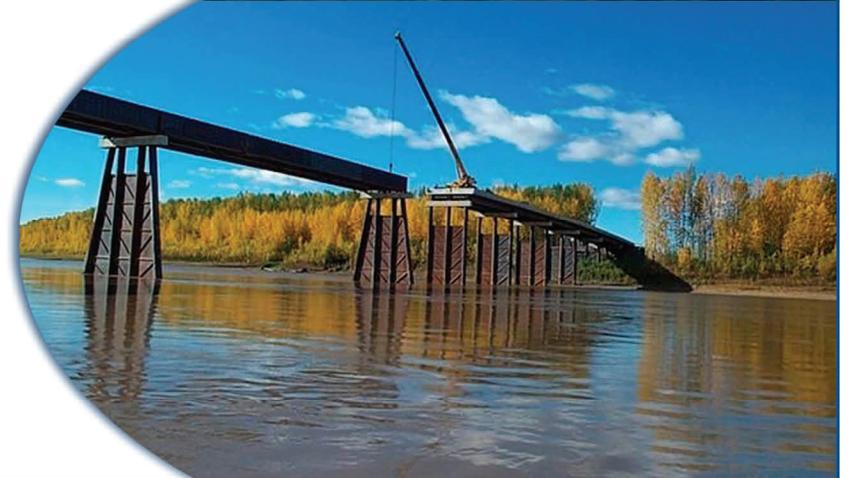




## NORTHERN INFRASTRUCTURE

Northern  
Development  
Ministers  
Forum

Thunder Bay, Ontario  
August 30–September 1, 2010



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## Introduction

The Northern Development Ministers Forum (NDMF) was established in 2001 to advance the diverse and common interests of Northerners in Canada while raising awareness among decision-makers and the public about the accomplishments, contributions and potential of the North.

NDMF member jurisdictions include northern representatives of the governments of British Columbia, Alberta, Yukon, Saskatchewan, Manitoba, Nunavut, Ontario, Québec, Newfoundland and Labrador, the Northwest Territories, as well as Canada.

NDMF strategic objectives are as follows:

- ▶ Organize an annual conference as a forum for Northern Development Ministers to establish priorities;
- ▶ Determine strategic actions, act and provide leadership with regard to these actions in order to promote Northern development;
- ▶ Reinforce the North's position among regional and national priorities;
- ▶ Reinforce cooperation between northern provincial and territorial authorities and the Government of Canada; and,
- ▶ Exchange information.

At the 2008 NDMF, held in Yellowknife, North West Territories, Newfoundland and Labrador's Minister of Labrador Affairs put forward Northern Infrastructure as a priority project.

The NDMF Ministers supported this motion and directed senior officials to establish it as a priority project. The project has been timely, since infrastructure projects are a key component of economic stimulus plans developed in response to the global economic slowdown. At the same time, it should be noted that because research for the report was completed in May 2009, it does not take account the full impact of Canada's Economic Action Plan or stimulus measures contained in provincial and territorial budgets.



## Executive Summary

Infrastructure is viewed as one of the cornerstones or building blocks for any successful economy. In the North, current economic realities have led to greater than normal expenditures across the country, spurred by the availability of stimulus funding. It is widely considered that infrastructure improvement is a viable option to create employment and stimulate national/global economies in economic downturns. Infrastructure development is a need in any economy; however, current fiscal circumstances are dictating greater than normal expenditures.

In order to determine the status of physical infrastructure in northern Canada, a survey was distributed amongst jurisdictions to determine priority needs, challenges, revenue sources for infrastructure projects, funding opportunities, delivery models and program best practices. Areas identified as priorities were roadwork, water/wastewater, electricity projects and broadband. Many of these priorities were identified as areas experiencing growth and maintenance needs in the northern economies.

There are numerous challenges facing infrastructure development such as: cost of implementation due to geographic isolation, limited labour supply, small tax base and limited grant programs.

Revenue sources for infrastructure projects involve all levels of government --- federal, provincial/territorial and municipal — to varying degrees. Funding partnerships

with the private sector were identified primarily in new projects.

There is a need for greater emphasis on public private participation in the construction, maintenance and replacement of infrastructure.

The most commonly identified way to secure project funding in northern jurisdictions is through federal grants. Federal programming criteria promotes pan Canadian accessibility. Other project funding sources are provincial/territorial grants, aboriginal partnerships, stimulus packages and public-private partnerships. The most successful projects commonly use these elements. Not only do best practices illustrate many of these funding models, they also demonstrate many common keys to success: effective communication, building partnerships, long term planning, community buy in and corporate sector engagement.

While the results show important trends in infrastructure development in the North, there is room for further investigation. This report is an overview of infrastructure initiatives across Canada. It should serve as a baseline document for future work.

## Project Overview

Northern infrastructure's intrinsic value has a direct correlation with our economic health. The current and future development of the North is closely linked to the ability to develop and maintain infrastructure systems. Without adequate physical infrastructure, northern regions' capacity for economic development is limited. The project's objective is to provide clear indications of the infrastructure development priorities in the North. The project will identify future trends, challenges and determine the effect that infrastructure has on the economic development of the region. The working group, led by Newfoundland and Labrador, includes British Columbia, Manitoba, Nunavut, Québec, and Canada (Indian Northern Affairs Canada).

The working group identified Northern Infrastructure as the underlying framework that supports a northern society, city or area. Examples of physical infrastructure include roads, water supplies, wastewater, power grids, flood management systems, schools, and telecommunications. An information template was developed in order to gather relevant data from the northern jurisdictions. Data gathering proceeded throughout the ten jurisdictions and the federal government in March 2009.

The data was analyzed in such areas as best practices, common issues and challenges, funding models, service gaps, and impacts on northern economies. Recommendations will provide information on northern priorities, successes, challenges, and programs to support infrastructure development and maintenance. As well, they will help identify and support

- ▶ Stimulus measures in the northern economy; and,
- ▶ Best practices in implementing infrastructure projects and funding over the longer-term.



## Methodology

### A. SURVEY DEVELOPMENT

To determine the state of northern infrastructure in the regions located north of the 49<sup>th</sup> parallel, a sub group composed of the Governments of Canada, Québec and Newfoundland and Labrador was formed to design a survey and distribute it by e-mail.

The goal of this survey was to determine the activity around northern infrastructure projects in Canada, identify exemplary practices and identify trends across Canada from the data compiled.

To achieve these objectives, the questions were designed to target certain key elements that allow us to establish the infrastructure picture across Canada (Appendix K: Jurisdictional Survey).

These elements are:

- ▶ Priority infrastructure projects;
- ▶ Challenges;
- ▶ Condition;
- ▶ Revenue sources;
- ▶ Funding possibilities;
- ▶ Exemplary practices;
- ▶ Lessons learned; and
- ▶ Keys to success.

