



GMRP Labour Resource Study 2016

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Executive Summary

Through its Socio-Economic Strategy, the Giant Mine Remediation Project (GMRP) commits to implement strategies that will maximize economic opportunities for Northerners and local Aboriginal people through employment and procurement. In order to meet this commitment, the GMRP needs to understand and regularly assess local labour capacity. This labour resource study provides an overview and analysis of current labour market conditions, existing local skills, local interests and capacity building programs, presented relative to the anticipated labour requirements of the GMRP. GMRP will use this information to inform decisions related to work package structure and contracting and to identify where additional capacity development may be required. It will also share this study with the Main Construction Manager to inform their work. The key findings, conclusions and next steps of this study are outlined below.

Economic Conditions

The Canadian economy has experienced a dramatic slowdown, due to a sharp fall in commodity prices and a weakening Canadian dollar. This has resulted in recent mine closures, project cancellations and labour force reductions. Additionally, economic growth in the Northwest Territories (NWT) is not expected until new mines come online around the turn of the next decade. All of this leads to the expectation that the GMRP will not be facing a competitive environment when recruiting the workers needed for the project. In particular, the GMRP could target its communication of job opportunities to mining and construction workers who may be unemployed due to closures or slowdowns. However, this continues to be a dynamic situation and is heavily influenced by volatile and unpredictable commodity prices.

Labour Supply and Demand

The NWT is expected to face occupational shortages in construction, trades and engineering occupations, while Canada overall is expected to see labour surplus conditions in entry-level and semi-skilled occupations. Typically, the mining and construction sectors report labour shortages in regions where Aboriginal unemployment is also high. Aboriginal representation in the NWT workforce is lower than in the other territories. NWT Aboriginal workforce participation rates are also low, although small local communities near the NWT diamond mines have seen Aboriginal workforce participation rates increase in the past decade. Overall, it is clear that the Aboriginal workforce has the potential to grow over time if accompanied by appropriate education and training. It is also noteworthy that the NWT also has the highest proportion among the three territories of a commuter (i.e. out-of-territory) workforce. An awareness of immigration support programs will be important to ensure GMRP labour needs are met.

Conclusions

Interviews conducted with Aboriginal governments and organizations, supplemented by desktop research, helped to identify existing skills, interests and capacity building programs in the NWT, particularly for communities in the vicinity of the GMRP. Based on the information gathered, we identified GMRP occupations/positions with Northern Aboriginal supply (i.e. areas with more than three suppliers or areas with interest, training and some expertise), occupations/positions with potential supply (i.e. areas with interest or training and some expertise) and gaps (i.e. areas with no interest, no or limited expertise and no training). The findings demonstrate that there is Northern Aboriginal capacity for GMRP entry-level and semi-skilled occupational needs, as well as some skilled occupational needs (e.g. some trades, technicians, blasting/drilling, and environmental monitoring). There is a potential local labour supply for some skilled occupational needs (e.g. some

trades, technicians, supervisors, underground miner), where additional training may help increase the available local supply. Finally, there is limited or no local labour supply for some skilled and all professional occupational needs, indicating a need for local capacity building and/or recruitment of out-of-territory workers.

The information in this study should be used to communicate and engage with relevant Northern communities, Aboriginal governments and organizations, educational institutions and capacity building coordinating bodies to identify additional capacity development that may be required. This information may also be used by the MCM to inform decisions related to work package structure and contracting, to allow for the maximization of local employment and procurement.

Next Steps

For the next iteration of the labour resource study, we recommend the following actions to enhance the GMRP's understanding of local labour capacity:

- Continue to refine the GMRP labour requirements as the project design advances
- Conduct interviews to collect additional information on existing capacity and interests of NWT firms
- Incorporate “other” Northern Aboriginal service and equipment suppliers (as identified in the Northern Aboriginal business listing and interviews with Aboriginal governments and organizations) relevant to GMRP needs into GMRP labour requirements
- Continue to validate and improve the understanding of relevant capacity building programs and identify specific gaps

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1 Introduction

1.1 BACKGROUND AND CONTEXT

The Giant Mine is located close to Yellowknife's city centre (about five kilometres from the North end) and within the asserted traditional territory of the Akaitcho Territory Dene First Nations, within the extended Monfwi (Môwhì Gogha Dè Nîîtâèè) boundary as defined in the *Tłı̨chʔ Land Claim and Self Government Agreement*, and adjacent to, or on the boundary of, the Interim Measures Agreement Area of the Northwest Territory Métis Nation.

In 1999, the Government of Canada took over responsibility for Giant Mine after the mine's last owner went bankrupt. After the Government assumed responsibility, the biggest concern was the arsenic trioxide dust stored underground. The site became the subject of several studies, workshops, community consultation sessions and the work of experts to find a solution for the dust. After several options were considered, it was determined that the best option available was to freeze the dust in place (the "frozen block method").

In 2007, the project submitted a Water Licence application to the Mackenzie Valley Land and Water Board (MVLWB) for the remediation of the site. While the MVLWB determined that the project should advance directly to the regulatory process, the Yellowknife City Council voted unanimously to refer the project to environmental assessment, as the mine is within the boundaries of the City.

Environmental assessment processes involve very thorough public and technical reviews. The assessment for the Giant Mine Remediation Project (GMRP) took seven years to complete and included a Developers Assessment Report¹, the Freeze Optimization Study, five days of technical sessions, five days of public hearings, over 400 information requests and hundreds of meetings and discussions with stakeholder groups, the Yellowknives Dene and the public.

On August 14, 2014, the Responsible Ministers issued their Decision of Environmental Assessment, and stipulated 26 legally binding measures that need to be completed before a Water Licence for the project will be issued, which would allow the project to proceed to remediation. These 26 measures will help focus the project team's work for the next phase of engagement, design and decision-making.

The Remediation Plan for the Giant Mine site can be broken down into five distinct but interconnected components.

- The arsenic trioxide waste stored in sealed chambers and vaults will be contained in frozen blocks.
- The surface remediation includes taking down close to 100 buildings, covering four tailings ponds, fencing off eight open pits and cleaning up the contaminated soil.
- Water entering the underground tunnels and coming into contact with contaminated material used to backfill mined out areas during the mine's operation will continue to be treated.
- Baker Creek, which runs through the mine site, will require some remediation to help restore it to a condition that is as ecologically sound as possible.
- After remediation is complete, the site will be maintained and monitored in order to ensure the ongoing protection of human health and safety as well as the environment.

¹ The Developer's Assessment Report was developed based on the direction provided in the Review Board's Terms of Reference for the environmental assessment. The report identifies and assesses any likely adverse environmental effects that might be caused during the implementation of the Remediation Project, the selected mitigation measures and a monitoring framework.

GMRP has an integrated Environment, Health & Safety and Community (EHSC) Management System² designed to ensure proactive management of key environment, health, safety and social issues at the site. An important issue addressed within the Management System is the provision of social and economic benefits. The GMRP will implement strategies to maximize the economic opportunities for Northerners and local Aboriginal people through employment and procurement. Through its Socio-Economic Strategy, it will:

1. Clarify and communicate socio-economic impacts, opportunities and benefits
2. Coordinate with stakeholders to minimize impacts, build capacity and deliver benefits, and
3. Improve socio-economic planning and performance, leading to a strengthened social license.

To help ensure access of Aboriginal people and Northerners to employment and procurement opportunities, GMRP needs to understand and regularly assess local capacity. This labour resource study provides an overview and analysis of current labour market conditions, as well as local skills and capacities. GMRP will use this information to identify where additional capacity development may be required, and to inform decisions related to work package structure and contracting.

1.2 PURPOSE

Indigenous and Northern Affairs Canada (INAC) commissioned Stratos Inc. (Stratos) to update the *Labour Resource Study Update* prepared by Merit Consultants International Inc. (Merit) in October 2012.³ The purpose of this study is to evaluate the anticipated labour requirements of the GMRP against the available labour resources in the Government of the Northwest Territories (GNWT) and Canada, including available Aboriginal labour and business resources and their potential involvement in the project.

Previous labour resource studies completed for the GMRP (in August 2010 and October 2012) focused on the current state and forecasts of labour resources based on best available information. The scope of this report goes beyond the previous studies to include additional information on Northern and Aboriginal business capacity along with a discussion on the potential for training and capacity building opportunities in the coming years to support workforce readiness. These additional sections support achievement of GMRP's socio-economic objectives.

This report is presented as a standalone document and is not considered a supplementary report or update to the previous labour studies. It will be included within solicitation documents for the Main Construction Manager (MCM) contract and is intended to provide guidance on the level of effort and detail that Public Services and Procurement Canada (PSPC) expects in the MCM's Labour Resource Assessment.

1.3 METHODOLOGY

The methodology to complete this study involved the following steps:

- A review of publicly-available data and information on economic outlooks and labour market information from government departments, industry organizations, and Aboriginal organizations with a strong

² The GMRP EHSC Management System is in alignment with internationally recognized standards in order to enable a single integrated approach (specifically, the ISO 14001:2004 Environmental Management Systems standard and the OHSAS 18001: 2007 Occupational Health and Safety Management Systems standard).

³ Merit's 2012 *Labour Resource Study Update* summarizes labour force profile, skill capability information within the NWT and Yellowknife, and portions of GMRP work packages that could be assigned to in-territory resources. It provided an update of information contained within an earlier report, entitled *Local Industrial Capacity Resource Study* (Merit, 2010).

preference for publications issued within the past year, given rapidly changing economic conditions. For a detailed list of references described in this section, see References.

- Supplementary information gathering through interviews with Aboriginal governments and organizations to collect more detailed, regionally specific data and information.
- Analysis and presentation of data, information, and implications for GMRP within this report.
- Identification of limitations and areas requiring further examination in future reports.

1.3.1 Limitations

During the course of this study, we encountered the following limitations:

- Rapidly changing economic conditions put into question future economic forecasts.
 - Given the dramatic changes and highly dynamic nature of commodity prices and the value of the Canadian dollar in the last year, we worked to find and draw upon the most current reference documents available. In some instances, we had to use documents that were more than a year old and, as such, likely provide a less accurate forecast of market demand.
 - Some of the available projection data (e.g. models of the Canadian Occupational Projection System (COPS)) were prepared before commodity prices continued to drop in late 2015. It is likely that, in the short term, employment growth projections may be lower than forecasted.
 - To address this limitation, GMRP may wish to update the COPS projection information (see Section 3.1.3) when it becomes available.
- GMRP labour requirement estimates may be underestimated.
 - Project design is not yet complete. As such, while Section 5 provides the most recent estimates for GMRP's labour requirements, we anticipate these will continue to change until further decisions are taken on project design.
 - This study assumes that remediation work (Phase 2) will begin in 2021. It should be noted that the start date for Phase 2 is dependent on GMRP receiving its water licence.
 - To address this limitation, GMRP may wish to update the labour requirement estimates and associated analysis in Sections 5 and 6 as more refined estimates become available.
- Lack of publicly available information on Aboriginal-owned businesses and Aboriginal employment.
 - Information tracking on the contribution of small businesses and Aboriginal-owned businesses to economic diversity and employment is limited. For example, there are no agencies or departments reporting the number and type of Aboriginal owned businesses, earnings, number of employees and location (GNWT Education, 2015).
 - To address this limitation, Stratos interviewed representatives from a number of Aboriginal governments and organizations to get a better understanding of available personnel, skills and businesses, as well as areas of interest for further capacity development.

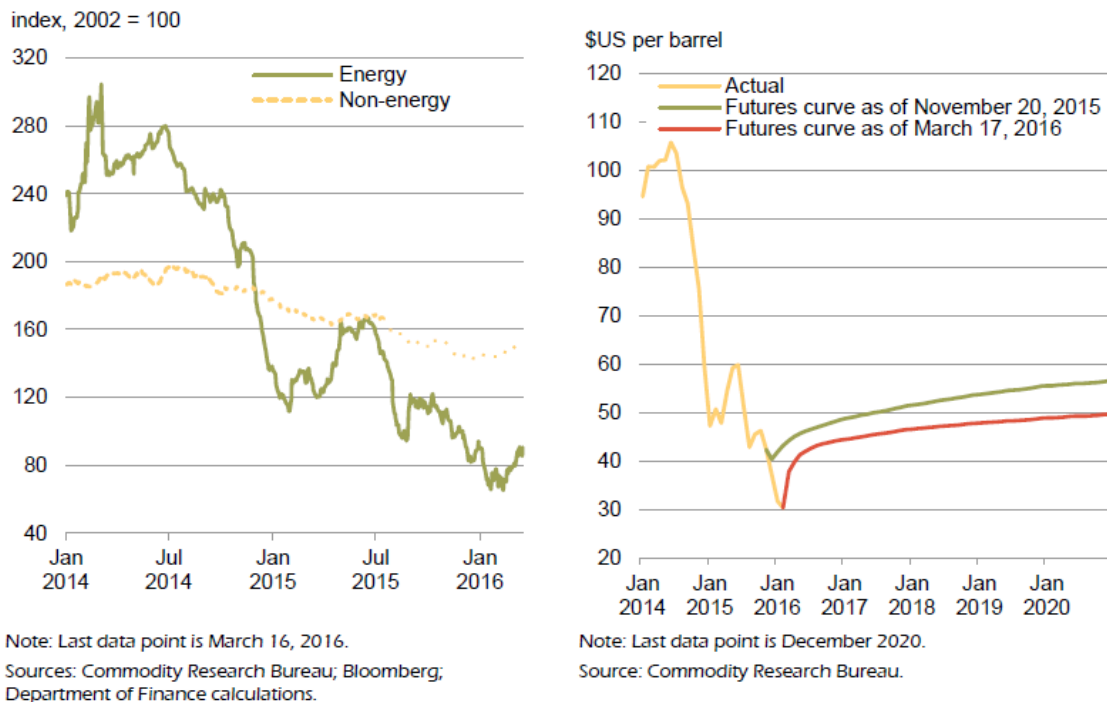
2 Economic Conditions

This section provides an overview of current economic conditions and trends that are affecting or are expected to affect resource development and major construction projects in Canada.

2.1 CANADIAN ECONOMIC CONDITIONS

Since the 2012 *Labour Resource Study Update*, the Canadian economy has experienced a dramatic slowdown. The sharp fall in commodity prices (base metals and energy products) has been a contributing factor to this slowdown. In January 2016, oil traded below US\$30 for the first time since 2003. With oil prices expected to remain below US\$50 a barrel until the end of 2017, the energy sector is likely to face further reductions in investments, continued cutbacks, slow downs and/or cancellation of projects and significant job losses (CBOC a, 2016).

Figure 1: Commodity Price Index and Evolution of Oil Prices



Source: (Government of Canada, 2016)

Linked to lower commodity prices is the weakening of the Canadian dollar, which fell to its lowest point since 2003 against the U.S. dollar in January 2016. The weakening Canadian dollar has resulted in higher consumer prices on imported goods such as heavy equipment.

As a result of the recent economic downturn, major projects in the energy and mining sectors are not expected to support the Canadian economy as significantly as they have in previous years. The trade sector is likely to be one of the most important drivers of Canadian growth in the near term. Public infrastructure investment is also expected to help stimulate the economy. The federal government has committed to investments in social housing, transit and other major infrastructure projects in its March 2016 budget.

The federal government has announced a plan to invest more than \$120 billion in infrastructure over 10 years to better meet the needs of Canadians and better position Canada's economy for the future (Government of Canada, 2016).

