

A PROPOSAL FROM THE GOVERNMENT OF THE NORTHWEST TERRITORIES UNDER THE

NATIONAL INFRASTRUCTURE FUND

NEW BUILDING CANADA PLAN 2014-2024









MESSAGE FROM THE GOVERNMENT OF THE NORTHWEST TERRITORIES

Almost fifty years ago, as part of the Roads to Resources Strategy, the federal government started the construction of the Mackenzie Valley Highway to the Arctic Coast with the vision of a strong and prosperous Canada, connected coast to coast to coast. In 1977, along with the release of the Berger Inquiry findings and the resulting 10-year moratorium on Northern oil and gas development, construction of the Mackenzie Valley Highway was halted near Wrigley.

The political and economic difficulties that impeded the completion of the Mackenzie Valley Highway almost four decades ago have changed. Northerners now enthusiastic partners in exploration and development. The NWT is home to a wealth of natural resources. including metals and minerals, oil and gas, and hydro potential on par with James Bay. Estimates indicate the NWT could hold as much as 37 per cent of Canada's marketable light crude oil resources and 35 per cent of the country's marketable natural gas resources. Turning northern potential into national prosperity will take strategic partnerships and investments in

key transportation infrastructure that will facilitate exploration, support development and ensure NWT resources can reach world markets. Access to the territory's wealth of resources is currently restricted by the NWT's transportation limitations. The long-promised road to resources is needed now.

Our fiscally prudent management practices have earned the GNWT its sixth Aaı credit rating from Moody's Investor Service. We have demonstrated that we are a reliable and responsible partner with the proven ability to deliver results for the people of the NWT and all Canadians.

The northernmost segment of the highway, linking Inuvik to Tuktoyaktuk, is under construction. The benefits that will flow to Canada from continuing to pursue the completion of the Mackenzie Valley Highway are greater now than ever.

Together, our governments have the momentum to complete the next segment of the highway. Completion of the southernmost segment of Mackenzie Valley Highway from Wrigley to Norman Wells will improve social and economic opportunities and provide long-term energy security for the people of Canada. This 313-kilometre segment will connect the North's oil and gas centre, Norman Wells, to southern Canada. Consistent with Canada's Northern Strategy, the Mackenzie Valley Highway will ensure a sovereign, strong, and prosperous nation for generations to come. The NWT has the potential to fuel nation building projects that will have profound impacts, north and south of 60, today and for generations to come. We cannot do it alone. Federal support is essential to turn this promise into reality.

It is with great pleasure and promise of a prosperous future that we invite the Government of Canada to partner with the Government of the Northwest Territories on the construction of the \$700 million Mackenzie Valley Highway project from Wrigley to Norman Wells for consideration under the National Infrastructure Fund of the new Building Canada Plan.



Robert C. McLeod Premier



Tom Beaulieu Minister of Transportation



Robert McLeod Minister Responsible for Infrastructure

FROM NORTHERN POTENTIAL TO NATIONAL PROSPERITY

The nation's strategic vision for transportation identifies a critical link between Canada's economic prosperity and growth potential and its interdependence on transportation infrastructure to move valuable natural resource commodities to national and international markets. In addition to maintaining existing infrastructure to respond successfully to global pressures, bold investments are necessary to construct basic infrastructure in resource-rich areas where little or no infrastructure currently exists.

The abundant petroleum and mineral resources identified in the Sahtu region of the Central Mackenzie Valley in the Northwest Territories (NWT) is a case in point. At present, overland industrial development activity is limited to the operating season of a publicly constructed winter road. The Mackenzie Valley Winter Road is a temporary snow and ice solution for investors, resource exploration, and community residents alike. A permanent solution to gain year-round access can be realized through the construction of an allweather highway from Wrigley, the highway's current terminus, to Norman Wells in the Sahtu region.