### B. COLLECTION

The Northern Infrastructure working group developed the survey and distributed it by e-mail to the Senior Officials Working Group of the Northern Development Ministers' Forum. The jurisdictions communicated with organizations, government departments and/or municipalities to compile the necessary information requested in the survey. All but one jurisdiction responded to the questionnaire. The response rate was approximately 91%. A collection period of three weeks was specified, however, it was approximately seven weeks before data was returned to the lead of the Northern Infrastructure working group, Newfoundland and Labrador.

### C. ANALYSIS

Response to each question were analyzed to highlight the similarities between the provinces and territories. The analysis allowed the working group to determine the exemplary practices that have been used across Canada and the lessons learned. Where applicable, analysis included 1) data compilation reflecting level of occurrence and 2) identification of various examples by jurisdiction. The conclusions made it possible to spot new trends and present recommendations.

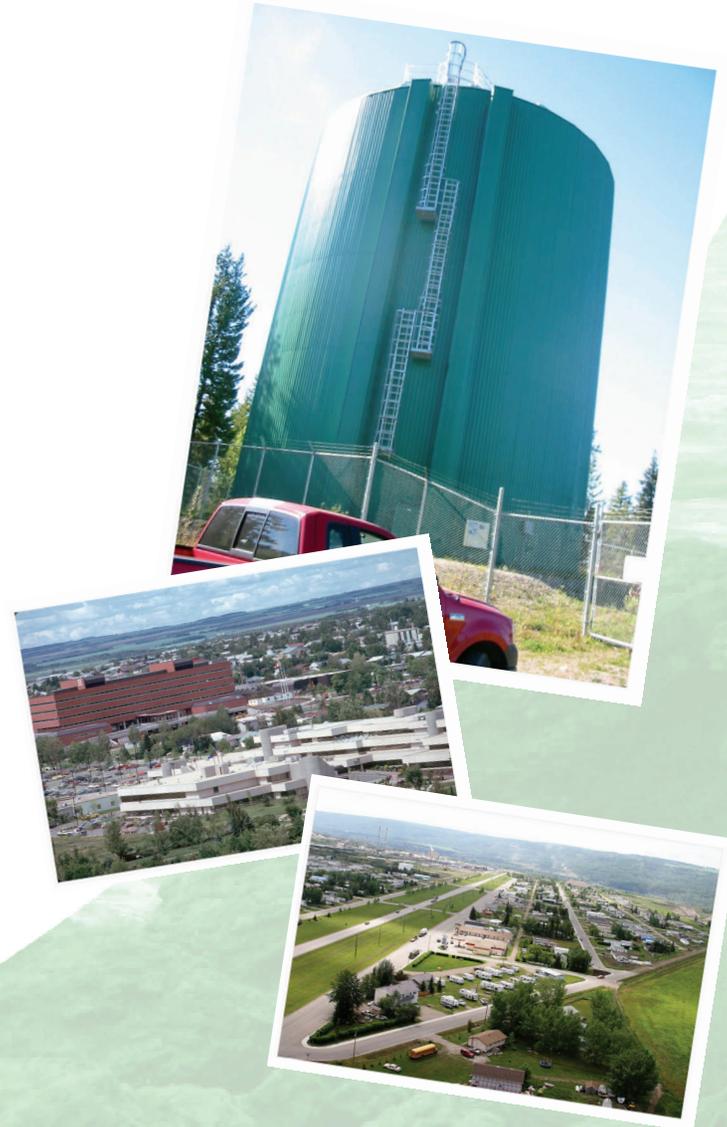
## Results

The survey results were analyzed for frequency of response - looking for trends that may highlight effective usage of programs and services. As well, this report identifies best practices and keys to success that may be shared with other northern jurisdictions.

Several jurisdictions submitted more than one survey, providing detail at a regional level. Since it reflected the jurisdictions' strengths and priority needs, the regional data was included.

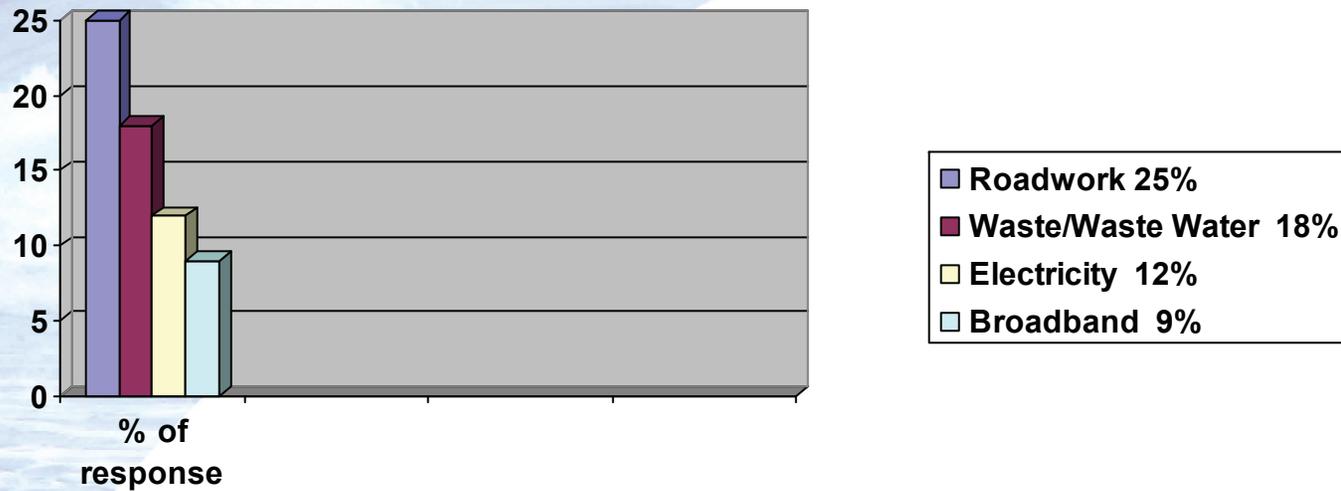
The data has been grouped and the most frequent jurisdictional responses are illustrated in the results section. Where appropriate, individual responses are highlighted. A comprehensive listing of all responses is provided in the Appendices.

The federal government also participated in the survey. Results are not listed with the provincial/territorial jurisdictions, since the federal government does not set infrastructure funding priorities; however, federal results were incorporated in the Appendices.



## Results

### Infrastructure Priorities



**Graph 1: Most Common Priorities in Northern Jurisdictions**

Priority projects in northern jurisdictions are primary in nature. Several involve new development projects (roads and broadband) while others strive to improve existing facilities (water and electricity). The highest ranked priority needs reported by northern jurisdictions are roadwork, water/waste water, electricity projects and broadband.