Other large infrastructure projects, including electricity generation and transmission, pipelines and liquefied natural gas (LNG) plants, may support economic growth in some regions of Canada if they move forward (BuildForce Canada a, 2015).

2.2 TERRITORIAL ECONOMIC CONDITIONS

In 2015, economic conditions in the territories also faced challenges due to depressed global commodity prices and weak demand for natural resources due to rising global inventories of mining and oil and gas commodities. As a result of the downturns in these important industries, all three territories have been experiencing weakened economic conditions. This has been manifested through recent mine closures, project cancellations, and labour force reductions.

Northwest Territories

The economic outlook for the Northwest Territories (NWT) is the weakest of the three territories. The GNWT's Finance department recently released a five year financial outlook for the territory stating that the economy is "very fragile" and could amass a \$1 billion debt by 2020. This is due to the territory's heavy reliance on a struggling mining sector, which accounts for 25% of real Gross Domestic Product (GDP) in the territory, as well as reductions in funds available for capital investment and eroded borrowing authority as the territory slips further into debt (GNWT, 2016).

Resource-based companies are reacting to the economic changes in the NWT. De Beers announced in December 2015 that it would be shutting down its Snap Lake diamond mine in light of current market conditions. The shutdown resulted in the loss of more than 400 jobs (De Beers, 2015), and also affected approximately 100 contractors. Of the permanent employees affected, approximately 100 were Northerners (CBC, 2015).

In the longer term, the territory can expect to see slowdowns in existing projects. Production at the Diavik diamond mine is expected to decrease over the rest of the decade and the Ekati diamond mine is forecast to conclude operations between 2020 and 2025 (CBOC f, 2015). There are currently about 1,000 people employed at Diavik and 1,400 in operational jobs at Ekati. However, Ekati's Jay pipe, a significant undeveloped deposit, is expected to extend the mine's life by approximately 11 years, to 2031 (CBOC f, 2015).

A few years ago, it was expected that up to six major mining projects would be getting under way in the territory over the next 10 – 15 years (excluding the GMRP). However, this outlook has dimmed due to weak resource prices and an uncertain international investment climate. A number of projects have been postponed, including Yellowknife Gold and Pine Point Mine.

Shale oil deposits in the NWT have also been affected by low commodity prices. In recent years, several large companies including ConocoPhillips, Husky Energy, Chevron Canada and MGM Energy have suspended drilling or pulled out of the region completely, with low and uncertain oil prices cited as a major factor (CBOC f, 2015).

Publicly funded infrastructure and construction projects, including development of the Inuvik-to-Tuktoyaktuk highway, the Norman Wells phase of the Mackenzie Valley Highway, a Fibre Optic Cable to Inuvik and the

Stanton Territorial Hospital in Yellowknife, will provide some support for the construction sector (CBOC f, 2015). Overall, economic growth in the NWT is not expected until additional mines come online around the turn of the next decade (CBOC b, 2016).

Table 1 provides a summary of the major projects in the NWT, including estimated capital costs associated with the construction phase.

Table 1: Major Projects and Capital Costs in the NWT

Project	Status	Construction		Capital cost (millions)
		Start Year	End Year	
Gacho Kue Mine	Planned	2013	2015	\$600
Inuvik to Tuktoyaktuk Highway	Planned	2014	2018	\$300
Nechalacho (Thor Lake) Project	Planned	2017	2018	\$902
Prairie Creek	Planned	2015	2016	\$120
NICO Project	Planned	2017	2018	\$210
Giant Mine Remediation Project	Planned	2021*	–	\$480
Yellowknife Gold Project	Suspended	–	–	\$193
Pine Point Mine	Suspended	–	–	\$140
* <i>Dependent on water licence</i>				

Source: (BuildForce Canada b, 2015)

Yukon

Yukon had been forecasting that its economy would improve in 2016, with projected growth of 2.7% (CBOC b, 2016). This growth hinges on continued mining production output, including Capstone's Minto mine. However, Capstone ceased underground mining in 2016 and will temporarily close operations once all ore is processed by mid-2017 (Capstone, 2016). Yukon Zinc also recently announced that it was putting the Wolverine Mine – a zinc-copper-lead-gold underground mine – into care and maintenance citing unfavourable market conditions and the ongoing weakness of silver prices as the reason for the temporary shutdown. This affected approximately 140 mine workers and 80 contractors (Yukon Zinc Corp., 2015). The resulting production decline in the territory could significantly impact economic growth. With no new mines expected to move into the development phase over the near term, the construction industry in Yukon will experience modest growth over the next two years. Strong government spending will be a critical driver in offsetting the slowdown in mining. Yukon's 2015–16 capital budget includes investments in health facilities, schools and other infrastructure (Yukon Economic Development, 2015).

Nunavut

In Nunavut, confirmed public sector investments in infrastructure will contribute to modest economic growth, including the construction of the \$143 million Canadian High Arctic Research Station (CHARS) in Cambridge Bay and the \$300 million upgrade to the Iqaluit airport. Although Agnico-Eagle Mining is continuing to cut back production at its Meadowbank gold mine, Nunavut is expected to see more exploration spending by senior companies in 2016 compared to the other territories. Nunavut's economy is forecast to expand by 1.2% in 2016 and grow at an even stronger pace in 2017 (CBOC b, 2016).

2.3 ECONOMIC CONDITIONS IN NEIGHBOURING PROVINCES

Other neighbouring provinces, with a heavy reliance on natural resource and industry-based sectors, have also experienced economic challenges over the past year.

British Columbia

The slowing natural resource sector is causing economic strain, especially in the northeast and interior. Mines have closed in the northeast, causing significant job losses, and many British Columbia companies that supply equipment or services to the Alberta oil sands are being adversely affected. Within the province, exploration work for oil and gas and for mining is almost non-existent. However, over the short term, it is forecast that British Columbia's economy will grow faster than that of any other province due to expected growth in the province's non-resource industries (e.g. high-tech sector, tourism, film and television, real estate) (CBOC d, 2016).

British Columbia's nascent LNG industry has responded to the downturn by postponing or shelving a number of development projects, including Royal Dutch Shell's \$50 billion dollar project for the LNG Canada development in Kitimat (Zussman, 2016). The metal and coal mining industry is also feeling the impact of low commodity prices. Imperial Metals has put its Huckleberry mine on hold, affecting the 260 person workforce, citing low commodity prices (Bennett, 2016).

Alberta

Lower crude oil prices have sent Alberta's economy into recession (CBOC c, 2016). As revenues shrink, the province is starting 2016 with a \$6-billion deficit, which is forecast to reach \$10-billion before the year ends (Government of Alberta - Finance, 2016). With no new oil sands mines forecast over the short term, the province will be looking at increased bitumen production and public infrastructure investment to help cushion the economic impact of lower crude prices (CBOC c, 2016).

Despite the dramatic drop in oil prices, few operating major oil sands projects have curtailed output in recent years. In part, this is due to the risk of damaging underground bitumen reservoirs, as well as the need to supply crude for processing to refineries owned by major players such as Imperial Oil and Suncor Energy (Lewis, 2016). This is not necessarily the case for smaller projects, such as Connacher Oil and Gas Limited's steam-driven Great Divide project, which has significantly reduced production due to "exceptionally low commodity prices" (ibid).

While the economic and technical peculiarities of the oil sands have kept existing projects producing at or below cost, the same is not true for early stage and development projects. Royal Dutch Shell recently announced a delay to its 80,000 barrel per day Carmon Creek thermal project, while Statoil announced it would be delaying its 44,000 barrel per day Corner thermal oil sands expansion project for at least three years (Healing, 2016).

Saskatchewan

The drop in oil prices has also hurt Saskatchewan's economy, with a bleak medium term outlook for the oil industry (CBOC e, 2016). These effects may be tempered by increasing production of uranium and potash, as well as a rebounding agricultural sector (CBOC e, 2016), though this remains uncertain, with BHP Billiton – which has a number of exploration projects in the Saskatchewan Potash Basin – recently laying off 70 Saskatoon employees (CBC b, 2015). Construction will also play a big role in the economic recovery (CBOC e, 2016).

3 Human Resource Availability and Demands

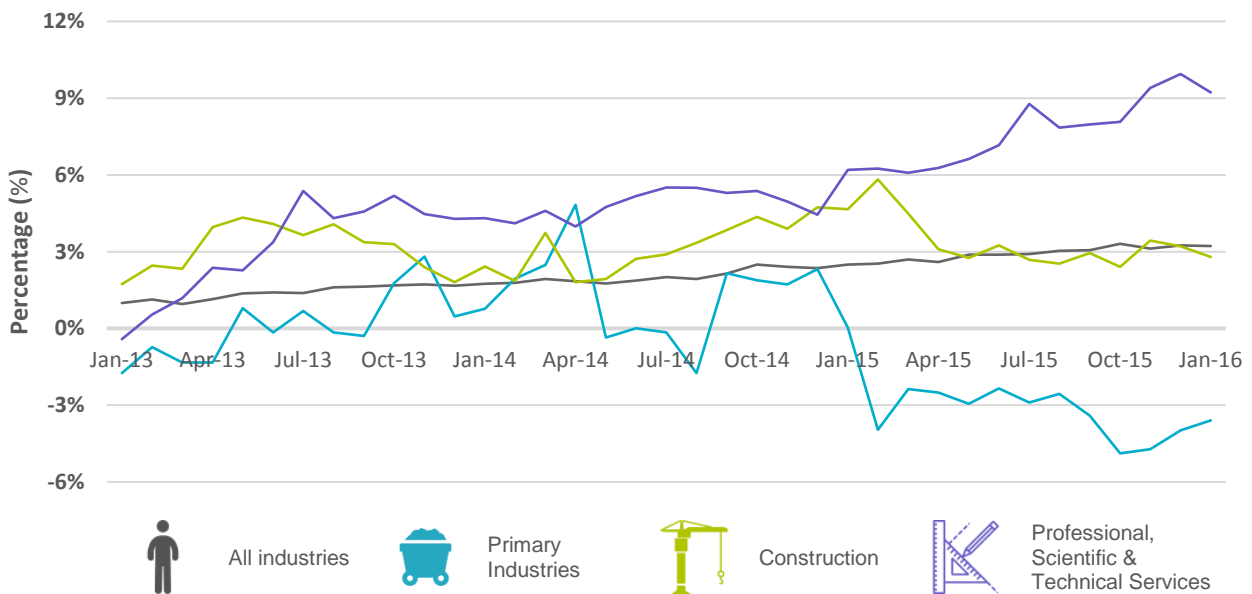
Changes in economic conditions across the country since 2012 have also affected labour availability. This section summarizes information on current human resource availability and forecasts of availability and demands in Canada, the NWT and neighbouring provinces.

3.1 LABOUR IN CANADA

3.1.1 Employment Rate

Overall, the national employment rate has slowed in recent months. Employment declines in natural resource industries, or primary industries, totalled -3.6% (or 13,000) in 2015. This dip has primarily been driven by job losses in the oil and gas sector (Statistics Canada a, 2016). Figure 2 shows the percentage change in Canada's workforce as a whole and for three sectors since 2012: primary industries, construction and professional services. Employment growth in the primary industries continues to lag behind the Canadian average, while employment growth in the professional, scientific and technical services has continued to outperform the national average.

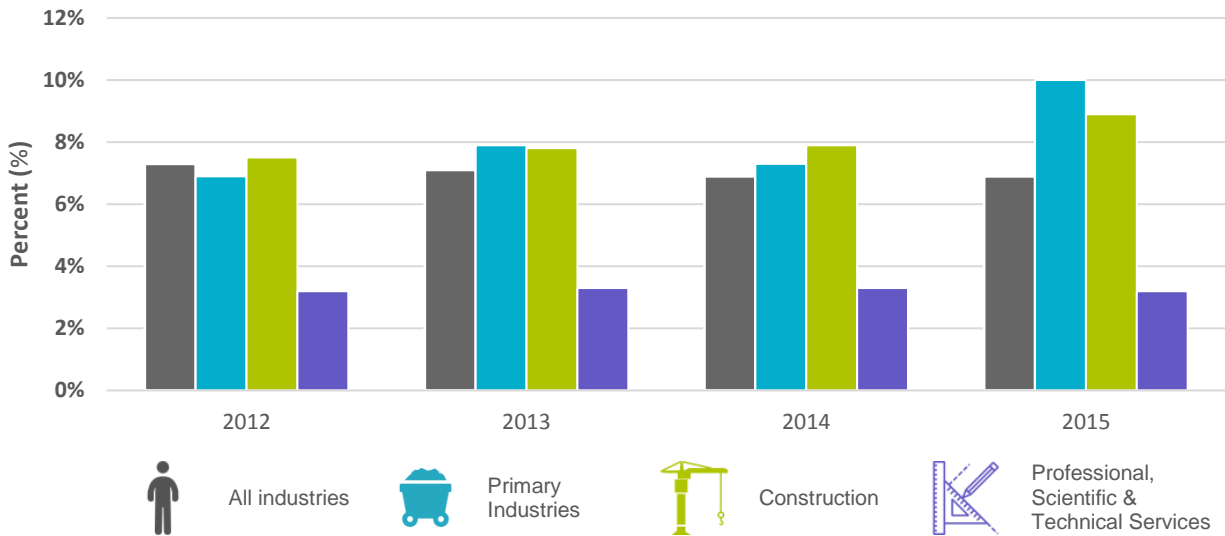
Figure 2: Percentage Change in Canada-Wide Employment, Total and by Select Industry, against 2012 baseline (2013 – 2016)



Source: (Statistics Canada c, 2016)

The national unemployment rate increased in 2015, from 6.6% to 7.2% (Statistics Canada a, 2016). While unemployment rates in mining, quarrying and oil and gas extraction have been fairly consistent with the Canadian average since 2012, certain regions, such as Alberta, have experienced higher than normal unemployment rates in recent months, pushing the unemployment rate in the primary industries higher in 2015 (See Figure 3). If commodity prices remain low, the unemployment rate for the primary industries is expected to stand near 10% in the short to medium term. In the long term, the Canada unemployment rate is projected to trend around 6.7% by 2020 (CBOC a, 2016).

Figure 3: Unemployment Rate, Total and By Select Industry (2012 – 2015)



Source: (Statistics Canada d, 2016)

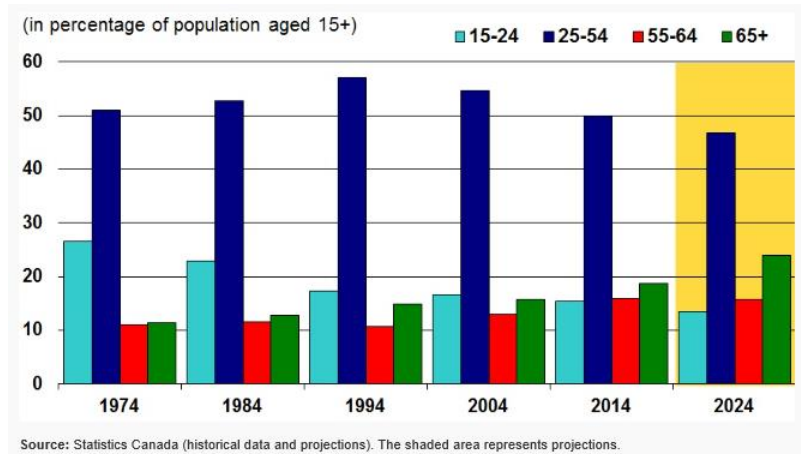
3.1.2 Demographics

Relative to previous decades, Canada is expected to enter into a period of much slower labour force growth which will be heavily influenced by demographic changes, including an aging population and slower population growth (ESDC a, 2016).

Growth in Canada's population of working age people (15 to 64 years) is projected to slow significantly over the period 2015-2024, with an annual average growth rate of 0.9% versus 1.3% in the previous ten year period (2005-2014) (ESDC a, 2016). The projected slowdown in growth of the working age population is primarily driven by aging baby-boomers (born between 1946 and 1965) retiring from the work force. A decline in the natural increase of the population (births minus deaths) attributable to fewer births and a rise in deaths due to population aging, will also contribute to the slowed growth of the working age population (ESDC a, 2016). Increasing life expectancy and the number of immigrants are not expected to offset this deceleration.

The distribution of the working age population in Canada is also going to shift as people in the older age groups will account for a greater share of the working age population. By 2024, those aged 55-64 are projected to represent 16% of the working age population. When added to the percentage of working age population over the age of 65, this means that 40% of the labour force source population will be aged 55 and over by 2024, compared to 35% in 2014 (ESDC a, 2016) (See Figure 4).

Figure 4: Distribution and Projection of the Working Age Population by Age Group, 1974 - 2024



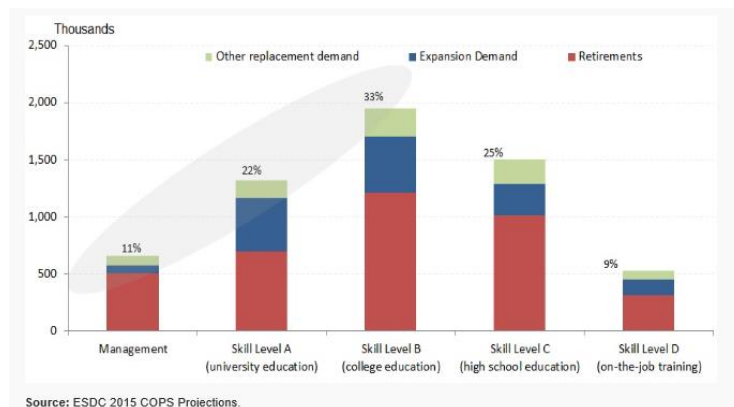
Source: (ESDC a, 2016)

Similar demographic trends are expected in the national mining sector. The Mining Industry Human Resources Council's (MiHR) Labour Market Information Survey found that approximately 40% of Canada's mining labour force was between the ages of 45 and 64 and that individuals in these age categories are among those more likely to retire in the coming decades. The annual retirement rate among the mining industry workforce is projected to rise from about 1.8% in 2015 to 2.5% by 2025 (MiHR a, 2015).

3.1.3 Skill Profile

Over the period 2015-2024, COPS projections show that two-thirds (71%) of the expected job openings (due to economic growth plus replacement needs) are in occupations that usually require post-secondary education (college, university or vocational) or in management occupations (ESDC e, 2016) (See Figure 5).

Figure 5: Job Openings from Expansion and Replacement Demand by Skill Level, 2015 - 2024



Source: (ESDC e, 2016)

During the same period, labour shortages (excess labour demand) are expected in professional and highly-skilled occupations (i.e. occupations usually requiring a college or a university education, or management occupations) including engineers, inspectors, technicians, supervisors in the mining and oil and gas sectors, and underground miners (ESDC e, 2016).

Similar labour shortages are expected in the trades. According to BuildForce Canada's data, collected from construction firms across the country, up to 132,000 skilled tradespeople in the non-residential construction sector alone will retire by 2025. The national skilled workforce that is available now and expected to be trained and recruited is unlikely to meet the combined replacement (retirement) and market expansion requirements in this sector (BuildForce Canada a, 2015). In most provinces, it is expected that hiring requirements for skilled tradespeople will not be met through local hiring. Out-of-province recruitment as well as international immigration will be necessary to meet long-term needs.

In contrast, skill profiles that are projected to face labour surplus conditions (excess supply) over the projection period include mainly low-skilled occupations (i.e. occupations that usually require less than post-secondary education) such as labourers and machine operators (ESDC e, 2016).

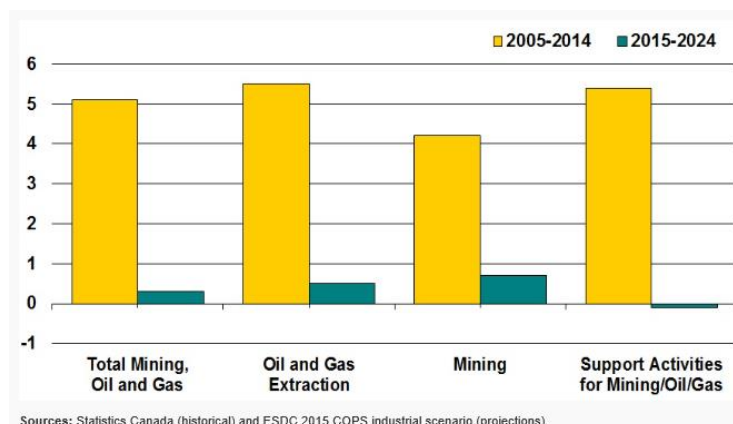
3.1.4 Sectoral Distribution

From a sectoral perspective, distribution of employment is expected to shift further towards the services and construction sectors by 2022 (ESDC g, 2016). Employment growth in the natural resources sector (mining, oil and gas, forestry, logging, agriculture, fishing) is projected to slow over the 2015-2024 period, reflecting job losses and slower job creation in mining, and oil and gas, especially in extraction and support activities. Boosts in public infrastructure investment will lead to employment growth in the non-residential construction sector (civil projects).

Mining

MiHR estimates that the Canadian mining industry directly employed 220,000 people in 2015, a 3% decline from 2014 stemming from sluggish commodity prices and reduced investments in exploration activities (MiHR a, 2015). Despite the recent slowdown in this sector, the pace of job creation in mining and support activities is expected to remain above the annual average of 0.7% anticipated for the overall economy (See Figure 6).

Figure 6: Forecast of Employment Growth in Mining, Oil and Gas, 2015 - 2024



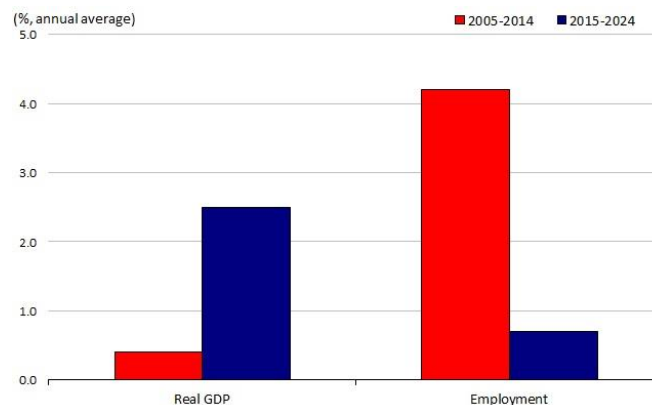
Source: (ESDC g, 2016)

NOTE: The projections above were prepared before commodity prices dropped in late 2015. It is likely that, in the short term, employment growth projections could be much lower; it remains unclear whether and how this would affect the ten-year forecast.

MiHR's cumulative hiring requirement forecasts, which include total recruitment demands, show that over the next decade, the mining industry will need to hire 106,490 workers, based on the current economic climate and forecasted business outlook (MiHR a, 2015). This forecast is in line with the COPS industrial projections

for mining, which show an increase in contributions to real GDP and employment growth in the sector during the period 2015 - 2024 (see Figure 7).

Figure 7: Forecast of Industrial Projection Real GDP and Employment Growth – Mining, 2015 - 2024

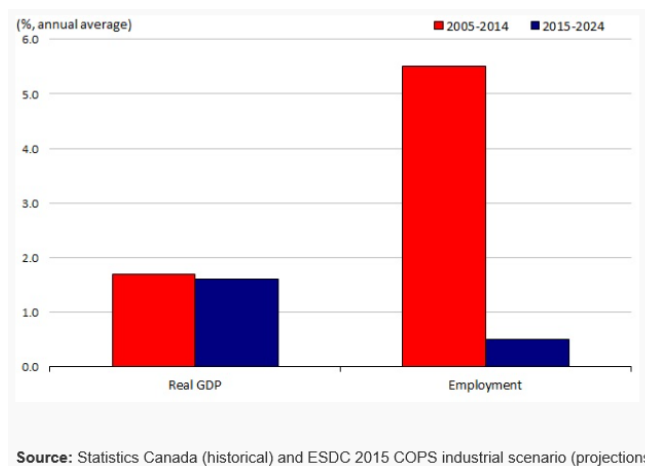


Source: (ESDC c, 2016)

Oil and Gas

Employment growth in oil and gas extraction is expected to weaken substantially compared to the previous decade (see Figure 6). Major investments made in the oil and gas extraction industry over the period 2005-2014 resulted in employment growth that largely exceeded output growth. This situation is reversing dramatically with the low price of oil resulting in a rapid slowdown in the expansion of new oil sands projects which is expected to continue to reduce labour demand during the period 2015-2024 (See Figure 8).

Figure 8: Forecast of Industrial Projection Real GDP and Employment Growth – Oil and Gas Extraction, 2015 - 2024

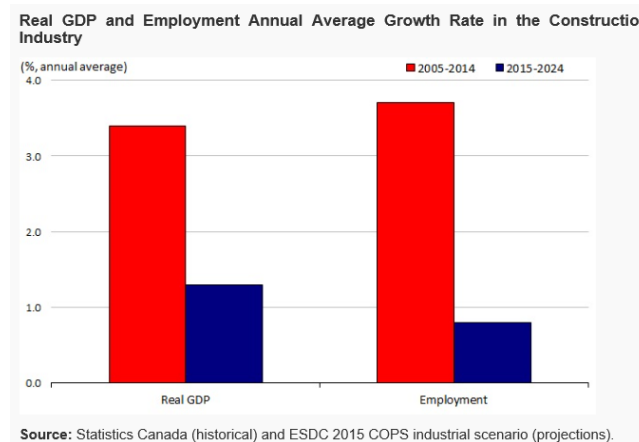


Source: (ESDC g, 2016)

Construction

In recent years, declining investments and project delays and cancellations have slowed growth in the construction sector considerably (BuildForce Canada b, 2015). Investments in engineering structures associated within mining and energy projects are expected to continue to decrease, resulting in slower employment growth over the short to medium term. (See Figure 9)

Figure 9: Forecast of Industrial Projection Real GDP and Employment Growth – Construction, 2015 - 2024



Source: (ESDC g, 2016)

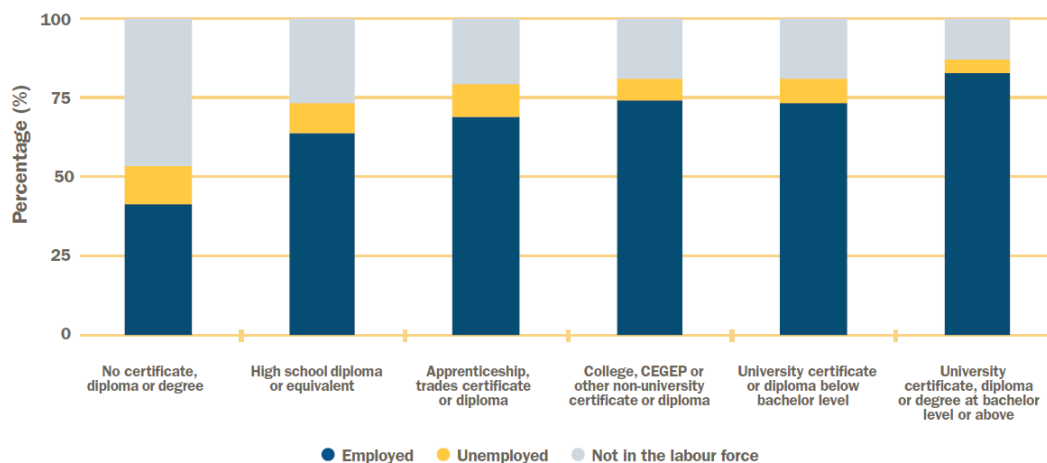
3.1.5 Aboriginal Labour Force

Aboriginal peoples in Canada record a much higher unemployment rate than the Canadian non-Aboriginal unemployment rate. Among Canada's Aboriginal people, the unemployment rate in December 2014 was 9.6%. In comparison, the Canadian unemployment rate in December 2014 was 6.1%. Aboriginal peoples' labour participation rate was 64.3% at the same point, just slightly lower than the overall national participation rate of 65.8%. (ESDC d, 2015)

Educational attainment is one factor related to low participation by Aboriginal peoples. Those with no certificate, diploma or degree are less likely to participate in the labour force, and participation is higher among those with a certificate, diploma or degree. Figure 10 shows this pattern for Aboriginal peoples in Canada.

Figure 10: Labour Market Outcomes among Aboriginal Peoples in Canada, by Educational Attainment

Figure 35: Labour market outcomes among Aboriginal peoples in Canada, by educational attainment (2011)



Source: Mining Industry Human Resources Council, Statistics Canada, 2015

Source: (MiHR a, 2015)

Typically, the mining, oil and gas extraction, and construction sectors report labour shortages in regions where Aboriginal unemployment is high. This suggests that Aboriginal workers do not have the right skills for the available jobs, although other factors including cultural barriers may also be relevant (McKellips, 2015). Targeted skills training for Aboriginal populations can help to increase workforce participation and help Aboriginal peoples prepare for, find and maintain jobs.

3.2 LABOUR IN NWT

3.2.1 Employment Rate

Labour markets in the NWT have been challenged recently. The unemployment rate in January 2016 was 9.4%, the highest for the month of January since 2003. Compared to the same time last year, there were 500 more unemployed persons in January 2016. This increase in unemployment can be largely attributed to lower commodity prices and the resulting economic slowdown in the territory.

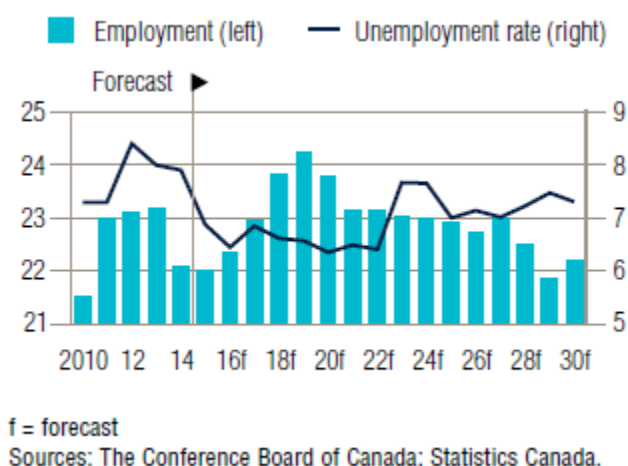
Table 2: Population and Overall Labour Force Activity in the NWT

Year	Population	Labour Force	Employment	Unemployment	Not in labour force	Unemployment rate	Participation rate	Employment rate
2001	28,400	21,800	19,900	1,900	6,600	8.7	76.8	70.1
2002	29,200	22,300	21,000	1,300	6,900	5.8	76.4	71.9
2003	30,200	22,900	21,300	1,600	7,300	7.0	75.8	70.5
2004	30,900	23,600	22,100	1,500	7,300	6.4	76.4	71.5
2005	31,200	23,900	22,700	1,200	7,300	5.0	76.6	72.8
2006	31,200	24,300	23,100	1,200	6,900	5.3	77.9	74.0
2007	31,600	24,700	23,300	1,400	6,900	5.7	78.2	73.7
2008	31,800	23,900	22,500	1,400	7,900	5.9	75.2	70.8
2009	31,700	22,600	21,100	1,500	9,100	6.2	71.3	66.6
2010	32,000	23,200	21,500	1,700	8,800	7.3	72.5	67.2
2011	32,300	24,800	23,000	1,800	7,500	7.3	76.8	71.2
2012	32,400	25,100	23,100	2,000	7,300	8.4	77.5	71.3
2013	32,600	25,100	23,200	1,900	7,500	8.0	77.0	71.2
2014	32,300	24,000	22,100	1,900	8,300	7.9	74.3	68.4
2015	32,100	24,400	22,100	2,300	7,600	9.4	76.0	68.8

Source: (NWT Bureau of Statistics, 2016)

Some job creation is expected over the 2017-2019 period as a result of new mining operations, however, employment levels are expected to decline when mines close (e.g. Ekati and Diavik) and construction on new projects is completed (e.g. Inuvik–Tuktoyaktuk all-season road). There are currently about 22,500 employed residents in the NWT (NWT Bureau of Statistics, 2016). According to a forecast conducted in the summer of 2015, that number could increase to 24,250 by 2019 (CBOC f, 2015). The unemployment rate is also expected to ease over that period to 6.6% in 2019 (See Figure 11). However, these forecasts do not include the recent Snap Lake mine closure and if the economy continues to weaken, by the second half of the 2020s, overall employment levels will likely decline and unemployment will rise. A project-based look at potential employment growth in the NWT is provided in Table 3, which shows new projects and expected number of jobs associated with these projects, based on best available information.

Figure 11: Forecasted Employment and Unemployment in the NWT to 2030



Source: (CBOC f, 2015)

Table 3: Major Projects in the NWT and Projected Labour Demand⁴

PROJECT	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Ekati	1405	1405	1405	1405														
Ekati Jay			635	635	635	1038	1038	1038	1038	1038	1038	1038	1038	1038	1038	1038	282	282
Diavik + A21*	1134	1134	1134	1134	1134	1134	1134	1134										
Snap Lake	70	70	70	70														
Gahcho Kue	700	380	380	380	380	380	380	380	380	380	380	380	380					
Cantung**	254	254																
Prairie Creek**	220	220	220	220	220	220	220	220	220	220	220							
NICO	231	231	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233
Nechalacho		286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286
Inuvik-Tuk Hwy	313	313	313															
Fibre Optic to Inuvik	133																	
GMRP			30	30	30	204	312	254	251	202	162	36						
TOTAL (Excluding GMRP)	4460	4293	4676	4363	2888	3291	3291	3291	2157	2157	2157	1937	1937	1557	1557	1557	801	801

*A21 will allow Diavik to maintain current production rates

**These mine sites are located near the Yukon border, a long distance from the GMRP site and Yellowknife community.

Legend
Construction
Operations
Reclamation

3.2.2 Demographics

The population in the NWT in July 2015 was 44,088 and has remained fairly constant since 2005. Total population is expected to drop below 43,000 residents in 2019 (CBOC f, 2015). Yellowknife is the largest community with 20,637 people. International immigration is expected to add to the territorial population over the next 15 years, but negative net interprovincial migration is expected to continue, drawing down the total population.

The average age in the NWT is 33 years. Despite a relatively young population, the 15-to-24 year old age group is forecast to shrink. Meanwhile, the share of the population aged 65 and over will more than double over the forecast period, from 6.5% in 2014 to 14% by 2030 (See Table 4). These demographic trends will increase the challenges for employers seeking to fill jobs with an in-territory workforce in the future. Labour

⁴ Data was identified through publicly available industry reports and news articles (included in References section).

force participation rate is expected to reach a peak in 2019 at 81.6% and then decline throughout the 2020s to below 75% by 2030.

Table 4: Population Projection Estimates in the NWT

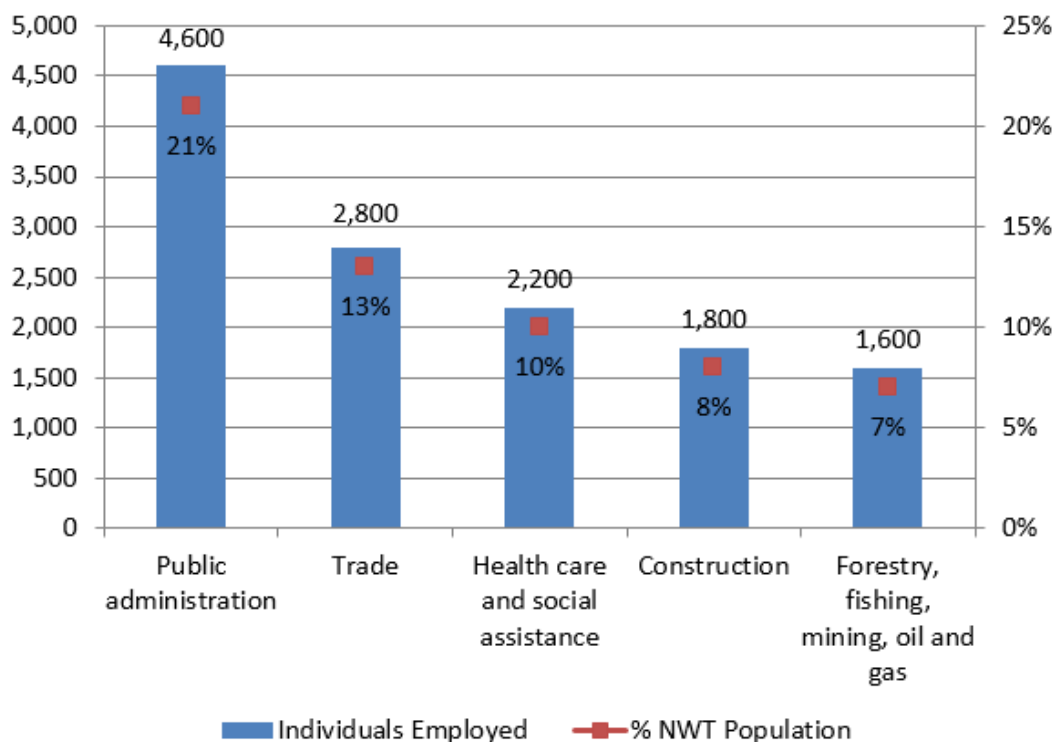
	2011*	2016	2021	2026	2031
Northwest Territories	43,675	44,414	45,330	46,215	47,163
0 - 4	3,342	3,533	3,475	3,377	3,348
5 - 14	5,924	6,059	6,347	6,535	6,478
15 - 24	7,296	6,520	5,967	6,270	6,663
25 - 44	13,656	13,857	14,551	14,119	14,192
45 - 59	9,115	8,642	7,686	7,435	7,532
60+	4,342	5,803	7,304	8,479	8,950
Male	22,405	22,652	22,999	23,347	23,654
Female	21,270	21,762	22,331	22,868	23,509
Aboriginal	22,241	22,957	23,692	24,329	24,802
Non-Aboriginal	21,434	21,457	21,638	21,886	22,361

Source: (NWT Bureau of Statistics, 2016)

3.2.3 Sectoral Distribution

The public sector employs the most people in the territory with over 20% of the population. Mining directly employs just over 6% of the population (roughly 1,600 jobs) (See Figure 12). However, MiHR estimates that the mining industry in the NWT employed roughly 3,690 people in 2013. The difference is the out-of-territory workforce. Mining employers in the NWT rely heavily on the commuter workforce (i.e. people who work at any mine in the NWT and live in another province or territory) that do not take up residency in the territory (CBOC f, 2015). The NWT has the highest proportion among the three territories of commuter workforce and this is not expected to change significantly due to the lack of local, in-territory human resources that are skilled in the mining and construction sectors.

Figure 12: Distribution of Employment Relative to Population in the NWT

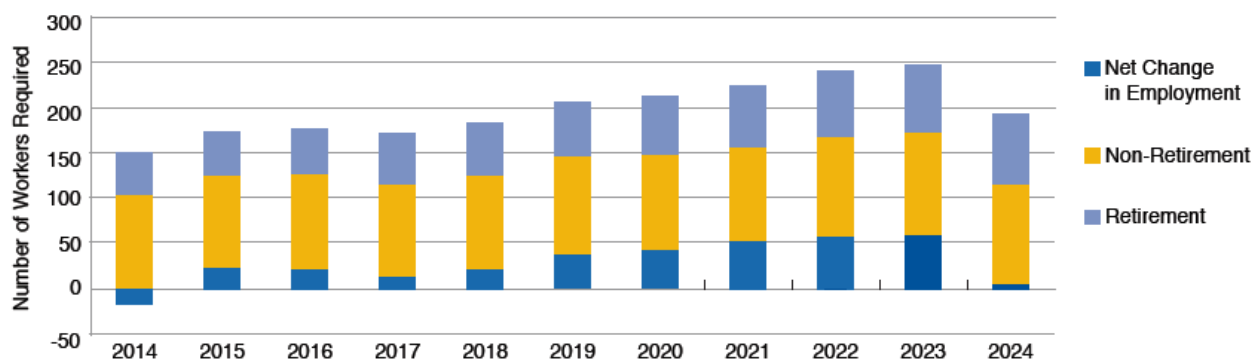


Source: (NWT Bureau of Statistics, 2016)

Mining

Compared to Canada's mining labour force, the NWT's mining labour force is relatively young, has fewer workers in their mid-career and older workers, and supports a large number of commuting workers (i.e. individuals working in the territory but living elsewhere). These factors will be important for future labour force planning in NWT's mining sector. MiHR's forecast for the NWT predicts cumulative hiring requirements of approximately 2,170 additional workers by 2024, under a baseline scenario (MiHR c, 2014). Figure 13 provides MiHR's expected breakdown of future hiring requirements under a baseline scenario, which averages about 200 workers per year.

Figure 13: Distribution of Employment Relative to Population in the NWT



Source: Mining Industry Human Resources Council, 2014

* Captures the collective activity for mining, mining support services and exploration.

Source: (MiHR c, 2014)

At the recent Prospectors and Developers Association of Canada (PDAC) International Convention March 2016 in Toronto, presentations by companies provided some insights on future NWT mining projects and projected resource requirements including the information provided in Table 5.

Table 5: Future NWT Mining Project Resource Requirements

Project	Description	Estimated Employment Needs
Gahcho Kué	A joint venture between DeBeers and Mountain Province Diamonds. This diamond mine is on track for production in 2016.	Estimated labour requirements include 400 operations jobs and 700 construction jobs.
NICO	A gold-cobalt-bismuth copper project by Fortune Minerals. Fortune continues to pursue off-take agreements and financing solutions with the objective of commencing construction activities as soon as project financing is secured.	Estimated employment requirements include 231 construction jobs and 233 operations jobs.
Prairie Creek	Canadian Zinc's project is expected to produce zinc, silver, and lead starting in 2018. Production levels are expected to remain stable for the life of the mine, with operations coming to a close in 2028.	Estimated employment requirements include 220 operations jobs.
Nechalacho (Avalon project; recently renamed)	One of the world's largest undeveloped heavy rare earth elements projects. With a completed feasibility study and an approved environmental assessment in place, initial production is anticipated for 2018 pending financing to begin construction.	Estimated employment needs include 286 workers during operations.

Oil and Gas

Oil production has been in steady decline in the NWT for almost 15 years. Although there has been oil and gas exploration work in recent years, the fall in oil prices along with limited infrastructure in the territory have halted any major projects in oil and gas in the NWT. Labour demands for this sector are expected to be low across the territory.

Construction

A similar situation exists for the construction sector in the NWT. Weak commodity prices and an uncertain financing environment for new mining operations mean that the forecast for construction may be subdued compared to previous years. Publicly funding construction work is expected to provide short to medium-term employment opportunities within this sector.

Overall, employment in the mining sector is forecast to peak around 2019, with construction employment expected to reach its highest level around 2025 (CBOC f, 2015). Even in an optimistic development scenario, upcoming projects are not likely to replace the decreased employment demand from the pending closures of major diamond mines (i.e. Ekati and Diavik, on top of the recent closure of Snap Lake) in the medium term.

3.2.4 Skills Profile

Based on the major projects outlook for the NWT, along with demographic information, the territory may be facing occupational shortages in the areas of construction, trades and engineering occupations. The demand for these skill profiles is expected to grow dramatically. Table 6 provides BuildForce Canada's estimates of labour requirements for various trades in the NWT, Yukon and Nunavut over the next few years. The largest requirement is for heavy equipment operators, followed by trades helpers and labourers, and truck drivers.

Table 7 shows the projected breakdown of trades required based on project timelines. The peak year for requirements is projected to be in 2017 at 1,200 workers.

Table 6: Construction Trades Demand by Territory

Trades and occupations	Northwest Territories	Yukon	Nunavut	Total
Boilermakers	37	45	23	105
Construction estimators	94	87	45	226
Construction managers	50	55	28	133
Construction millwrights and industrial mechanics (except textile)	12	13	7	32
Contractors and supervisors	101	110	57	268
Crane operators	121	136	70	327
Drillers and blasters	110	128	66	304
Electricians	11	13	7	31
Heavy equipment operators (except crane)	1,120	1,152	593	2,865
Heavy-duty equipment mechanics	84	79	40	203
Ironworkers and structural metal and platework fabricators and fitters	61	68	35	164
Sheet metal workers	3	4	2	9
Steamfitters, pipefitters and sprinkler system installers	12	13	7	32
Trades helpers and labourers	485	412	212	1,109
Truck drivers	235	223	115	573
Welders and related machine operators	93	98	50	241
Total	2,629	2,636	1,357	6,622

Sources: Yukon Economic Development, NWT Bureau of Statistics, Nunavut Bureau of Statistics, company websites and BuildForce Canada

Source: (BuildForce Canada b, 2015)

Table 7: Projected Construction Trades Demand within the Territories (all major projects)

Trades and occupations	2014	2015	2016	2017	2018	2019–2023*
Boilermakers	6	7	6	19	19	21
Construction estimators	16	18	16	41	41	40
Construction managers	8	9	8	24	24	25
Construction millwrights and industrial mechanics (except textile)	2	2	2	6	6	6
Contractors and supervisors	17	19	17	48	48	50
Crane operators	20	23	20	59	59	62
Drillers and blasters	18	21	18	55	55	59
Electricians	2	2	2	6	6	6
Heavy equipment operators (except crane)	189	210	187	518	518	526
Heavy-duty equipment mechanics	14	16	14	37	37	36
Ironworkers and structural metal and platework fabricators and fitters	10	11	10	30	30	31
Sheet metal workers	1	1	1	2	2	2
Steamfitters, pipefitters and sprinkler system installers	2	2	2	6	6	6
Trades helpers and labourers	84	92	84	202	202	188
Truck drivers	40	44	40	104	104	102
Welders and related machine operators	16	17	15	44	44	45
Total	446	495	441	1,201	1,201	1,205

Sources: Yukon Economic Development, NWT Bureau of Statistics, Nunavut Bureau of Statistics, company websites and BuildForce Canada

* As all current and proposed projects end by 2023, there are no employment numbers for the final years of the scenario in 2024 and 2025.

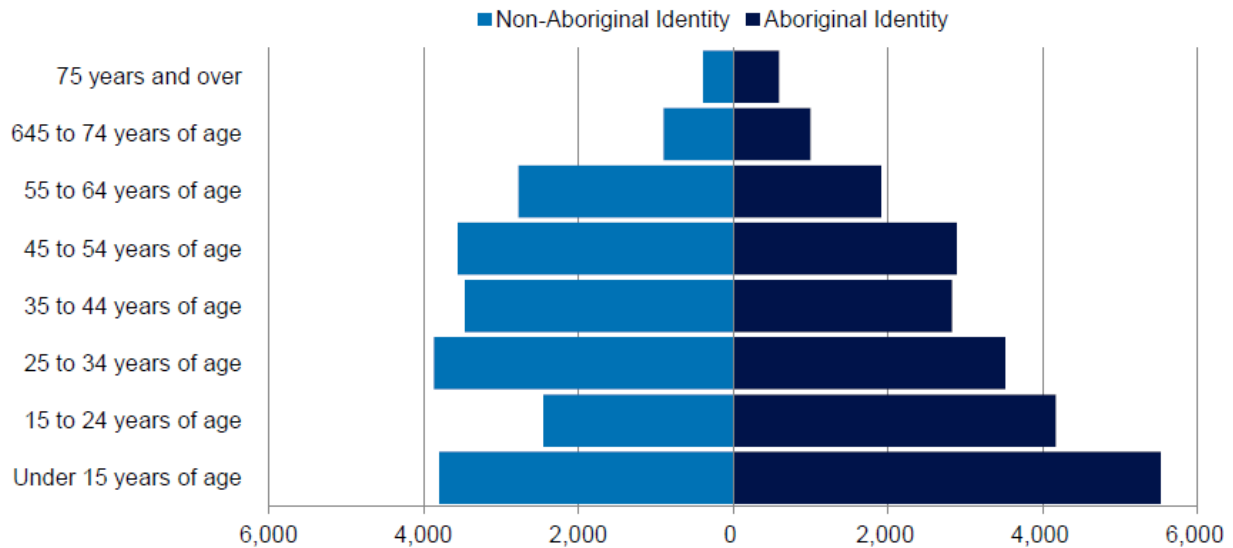
Source: (BuildForce Canada b, 2015)

MiHR also projects significant hiring requirements for the trades and production occupations in their territorial hiring requirement forecasts (MiHR c, 2014). The future need for professionals and supervisors is also noted by MiHR. Although fewer overall positions will be required in these categories, it may be more of a challenge or require longer term planning to fill these positions compared with other categories given the education and job experience requirements needed to replace retiring workers in this category.

3.2.5 Aboriginal Labour Force

Large differences exist between the Aboriginal and non-Aboriginal sub-population in the NWT when comparing demographics, skills attainments and occupational categories. The Aboriginal population is significantly younger than the non-Aboriginal population and about 50% of the working age population (15 and older) is Aboriginal (see Figure 14). Over the next few decades, these young Aboriginal people will represent a large portion of the future labour force in the territory.

Figure 14: Aboriginal and Non-Aboriginal Population in the NWT – 2014



Source: 2014 Northwest Territories Community Survey.

Source: (CBOC g, 2015)

A significant proportion, nearly 40%, of Aboriginal peoples do not participate in the NWT's labour force, and the unemployment rate in 2014 was 19.8%, significantly higher than the 3.5% unemployment rate for non-Aboriginals in the NWT. A much greater number of Aboriginal peoples in the NWT have some or no high school education compared to non-Aboriginals (see Table 8). The labour participation rate is much lower for the Aboriginal population (64.9%) compared to non-Aboriginals (81.7%) in NWT. These statistics highlight the importance of access to employment opportunities, especially skills development initiatives and training programs that aim to improve the likelihood of Aboriginal labour force participation and employment in the NWT.

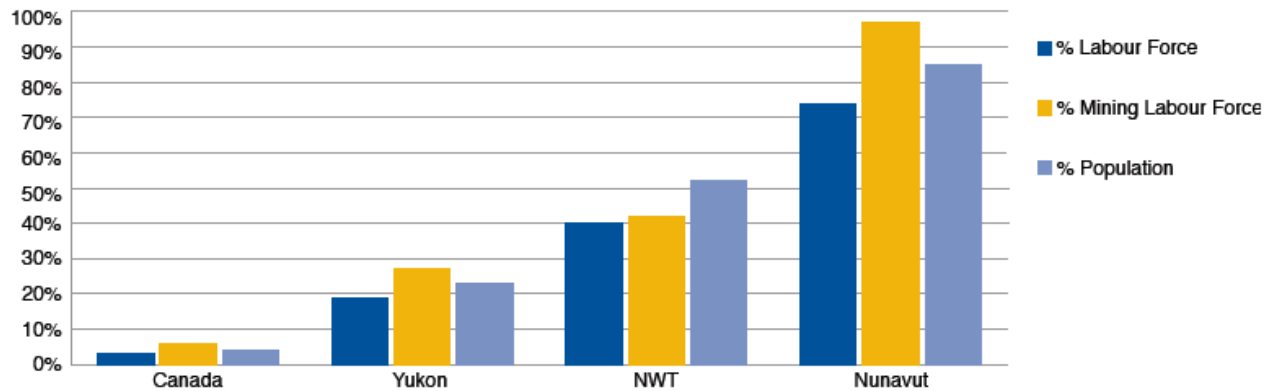
Table 8: Labour Force Activity and Highest Level of Schooling in the NWT

	Population 15 & Older	Labour Force	Employed	Unemployed	Participation Rate (%)	Unemployment Rate (%)	Employment Rate (%)
All Persons	34,087	25,014	22,353	2,661	73.4	10.6	65.6
Less than Grade 9	2,219	972	696	276	43.8	28.4	31.4
High School, No Diploma	6,333	3,471	2,528	943	54.8	27.2	39.9
High School Diploma	7,813	5,360	4,771	589	68.6	11.0	61.1
Other Certificate or Diploma	10,566	9,042	8,381	661	85.6	7.3	79.3
University Degree	6,698	6,056	5,903	154	90.4	2.5	88.1
Not Stated	458	112	74	38	24.5	33.9	16.2
Aboriginals	16,837	10,919	8,753	2,166	64.9	19.8	52.0
Less than Grade 9	2,024	820	550	270	40.5	32.9	27.2
High School, No Diploma	5,171	2,762	1,881	881	53.4	31.9	36.4
High School Diploma	3,589	2,519	2,069	450	70.2	17.9	57.6
Other Certificate or Diploma	4,816	4,004	3,484	520	83.1	13.0	72.3
University Degree	790	706	699	7	89.4	1.0	88.5
Not Stated	447	108	70	38	24.2	35.2	15.7
Non-Aboriginals	17,250	14,094	13,599	495	81.7	3.5	78.8
Less than Grade 9	195	152	146	6	77.9	3.9	74.9
High School, No Diploma	1,161	709	647	62	61.1	8.7	55.7
High School Diploma	4,224	2,841	2,702	139	67.3	4.9	64.0
Other Certificate or Diploma	5,750	5,038	4,897	141	87.6	2.8	85.2
University Degree	5,908	5,350	5,204	147	90.6	2.7	88.1
Not Stated	11	8	4	4	72.7	50.0	36.4

Source: (NWT Bureau of Statistics, 2015)

From a sectoral perspective, Aboriginal representation in the NWT mining sector was lower than in the population as a whole when compared to other territories and Canada as a whole (MiHR c, 2014). This suggests there is an opportunity in the NWT to better engage the region's Aboriginal people in this sector. (See Figure 15)

Figure 15: Aboriginal Participation in Mining, Canada and Northern Territories – 2011



Source: Mining Industry Human Resources Council, Statistics Canada, 2014

Source: (MiHR c, 2014)

MiHR has identified the following barriers that restrict Aboriginal participation in certain mining occupations:

- Employer and potential employee perceptions that educational and skills levels do not meet entry requirements
- Limited employer awareness of how to find and recruit candidates and how to incorporate cultural norms into their hiring processes, and
- Need for improvements in human resource aspects of various partnership agreements (i.e. Impact Benefit and Socio-economic Agreements).

Yellowknife

In 2014, there were approximately 3,600 Aboriginal people and 12,300 non-Aboriginal people living in Yellowknife. Compared to other communities, a larger proportion of Aboriginal people in Yellowknife (77%) have higher level education (e.g. high school, certificate or diploma, university degree) than Aboriginal peoples in the rest of the territory (49%) (NWT Bureau of Statistics, 2015). This indicates there may be more skilled Aboriginal workers to draw on in Yellowknife.

3.3 LABOUR IN NEIGHBOURING REGIONS

This section provides a snapshot of recent changes to the unemployment rate and human resource demand in certain sectors within the neighbouring jurisdictions of British Columbia, Alberta and Saskatchewan.

British Columbia (Statistics Canada d, 2016)	
<ul style="list-style-type: none"> • Collectively, the construction, primary industries and professional, scientific and technical services industries accounted for 19% of the province's employment in 2015 – a number that has held fairly stable over the past four years. • The unemployment rate of the primary industries in British Columbia increased in 2015, from 7.1% to a high of 10.2%. Interestingly, unemployment in the construction industry fell over the same period, from 6.4% in 2014 to 5.7% in 2015. • The professional, scientific and technical services industry held relatively stable, with an unemployment rate of 3.3% in 2015. 	

Alberta (Statistics Canada d, 2016)
<ul style="list-style-type: none"> • In Alberta, the construction, primary industries and professional, scientific and technical services industries accounted for 26% of employment in 2015, remaining fairly stable over the past four years. • 2015 saw the unemployment rate for the primary industries in Alberta double from 3.8% to 7.7% over the period of one year. The construction industry's unemployment rate also rose over the same period, less drastically, from 5.1% to 6.8%. • The professional, scientific and technical services industry was also heavily hit, with the unemployment rate more than doubling to 4.5% in 2015 from 2.1% in 2014.
Saskatchewan (Statistics Canada d, 2016)
<ul style="list-style-type: none"> • Collectively, the construction, primary industries and professional, scientific and technical services industries accounted for 19% of the province's employment in 2015 – a number that has held relatively stable over the past four years. • In 2015, the unemployment rate for the primary industries was 8.1%, more than double the 2014 rate of 3.1%. Similarly, the construction industry's unemployment rate rose from 5.3% to 8.5% over the same time period. • Professional, scientific and technical services have a comparatively low and stable unemployment rate at 2.3%.

Increasing unemployment rates in those industries with similar workforce requirements to the GMRP will likely lead to an increased supply and less competition for human resources in the short term. However, this continues to be a dynamic situation, heavily influenced by unpredictable commodity prices.

4 Northern Aboriginal Businesses

A list of Northern Aboriginal businesses within the project area was identified through interviews with the Aboriginal governments and organizations identified below, supplemented with desktop research. The Deninue K'ue First Nation were also contacted, but they were not available to participate. This list was developed to assist the GMRP in identifying or engaging with relevant Northern Aboriginal businesses in advance of request for proposal postings, to maximize local employment.

Organization	Individuals
Tłıchq Investment Corp.	Kelly Brenton, CEO
Det'on Cho Corporation	Bob Murphy, President and CEO; Gord Kirby, General Manager; Nyasha Magony, Human Resources Manager
Yellowknives Dene First Nation (YKDFN)	William Lyons, Community Liaison
Det'on Cho Logistics	Matthew Mossman, President
Northwest Territory Métis Nation	Garry Bailey, President
North Slave Métis Alliance (NSMA)	Bill Enge, President
Lutsel K'e Dene First Nation (LKDFN) Denesoline Corporation Ltd.	Jesse Weng, Operations / Project Manager

Many of the above Aboriginal organizations have numerous joint ventures established through their development corporations to diversify their service offerings.

The complete listing we have prepared for Northern Aboriginal businesses (see Appendix A: NWT Aboriginal Business Listing) includes the following information for each business:

- Business name
- Organizational structure (e.g. Joint venture, wholly owned subsidiary, corporation, etc.)
- Business office location(s)
- Applicable employee categories (e.g. Tłıchq, Akaitcho, YKDFN, etc.)
- Overview of firm services
- Skill offerings applicable to GMRP
- Number of employees
- Contract experience (e.g. clients, projects, total sales)
- Key contact(s)

A list of Northern (i.e. NWT) businesses can be found in the GNWT Business Incentive Policy (BIP) registry at <http://www.bipregistry.nt.ca/Public/BIPBusinessSearch.asp?Page=BIPBusinessSearch&Action=View>.

5 Summary of GMRP Resource Requirements

This section summarizes the GMRP labour requirements and what reasonable number of Aboriginal and Northern employees the GMRP could strive to hire, contract or sub-contract. For details on the GMRP labour requirements by work type (e.g. underground, care and maintenance, etc.), see Appendix B: GMRP Labour Requirements. These numbers will require further validation and refinement by INAC Project Leads and the MCM as the project design advances.

5.1 GMRP LABOUR REQUIREMENTS

Table 9 outlines the total FTEs required by GMRP per year by occupation. Some FTEs may not be year-round staff, due to the seasonal nature of some of the work. More detailed numbers by position (where there are multiple positions per occupation) and by work type (e.g. underground, care and maintenance, etc.) are provided in Appendix B: GMRP Labour Requirements.

Table 9: Total Anticipated Number of FTEs per Year across Occupations, Totals

Category	Occupation	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total Years
Entry Level		0	0	2	2	2	24	47	43	37	32	30	3	0	0	0	0	0	222
Semi-Skilled		0	0	2	2	2	64	98	81	83	80	64	15	0	0	0	0	0	491
	Truck Driver	0	0	0	0	0	35	57	44	44	43	36	5	0	0	0	0	0	264
	Equipment Operator	0	0	1	1	1	26	38	34	39	37	28	10	0	0	0	0	0	215
	Drilling Support	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	6
	Admin Support	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	6
Skilled		0	0	25	25	25	108	154	115	124	84	63	17	0	0	0	0	0	740
	Technician	0	0	13	13	13	28	34	27	27	27	21	3	0	0	0	0	0	206
	Trades	0	0	8	8	8	31	64	34	50	25	17	1	0	0	0	0	0	246
	Surveyor	0	0	1	1	1	6	6	7	6	4	4	1	0	0	0	0	0	37
	Surface Drilling	0	0	0	0	0	21	21	21	20	8	6	6	0	0	0	0	0	103
	Blasting/Drilling	0	0	0	0	0	5	5	5	8	8	4	4	0	0	0	0	0	39
	Underground Miner	0	0	3	3	3	9	5	5	0	0	2	0	0	0	0	0	0	30
	Supervisor	0	0	0	0	0	8	19	16	13	12	9	2	0	0	0	0	0	79
Professional		0	0	1	1	1	8	13	15	7	6	5	1	0	0	0	0	0	58
	Management	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Environmental	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	4
	Safety	0	0	1	1	1	7	11	9	6	5	4	1	0	0	0	0	0	46
	Engineer	0	0	0	0	0	1	1	5	0	0	1	0	0	0	0	0	0	8
Total Employees per year		0	0	30	30	30	204	312	254	251	202	162	36	0	0	0	0	0	1511

Source: (Merit, 2016)

5.1.1 Northern and Aboriginal Resource Requirements

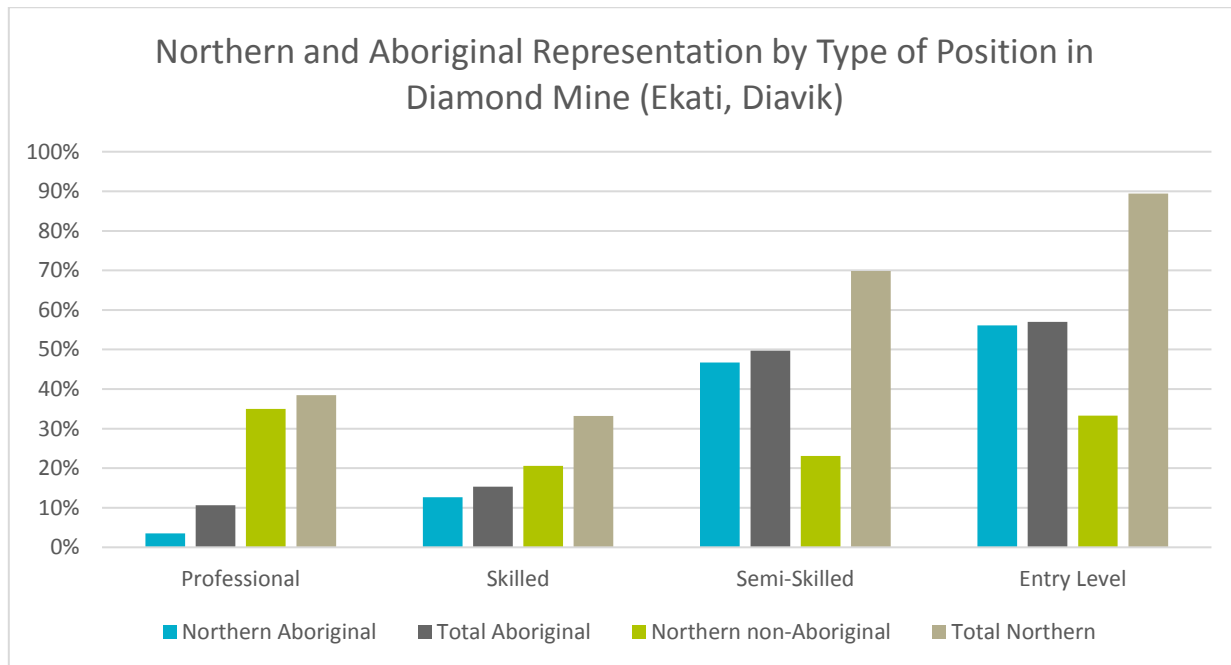
The numbers below are representative of the average proportion of Northern and Aboriginal employees at the Ekati and Diavik diamond mines in 2014. As can be viewed in Table 10 and Figure 16 below, approximately 50% Northern Aboriginals represent entry-level and semi-skilled employees, while far less represent skilled and professional employees. Northerners represent a larger proportion of the workforce, also especially in the entry-level and semi-skilled categories. These proportions can be applied to the GMRP to inform potential Northern and Aboriginal employee targets.

Table 10: Diavik and Ekati Northern and Aboriginal Labour, 2014

	Northern Aboriginal ⁵	Total Aboriginal ⁶	Northern ⁷ non-Aboriginal	Total Northern
Professional	3.6%	10.7%	34.9%	38.5%
Skilled	12.7%	15.4%	20.6%	33.2%
Semi-Skilled	46.7%	49.7%	23.1%	69.8%
Entry Level	56.1%	57.0%	33.3%	89.4%

Source: (Dominion Diamond, 2014; DDMI, 2014)

Figure 16: Northern and Aboriginal Representation by Type of Position in Diamond Mine (Ekati, Diavik)



Diavik also provides employee data on a community basis. The data indicated Yellowknife and Dettah supplied the greatest number of Northern Aboriginal employees for Diavik.

⁵ Northern Aboriginal is defined by Ekati as a self-declared Aboriginal who is indigenous to the NWT or Nunavut and resides in the North. It is defined by Diavik as a self-declared Aboriginal person born in or descendant of an Aboriginal person born in the NWT or the West Kitikmeot region of Nunavut, and who is residing in that region.

⁶ Aboriginal is defined by Ekati as a self-declared Aboriginal who is indigenous to the NWT or Nunavut and resides anywhere. It is defined by Diavik as a self-declared First Nations, Inuit or Métis person in Canada.

⁷ Northern is defined by Ekati as any resident in the NWT or Nunavut. It is defined by Diavik as any resident in the NWT or the West Kitikmeot region of Nunavut.

6 Analysis of GMRP Requirements vs. Forecast Available Resources

This section outlines skillsets needed by GMRP that are available, or not, in the NWT. It also identifies challenges and opportunities particular to the surrounding NWT communities, with a focus on Aboriginal and Northern labour.

6.1 GENERAL TRENDS

The following subsections summarize the implications of current economic conditions and human resource availability and demands in Canada and the NWT to the GMRP (see Sections 2 and 3 for further details).

6.1.1 Economic Downturn

The Canadian economy has experienced a recent economic downturn, particularly in the energy and mining sectors (CBOC a, 2016). The NWT similarly has a weak economic outlook, with the recent shutdown of the Snap Lake diamond mine (De Beers, 2015), postponement of new projects, and the planned closure of at least one major diamond mine, Diavik, by 2024 (CBOC f, 2015). **All of this leads to the expectation that there will be a greater supply of mine sector workers than there is demand for them, allowing the GMRP to recruit the workers needed for the project.** However, this continues to be a dynamic situation and is heavily influenced by volatile and unpredictable commodity prices.

6.1.2 Aging Workforce

The NWT has a younger mining workforce than Canada overall, although it is expected that the workforce will age significantly by 2030, which will increase challenges for employers seeking to fill jobs with an in-territory workforce in the future (NWT Bureau of Statistics, 2016). **As GMRP is expected to conclude by 2032, this may have some affect the project, but this is not expected to be pronounced.**

6.1.3 Labour Shortages

Canadian labour shortages are expected in professional and highly-skilled occupations including engineers, technicians, supervisors, and managers, as well as in trades in the mining sector (ESDC e, 2016). Based on the demographic information and the major projects outlook, the **NWT is expected to face occupational shortages in construction, trades and engineering occupations.**

6.1.4 Labour Surpluses

Canadian labour surplus conditions are expected in low-skilled occupations e.g. labourers and equipment operators (ESDC e, 2016). No labour surplus conditions were noted for the NWT.

6.2 NWT WORKFORCE CONSIDERATIONS

6.2.1 NWT Aboriginal Workforce

The NWT Aboriginal population is significantly younger and represents 50% of the working age population in the NWT. Aboriginal unemployment is significantly higher than non-Aboriginal unemployment, workforce participation is lower, and Aboriginal representation in the mining sector is also comparatively lower (NWT Bureau of Statistics, 2015). However, small local communities (SLCs) near the diamond mines have seen workforce participation rates increase in the past decade, which could be a new trend or a response to the increased education levels over the past decade (GNWT, 2015). **The Aboriginal workforce may therefore grow over time, due to increased participation rates.**

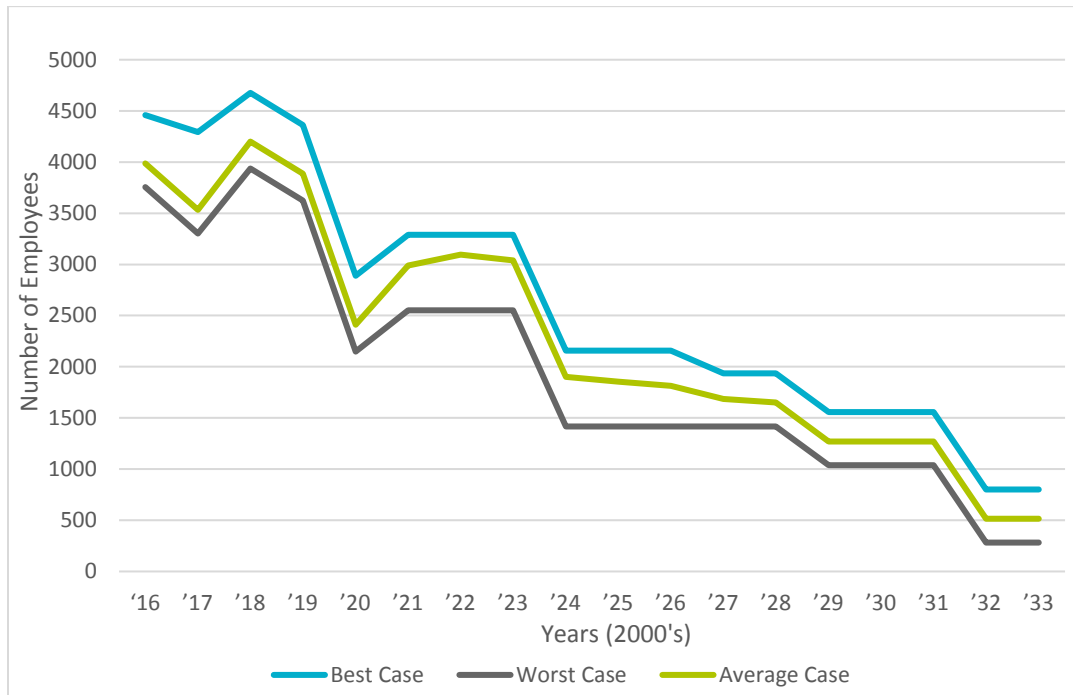
6.2.2 Commuter Workforce

The NWT has the highest proportion among the three territories of a commuter (i.e. out-of-territory) workforce, and this is not expected to change due to the lack of local, in-territory human resources (CBOC f, 2015). **An awareness of immigration support programs (see section 7.2) will be important to ensure the GMRP labour needs are met.**

6.2.3 NWT Mining Project Timelines

As Table 3 in Section 3.2.1 indicates, NWT mining and construction sector employment is expected to consistently decrease from 2016 to 2033. Construction employment, in particular, is expected to significantly drop in 2019.

Figure 17: NWT Project Scenarios



The GMRP's peak years of employment are expected to be from 2021 to 2026, which aligns with significant drops in employment seen in other projects. **There is an opportunity for the GMRP to hire mining and construction sector workers that may be recently unemployed due to closures or slowdowns in other NWT projects. The GMRP should consider targeting its communication of job opportunities accordingly (i.e. communicating to former employees of Ekati, which is expected to close in 2019).**

6.3 COMMUNITY SPECIFIC CONSIDERATIONS

The GMRP is located close to Yellowknife's city centre, within the asserted traditional territory of the Akaitcho Territory Dene First Nations, within the extended Monfwi (Môwhi Gogha Dè Nîitâèè) boundary as defined in the *Tłı̨chǫ Land Claim and Self Government Agreement* and adjacent to, or on the boundary of, the Interim Measures Agreement Area of the Northwest Territory Métis Nation. The communities affected by the above mentioned territory agreements are listed in Table 11 below, in addition to the City of Yellowknife, due to its proximity to the GMRP. The subsections that follow provide information relevant to these identified communities.

Table 11: GMRP Communities

Aboriginal government/group	Relevant Communities
Akaiicho Territory Dene First Nations	Ndilo Dettah Łutselk'e Fort Resolution
Tłıchq	Behchokq Gameti Whati Wekweètì
Northwest Territory Métis Nation	Fort Smith Fort Resolution (also listed under Akaiicho Territory Dene First Nation) Hay River Yellowknife
North Slave Métis Alliance	Behchokq (also listed under Tłıchq) Yellowknife

6.3.1 Communities' Potential Available Workforce

Table 12 provides two key indicators to represent a community's potential available workforce, as of 2014. The first is the unemployed workforce, which indicates the number of unemployed persons seeking and available for employment, by community. This does not indicate whether these persons have appropriate education or training for GMRP positions.

The second indicator is new workforce potential, which represents the number of residents 15 years of age and over that are neither currently employed, nor seeking employment. It is possible that some portion of this category may become interested in employment moving forward within the project timeline. Additionally, these communities have seen an increase in education rates over the past decade, improving the likelihood of community members competing for semi-skilled, skilled or professional occupations.

These two indicators demonstrate that it should be possible to partially fulfill the labour needs of the GMRP with the local Aboriginal workforce, provided that the currently unemployed and potential workforce are provided with the appropriate level of education and/or training to allow them to meet GMRP's position requirements.

Table 12: Workforce Potential by Community, 2014

Communities	Total Population	Aboriginal Population	Unemployment Rate	Unemployed Workforce	Participation Rate	New Workforce Potential ⁸
Behchokq	2,066	93%	57%	272	57%	1,197
Whati	505	95%	67%	81	61%	315
Gameti	276	98%	57%	34	57%	152
Wekweètì	128	92%	69%	13	69%	93
Ndilo ⁹	345	--	35%	140	56%	193
Dettah	253	100%	70%	49	42%	176
Yellowknife	20,497	24%	79%	590	63%	16,386
Łutselk'e	307	90%	69%	40	70%	218
Fort Smith	2,542	59%	7%	98	70%	1,749

⁸ New workforce potential is calculated by multiplying the community population by the non-participation rate i.e. 100% - participation rate.

⁹ Population from 2011 census

Fort Resolution	508	90%	33%	89	68%	347
Hay River	3,727	45%	7%	162	76%	2,846

Source: (NWT Bureau of Statistics, 2014)

6.3.2 Communities' Existing Skills

The communities' existing skills were identified through two sources of information:

1. Northern Aboriginal business listing (see Appendix A: NWT Aboriginal Business Listing), i.e. services provided.
2. Interviews with individuals from Aboriginal communities and business organizations (see Appendix C: Aboriginal Community Profiles), through which Stratos identified skills that exist within particular Aboriginal communities. Aboriginal community members that have completed or are in the process of completing training programs were also included in the identified existing skills.

A numbers of assumptions were made in matching Northern Aboriginal business service offerings with GMRP occupations and positions. These assumptions are detailed in Appendix A: NWT Aboriginal Business Listing.

Table 13 summarizes existing skills by occupation and position, as identified by Appendix B: GMRP Labour Requirements.

Table 13: Northern Aboriginal Existing Skills

Category	Occupation	Position	Northern Aboriginal Business Skills	Northern Aboriginal Community Skills
Entry Level	Labourer	General Labourer	X*	X
		Flag Person	X*	
Semi-Skilled	Truck Driver	Atriculated dump truck	X*	X
		5 Ton (Mixer/Water/Flat Deck w Picker/Vac/Tandem Dump/Compactor)	X*	
		Skid Steer / Telehandler / Mini Excavator/Manlifts	X*	
	Equipment Operator	Excavator	X*	X
		966 Loader	X*	
		Grader operator	X*	
		Dozer operator	X*	
		Jumbo operator	X*	
		LHD operator	X*	
		U/G Dump Truck	X*	
		U/G man carriers	X*	
	Drilling Support	Driller's helper	X*	
		Rod man	X*	
	Admin Support	Clerk		X
Skilled	Technician	Lead instrument technician		
		Instrument technician	X	
		Technician - GeoFabric Liner Welder	X	
		Technician - Environmental	X*	
		Technician - Civil		
		ETP operator	X	X
		Crusher/ screener operator	X	
		Security Personnel	X	X
	Trades	Carpenter	X	X
		Ironworker (Rebar or Structural)	X	
		Trades Supervisor	X	
		Crane Operator		
		Mechanic	X	
		HVAC	X	

Category	Occupation	Position	Northern Aboriginal Business Skills	Northern Aboriginal Community Skills
		Electrician	X*	X
		Millwright		
		Pipe fitter	X	
		Pipe welder	X	X
		Hazmat crew workers		X
		Hazmat FM		X
	Surveyor	Quantity surveyor	X	
		Surveyor	X	
	Surface Drilling	Driller	X*	
		Driller's helper	X*	
	Blasting/Drilling	Surface driller	X*	
		Surface blaster	X*	
		Underground driller		
	Underground Miner	Underground shift boss	X	
		Underground miners	X	X
	Supervisor	Project Manager	X*	
		Supervisor	X	
		Shift foreman	X	
Professional	Management	Planner	X	
		Accountant		
	Environmental	Environmental superintendent	X*	
		Environmental monitor	X*	
	Safety	Safety supervisor		
		Safety officer		
		Underground safety		
	Engineer	Civil engineer	X	
		Mining engineer	X	
		Chemical engineer	X	
		Mechanical engineer	X	
		Electrical engineer	X	

Legend for Tables 13 and 14:

X – Some supply available

X* - More than three suppliers

Italics – No GMRP labour needs identified (Merit, 2016)

Other skill categories were identified through both the Northern Aboriginal business listing and the Northern Aboriginal community interviews, which may be relevant to the GMRP. These other skill categories are listed in Table 14, below.

Table 14: Other Category Occupations/Positions

Other Category	Northern Aboriginal Business Skills	Northern Aboriginal Community Skills
Catering	X	X
Housekeeping / Janitorial	X	
Shotcrete	X	
Trucking Transportation (e.g. freight delivery)	X*	
Trucking Transportation – Fuel Hauls	X	
Bus Transportation	X	
Emergency Response	X	
Road Construction	X	X
Home Construction	X	
Air Transportation	X*	X
Cost Estimation	X	
Training	X	
Community Engagement	X	
Aboriginal Engagement	X	
Environmental Engineer	X	
Leadership Development / Business Management		X
Boating		X
Timber Harvesting		X
Logistics	X	
Concrete Operations	X	
Medical Services	X	

Some Northern Aboriginal businesses identified provide equipment that may meet GMRP's needs (rather than services). Equipment suppliers were identified for the following categories:

- Tires
- Lubricants
- Heavy equipment rentals
- Pipe/pump parts
- HVAC systems
- Ground support systems
- Food

Overall, Table 13 indicates that **there is Northern Aboriginal business capacity for most GMRP entry-level and semi-skilled occupational needs**, as well as in surface blasting. There is limited or no Northern Aboriginal business capacity in the remaining GMRP skilled and professional occupation needs. There are also additional services and goods that Northern Aboriginal businesses offer that may be of interest to the GMRP. If this is the case, it is recommended that the GMRP labour requirements (Appendix B: GMRP Labour Requirements) be revised to include any other relevant occupations.

6.4 SUMMARY

Currently, Canada's – and, more specifically, NWT's - natural resource sector forecasts indicate a decline in employment levels over the next decade, providing an opportunity for the GMRP to hire mining and construction sector workers who are unemployed due to project closures and slowdowns. The GMRP should consider targeting its communication of job opportunities accordingly (e.g. communicating to former employees of Ekati, which is expected to close in 2019).

Overall, local labour supply can partially fulfill GMRP labour needs, although the local labour market may not have the interest or skills needed to fulfill some of GMRP's labour needs and therefore may require additional training or education. Additionally, the local Aboriginal workforce may be larger than presumed, due to potential growth in workforce participation and increasing education levels.

Local (i.e. Northern Aboriginal) labour supply exists for all GMRP entry level (i.e. labourer) and most GMRP semi-skilled (i.e. truck driver and equipment operator) occupations. No local labour supply was identified in some technician occupations (i.e. instrument technician, geofabric liner welder technician, crusher/screener operator), some trades occupations (i.e. crane operator, to be confirmed with construction companies, and millwright) and for safety officers, although it is recommended that this assumption (see Appendix B: GMRP Labour Requirements) be confirmed with construction companies. Finally, there appears to be limited local labour supply in all other GMRP semi-skilled, skilled and professional occupations.

There may also be additional labour supply from Northern non-Aboriginal firms. It is recommended that interviews be conducted with the following organizations to determine existing capacity and interests of local NWT firms:

- GNWT Industry, Tourism and Investment (ITI), which is responsible for managing the GNWT Business Incentive Policy (BIP) registry
- NWT and/or Yellowknife Chamber of Commerce
- NWT Association of Communities (i.e. municipal governments)

A number of other Northern Aboriginal services and equipment suppliers were identified, which the GMRP should review and consider for inclusion in future labour studies.

7 Capacity Building Opportunities

To help ensure access of Aboriginal people and Northerners to employment and procurement opportunities, GMRP needs to understand and regularly assess local skills and capacities and identify where additional capacity development may be required. This section summarizes information on current human resource capacity-building and training programs that the GMRP could support or leverage to help achieve socio-economic objectives.

7.1 COMMUNITY INTERESTS

We identified Aboriginal community¹⁰ interests in training for specific positions, occupations and sectors through interviews with Aboriginal governments and organizations (see Appendix C: Aboriginal Community Profiles).

Industries that GMRP communities expressed interested in include trucking, road construction, mining (base and precious metal mines), remediation (diamond mines), and tourism. With the exception of tourism, all of these sectors would provide skills that meet GMRP labour needs. More specifically, the Tłıchq, YKDFN and Northwest Territories Métis Nation indicated interest in growing mining industry employment. The YKDFN also indicated interest in growing diamond mine remediation employment. We recommend that the GMRP continue to engage with these groups to explore what GMRP skills and employment may be valuable for each community to pursue.

Table 15 identifies community interests specific to identified GMRP needs. In addition to the interests listed below, communities were also interested in job readiness services (e.g. resume development support) and training in catering services.

Table 15: Community Interests Specific to GMRP Needs

Community Interests	Category	GMRP Occupation	GMRP Position
Construction	Entry Level	Labourer	All
Class 1 driver training, fuel hauls	Semi-Skilled	Truck Driver	All
Heavy machinery or equipment operation	Semi-Skilled	Equipment Operator	All
Drilling/blasting	Semi-Skilled	Drilling Support	All
	Skilled	Surface Drilling	All
		Blasting/Drilling	All
White collar jobs, leadership development	Semi-Skilled	Admin Support	All
	Skilled	Supervisor	All
	Professional	Management	All
Water management	Skilled	Technician	ETP Operator
Security training	Skilled	Technician	Security Personnel
Carpentry	Skilled	Trades	Carpenter
Mechanical apprenticeships	Skilled	Trades	Mechanic
Water/Wildlife monitoring	Professional	Environmental	Environment monitor
First aid	Professional	Safety	Safety Officer

¹⁰ For a list of GMRP communities, refer to section 6.3

7.2 EXISTING CAPACITY BUILDING PROGRAMS

This section provides a summary of applicable capacity building programs with which the GMRP may wish to coordinate and/or engage. A primary source of information for identification of these programs is the Skills for Success Initiative (S4S) Discussion Papers, prepared by GNWT's Department of Education, Culture and Employment (ECE). These programs are categorized into five types:

- Coordinating bodies that work to identify and address training needs
- Educational institutions
- Financial supports for capacity-building programs (i.e. directed towards NWT residents, employers or organizations)
- Immigration programs
- Community-specific training programs

7.2.1 Coordinating Bodies

Three main organizations/initiatives are currently working on coordination between the needs of industry and the needs of communities and their members (see Table 16). We recommend that the GMRP communicate its labour needs to these bodies to better understand what role they may play in supporting training that would help to meet the GMRP labour needs.

Table 16: Coordination Organizations and Initiatives

Organization/Initiative	Description
North Slave Regional Training Partnership¹¹	The North Slave Regional Training Partnership includes the GNWT Education, Culture and Employment (ECE), Tlicho Government, Akaitcho Territory Government, Yellowknives Dene First Nations, Lutselk'e Dene First Nations, as well as community organizations, industry and Aurora College. The Partnership also has a seat on the Mine Training Society Board of Directors, to determine the skills required and needs for the mining industry in the NWT.
Canadian Northern Economic Development Agency (CanNor)	CanNor fosters growth and development in the North by delivering economic development programs and by collaborating with and aligning the efforts of partners in northern and southern Canada to respond to economic challenges and opportunities in the North.
GNWT ECE	ECE's mission is to invest in and provide for the development of the people of the NWT. Its goals are to: <ul style="list-style-type: none">• Provide and preserve the understanding, promotion and enhancement of the culture and languages of the NWT;• Secure access to learning opportunities for the people of the NWT in order to continue their personal development; and,• Help people of the NWT to acquire knowledge and skills to make informed choices, resulting in productive lives and contributing to a prosperous society.

An initial interview with CanNor highlighted the potential of the Strategic Partnership Initiative as a vehicle for the project to achieve goals around Aboriginal participation. We recommend that GMRP engage further with CanNor on the details and potential of this program for GMRP (see Table 20).

7.2.2 Educational Institutions

Table 17 identifies a number of educational institutions that have programs targeted towards NWT residents. Both the Aurora College and the NWT Mine Training Society were referenced by interviewed Aboriginal governments and organizations as important partners and providers of training programs that their

¹¹ GNWT is not aware of this initiative, and the group may now be inactive.

community members use. All three diamond mines (Ekati, Diavik, Snap Lake) have built partnerships with these institutions.

Table 17: Educational Institutions

Institution	Description	Partnerships
Aurora College	Aurora College serves all communities in the Northwest Territories. A majority of Aurora College students are Aboriginal, and many come from small, remote communities. Aurora College delivers programs and courses as close to the communities as possible. This is achieved through a network of three regional campuses as well as Community Learning Centres in most communities.	Maintains partnerships with: the University of the Arctic, National Research and Education Network, NWT Mine Training Society, NWT Institute of Supply Chain Management Association, and more. Strategic plan indicates they are preparing a policy for program and service partnerships.
NWT Mine Training Society	Mine Training Society (MTS) is a partnership between Aboriginal governments, public governments and the mining industry with a strong record in evaluating, training and offering job placements to Northerners in the mining sector. The MTS approach addresses both life and job skills, and is able to respond to specific industry demands.	Collaborates with Aurora College, GNWT ECE, Employment and Social Development Canada (ESDC), LKDFN, YKDFN, NSMA, and Tlicho.
Canadian Mining Certification Program	Individuals or companies can pay for certification to recognize skills in the mining industry to increase recruitment and retention success.	Funded in part by the Government of Canada's Sectoral Initiatives Program. Created collaboratively with the Mining Industry Human Resources Council (MiHR)

Education and training programs currently offered by Aurora College that are specific to GMRP needs are identified in Table 18 below. The NWT Mine Training Society is currently offering an "Intro to the Mining Industry" course (Summer 2016), although NSMA note that they have also worked with the NWT Mine Training Society to develop mineral process plant operator, shotcrete operator and fuel haul operator training programs.

Table 18: Aurora College Programs

Aurora College Programs	Category	GMRP Occupation	GMRP Position
Apprenticeship Carpenter	Skilled	Trades	Carpenter
Apprenticeship Electrician	Skilled	Trades	Electrician
Heavy Equipment Operator Program	Semi-skilled	Equipment Operator	All
Office Administration	Semi-skilled	Admin Support	All
Introduction to Underground Mining / Underground Miner Training Program	Skilled	Underground Miner	All
Project Management Fundamentals/PMP Certification Preparation	Skilled	Supervisor	Project manager
Introductory Supervisory Skills Workshop	Skilled	Supervisor	All
Environmental Monitor Training Program	Professional	Environmental	Environmental monitor

We recommend the GMRP engage with Aurora College and the NWT Mine Training Society to communicate labour needs and identify training programs that may meet those needs. The GMRP may also wish to better

understand how these institutions' training programs are created with industry partners, and if developing a training program in partnership with the GMRP would be helpful to meet its projected labour needs.

7.2.3 Financial Support for Capacity Building Programs

The following tables describe programs that provide financial support for capacity building to NWT employers, organizations and residents. The MCM and its subcontractors could use these programs to support capacity building of NWT employees. We recommend that the MCM maintain awareness of these programs and communicate applicable programs to subcontractors to support local hiring efforts.

Table 19 outlines wage subsidies and other financial supports delivered through the GNWT ECE to private and public sector employers offering training opportunities. These programs are similar in scope, but targeted towards different demographics.

Table 19: Financial Support for NWT Employers

Program	Description	Eligible Recipients
Training-on-the-Job	Helps NWT Employment Insurance participants take part in skills development opportunities by providing wage subsidies to employers who offer them training in the workplace.	NWT employers that may apply for this program are the following: <ul style="list-style-type: none"> • Business or Corporation • Aboriginal Government or Organization • Non-governmental Organization • Municipal or Local Government (excluding territorial/federal) • Industry Association • Local Housing Authority Preference is given to businesses eligible under the GNWT BIP.
Apprenticeship Training-on-the-Job	Helps NWT residents take part in apprenticeship training by providing wage subsidies to employers who train them towards journeyperson certification.	NWT employers with under 300 employees that may apply for this program are the following: <ul style="list-style-type: none"> • Business or Corporation • Aboriginal Government or Organization • Non-governmental Organization • Municipal or Local Government • Industry Association • Local Housing Authority Preference is given to those with under 20 employees.
Training-on-the-Job: Small Community Employment Support	Provides wage subsidies to employers in small NWT communities ¹² who offer training in the workplace to unemployed individuals that reside in small NWT communities.	Small NWT community employers that may apply for this program are the following: <ul style="list-style-type: none"> • Business or Corporation • Aboriginal Government or Organization • Non-governmental Organization • Municipal or Local Government • Industry Association • Local Housing Authority • Educational Institution/Training Provider • Board/Agency
Canada – Northwest Territories Job Grant	Provides financial assistance for employers providing third-party training to new or current employees in the NWT .	NWT employers that may apply for this program are the following: <ul style="list-style-type: none"> • Private sector employers • Not-for profit sector employers • Designated crown corporations and Aboriginal governments

¹² Small NWT communities relevant to the GMRP are Dettah, Fort Resolution, Gameti, Wekweètì, Whatì and Łutselk'e

Table 20 outlines examples of supports for community-based projects or partnership initiatives to improve employability through training or other means. Program funders are provided in brackets following the program title. Eligible participants are typically groups facing barriers to employment, including Aboriginal people and small NWT communities. We recommend that the GMRP attempt to keep apprised of any community-based projects or partnership initiatives that may support GMRP labour needs through engagement with GMRP communities. The GMRP may also wish to consider applying for the Strategic Partnerships Initiative, as noted in section 7.2.1 above.

Table 20: Funding for Community-Based Projects or Partnership Initiatives

Program	Description	Eligible Recipients
Community Initiatives (GNWT ECE)	Provides financial assistance (e.g. salaries and benefits, overhead costs, etc.) for NWT community partners to deliver initiatives that engage underrepresented groups . Eligible initiatives may include: training programs, workplace education programs, construction boot camps, trades awareness programs and job coaching/counselling.	NWT organizations that may apply for this program are the following: <ul style="list-style-type: none"> • Business or Corporation • Aboriginal Government or Organization • Non-governmental Organization • Municipal or Local Government • Industry Association • Local Housing Authority Preference is given to businesses eligible under the GNWT BIP.
Community Initiatives: Small Community Employment Support (GNWT ECE)	Provides financial assistance to organizations in small NWT communities who initiate project based training to enhance the employability of residents . Eligible projects may include: training programs, workplace education programs and job coaching or counselling.	Small NWT community organizations that may apply for this program are the following: <ul style="list-style-type: none"> • Business or Corporation • Aboriginal Government or Organization • Non-governmental Organization • Municipal or Local Government • Industry Association • Local Housing Authority • Educational Institution/Training Provider • Board/Agency
Skills Links (Service Canada)	Provides funding for employers and organizations to offer eligible activities to youth facing barriers to employment in a particular province, territory, or local area. Activities should help youth acquire skills, realize educational achievements and/or improve their employability or obtain employment. Calls for proposals were last issued September 2016, with a focus on targets such as Indigenous youth or essential skills.	Organizations that may apply for this program are the following: <ul style="list-style-type: none"> • Not-for-profit organizations • Municipal governments • Indigenous organizations (including band councils, tribal councils and self-government entities) • For-profit organizations • Provincial and territorial governments, institutions, agencies and Crown Corporations
First Nations and Inuit Summer Work Experience Program (INAC)	Provides funding for First Nations and Inuit governments and organizations to offer support to First Nations and Inuit youth in gaining summer work experience opportunities. Eligible projects may include: wage subsidy programs, job counselling and summer employment programs. Calls for proposals were last issued May 2016.	First Nations and Inuit governments and organizations may apply for this program.

Program	Description	Eligible Recipients
Aboriginal Skills and Employment Training Strategy (ESDC)	Provides funding for Aboriginal agreement holders to design and deliver employment programs best suited to the unique needs of their clients. All aboriginal people, regardless of status or location, may access its programs and services which may include: <ul style="list-style-type: none"> • Skills development • Training for high demand jobs • Programs and care initiatives for youth and children 	Aboriginal agreement holders may apply for this program.
Strategic Partnerships Initiative (SPI) (INAC)	This program works to increase Aboriginal participation in complex economic development opportunities, particularly in the natural resource sectors. A lead federal department, in collaboration with other key federal partners, submits a proposal for SPI funding. Work plans are then developed, in collaboration with Aboriginal communities and other partners, to identify the specific activities to be undertaken with the SPI investment. Investments are prioritized on the extent to which they meet specific criteria, such as alignment with Government of Canada priorities and with the objectives of the Federal Framework for Aboriginal Economic Development.	Federal departments may apply for this program. Funding can be directed towards: <ul style="list-style-type: none"> • First Nations, Métis and Inuit communities • Tribal Councils, Self-governing First Nations and local governments of Inuit communities • Aboriginal corporations, associations, cooperatives and institutions (for-profit and not-for-profit) • Aboriginal businesses, partnerships and joint ventures

Table 21 outlines examples of GNWT ECE financial supports for individuals seeking training or education opportunities. These programs target different demographics including youth, First Nation and Inuit, people with disabilities, students and recipients of other government supports (e.g. employment insurance, income assistance, student financial assistance). We recommend that the MCM maintain awareness of these programs and communicate applicable programs to subcontractors to support local hiring efforts.

Table 21: Funding for Individuals

Program	Description	Eligible Recipients
Building Essential Skills and Building Essential Skills – Apprentice	Provides financial assistance for training opportunities that help NWT Employment Insurance participants return to work. Eligible training opportunities may include: pre-employment training courses, skill-specific training programs and apprenticeship technical training.	NWT Employment Insurance participants
Skills Development	Provides financial assistance for training opportunities that help unemployed individuals who are not eligible for Employment Insurance find employment and help employed individuals who want skills upgrading . Eligible training opportunities may include: pre-employment training courses, skill-specific training programs and workplace essential skills.	NWT residents unemployed and ineligible for Employment Insurance benefits or employed and “under-skilled” (e.g. no high school diploma or recognized certification)
NWT Student Financial Assistance	Financial assistance to NWT residents to assist with postsecondary education-related expenses.	NWT residents

A variety of business support and financing programs are available for communities and contractors. These are identified and plotted in Figure 18 below, based on their target and when they will be most relevant in the GMRP timelines. Detailed descriptions are not provided for these programs, as they require action by businesses to be useful. We recommend that the MCM maintain awareness of these programs and communicate applicable programs to subcontractors to support local hiring efforts.

Figure 18: Business Capacity Building Programs



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7.2.4 Immigration Programs

Immigration support programs, as described in Table 22 below, are provided for Canadians and international residents interested in immigrating to the NWT. We recommend that the GMRP or MCM become a business partner with the Come Make Your Mark program, in order to advertise positions that may not be filled by local residents.

Table 22: Immigration Support Programs

Program	Description	Recipients
Come Make Your Mark (GNWT)	A program that supports individuals and their families from across Canada to move and work in the NWT. The program also works with business partners (free sign-up), who receive: <ul style="list-style-type: none"> Increased promotion in target regions across Canada Representation at tradeshow and career fairs across the country Access to online tools, including the job board and an active social media presence 	Canadian citizens and NWT employers.
NWT Nominee Program (Citizenship and Immigration Canada, GNWT)	An immigration program to help fast-track the processing of an application for permanent residency, by sending prospective immigrants a NWT Provincial Nomination Certificate. The program can assist employers with recruiting and retaining foreign workers, while helping those workers make NWT a permanent home.	Foreign workers and NWT employers.

7.2.5 Community-Specific Training Programs

A number of Aboriginal organizations and governments interviewed mentioned the effectiveness of in-house or one-on-one training offered to their members. Specific training programs are detailed in Appendix C:

Aboriginal Community Profiles. We recommend that the GMRP continue to engage with the Aboriginal governments and organizations to communicate GMRP's labour needs. The Tłıchǫ, YKDFN, and Northwest Territories Métis Nation particularly indicated interest in growing mining industry employment, and the YKDFN additionally indicated interest in growing diamond mine remediation employment.

In addition, GNWT ECE directly delivers programs and services through ECE Service Centres (formerly called 'Career Centres'). These centres offer a range of career development and income security programs and services to Northerners. Recommendations on engagement with GNWT ECE are captured in section 7.2.1 above.

7.3 CAPACITY-BUILDING AND TRAINING PRIORITIES

Table 23 identifies recommended next steps that can be taken by GMRP by capacity building program type.

Table 23: Summary of Program Types and Actions

Program Type	Actions
Coordination organizations and initiatives	<ul style="list-style-type: none"> • Communicate labour needs to coordinating bodies and better understand what role they may play in supporting training that meets the GMRP labour needs • Engage CanNor on the details and potential of the Strategic Partnership Initiative program for GMRP • Validate section 7.2 programs with coordinating bodies and identify any gaps
Educational institutions	<ul style="list-style-type: none"> • Communicate labour needs and identify training programs that may meet those needs • Improve understanding of how the training programs are created with industry partners, and if developing a training program in partnership with the GMRP would be helpful to meet its labour needs • Improve understanding of training program success rates and timelines (i.e. how long the program may continue)
Financial support for capacity building programs	<ul style="list-style-type: none"> • Make information on applicable programs and requirements available to interested parties, including contractors
Immigration programs	<ul style="list-style-type: none"> • Register GMRP or MCM as a business partner with the Come Make Your Mark program, in order to advertise positions that may not be filled by local residents
Community-specific training programs	<ul style="list-style-type: none"> • Engage with Aboriginal governments and organizations to communicate GMRP labour needs

8 Engagement on Socio-Economic Opportunities

The GMRP conducts engagement with a number of key external stakeholders (section 8.1). The MCM is expected to support the GMRP in relevant engagement activities, some of which are listed in section 8.3 below.

8.1 KEY STAKEHOLDERS

Figure 19 presents the results of an initial external stakeholder identification and prioritization exercise completed in late 2015 to inform plans for bilateral engagement. The stakeholders listed in blue match with the communities whose traditional or asserted territories are affected by the GMRP, as listed in Table 11.

Figure 19: Key External Stakeholders

Tier A: Key Players	Tier B: Influencers
<ul style="list-style-type: none"> • Tłıchq Government • Northwest Territory Métis Nation • North Slave Métis Alliance • Yellowknives Dene First Nation • Łutsel K'e Dene First Nation • Deninue K'ue First Nation • Denendeh Development Corporation • Det'on Cho Companies • Metcor Inc. • Tlıcho Investment Corporation • NWT and Nunavut Chamber of Mines • Northern Construction Association • Aurora College • City of Yellowknife • Native Women's Association of the NWT • NWT Mine Training Society • NWT Chamber of Commerce • Yellowknife Chamber of Commerce • Northern Aboriginal Business Association • Dominion, De Beers, Rio Tinto 	<ul style="list-style-type: none"> • GNWT – ECE (Education, Culture and Employment) • GNWT – ITI (Industry, Tourism, Investment) • GNWT – HSS (Health and Social Services) • CanNor – Northern PM Office • MIHR (Mining Industry Human Resources Council) • ESDC (Employment and Social Development Canada) • Health Canada • Akaitcho Territory Government • Ndilo and Dettah Residents • Yellowknife Residents
<p>Key</p> <ul style="list-style-type: none"> Engage on employment, business capacity and impact programs Engage on employment and business capacity Engage on business capacity and/or impact programs Consider engaging at a later date 	

8.2 LOCAL COMMUNICATION METHODS

Interviews with Aboriginal governments and business organizations identified the communities' preferred communication methods for job opportunities. These are described in further detail in Appendix C: Aboriginal Community Profiles.

Generally speaking, sending job opportunities to Aboriginal governments or their community/economic development officers is the best way to distribute job or business opportunity information to Aboriginal communities. Other methods include posting the information on community Facebook pages or posting the information on the community's jobs bulletin, typically located in the band office or general store.

8.3 ENGAGEMENT ACTIVITIES

This section outlines examples of engagement opportunities in which the MCM may be required to participate.

1. **Aboriginal Opportunities workshop:** Outline the nature of the GMRP work (e.g. skills required) expected in the near future to Aboriginal stakeholders (e.g. businesses) and rights' holders.
2. **Capacity Builders workshop:** Work with GNWT to define capacity building programs available in the NWT and how they may support GMRP labour needs.
3. **Other engagement** with Aboriginal groups, as requested (e.g. YKDFN Chief and Council) on the GMRP socio-economic and procurement approach.

We recommend that the MCM ensure that any engagement conducted supports and is integrated with the GMRP engagement strategy/plan.

9 Conclusions

Currently, the natural resource sector forecasts for both Canada and the NWT indicate an expected decline in employment levels over the next decade, providing an opportunity for the GMRP to hire mining and construction sector workers who are unemployed due to project closures or slowdowns. The GMRP should consider targeting its communication of job opportunities accordingly (e.g. communicating to former employees of Ekati, which is expected to close in 2019).

A summary of the Northern Aboriginal community interests, existing skills, and NWT training programs is mapped relative to GMRP labour needs in the table below.

Table 24: Northern Aboriginal Skills and Interest and NWT Training Opportunities

Category	Occupation	Position	Northern Aboriginal Skills	Communi- ty Interest	Available Training
Entry Level	Labourer	General Labourer	X*	X	
		Flag Person	X*	X	
Semi-Skilled	Truck Driver	Atriculated dump truck	X*	X	
		5 Ton (Mixer/Water/Flat Deck w Picker/Vac/Tandem Dump/Compactor)	X*	X	
		Skid Steer / Telehandler / Mini Excavator/Manlifts	X*	X	
	Equipment Operator	Excavator	X*	X	X
		966 Loader	X*	X	X
		Grader operator	X*	X	X
		Dozer operator	X*	X	X
		Jumbo operator	X*	X	X
		LHD operator	X*	X	X
		U/G Dump Truck	X*	X	X
		U/G man carriers	X*	X	X
	Drilling Support	Driller's helper	X*	X	
		Rod man	X*	X	
	Admin Support	Clerk	X	X	X
Skilled	Technician	Lead instrument technician			
		Instrument technician	X		
		Technician - GeoFabric Liner Welder	X		
		Technician - Environmental	X*		
		Technician - Civil			
		ETP operator	X	X	
		Crusher/ screener operator	X		
		Security Personnel	X	X	
	Trades	Carpenter	X	X	X
		Ironworker (Rebar or Structural)	X		
		Trades Supervisor	X		
		Crane Operator			
		Mechanic	X	X	
		HVAC	X		
		Electrician	X*		X
		Millwright			
		Pipe fitter	X		
		Pipe welder	X		
	Surveyor	Hazmat crew workers	X		
		Hazmat FM	X		
		Quantity surveyor	X		
		Surveyor	X		
	Surface Drilling	Driller	X*	X	
		Driller's helper	X*	X	
	Blasting/Drilling	Surface driller	X*	X	
		Surface blaster	X*	X	
		Underground driller		X	

Category	Occupation	Position	Northern Aboriginal Skills	Communi ty Interest	Available Training
	Underground Miner	Underground shift boss	X		X
		Underground miners	X		X
	Supervisor	<i>Project Manager</i>	X*		X
		Supervisor	X	X	X
		Shift foreman	X		X
Professional	Management	Planner	X	X	
		Accountant		X	
	Environmental	Environmental superintendent	X*		
		Environmental monitor	X*	X	X
	Safety	Safety supervisor			
		Safety officer		X	
		Underground safety			
	Engineer	Civil engineer	X		
		Mining engineer	X		
		Chemical engineer	X		
		Mechanical engineer	X		
		Electrical engineer	X		

Legend for Table 25:

X – Supply available

X* - More than three suppliers

Italics – No GMRP labour needs identified (Merit, 2016)

Based on the above table, we have identified areas with local supply (i.e. areas with more than three suppliers or areas with interest, training and some expertise), areas with potential (i.e. areas with interest or training and some expertise) and gaps (i.e. areas with no interest, no or limited expertise and no training), for the short-term (i.e. until 2020) and the long-

term (see Table 26).

Table 25: Summary of Local Labour Supply

	Short-Term (until 2020)	Long-Term
Local Supply	Labourer Equipment Operator Admin Support Technician: Environmental Trades: Carpenter Trades: Electrician	Labourer Truck Driver Equipment Operator Drilling Support Admin Support Technician: Environmental Trades: Carpenter Trades: Electrician Surface Drilling Blasting/Drilling: Surface driller Blasting/Drilling: Surface blaster Environmental
Potential Local Supply	Technician: ETP operator Technician: Security personnel Trades: Mechanic Underground Miner	Technician: ETP Operator Technician: Security personnel Trades: Mechanic Underground Miner Supervisor: Supervisor Supervisor: Shift foreman Management: Planner
Limited or No Local Supply	Trades: Trades Supervisor Trades: Millwright Surveyor: Surveyor Safety: Safety officer	Technician (except Environmental, ETP operator, Security personnel) Trades (except Carpenter, Electrician, Mechanic) Surveyor

	Short-Term (until 2020)	Long-Term
		Blasting/Drilling: Underground driller Management: Accountant Safety Engineer

The above tables are based on existing skills identified through interviews with Aboriginal governments and organizations. The additional potential available workforce, as identified in section 6.3.1, as well as non-Aboriginal Northern businesses could also work to meet GMRP labour needs. Assumptions made in identifying existing skills are outlined in Appendix A: NWT Aboriginal Business Listing.

The above information should be used to communicate and engage with relevant stakeholders to inform decisions related to work package structure and contracting, and to identify additional capacity development that may be required to maximize local employment and procurement.

9.1 RECOMMENDATIONS FOR FUTURE LABOUR MARKET STUDIES

The following table summarizes recommended next steps to inform future labour market studies, in order of priority.

Table 26: Recommended Next Steps

Relevant Stakeholder	Priority	Action
N/A	High	<ul style="list-style-type: none"> