participation, consultation and outreach)	1	1	Copy of reports				
	2) Projects increasing knowledge (i.e. use of new technology; research; and monitoring, training, risk management, best practices and evaluation, inventory of infrastructure eligible under the GTF program)	22	18	Copy of reports				
	3) Projects promoting integration (i.e. planning, policy development and implementation, environmental management systems, life cycle assessment)	1	1	Copy of reports				
	4) Projects increasing information for water resource management	14	12	Copy of reports				

## APPENDIX B: List of Completed Incorporated Area Projects

Please be advised that all entries in Appendices B and C showing N/A in the GTF National Objective column are Capacity Building projects. There is no GTF national objective associated with this category.

Project Name	Applicant	GTF National Objective
Paving of Chignecto Drive and Bayview Drive	Village of Alma	Lower GHG
Resurfacing of School Street	Village of Alma	Lower GHG
Chignecto Drive Sewer Extension	Village of Alma	Cleaner Water
School Street Reconstruction - Phase II	Village of Alma	Lower GHG
PSAB 3150 Compliance	Village of Alma	N/A
Water Line Extension	Village of Aroostook	Cleaner Water
Well Houses #1 and #2 Renovations	Village of Aroostook	Lower GHG
Water Line Extension - Phase II	Village of Aroostook	Cleaner Water
Ultraviolet Disinfection for Sugarloaf Potable Water Supply Well	Village of Atholville	Cleaner Water
Replacement of Water and Sewer Lines – Ferguson Street (Phase II)	Village of Atholville	Cleaner Water & Lower GHG
Sustainable Potable Water Supply Action Plan	Village of Baker Brook	N/A
PSAB	Village of Baker Brook	N/A
Sustainable Potable Water Supply Action Plan – Phase II	Village of Baker Brook	N/A
Reconstruction of a Street and Paving of Streets	Village of Balmoral	Lower GHG
Turbidimeters	Village of Balmoral	N/A
Inventory of Municipal Assets as Required by the PSAB	Village of Balmoral	N/A
Installation of Baffle Curtains in Lagoon	Village of Bas-Caraquet	Cleaner Water
Renovation of Lift Station Buildings	Village of Bas-Caraquet	Lower GHG
Renovation of Well Building on Frédéric Street	Village of Bas-Caraquet	Lower GHG
Resurfacing of Morais and Lanteigne Streets	Village of Bas-Caraquet	Lower GHG
New Water Source	Village of Bas-Caraquet	N/A
Monitoring of Frédéric Well	Village of Bas-Caraquet	Lower GHG
Upgrading of Road Surface	Village of Bas-Caraquet	Lower GHG
Sidewalk Extension & Storm Sewer Addition - Main Street	Village of Bath	Cleaner Air & Lower GHG
Water and Sewer Upgrade - St. John Street, York Street, and St. Andrew Street	City of Bathurst	Cleaner Water
Water and Sewer Upgrade - College Street and University Drive	City of Bathurst	Cleaner Water
Upgrades to Water and Wastewater Systems - Chaleur Drive	Village of Belledune	Cleaner Water
Retrofits and Upgrades to Municipal Building / Fire Station 2	Village of Belledune	Lower GHG
Retrofits and Upgrades to Veterans Memorial Centre Arena	Village of Belledune	Lower GHG

Retrofits and Upgrades to Belledune Recreation & Cultural Centre	Village of Belledune	Lower GHG
Retrofits and Upgrades to Jacquet River Campground	Village of Belledune	Lower GHG
Retrofits and Upgrades to Fire Station #1	Village of Belledune	Lower GHG
Parc Street East and John Cormier Street	Town of Beresford	Cleaner Air, Cleaner Water & Lower GHG
Sidewalk and Cycling Trail	Town of Beresford	Cleaner Air & Cleaner Water
De l'École Street and Continuation of John Cormier Street	Town of Beresford	Cleaner Air, Cleaner Water & Lower GHG
PSAB	Town of Beresford	N/A
Construction of Cycling Trail and Pedestrian Lane	Village of Bertrand	Cleaner Air
Sidewalk Repairs	Village of Bertrand	Cleaner Air
Sidewalk Repairs	Village of Bertrand	Cleaner Air
Storm Water Separation - Wellington Road	Village of Blacks Harbour	Cleaner Water
Exploration for a New Well	Town of Bouctouche	N/A
Extension of Potable Water Line from Irving Boulevard	Town of Bouctouche	Cleaner Water
Municipal Building and Library Energy Retrofit	Village of Cambridge-Narrows	Lower GHG
Replacement of Water & Sewerage Lines on Minto Street	City of Campbellton	Cleaner Water
Upgrading Wastewater Treatment Plant - Phase I	City of Campbellton	Cleaner Water
Replacement of Water & Sewerage Lines on City Streets	City of Campbellton	Cleaner Water & Lower GHG
Valley Road - Street and Watercourse Repair	City of Campbellton	Cleaner Water & Lower GHG
Energy Retrofits to Municipal Buildings (Phase I)	Village of Canterbury	Lower GHG
Installation of Geothermal System	Village of Cap-Pelé	Lower GHG
Installation of Geothermal System in Père-Camille-Léger Arena	Village of Cap-Pelé	Lower GHG
Addition of Sanitary and Storm Sewer Networks – De l'Espoir Street	Village of Cap-Pelé	Cleaner Water
Construction of Cycling Trail	Town of Caraquet	Cleaner Air
Construction of New Sidewalks	Town of Caraquet	Cleaner Air
PSAB 3150	Village of Centreville	N/A
Sewerage Waste Water Treatment Plant	Village of Chipman	Cleaner Water
Retrofit of DiCarlo Lift Station - Phase 1	Village of Chipman	Lower GHG
Repaving of Queen Street and Hillcrest Avenue	Village of Chipman	Lower GHG
Repaving of Elm Street	Village of Chipman	Lower GHG
Retrofit of DiCarlo Lift Station - Phase 2	Village of Chipman	Lower GHG
Lift Station Upgrades	Village of Chipman	Lower GHG
Paving of Elm Street - Phase 2	Village of Chipman	Lower GHG
Paving of Municipal Streets	Village of Chipman	Lower GHG
Inventory of Capital Assets	Village of Chipman	N/A
Potable Water – Des Pins Street	Village of Clair	Cleaner Water
Monitor and Alarm Upgrade	Town of Dalhousie	Cleaner Water

Bus Purchase	City of Dieppe	Lower GHG
Improvements to Régis/Acadie Street Intersection	City of Dieppe	Lower GHG
Construction of New Water Transmission Main	Village of Doaktown	Cleaner Water
Upgrade of Doaktown Community Arena	Village of Doaktown	Lower GHG
New Well Study	Village of Drummond	N/A
Intersection of Canada and St. François Streets	City of Edmundston	Lower GHG
Construction of a Dome	City of Edmundston	Cleaner Water
Roadway Reconstruction	City of Edmundston	Lower GHG
Culvert Replacement – Main Street, Saint-Jacques Ward	City of Edmundston	Cleaner Water
Cycling Trail, Saint-Basile Sector, and Widening of Traffic Lanes on Chapelle Street	City of Edmundston	Cleaner Air
Upgrading the Potable Water Reservoir	Village of Eel River Crossing	Cleaner Water
Improvement to Municipal Building	Village of Eel River Crossing	Lower GHG
Upgrading of Whalen Street and rue de l'Église	Village of Eel River Crossing	Lower GHG
Upgrading of Streets	Village of Eel River Crossing	Lower GHG
Pumping Station Upgrade - Route 105 (McCain)	Town of Florenceville-Bristol	Cleaner Water
Pumping Station Upgrade - Route 105 (Co-op Site)	Town of Florenceville-Bristol	Cleaner Water
Pumping Station Upgrade - Route 105 (Co-op Site)	Town of Florenceville-Bristol	Cleaner Water
Phyliss Creek Storm Water Attenuation Pond	City of Fredericton	Cleaner Water
HVAC System - Conference Centre Area	City of Fredericton	Lower GHG
Grant Harvey Centre Geo-Thermal Energy System	City of Fredericton	Lower GHG
Knowledge Park Drive Roadway & Traffic Decongestion Project	City of Fredericton	Lower GHG
Cliffe Street Off Ramps - Westmorland Street Bridge	City of Fredericton	Cleaner Air & Lower GHG
Cliffe Street Transportation Network - Plus Paving	City of Fredericton	Lower GHG
Traffic Enhancement Associated with Conference Centre	City of Fredericton	Lower GHG
Clark Street - Sanitary Sewer	City of Fredericton	Cleaner Water
Friel Street - Water & Sanitary Sewer	City of Fredericton	Cleaner Water
Longwood Drive - Water & Sanitary Sewer	City of Fredericton	Cleaner Water
Edinburgh Street - Water & Sanitary Sewer	City of Fredericton	Cleaner Water
Wright Street - Water & Sanitary Sewer	City of Fredericton	Cleaner Water
Parklyn Court - Water & Sanitary Sewer	City of Fredericton	Cleaner Water
Road upgrades	Village of Fredericton Junction	Lower GHG
Water and Sewerage Services on Horseman Road	Village of Fredericton Junction	Cleaner Water

Tilley Road Project - Phase II	Village of Gagetown	Lower GHG
Tilley Road Project - Phase II	Village of Gagetown	Lower GHG
Highland Road Storm Sewer	Town of Grand Bay-Westfield	Cleaner Water
Inglewood Drive Storm Sewer	Town of Grand Bay-Westfield	Cleaner Water
Inglewood Drive Storm Sewer - Phase I (2005-09)	Town of Grand Bay-Westfield	Cleaner Water
Inglewood Drive - Storm Sewer and Roadway Widening - Phase II	Town of Grand Bay-Westfield	Cleaner Air & Cleaner Water
Woolastook Drive - Storm Sewer and Roadway Widening	Town of Grand Bay-Westfield	Cleaner Air & Cleaner Water
Woolastook Drive - Concrete Curb and Sidewalk	Town of Grand Bay-Westfield	Cleaner Air
Lajoie Street Water Main Looping	Town of Grand Falls	Cleaner Water
Sheriff/High/Chapel Streets Water Main Looping	Town of Grand Falls	Cleaner Water
CN Road Water Main Looping	Town of Grand Falls	Cleaner Water
Wells No. 3 and 5 major rehabilitation	Town of Grand Falls	Lower GHG
Rioux/Morrissey Water Main Looping	Town of Grand Falls	Cleaner Water
Eco-Ice Cooling System - Phase I	Village of Grand Manan	Lower GHG
Sidewalk Reconstruction	Village of Grande-Anse	Cleaner Air
Replacement of Arena Refrigeration System and Heating System in Players' Rooms	Village of Grande-Anse	Lower GHG
Bartlett Avenue and Dale Avenue Storm Sewers	Town of Hampton	Cleaner Water
Blue Bin Recycling Depot	Town of Hampton	Cleaner Air
Traffic Lights	Town of Hampton	Lower GHG
Roadway Upgrading - Kennebecasis River Road	Town of Hampton	Lower GHG
Integrated Community Sustainability Plan	Town of Hampton	N/A
Storm Sewer - Kelti Avenue and Walker Crescent	Town of Hampton	Cleaner Water
Storm Sewer - Dale Avenue	Town of Hampton	Cleaner Water
Storm Sewer - Bartlett Avenue	Town of Hampton	Cleaner Water
Paving - Hilltop Drive, Dann Drive and Robertson Road	Town of Hampton	Lower GHG
Traffic Circle	Town of Hampton	Lower GHG
Paving - Villa Drive	Town of Hampton	Lower GHG
Sidewalk Repairs on Rockland Road - Phase 1	Town of Hartland	Cleaner Air
Water Main Extension (Rosedale Dr. to Aiton Cres.)	Town of Hartland	Cleaner Water & Lower GHG
Connection of the Ambulance NB building development to the central sewage collection and treatment system	Village of Harvey	Cleaner Water
Connection of new development areas to central sewage collection and treatment system	Village of Harvey	Cleaner Water
Remediation of manhole infrastructure related to the sanitary sewer system	Village of Harvey	Cleaner Water
Energy Reduction of Sewage Treatment Facility	Village of Harvey	Lower GHG
Strategic Plan	Village of Harvey	N/A

Assessment of Water Supply	Village of Harvey	N/A
Analysis of the Sewage Treatment System	Village of Harvey	N/A
Connection of new development area to central sewage collection and treatment system	Village of Harvey	Cleaner Water
Upgrade of electrical backup at pumping station	Village of Harvey	Cleaner Water
Implementation of Public Sector Accounting (PSAB)	Village of Harvey	N/A
Water and Sewer Extension	Village of Hillsborough	Cleaner Water
Therma-Stor Heat Recovery	Village of Hillsborough	Lower GHG
Survey of Lagoon Facility	Village of Hillsborough	N/A
Municipal Potable Water Reservoir Upgrading – Phase I	Village of Kedgwick	Cleaner Water
Paving of Streets	Village of Kedgwick	Lower GHG
Repair of Municipal Potable Water Reservoir – Phase II	Village of Kedgwick	Cleaner Water
Paving of Streets	Village of Kedgwick	Lower GHG
Development of an Infrastructure Master Plan	Village of Kedgwick	N/A
Replacement of Catch Basin in Municipal Park with a Septic Tank, Pumping Station, and Disposal Field	Village of Lac Baker	Cleaner Water
Replacement of Catch Basin at Municipal Building with Septic Tank and Disposal Field	Village of Lac Baker	Cleaner Water
Energy Upgrading Work at Municipal Building	Village of Lac Baker	Lower GHG
Energy Upgrading Work at Municipal Park Building	Village of Lac Baker	Lower GHG
Resurfacing of Streets – Phase I	Village of Lac Baker	Lower GHG
Municipal Inventory for PSAB	Village of Lac Baker	N/A
Evaluation of Compliance of On-Site Sewage Systems and Verification of Potable Water Supply	Village of Lac Baker	N/A
Replacement of Lift Station – Pêcheur-Sud Street	Town of Lamèque	Lower GHG
Energy Upgrades at Town Hall	Town of Lamèque	Lower GHG
Energy Upgrades at Fire Station	Town of Lamèque	Lower GHG
Energy Upgrades at Municipal Library	Town of Lamèque	Lower GHG
Paving of De l'Hôpital and Des Saules Streets	Town of Lamèque	Lower GHG
Resurfacing of Streets	Village of Le Goulet	Lower GHG
Sidewalk Construction	Village of Maisonnette	Cleaner Air
Replacement of Exterior Doors and Windows on Municipal Building	Village of Maisonnette	Lower GHG
Extension of Municipal Water Infrastructure on Reagon Road	Village of McAdam	Cleaner Water
Extension of Municipal Water Infrastructure on Lake Avenue - Phase II	Village of McAdam	Cleaner Water
Water and Sewer Line Extension - West Street - Phase I	Village of McAdam	Cleaner Water
Water and Sewer Line Extension - West Street - Phase II	Village of McAdam	Cleaner Water
Storm and Sanitary Sewer Separation	Village of McAdam	Cleaner Water

Energy conservations measures implementation	Village of Meductic	Lower GHG
Upgrading of Road Network	Village of Memramcook	Lower GHG
Search for Potable Water	Village of Memramcook	N/A
Replacement of Pumping Station	Village of Memramcook	Lower GHG
Chip Sealing of Reid Street & Sansom Drive and Resurfacing of Cookson Drive	Village of Millville	Lower GHG
Roadway Reconstruction	Village of Millville	Lower GHG
PSAB 3150 Implementation	Village of Millville	N/A
Village Office/Call Center/Maintenance Building Energy Saving	Village of Minto	Lower GHG
Arena Energy Saving	Village of Minto	Lower GHG
Paving Local Roads and Sidewalk Repairs	Village of Minto	Lower GHG
Repairs to Sidewalks	Village of Minto	Cleaner Air
Sewer Line Replacement and Extension	Village of Minto	Cleaner Water
Chipseal and Paving of Local Roads	Village of Minto	Lower GHG
Sidewalk Reconstruction	Village of Minto	Cleaner Air
Mirview Drive Phase I	City of Miramichi	Cleaner Water
Bus Shelters	City of Miramichi	Cleaner Air
King Street Trunk Sewer	City of Miramichi	Cleaner Water & Lower GHG
Route 117 Wellington Street (St. Andrews to Dan Cripps)	City of Miramichi	Cleaner Water & Lower GHG
Ironmen Road Water Main Loop	City of Miramichi	Cleaner Water
Wastewater Treatment Plant - Former Canadian Forces Base	City of Miramichi	Cleaner Water
King Street Reconstruction	City of Miramichi	Cleaner Water
Millar Avenue Reconstruction	City of Miramichi	Cleaner Water
Millar Avenue Well Design	City of Miramichi	N/A
Resurfacing no. 2 (2009)	City of Moncton	Lower GHG
Mapleton Road Widening	City of Moncton	Lower GHG
Road Reconstruction No. 2 (2009)	City of Moncton	Lower GHG
Road Reconstruction No. 1 (2009)	City of Moncton	Lower GHG
Millennium Boulevard Upgrades	City of Moncton	Lower GHG
Replacement of water pipes on Pugsley Street	Town of Nackawic	Cleaner Water
Water Meters	Village of New Maryland	Cleaner Water
Water Supply Main Installation	Village of New Maryland	Cleaner Water
Installation of Storm Sewers on Baker Brook Court	Village of New Maryland	Cleaner Water
Insulation and Exterior Door – Sportplexe Richelieu	Village of Nigadoo	Lower GHG
Resurfacing of Streets	Village of Nigadoo	Lower GHG
Insulation and Exterior Door – Sportplexe Richelieu	Village of Nigadoo	Lower GHG
Roadway Improvements	Village of Norton	Lower GHG
Salt Shed - Phase 1	Village of Norton	Cleaner Water
Water Exploration Study	Village of Norton	N/A

Well Exploration	Village of Norton	Cleaner Water
Salt Shed - Phase 2	Village of Norton	Cleaner Water
Waasis Road Sidewalk/Bicycle Path	Town of Oromocto	Cleaner Air
Oromocto West Sewage Flow Reversal	Town of Oromocto	Cleaner Water
Efficiency Upgrade - Arena Ice Plant Chiller to Plate Exchanger	Town of Oromocto	Lower GHG
Reconstruction of Des Érables Street	Village of Paquetville	Lower GHG
Perth-Andover Flood Mitigation - Municipal Services Extension - Phase I	Village of Perth-Andover	Cleaner Water
Energy Retrofit Project	Village of Perth-Andover	Lower GHG
Resurfacing on Renfrew Street (Phase I)	Village of Petitcodiac	Cleaner Air & Lower GHG
Heat Recovery and High Efficiency Motors - Arena	Village of Petitcodiac	Lower GHG
T8 Lighting at Municipal Office and Library	Village of Petitcodiac	Lower GHG
Extension of Sanitary Sewer System	Village of Petit-Rocher	Cleaner Water
New Pumping Station	Village of Petit-Rocher	Lower GHG
Storm Sewers	Village of Petit-Rocher	Cleaner Water & Lower GHG
Improvements to Arena Heating and Lighting Systems	Village of Petit-Rocher	Lower GHG
Analysis of Sewer System	Village of Petit-Rocher	N/A
New Pumping Station (Phase II)	Village of Petit-Rocher	Cleaner Water & Lower GHG
Replacement of Runoff Pipe, Arseneau Street	Village of Petit-Rocher	Cleaner Water
Repairs to Potable Water Source Filtration Field	Village of Petit-Rocher	Cleaner Water
PSAB	Village of Petit-Rocher	N/A
Sewer Main Replacement	Village of Plaster Rock	Cleaner Water
Main Street Sidewalk and Curb	Village of Plaster Rock	Cleaner Air
Fencing of Well Area	Village of Plaster Rock	Cleaner Water
Tourist Park - Extension of Sewage Services	Village of Plaster Rock	Cleaner Water
Insulation of Municipal Building	Village of Pointe-Verte	Lower GHG
Main Street Lift Station Upgrade (Phase I)	Village of Port Elgin	Cleaner Water & Lower GHG
Municipal Building and Municipal Works Garage - Energy Improvements	Village of Port Elgin	Lower GHG
Main Street Lift Station Upgrade (Phase II)	Village of Port Elgin	Cleaner Water & Lower GHG
LiDAR Information Processing	Village of Port Elgin	N/A
Construction of a water reservoir	Town of Quispamsis	Cleaner Water
Hampton Road Water Main Construction	Town of Quispamsis	Cleaner Water
Sidewalk on Main St. (Route 134)	Village of Rexton	Cleaner Air
Resurfacing Beattie Street	Village of Rexton	Lower GHG
Water Meters	Town of Richibucto	Cleaner Water
Geothermal Heating System – Town Hall	Town of Richibucto	Lower GHG
Watermain Replacement Program	Town of Riverview	Cleaner Water
Water Main Renewals	Town of Riverview	Cleaner Water
Repairs to Lizotte Street	Village of Rivière-Verte	Lower GHG
Water Supply Improvements – Phase I	Village of Rivière-Verte	N/A
Water Supply Improvements – Phase II	Village of Rivière-Verte	N/A



Installation of Generator at Pumping Station No. 5	Village of Rogersville	Cleaner Water
Replacement of Pumping Station (Phase 1)	Village of Rogersville	Lower GHG
Construction and Replacement of Sidewalks	Village of Rogersville	Cleaner Air
Resurfacing of a Street	Village of Rogersville	Lower GHG
Comprehensive Wastewater and Stormwater Development Plan	Village of Rogersville	N/A
Replacement of a Pumping Station	Village of Rogersville	Lower GHG
Installation of Pumping Mini-Station – De l'École Street	Village of Rogersville	Cleaner Water
Water Main Relining - Phase I	Town of Rothesay	Cleaner Water
Storm Sewer and Drainage Improvements - Phase I	Town of Rothesay	Cleaner Water
Water Main Relining - Phase II	Town of Rothesay	Cleaner Water
Municipal Building Energy Retrofits	Town of Sackville	Lower GHG
Repaving of Ogden Mill Road	Town of Sackville	Lower GHG
Repaving of King Street	Town of Sackville	Lower GHG
Watermain Cleaning and Lining	City of Saint John	Cleaner Water
Storm Water Management - Brentwood	City of Saint John	Cleaner Water
Storm Sewer Outfall - Rodney Terminal - Phase I	City of Saint John	Cleaner Water
Ashburn Lake Road	City of Saint John	Lower GHG
Lorneville Road Reconstruction	City of Saint John	Lower GHG
Westfield Road Reconstruction	City of Saint John	Lower GHG
Storm Sewer - Milford Drainage Basin - Kingsville Road Area	City of Saint John	Cleaner Water
Storm Sewer - Milford Drainage Basin - Saint Clair Avenue	City of Saint John	Cleaner Water
Storm Sewer Outfall - Rodney Terminal - Phase II	City of Saint John	Cleaner Water
Lift Station #10 - Long Wharf Area	City of Saint John	Cleaner Water
Installation of Potable Water Lines	Rural Community of Saint-André	Cleaner Water
Installation of New Aerators in Municipal Lagoon	Rural Community of Saint-André	Cleaner Water
Implementation of PSAB	Rural Community of Saint-André	N/A
Improvements to Water Chlorination System	Village of Saint-Antoine	Cleaner Water
Improvements to Sanitary Sewer on Acadie Street	Village of Saint-Antoine	Cleaner Water
Improvements to Pumping Station on Renaud Road	Village of Saint-Antoine	Lower GHG
Connection of Treatment Plant to Potable Water System	Village of Sainte-Anne-de-Madawaska	Cleaner Water
Meshing of Water System	Village of Sainte-Anne-de-Madawaska	Cleaner Water
Verification and Reduction of Infiltration in Village Sewer System	Village of Sainte-Anne-de-Madawaska	Lower GHG
Meshing of Water System – Phase II	Village of Sainte-Anne-de-Madawaska	Cleaner Water

Geothermal Heating and Air Conditioning System in Municipal Building	Village of Sainte-Marie-Saint-Raphaël	Lower GHG
Resurfacing of Streets	Village of Sainte-Marie-Saint-Raphaël	Lower GHG
Sanitary Sewers on De l'Étang Street	Village of Saint-François	Cleaner Water & Lower GHG
SCADA System	Village of Saint-François	Cleaner Water
Insulation – Pumping Station	Village of Saint-François	Lower GHG
Energy Upgrading Work in Municipal Building	Village of Saint-Hilaire	Lower GHG
Resurfacing of Streets	Village of Saint-Léolin	Cleaner Air & Lower GHG
Completion of Champlain and Bellefleur Streets and part of Roland J. Martin Street	Town of Saint-Léonard	Cleaner Water & Lower GHG
Improvements to Potable Water Distribution System	Village of Saint-Louis-de-Kent	Cleaner Water
Expansion of Potable Water Distribution on Principale Street (Phase I)	Village of Saint-Louis-de-Kent	Cleaner Water
Resurfacing of Streets	Village of Saint-Louis-de-Kent	Lower GHG
Extension of Potable Water System on Principale Street	Village of Saint-Louis-de-Kent	Cleaner Water
Installation of Two New Generators for Water System	Village of Saint-Louis-de-Kent	Cleaner Water
Work Relating to PSAB Standards	Village of Saint-Louis-de-Kent	N/A
Sidewalk Construction – Canada Street	Town of Saint-Quentin	Cleaner Air
Douglas Street Storm Sewer Improvements - Phase I	Village of Salisbury	Cleaner Water & Lower GHG
Douglas Street Storm Sewer Improvements - Phase II	Village of Salisbury	Cleaner Air, Cleaner Water & Lower GHG
Extension of Potable Water System on Lino/Sackville Road	Town of Shediac	Cleaner Water
Extension of Potable Water System on Evergreen Drive	Town of Shediac	Cleaner Water
Arena – Replacement of Floor and Refrigeration Plant	Town of Shediac	Lower GHG
Des Cormiers Street – Paving and Water System	Town of Shippagan	Cleaner Water & Lower GHG
Audet Street – Paving and Water System	Town of Shippagan	Cleaner Water & Lower GHG
Audet Street - Paving	Town of Shippagan	Lower GHG
Cycling Trail	Town of Shippagan	Cleaner Air
Storm, Sanitary Sewer & Water Main - William Street & Augustus Street	Town of St. Andrews	Cleaner Water & Lower GHG
Water Main Replacement on Campbell Hill Road	Town of St. George	Cleaner Water
Brunswick Street	Town of St. George	Cleaner Water
Renovations to the Valley Road Reservoir - Phase I	Town of St. Stephen	Cleaner Water
Combined Sewer Separation and Relocation (Prince William St. to Budd Ave.)	Town of St. Stephen	Cleaner Water
Replacement of Open Bottom Box Culvert/Bridge - Doodle Brook	Town of St. Stephen	Cleaner Water

Watermain replacement on Broad Street	Town of Sussex	Cleaner Water
Watermain Replacement from the Reservoir to Church Avenue	Town of Sussex	Cleaner Water
Watermain Replacement on Church Avenue - Phase I	Town of Sussex	Cleaner Water
Church Avenue (Peter Street to Gordon Street) - Water Main Renewal	Town of Sussex	Cleaner Water
Brookview Crescent - Sanitary Sewer Renewal	Town of Sussex	Cleaner Water
Church Avenue (Peter Street to Gordon Street) - Sanitary Sewer Renewal	Town of Sussex	Cleaner Water
Rosemount Avenue - Street Reconstruction	Town of Sussex	Lower GHG
Union Street - Street Reconstruction	Town of Sussex	Lower GHG
Industrial Drive - Street Reconstruction	Town of Sussex	Lower GHG
Court Street - Street Reconstruction & Storm Sewer	Town of Sussex	Cleaner Water & Lower GHG
O'Connell Avenue - Street Reconstruction & Storm Sewer	Town of Sussex	Cleaner Water
Bryant Drive - Street Reconstruction	Town of Sussex	Lower GHG
Winter Street - Street Reconstruction	Town of Sussex	Lower GHG
St. James Street - Street Reconstruction	Town of Sussex	Lower GHG
Concrete Sidewalk - Post Road	Village of Sussex Corner	Cleaner Air & Cleaner Water
Curb, Gutter, Sidewalk & Storm Sewer Installation	Village of Sussex Corner	Cleaner Air & Cleaner Water
Water Supply Backup	Village of Tide Head	Lower GHG
Sidewalks	Village of Tide Head	Cleaner Air
Development of Well No. 4, Sheila Sector	Town of Tracadie-Sheila	Cleaner Water
Energy Improvements to Municipal Arena and Pool	Town of Tracadie-Sheila	Lower GHG
Sanitary Sewer Collection Between King Street and Elm Street	Town of Woodstock	Cleaner Water
Riverbank Sanitary Collector Sewer - Bridge St. to Grafton Bridge	Town of Woodstock	Cleaner Water
Booster Pumping Station - Keenan Subdivision	Town of Woodstock	Cleaner Water
Riverbank Sanitary Collector Sewer - Bridge St. To Grafton Bridge (Phase II)	Town of Woodstock	Cleaner Water
PSAB 3150 Reporting	Town of Woodstock	N/A

## APPENDIX C: List of Completed Unincorporated Area Projects

Project Name	Applicant	GTF National Objective
Chemin St-Simon Water Distribution	Saint-Simon LSD	Cleaner Water
Point La Nim Water Distribution System	Point La Nim LSD	Cleaner Water
Ben Lomond Estates Wastewater Treatment Facility	Ben Lomond	Cleaner Water
Allardville Wastewater System Upgrade and Extension	Allardville	Cleaner Water
Scoudouc Wastewater Collection & Lagoon Expansion	Scoudouc LSD	Cleaner Water
Greater Shediac Trunk Sewer Upgrade	Greater Shediac Area (LSD part)	Cleaner Water
Pont-Landry Wastewater Collection System	Pont-Landry LSD	Cleaner Water
Study and Construction of a Wastewater Collection and Treatment System for Robertville Area	Robertville LSD	Cleaner Water
Scoudouc Industrial Park – Direct Access to Route 15	Scoudouc LSD	Lower GHG
Pointe-du-Chêne – Flooding and Well Contamination Study	Pointe-du-Chêne LSD	N/A
Blacks Harbour and Beaver Harbour Water Exploration Study	Beaver Harbour LSD	N/A
Infrastructure Plan – Management of Recyclables for Northeastern N.B.	Nepisiguit-Chaleur Solid Waste Commission	N/A
Provincial Highway Inventory Review	Province Wide	N/A