An economic analysis of the influences of



building a Mackenzie Valley all-weather highway calculated the direct, indirect, and induced benefits for Canada. The 2009 analysis concluded that strategic investments in an all-weather highway are vital to support growth in the hydrocarbon sector over the next five to six decades. Effecting strategic commitments now will contribute to the long-term success of Canada's economy, which requires basic infrastructure such as all-weather highways to access and move resources across territorial, provincial, and international borders.

Strong commitments to continue investing in basic infrastructure in the Mackenzie Valley corridor remain necessary before Canada can fully realize the benefits of the region's economic

potential and maintain a competitive edge in the global marketplace. Innovative investment partnerships between government and industry could make this strategic Canadian corridor a reality.

The vision of an all-weather highway through the Mackenzie Valley to the Arctic Coast has been a strategic priority for Canada since as far back as 1958. Construction of this nationally significant highway is viewed as another link to connecting Canada from coast-to-coast-to-coast and realizing the federal government's 'Road to Resources' through the NWT as envisioned by previous Canadian leaders.

This same vision is restated in a number of GNWT strategic investment documents, including *Investing in Roads for People and the Economy: A Highway Strategy for the Northwest Territories* and in the successful funding proposals *Corridors for Canada and Corridors for Canada II.*

The GNWT has continued developing infrastructure in the Mackenzie Valley since 2000 through funding partnerships with the federal government resulting in the construction of permanent bridges at water crossings and grade improvements along the length of the

Mackenzie Valley Highway proposed extension Wrigley to Norman Wells

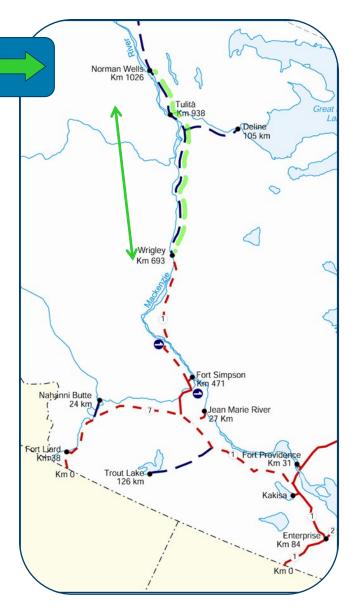
Four priorities of Canada's Northern Strategy: exercising Arctic sovereignty; promoting social and economic development; protecting environmental heritage, and improving and devolving Northern governance.

winter road. In addition to extending the window of operation and reducing environmental concerns at stream crossings, these investments are strategically located on the alignment of the proposed all-weather highway.

Strategic investments to extend the existing all-weather highway into the Central Mackenzie Valley will promote an attractive business environment for industry, manage industrial development effectively, and maximizes benefits that accrue from resource development. These outcomes align with the priorities stated in Canada's *Northern Strategy* specifically by promoting social and economic development in the NWT. Progress to achieve the outlined priorities coupled with the vision of prosperity for NWT and Canadian residents requires investing in permanent transportation infrastructure such as the

proposed extension of the all-weather highway into the Central Mackenzie Valley. Investing now will ensure additional large-scale resource exploration and development activities are able to proceed thereby creating numerous opportunities for business and industry in the NWT and the rest of Canada and warrant resource development to continue contributing to self-reliant communities and a strong and prosperous Canada.

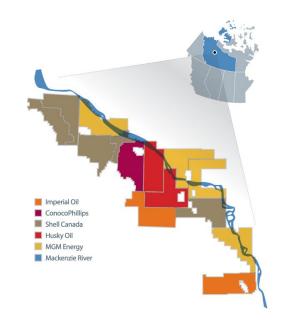
The Government of the Northwest Territories is proposing a funding partnership with the Government of Canada under the National Infrastructure Fund of the New Building Canada Plan. Our proposed \$700 million investment partnership will continue the federal government's 'Road to Resources' program by extending the Mackenzie Valley Highway from Wrigley to Norman Wells in the Sahtu region of the Central Mackenzie Valley.