The following identifies, by category, examples of infrastructure projects reported by the responding jurisdictions:

## Results

### Infrastructure Priorities (Examples)

#### Roadwork:

- ▶ Extension of Route 167 to Monts Otish (240 km gravel road extension) (QC)
- ▶ Western Canada's "Northwestern Canadian Integrated Road Network Plan" – A vision for the integration of road development in northwestern Canada. (AB)
- ▶ Trans Labrador Highway: Construction of a highway connecting eastern, central and western Labrador for the first time. (NL)
- ▶ Ontario's Northern Highways Program: - includes future the development and construction of infrastructure and rail & road networks to access the Ring of Fire development in northern Ontario. (ON)

#### Water Projects:

- ▶ Telkwa water storage and supply: Upgrading the water storage and supply to improve fire protection and water supply. (BC)
- ▶ Manitoba – Water and waste water treatment facilities. (MB)
- ▶ Québec – Upgrade drinking water plant and sewage treatment facilities. (QC)

#### Electricity:

- ▶ Rivière La Romaine Hydroelectric Project: New hydroelectric complex on Rivière La Romaine (QC)
- ▶ Integrity of electrical supply ( dead end routing and non-looped supply) (BC)
- ▶ Bipole III - A second hydro transmission line from the North to service the South (MB)
- ▶ Lower Churchill Project: Construction of a hydro-electric energy system on the Churchill River. (NL)

#### Broadband:

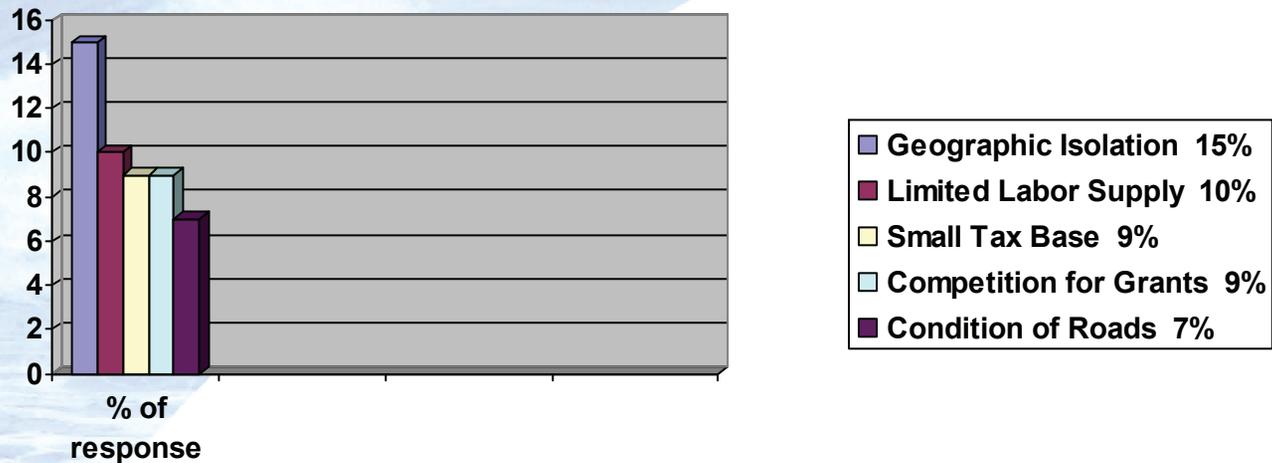
- ▶ Nunavut Broadband Initiative: \$10 million spent on 25 communities (NU)
- ▶ Nord-du-Québec Broadband: Implementing a broadband and cellular phone network. (QC)
- ▶ Northern Ontario Heritage Fund Corporation Emerging Technology Program providing connectivity and broadband networks to northern and rural areas (ON)

#### Other jurisdictional infrastructure priorities were:

- ▶ Airports
- ▶ Municipal
- ▶ Marine
- ▶ Housing
- ▶ Education
- ▶ Rail

## Results

### Infrastructure Challenges



**Graph 2: Most Common Challenges Facing Northern Jurisdictions**

The major challenges in Canada's northern jurisdictions accurately reflect the constraints faced with any form of development. Several of the most common issues are:

- ▶ Cost of implementation/construction due to geographic isolation. Access to remote areas is more difficult and more costly due to geographic distance from supplies, shorter shipping seasons, weather considerations, and limited transportation infrastructure.
- ▶ There is limited labor supply due to low population. When projects begin, labor supplies are not readily available to respond to project timelines.

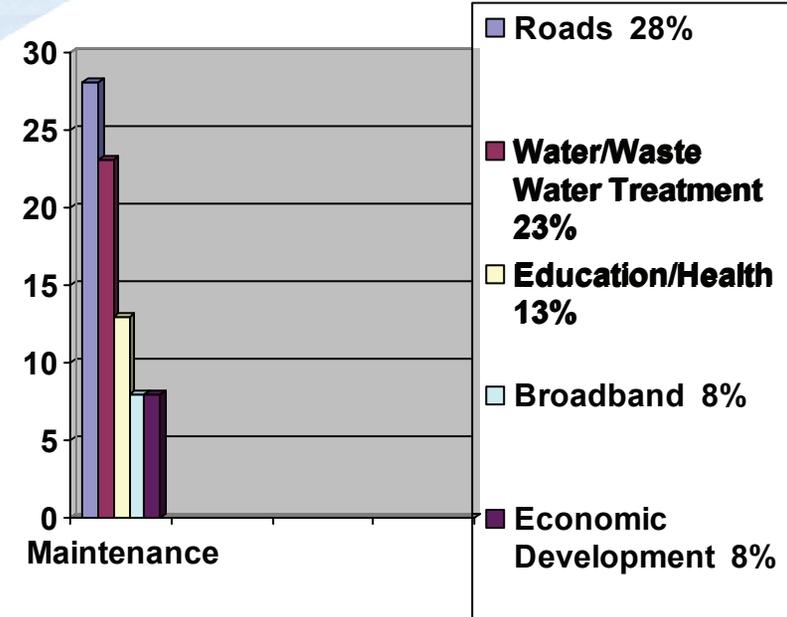
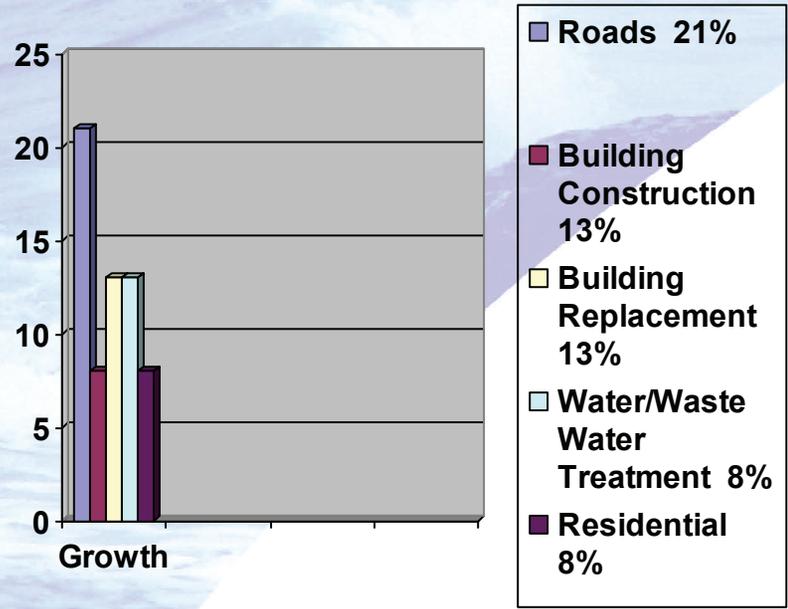
## Results

### Infrastructure Challenges

- ▶ The north's relatively small tax base means fewer cost benefits for the region. For cost-shared contributions on projects, the share of the local jurisdiction is limited due to an insufficient tax base.
- ▶ Most grants reflect urban, populated needs. Northern regions are at a disadvantage when competing for grants since the criteria do not fit their unique requirements or project timelines (i.e. short construction season).
- ▶ Other common challenges are bureaucratic delays/approvals, extreme weather and communication coverage over large geographic areas.
- ▶ Achieving a balance between environmental (species at risk, toxic reduction strategy), First Nations (duty to consult, Far-North protection and land-use planning) and economic interests will change and affect some future development.

## Results

### State of Current Infrastructure



Graph 3: Growth and Maintenance Areas in Northern Jurisdictions

The most commonly identified areas experiencing **growth** in the northern jurisdictions are:

- ▶ Road Construction
- ▶ Building Construction/Replacement
- ▶ Resource/Mineral Development
- ▶ Residential
- ▶ Water/Waste Water Treatment

## Results

### State of Current Infrastructure

The most common infrastructure projects requiring **maintenance** are:

- ▶ Roads
- ▶ Water/Waste Water Treatment
- ▶ Education and Health Facilities
- ▶ Broadband
- ▶ Economic Development Projects

It is not surprising that several of the areas experiencing growth and maintenance i.e. road construction and water/waste water treatment are also areas that have been identified as priorities for the jurisdictions.

With developing regions comes the need to create “basic” infrastructure; infrastructure that addresses a fundamental need, such as access for a region. For example, the provision of effective modes of transportation means availability of goods and services at reasonable rates. With a solid base of infrastructure, the incentive and means for sustainable economic development are greater.



## Results

### Sources of Revenue for Infrastructure Projects

Results from jurisdictional surveys indicate the primary funding source for most projects in the North is the **province/territory**. The economy does not generally support sole-source funded projects; partnering arrangements can leverage more funds. There are circumstances where the province/territory, federal or municipal governments have contributed 100% of project funds, but this is the exception rather than the rule. The next series of graphs demonstrates how all entities need to partner to support economic growth in the regions. As well, there is a noticeable trend in partnerships with public and private corporations. Public private partnerships were seen primarily in the construction of infrastructure but were almost absent under maintenance and replacement initiatives.

The term **other** refers to partners besides those listed public jurisdictional entities. For example, in northern Ontario, other represents Mushkegowuk Council, James Bay First Nations Councils or Five Nations Energy.



## Results

### Construction of Infrastructure

The following table represents participation in construction projects:

	Public-Private Partnerships	Municipal	Provincial/Territorial	Federal	Other
Frequency of Response	7	18	33	20	5
Range of Financial Participation	40%-50%	20% - 100%	33% - 100%	5% - 100%	4% - 52%

**Table 1: Funding for Infrastructure Construction Projects**

#### Construction of Infrastructure:

When the municipality participated in funding, it had an equal number of partnerships with both provincial/territorial and federal sources.

When the province/territory participated in funding, 55% of the time their funding partner was federal, and 45% of the time it was a municipality.

There is a very broad range of funding participation at construction level, anywhere from 5% - 100%. For example: Québec has a technical landfill site with 100% municipal funding and Nunavut has 100% territory funding for their five year capital plan.

## Results

### Maintenance of Infrastructure

	Public-Private Partnerships	Municipal	Provincial/Territorial	Federal	Other
Frequency of Response	1	24	23	14	4
Range of Financial Participation	50%	33% - 100%	33% - 100%	33% - 100%	50%

**Table 2: Funding for Infrastructure Maintenance Projects**

#### Maintenance of Infrastructure:

- ▶ When the municipality participated in funding, it had an equal number of partnerships with both provincial/territorial and federal sources.
- ▶ When the province/territory participated in funding, 60% of the time partnered funding was federal, and 40% of the time it was municipal.
- ▶ Twenty nine percent of the time, all levels of government (federal, provincial/territorial and municipal) participated in project funding.
- ▶ Although the range of funding for maintenance projects is not as broad as those for construction, there are still examples of sole funded projects. For example, in Alberta, provincial highways and infrastructure projects are funded 100% by the province. In British Columbia, major infrastructure maintenance is 100% funded by the municipality.

## Results

### Replacement of infrastructure

	Public-Private Partnerships	Municipal	Provincial/Territorial	Federal	Other
Frequency of Response	0	18	25	23	0
Range of Financial Participation		30% - 100%	25% - 100%	33%- 75%	

Table 3: Funding for Infrastructure Replacement Projects

#### Replacement of Infrastructure:

- ▶ When the municipality participated in funding, it had an equal number of partnerships with both provincial/territorial and federal sources.
- ▶ When the province/territory participated in funding, 59% of the time, their funding partner was federal and 39% of the time it was municipal.
- ▶ No respondent indicated public-private partnerships for replacement infrastructure. Replacement may not be economically viable for private sector partners.
- ▶ Like the construction and maintenance projects, partnerships are very important to secure the necessary funds for the completion of a project. However, there are exceptions where sole 100% funding occurs. For instance, road networks in both Québec and Newfoundland and Labrador are solely funded by provincial governments.

## Funding Opportunities and Obstacles

### Maintenance of Infrastructure

Funding	
Opportunities	Obstacles
Federal government grants	Limited municipal resources
Provincial/Territorial grants	Red tape
Provincial/Aboriginal partnerships	Limited human resources
Stimulus packages	Grant deadlines
Public-Private partnerships	Short construction season
User-Fee revenues	Guidelines unsuitable for northern areas
Federal/Municipal partnerships	Economic uncertainty

Table 4: Jurisdictional funding (Opportunities and Obstacles)

#### 6.1. Funding Opportunities

**Accessing federal grants** is identified as the most commonly identified way to secure funds for infrastructure projects. Federal programming criteria promotes pan Canadian accessibility. Grant monies are also available from the province and territorial governments. Availability of grants is generally acknowledged as a viable method to stimulate the economy, particularly during a period of recession.

For over two decades, there has been a growing trend toward the development of Aboriginal partnerships. These partnerships support skills development for Aboriginal people and assist their partners in accessing programs and project funding previously unattainable. Stimulus packages are seen as just that; a mechanism to stimulate the local economy and promote economic wealth and prosperity for regions.

## Funding opportunities and Obstacles

The newest form of cooperation is the Public-Private Partnership (P3's). Survey results indicate P3's occur predominantly during construction of new projects. Typically, there is no commitment beyond the construction of infrastructure to support project sustainability illustrating a need to expand P3 partnerships in all areas of development. Maintenance and replacement of infrastructure are often left to the municipalities to finance, although there are incentives to garner public support if investing in local infrastructure.

### 6.2. Funding Obstacles

The most problematic aspects of accessing funds are not surprising to those who dwell in northern remote jurisdictions. With a small and isolated population unable to produce a substantial tax base, financial resources are bound to be limited. If one factors in the inflexibility of funding programs, there are bound to be limitations on the growth of a region.

The feedback provided by respondents on challenges to accessing funding mirrors the obstacles identified in this section of the report. This includes items such as remoteness, increased cost of goods, limited labour supply, small tax base, extreme weather and limited communication coverage.

As previously indicated, it is often easier to access funding for development but maintenance of infrastructure becomes more challenging, particularly for small remote northern communities where public funding is limited. As a result, we often see facilities that are not maintained at a standard to appropriately support the community and its residents.



## Funding Alternatives

### Alternative funding models

Jurisdictions were asked to provide information on new and innovative approaches to funding that illustrate strong program partnerships. Several of the more commonly mentioned programs include:

▶ **Programs from Indian and Northern Affairs**

This Federal department is aware of the particular demands and unique circumstances of working in a northern remote environment. It is constantly monitoring and evaluating its programming to accurately reflect the needs of the north.

▶ **Plans to Streamline the Federal Environmental Assessment Process**

The federal government is taking steps in Budget 2010 to further improve the regulatory review process for large energy projects. Budget 2010 provides \$11 million over two years to Indian and Northern Affairs to support the acceleration of the review of resource projects in the North. Budget 2010 also provides an additional \$2.8 million over two years to the Canadian Environmental Assessment Agency to support consultations with Aboriginal Canadians related to projects that are assessed by a review panel under the Canadian Environmental Assessment Act.

▶ **Towns for Tomorrow (Government of British Columbia)**

The five-year, \$71-million Towns for Tomorrow program provides funding for infrastructure projects for municipalities and regional districts with fewer than 15,000 residents. The Province and communities share costs on a 80/20 basis for towns under 5,000 and 75/25 basis for towns between 5,000 and 15,000 residents.

▶ **Aboriginal Partnerships**

- These partnerships support skills development for Aboriginal people and assist their partners in accessing programs and project funding previously unattainable. They come in a variety of joint ventures, with some built into land claim agreements.

▶ **Natural Resource Revenue**

- Revenue generated from natural resource production is directly injected into the local economy to either solely funded regional/municipal development to provide stimulus for project partnerships. An example of this revenue are the Aboriginal resource benefit agreements.

▶ **Public Private Partnerships**

- The federal government has created a public-private partnership crown corporation, PPP Canada Inc., to administer the Public-Private Partnership Fund and work with public and private sectors toward encouraging the further development of Canada's public-private partnership market.

## Funding Alternatives

### Obstacles to Alternative funding

Northern regions are finding innovative ways to access funding for new projects and those requiring substantial maintenance or replacement. Federal funding initiatives continue to be the most commonly used funds. Although innovative, access problems to all initiatives still exist. Several of the more prominent problems are:

- ▶ High municipal contribution
- ▶ Federal Environmental Assessment process (Prior to streamlining efforts)
- ▶ Small tax base for sourcing partnership contributions
- ▶ Grant programs too rigid and inflexible
- ▶ Current global economic conditions
- ▶ Challenge to attract private partners

Such challenges may mean advocating for financial support from funding entities in more southern areas. Providing affordable, accessible funding while maintaining appropriate checks and balances for accountability is a challenge that faces all funding agencies.

Southern investment may mean benefits for stakeholders in the south as well. Many jurisdictions are now advocating for maximization of benefits.



## Best Practices

### Current/Potential Practices

Governments strive for the most efficient, effective means to attain their goals and objectives.

A best practice can be summarized as a belief that there is a more effective method to deliver a particular outcome or it can simply be referred to as a “good idea”.

Responses from jurisdictions regarding their best practices were as varied as our country itself. This can be viewed as extremely healthy, since everyone isn’t focused on the same applications.

Examples of cited best practices, both current and potential, are highlighted in Table 5. Further details of best practices are set out in the following pages.

Best Practices	
Current	Potential
Yellowknife Community Arena (NT)	Partnership funding for Recreation Centre (NL)
Sustainable Dawson Creek (BC) Community Forest Program (BC)	Remote Region Development Assistance Fund (QC)
Sanarrutik (QC)	Small Craft Harbours (NU)
Winter Roads Program (ON)	Federal/Provincial/Local/Consultative Committee (MB)
Nunavut Broadband Development Corporation (NU)	Repairing Route de la Baie James (Québec & Société de développement de la Baie-James) (QC)
Tele Health Initiative (NL)	Wuskwatim Hydro Partnership (MB)
Towns for Tomorrow/Dyking Program (BC)	Labrador Sportsplex (NL)
Hydro Training Consortium (MB)	Royalty Systems on Resource (QC)
Environmental Sustainability (LEED) (AB)	Inter-ministry delivery of joint federal-provincial funding programs (ON)
Building Canada Fund (Fed)	

Table 5: Jurisdiction Best Practices (Current and Potential)

## Best Practices (Continued)

Best practices are areas where jurisdictions can definitively learn from each better methods to organize and complete projects. A more detailed series of examples illustrates the jurisdictions' best practice programs and how they benefit the people of their province or territory:

### Northern Ontario

#### *Winter Roads Program*

Partnership with First Nations who are responsible for building and maintaining winter roads. Winter roads in the province's Far North connect 31 communities to a permanent highway or railway system. From freeze up until spring thaw (usually late March), these roads make it easier and less costly for people to travel and bring in supplies. Communities manage the construction and usually pay part of the costs. [1](#)

### Northwest Territories

#### *Phase 2 of Yellowknife Community Arena*

Facilities for Kids (FFK), a non-profit group, formed a three way partnership with the City of Yellowknife and Diavik Diamond Mines to complete a second sheet of ice in the Multiplex, two years before the City was able to budget for it. FFK raised advertising revenue and Diavik donated its project management, used its purchasing power and loaned the City cash to complete the work early. In addition, many subcontractors donated their time.

### Manitoba

#### *Wuskwatim Hydro Partnership*

Involves the development of a 200-megawatt generating station at Taskinigup Falls on the Burntwood River. Being developed by an equity partnership between Nisichawayasihk Cree Nation (NCN) and Manitoba Hydro. [2](#)

### Nunavut

#### *Nunavut Broadband Development Corporation (NBDC)*

On January 5th, 2009, Infrastructure Canada and NBDC signed a 5-year Contribution Agreement which, when combined with matching funds from customers, constitutes an investment of \$43,202,000. This investment supports the development of satellite bandwidth management tools, the procurement of additional satellite capacity, and the upgrading of the terrestrial satellite networks for 25 communities in Nunavut. [3](#)

1. [Ontario Ministry of Northern Development, Mines and Forestry Website](#)
2. [Manitoba Hydro Website](#)
3. [Nunavut Broadband Development Corporation Website](#)

## Best Practices (Continued)

### British Columbia

#### *Community Forest Program*

This program resulted in the establishment of a Community Forest Corporation owned and operated by the municipality. The corporation has a forest license. The project began as a way to provide sustainable local forestry jobs that would build and sustain the community. Began as a 5 year pilot project, eventually the corporation was awarded a 25 year operating license. The project generates local employment and provides a dividend revenue source for the municipality. The program is challenging to administer because of the administrative framework between the municipality, the Province and the corporation. The project receives support from University of Northern BC.

#### *Sustainable Dawson Creek – Planning for People Program*

A bottom up planning approach to make Dawson Creek a leader in sustainability. The plan addresses Green House Gases and also water conservation planning, recycling and all aspects of municipal / community sustainability. The plan is collaboratively developed by Ministry of Community and Rural Development and other provincial agencies, such as the Climate Action Secretariat / Union of British Columbia Municipalities.

### Alberta

The focus on the importance of environmental sustainability as evidenced by the adoption of *Leadership in Energy and Environmental Design* (LEED) standards for the design of new infrastructure, the implementation of Building Owners and Managers Association (BOMA) BEST certification in major buildings and the use of green electricity in buildings.

### Quebec

Sanarrutik is a long-term agreement that obliges governments to make financial commitments accordingly, which facilitates programming of the work. This is a Partnership Agreement on economic and community development in Nunavik ( Nord - du - Quebec).



## Best Practices (Continued)

### Challenges

There are inherent challenges when implementing any new program or service. Similar areas of concern exist between all types of programming, regardless of the measures of success.

Some of the more common challenges noted for best practices programs in infrastructure are:

Best Practices
Challenges
Gathering Community Input/Engaging Communities
Willingness to partner
Consultation early and engagement of residents and stakeholders in planning
Collaboration is lacking between Fed/Provincial Government representatives and joint Municipal projects
Building Canada Fund: Memorandum negotiating process is too long. Must consider the short construction season in the North
Effective Communication
Environmental approval process too lengthy and not clearly outlined

**Table 6: Jurisdiction Best Practices (Challenges)**

If a project or program is launched without prior consultation with stakeholders, issues or concerns about its effectiveness are likely to arise. With any type of development process, engagement is critical. However, early engagement of stakeholders, including community/regional input, will vastly improve any project/programs chances for success.

Partnership is also a key to successful best practices. Generally, there is less project capital available during recessionary times. Pooling of resources is an effective way to “make more with less”. Partnerships working effectively together require good communications, allowing for continued adjustments in the project/program that ultimately benefits program recipients.

## Best Practices (Continued)

### Keys to Success

There are qualities that consistently appear among the most successful ventures. They are, in fact, keys to any successful completion of a project.

The most commonly mentioned keys to successful best practices in the surveys are:

- ▶ Effective Communication
- ▶ Building Partnerships
- ▶ Long Term Planning
- ▶ Community/Local Buy in
- ▶ Engaging the Corporate Sector (Public/Private/ Partnerships)

By examining best practices, it is possible to highlight many of the traits seen in successful program initiatives. For example:

*Towns for Tomorrow* is regarded as a very effective grant delivery model. In particular, the two page application format, the 60-day turnaround model and simple administrative requirements are all considered best practices in how senior government can work with small communities in the North.

*The Dyking Program* in the Nechako region of British Columbia illustrates a way of senior government delivering funds to a local level with minimal conditions attached. This project used local work sources that produced quality work, under budget and on time.

The establishment of a *Community Forest Corporation* that is owned and operated by a municipality is a project granted autonomy from the province/territory that is able to generate local employment opportunities. The province and University of Northern British Columbia continue to provide support when necessary.

These models demonstrate qualities seen in all successful ventures: community buy-in, effective communication, long term planning, and most importantly, building effective partnerships with both government and private enterprise alike.

## Considerations and Recommendations

### Considerations:

Considerations for Jurisdictions on Northern Infrastructure include:

- ▶ Building partnerships: a more active engagement of governments in public-private and Aboriginal partnerships demonstrates an effective use of limited resources.
- ▶ More emphasis on long term planning with a committed effort to local buy-in.
- ▶ Funding programs that are more accessible to jurisdictional needs.
- ▶ Endeavour to recognize remote and northern circumstances in the development of program criteria.

The use of mainstream funding models in program criteria is likely to mean that these programs will be more readily accessible to southern, urban communities, and less accessible to northern or remote communities. This would indicate a bias towards southern/urban communities. Smaller rural communities have issues that prevent or negate access (capacity, labour force, remote location etc.). If programs take into account the northern jurisdictional needs, their accessibility would improve, thereby creating greater funding opportunities. One way of demonstrating flexibility would be the creation of a

subsection in current programming that specifically addresses the needs of northern, rural communities. The jurisdictional survey responses provide a valuable resource, allowing this report to serve as an excellent baseline document. There are aspects of infrastructure development relevant to Canada's North that may be further explored. Additional resources can now focus on specific projects, thereby expanding the knowledge of northern infrastructure priorities.

### Recommendations:

- ▶ Accept the report as presented;
- ▶ Post the final report on the NDMF public site upon ratification of Ministers at the next Forum;
- ▶ Circulate the report to Federal, Provincial, and Territorial ministries.

## List of Appendices

- Appendix 1: Infrastructure (Priorities/Challenges)
- Appendix 2: Infrastructure Projects (Growth/Maintenance)
- Appendix 3: Funding Opportunities/Obstacles
- Appendix 4: Alternative Funding Delivery Models
- Appendix 5: Obstacles to Alternative Funding
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## Appendix 1: Infrastructure (Priorities and Challenges)

	Priority	Frequency of Responses
<b>Jurisdictions</b>	Road Work	14
	Water/Waste water	10
	Electricity	7
	Broadband	5
	Airport	4
	Municipal	4
	Marine	3
	Housing	2
	Education	2
	Rail	2
	Medical	2
	Landfill	1
	Gas lines	1
	<b>Federal</b>	Water Survey of Canada
Core National Highway System		
Green Energy		

## Appendix 1: Infrastructure (Priorities and Challenges) - Continued

	Challenge	Frequency of Responses
<b>Jurisdictions</b>	Cost of Implementation/geographic isolation	9
	Limited labour supply/low population	6
	Less tax base/less cost benefit	5
	Disadvantage competing for grants	5
	Condition of roads	4
	Broadband	3
	Extreme Weather	3
	Upkeep of facilities	3
	Housing Shortage	2
	Short Construction season	2
	Integrity of electrical supply	2
	Waste Management	2
	Fast Growing Population	2
	Health	2
	Land Claims	2
	Large Geographic Size	1
	Type of terrain	1
	Capacity of Roads	1
	Security of water supply	1
	Improve Services	1
	Bureaucratic Delays	1
	Obtaining Approvals	1
<b>Federal</b>	Lack of scientific information on water	
	Cooperate with Territories on priorities	

## Appendix 2: Infrastructure Projects (Growth and Maintenance)

	Areas experiencing growth	Frequency of Response
<b>Jurisdiction</b>	Road Construction	8
	Building Construction	5
	Building Replacement	5
	Resource/Mineral Development (Energy)	3
	Residential	3
	Waste Water/Water Treatment	3
	Broadband	2
	Oil and Gas	2
	Moratorium	2
	Airport	1
	Fishing Lodges	1
	Air Transportation	1
	Hydro Development	1
	Education & Training	1
	<b>Federal</b>	Hydrology
Social Housing Infrastructure		
PPP Canada Inc.		

Appendix 2: Infrastructure Projects (Growth and Maintenance) - Continued

	Areas of Priority Maintenance	Frequency of Response
	Roads	11
	Water and Sewer	9
	Education and Health Facilities	5
	Broadband	3
	Economic Development	3
	Transportation System	2
	Cultural and Recreational	2
	Municipal Repairs	2
	Stabilization (reclamation)	1
	Oil and Gas	1
	Storm water	1
	Environmental Hygiene	1
	Municipal Services	1
	Residential	1

### Appendix 3: Funding Opportunities/Obstacles for Infrastructure Projects

	Type of Opportunities	Frequency of Response
<b>Jurisdictions</b>	Senior Government Grants	5
	Build Canada Fund	3
	Federal Government Programs	3
	Provincial/Aboriginal Partnerships	3
	Northern Development Initiatives	3
	Infrastructure Planning Grants	2
	Indian and Northern Affairs	2
	Stimulus Package	2
	User-Fee Package	2
	User-Fee Revenue	2
	Grants	2
	Excise tax on gas refunds	2
	Municipal Airport Programs	2
	Ontario/Canada partnerships Fair Share Agreement	2
	Gwaii Trust	2
	Federal Municipal Partnerships	2
	Pine Beetle Recovery Fund	1
	Towns for Tomorrow	1
	Mackenzie Gas Pipeline	1
	Mining Companies	1
	Major Resource Development with Private Sector	1
	Regional Municipality	1
	Enhancements incentives for PPP	1
<b>Federal</b>	Federal-territorial transfer payments	

### Appendix 3: Funding Opportunities/Obstacles for Infrastructure Projects - Continued

	Type of Obstacle	Frequency of Response
<b>Jurisdictions</b>	Municipal resources limited	9
	Red Tape	6
	Limited Human Resources	4
	Grant Deadlines	3
	Politics	1
	Federal regulatory system and environment review	1
	Infrastructure planning grant program	1
	Requirement (grants) too rigid	1
	Delayed Announcement for Projects	1
	Economic uncertainty	1
	Guidelines not suitable for Northern areas	1
	Short Construction Period	1
	Weak relationships with Federal Government	1
	Locating funding	1

Appendix 4: Alternate Funding Delivery Models

	Delivery Model	Frequency of Response
<b>Jurisdictions</b>	Indian and Northern Affairs	3
	Federal Environmental Assessment Streamlining	2
	Towns for Tomorrow	2
	Unconditional Grants	1
	Northern Development Initiative Trust	1
	Infrastructure Planning Grant	1
	Partnership with Federal Government on infrastructure programs	1
	Funds disbursed based on a sharing model that would consider regional size in relates to population factors	1
	Dues on natural resources for the regions	1
	Public Private Partnerships	1
	Alternative schools alleviate procurement	1
	Aboriginal Partnerships	1
	Multi – Municipal Partnerships	1
	Block Transfers	1
	Liability Servicing Limit	1
<b>Federal</b>	All party agreement for sustainable water resources	
	Royalties and Fees	
	Hydro, Mining and Energy development as part of assessment and development permits	

## Appendix 5: Obstacles to Alternative Funding

	Type of Obstacle	Frequency of Response
<b>Jurisdictions</b>	Municipal contribution too high	3
	Federal Environmental Assessment	2
	Small populations/less tax base for sourcing partnership contributions	1
	Agreement on project outcomes	1
	Grant programs too rigid and inflexible	1
	Challenge of attracting private partners	1
	Legal ramifications	1
	Ensure all parties interest are balanced	1
	Adjusting budgets to real costs	1
	Global credit market/economic conditions	1
	Federal funding tend to off load fiscal responsibility	1
	Federal funds are not given with appropriate funding splits	1
	Jurisdiction challenges Federal/other	1
	Program deadlines geared to Federal Fiscal year	1
<b>Federal</b>	Reluctance of all parties to participate and potential issue with respect to water management mandate responsibilities	
	Reluctance of developers to participate	
	Requires development of royalty sharing agreement and targeted investment back to water resources programs and projects	

**Appendix 6: Best Practices Programs/Initiatives (Current)**

	Types of Programs
<b>Jurisdictions</b>	Dyking Program
	Environmental Monitoring station
	Highway 16 Road, Water & Sewer Upgrades
	Intelligent Pressure Management
	Municipal Fleet Downsizing
	Northern Ontario Highway Strategy
	Winter Roads Program
	Inter-Ministry Delivery of joint Federal/Provincial funding
	Municipal Green Fund
	Transfer of federal gas tax reviews
	Nunavut Housing Trust
	Nunavut Broadband Development Corporation
	Hydro Training Consortium
	Environmental Sustainability (LEED)
	Use of transparent, procurement processes
	Alberta Transportation
	Sustainability
	Tele Health Initiative
	Water/Sewer (North Coast Labrador)
	Labrador Health Centre
	Building Canada Fund
	Sanarutit Economic Development Agreement
	Phase II of Yellowknife Community Arena
	Yellowknife Hydro supply

Appendix 6: Best Practices Programs/Initiatives (Current) - continued

	Types of Programs
<b>Jurisdictions</b>	CNR/Cominco/Government of Canada built Mackenzie Northern Railway
	Broadband Network
	Automated garbage & recycling program
	Water committee on enhanced conservation measures
	Storm water infrastructure wetlands enhancements & trail system
	Community Forest Program
	Joint Planning With Bands
	Wastewater Treatment Lagoon Project (this project is considered to be a best practice in sustainable wastewater treatment)
	Spare standards/alternative work arrangements
	Repairing Radisson roads
	Planning for people program
	Full infrastructure condition inventory
	Wuskwatim Hydro Partnership
	Building Owners and Managers Association (BOMA)
<b>Federal</b>	Quillig Energy Investigation
	Mary River Iron Project
	PPP Canada Inc.

## Appendix 7: Best Practices Programs/Initiatives (Potential)

	Types of Programs
<b>Jurisdictions</b>	Recreation Centre
	Remote Region Development Assistance Fund
	Small Craft Harlow's
	Federal/Provincial/Local/Consultative Committee
	Repairing Route de la Baie-James (Québec & Société de développement de la Baie-James)
	Grey Water Reclamation Project
	Labrador Sportsplex
	Royalty Systems on Resource

## Appendix 8: Challenges to Best Practice Programs

	Types of Challenges	Frequency of Response
<b>Jurisdictions</b>	Gathering Community Input/Engaging Communities	5
	Be willing to partner	5
	Need to start consultation early and engage residents and stakeholders in planning	5
	Collaboration is lacking between Fed/Provincial Government representatives and joint municipal projects	4
	Building Canada Fund: Memorandum negotiating process is long, must try and take account of the short summer season	3
	Effective communication	3
	Environmental approval process too lengthy and not clearly outlined	3
	Helping make communities aware of key initiatives and generating feedback through public engagement	1
	Ensure adequate pre-hospital/emergency core services are available to meet needs	1
	Government needs to approach construction projects with a private sector attitude	1
	Risk Management	1
	Need to be able to have benchmark reports on progress	1
	Most programs are not adapted to Northern Regions	1

Appendix 8: Challenges to Best Practice Programs—continued

	Types of Challenges	Frequency of Response
	Importance of accurate baseline information	1
	On-going long-term planning approach	1
	Basic infrastructure/urgent need to be addressed	1
	Lack of trained/skilled workers	1
	High costs of shipping/freight	1
	Disadvantage (Northern Regions) competing for Senior Government Grants	1
	Consultation does not mean approval	1
<b>Federal</b>	Significant savings for the developers and for long term operations due to water level and stream flow program	
	Public Private Partnership funding tends to benefit larger communities that draw in private partners	

## Appendix 9: Keys to Success

	Successful Initiatives	Frequency of Response
<b>Jurisdictions</b>	Effective communication	4
	Long-Term planning	4
	Extremely important to have community buy-in	4
	Building partnerships	3
	Engaging the corporate sector	3
	Flexibility of programs	3
	Effective collaboration	2
	Unconditional grant programs	1
	Effective planning	1
	Planning Process	1
	Focusing organizational capacity around strategic priorities	1
	Incorporate community capacity building	1
	Initiatives to close gap between aboriginal persons and society	1
	Federal Government to fund projects in the North	1
	Jurisdictions working together to maximize funding sources	1
	Sanarutiit long-term agreement	1
	Province adequate pre-hospital emergency care in areas	1
	Leadership by community members,	1
<b>Federal</b>	Transfer Payment Policy – Reducing red tape	

## Appendix 10: Building Canada Infrastructure Plan (2007-2014)

Programs	Funding Amount
Municipal GST Rebate	\$5.8 B
Gas Tax Refund	\$11.8 B
Building Canada Fund	\$8.8 B
Public-Private Partnership Fund	\$1.25 B
Gateways and Border Crossings Fund	\$2.1 B
Asia-Pacific Gateway and Corridor Initiative	\$1 B
Provincial-Territorial Base funding	\$2.275 B
<b>Total</b>	<b>\$33 B</b>

## Appendix 11: Sample Survey

### Northern Infrastructure Project Northern Development Minister's Forum Template

Please complete this profile for your jurisdiction. This template will be used to compile jurisdictional information that will be provided to each jurisdiction for inclusion in NDMF briefing books. All data provided will be summarized to reflect the submission.

Jurisdiction: \_\_\_\_\_ Northern Region \_\_\_\_\_

#### Infrastructure

For the purposes of this project, our definition of Northern Infrastructure is the basic underlying framework that supports a northern society, city or area such as roads, water supplies, waste water, power grids, flood management systems, schools, telecommunications (Internet, telephone lines, broadcasting), etc.

**1. Identify three infrastructure priorities in your northern region and give a brief description of each priority.**


**2. Identify three infrastructure challenges in your northern region**


Appendix 11: Sample Survey—continued

3. State of current infrastructure:					
What are the areas of your community’s infrastructure that are currently experiencing growth, and why:					
What are the areas of priority maintenance and why (e.g. public health, environmental health economic development, social equity, necessary renewal. Etc.):					
4. Source of revenue for the construction of the infrastructure:					
Infrastructure	PPP (Yes/No)	Local Government/ Municipal Funding	Provincial/ Territorial Funding (%)	Federal Funding (%)	Others (Name and %)
5. Source of revenue for the maintenance of the infrastructure:					
Infrastructure	PPP (Yes/No)	Local Government/ Municipal Funding	Provincial/ Territorial Funding (%)	Federal Funding (%)	Others (Name and %)

Appendix 11: Sample Survey—continued

6. Source of revenue to replace the infrastructure:					
Infrastructure	PPP (Yes/No)	Local Govern- ment/ Muni- cipal Funding	Provincial/ Territorial Funding (%)	Federal Funding (%)	Others (Name and %)
7. Funding opportunities			Obstacles		
Identify alternative funding delivery models to improve senior government funding programs:			Obstacles		
8. Three Best practices Programs/Initiatives					Current or po- tential
1-					
2-					
3-					
9. Challenges/Lessons Learned in implementing Best Practices Programs					
10. Keys to success (e.g. best practices)					