CONTRIBUTING TO CANADA'S ECONOMIC PROSPERITY

The central Mackenzie Valley is an underexplored frontier basin host to conventional and unconventional oil and gas deposits of substantial proportion. In 2011 and 2012, five different resource companies received 14 license blocks from Aboriginal Affairs and Northern Development Canada to explore the Canol Shale, an area with potential to yield significant discoveries of oil and gas in the Central Mackenzie Valley. The Canol Shale is believed to be the source rock of the Norman Wells oil discovery, which has yielded millions of barrels of oil since its discovery in the 1920s. Industry experts believe the region has the potential to produce one to two million barrels of petroleum from the Canol Shale formation. Results of this exploration activity hold the potential to significantly strengthen and diversify the Canadian and NWT economies. In 2011, for example, the petroleum industry committed investing \$534 million to test eleven parcels of land in the Sahtu region and signed access and benefit agreements with local Aboriginal land corporations.

Increased development activity in the Central Mackenzie Valley, facilitated by all-weather highway access, will result in increased revenue flows to Canada through royalties and taxes. The benefits of exploration and development, in terms of business and employment opportunities, will continue to improve and support the quality of life for Northerners and



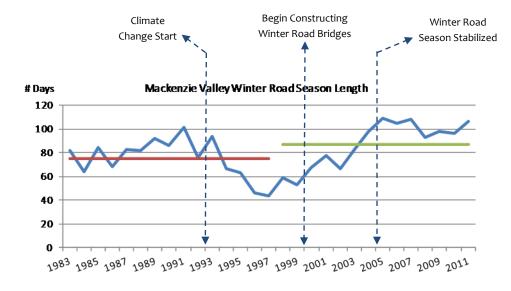
Canadians. According to the 2009 economic analysis, NWT petroleum developments are expected to generate the following influences over the next 30 years:

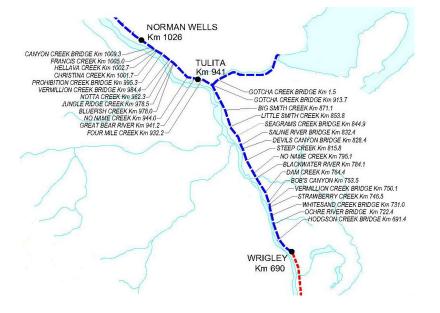
- Contribute up to \$58.9 billion to the national gross domestic product
- Create between 86,000 to 181,000 personyears of employment across Canada, 71,118 to 159,719 of which would be created outside the NWT

 Generate up to \$15 billion in government revenue, of which the vast majority would flow to the federal government

The Central Mackenzie Valley also holds significant mineral resource potential. However, unlike the successful diamond industries in the NWT's Slave Geologic Province, mineral deposits in the valley require significant transportation infrastructure to export large volumes of ore. The lack of all-season transportation infrastructure to move equipment, goods, and people increases the cost of exploration programs, the main obstacle to further explore and develop the deposits.

A seasonal public winter road constructed north of Wrigley into the Central Mackenzie Valley provides a surface transportation option for approximately three months per year. The unpredictable factors affecting the length of the winter road's operating season though, translate into a business concern for mineral, oil, and gas investors involved in exploring the areas economic potential. The existing limited transportation window also increases the cost development and exploration activities. The variable nature of the current transportation system adds uncertainty to development projects and poses challenges for community mobility, resupply, industry initiatives, and economic diversification.





Permanent bridges installed on the Mackenzie Valley winter road between Wrigley and Norman Wells since 2000 have resulted in longer operating seasons and greater access for industry and residents

Significant improvements have been achieved increasing the duration of the winter road operating season since the installation of permanent infrastructure began in 2000.

Since 2000, the governments of Canada and the Northwest Territories have successfully invested more than \$120 million in permanent structures and grade improvements along the Mackenzie Valley winter road as a proactive solution to increase the window of operation and better facilitate resource exploration activities and cost-effective community resupply. Our investments include grade improvements, safety enhancements, and 36 bridges strategically located on the alignment of the proposed all-weather highway, thus chipping away at the overall cost of achieving the long-held Northern vision of year-round access.

The northern-most segment of the envisioned all-weather highway to the Arctic coast is a 170 kilometre section linking the communities of Inuvik and Tuktoyaktuk on the shore of the Arctic Ocean. A partnership between the Governments of Canada and the Northwest Territories initiated the highways construction early in 2014, confirming the strategic benefits of building permanent transportation infrastructure where none currently exists. This 4-year core infrastructure project will promote economic growth, support job creation, increase productivity, generate income, enhance the quality of life in the North, and support Canada's claim to Arctic Sovereignty.

Extending the all-weather highway into the Central Mackenzie Valley north of Wrigley would alleviate increasing problems associated with the reduction of winter road reliability, uncertainty of opening and closing dates, and reduced periods of operation. Bridge building and all-weather road would transform the current discontinuous system to one that functions year-round.

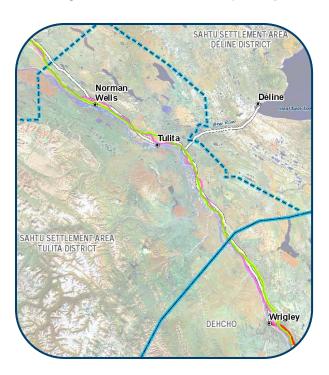
Inclusive partnerships with Aboriginal organizations to lead, develop, and manage PDRs for sections of the Mackenzie Valley Highway in their land claim areas maximized local involvement, input, and control of the planning process. The result was a common demonstration of support for the proposed all-weather highway and the Department of Transportation receiving the 2012 Silver Award for Innovative Management from the Institute of Public Administrators of Canada

A PLAN TO EXTEND CANADA'S 'ROAD TO RESOURCES'

A number of studies were undertaken by the federal government in the 1960's and 70's supporting the construction of an all-weather highway through the Mackenzie Valley. These studies produced a detailed road alignment, environmental data, and engineering design, which eventually added to Project Description Reports (PDR) for an all-weather highway through Aboriginal land claim areas.

A 2010 funding opportunity with the Canadian Northern Economic Development Agency led to inclusive GNWT partnerships established with Aboriginal organizations to lead, develop, and manage PDRs for sections of the Mackenzie Valley Highway in their land claim areas. These partnerships maximized local involvement, input, and control of the planning process resulting in a common demonstration of support for the proposed all-weather highway. In addition, the collaborative approach resulted in the Department of Transportation receiving the 2012 silver award for innovation from the Institute of Public Administrators of Canada (IPAC).

The completed PDRs formed the basis of a submission initiating an environmental assessment (EA) of the project in 2013. The Mackenzie Valley Environmental Impact Review Board (MVEIRB) issued a Terms of Reference outlining the information and analysis required



in a Developer's Assessment Report, a key component of the EA which is anticipated to conclude in 2016/17. Aboriginal land claim organizations will continue to be involved in related activities such as geotechnical investigations, surveys, consultations, and studies into fisheries, vegetation, wildlife, archaeology, terrain, permafrost, and hydrology.

The proposed highway extension from Wrigley to Norman Wells is approximately 333 kilometres in length. The highways alignment, defined by Public Works Canada in the 1970's, is within a footprint already established for the public winter road and incorporates the existing permanent bridges at water crossing locations. Highway design parameters are based on published and accepted guidelines and best practices for developing infrastructure in the NWT, including best practices for permafrost management. The highway design would see a road placed within a 60 metre wide right-of-way (ROW) except where large cut and fill sections will be required. The road surface will average 9 m in width and range between 1.6 and 2 m in depth. These standard embankment widths and

Canada/ NWT Funding Partnership	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	Total
Proposed Cash Flow	10	10	10	10	120	120	120	100	100	100	700

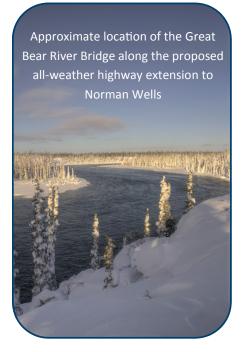
depths could be altered to accommodate site specific conditions.

Typical activities proposed over the project's 7-year duration include embankment construction, development of borrow sources, construction of remaining water course crossings, and supporting activities such as access road development, fuel and material storage, camp operation, and waste management.

The proposal also requires the construction of one major bridge designed in 2006 to span the Great Bear River near Tulita, a community south of Norman Wells. An environmental assessment and water license required for the Great Bear River Bridge are already complete bringing the estimated cost of its construction to

\$70 million, which is included in the total proposal of \$700 million. Upon its completion, the Mackenzie Valley Highway to Norman Wells will be operated as a public highway by the GNWT.

All GNWT projects valued at \$50 million or greater must be assessed according to the governments Public-Private Partnership (P₃) Policy and Management Framework to evaluate procurement options. The evaluation will include a detailed feasibility analysis comparing the traditional competitive procurement process against a range of P₃ models through the development of an opportunity paper and detailed business case. Given the benefits to industry, it is anticipated that highway tolls will be levied to commercial vehicles to help offset a portion of the projected capital and O&M costs.



2014/15	2015/16 — 2017/18	2018/19 — 2023/24					
Timing to Extend the Mackenzie Valley Highway - Wrigley to Norman Wells							
Canada-NWT Funding Partnership	Environmental Assessment	Highway Construction Project					

NATIONAL AND REGIONAL BENEFITS

The Mackenzie Valley All-weather Road Economic Analysis prepared for the GNWT in 2009 updated a socio-economic study that was included in the 1999 Highway Strategy. This economic analysis looked at the overall Mackenzie Valley Highway (Wrigley to Inuvik) and includes the following anticipated national and territorial outcomes:

The anticipated subsequent benefits of extending the all-weather highway to Norman Wells remain the same as when first proposed by Canada in the 1960s:

- Provide a year-round transportation link between the Central Mackenzie Valley and southern Canada
- Decrease the cost of living by increasing access to good and services

- Significantly reduce the cost of transporting freight
- Stimulate local workforce and business development in the resources sector
- Develop hospitality and tourism markets and other businesses
- Increase access to health care, education, training resources and employment opportunities
- Enable communities and families to interact and share social, cultural, and recreational activities
- Support resource exploration, development, and production to increase viability and stimulate the economy

- Deliver government commitments for economic development in the NWT
- Reduce the cost of delivering government services
- Improving the efficiency of existing facilities that provide emergency response in case of contaminant spillage and pollution prevention
- Providing an effective demonstration of Canada's sovereignty on its share of the northern hemisphere, sea and land

The world is taking notice of the NWT's resource potential with the territory ranking as the 29th out of 96 as the most attractive jurisdiction for mineral exploration and development in the world and the best overall improvement in Canada.

2012-2013 Annual Survey of Mining Companies—The Fraser Institute



Canada *Northern Strategy* is based on four priorities: exercising Arctic sovereignty; promoting social and economic development; protecting our environmental heritage, and improving and devolving Northern governance. Progress to achieving these priorities and the vision of prosperity for NWT and Canadian residents requires investing in permanent transportation infrastructure such as this proposed extension of the all-weather highway into the Central Mackenzie Valley.

An all-weather highway from Wrigley to Norman Wells will support the non-renewable resource industry, facilitate the diversification of the

NWT economy and improve the quality of life of its citizens through better access to essential services, increased mobility, and a lower cost of living leading to safe and healthy communities.

A partnership between the Governments of Canada and the Northwest Territories under the National Infrastructure Fund of the New Building Canada Plan to extend the all-weather highway to Norman Wells will contribute to our nation's long -term economic productivity and the future prosperity and well-being of all Canadians.

We are a Northern country.
The true North is our destiny – for our explorers, for our entrepreneurs, for our artists.

To not embrace the promise of the true North now, at the dawn of its ascendancy, would be to turn our backs on what it is to be Canadian.

Prime Minister Stephen Harper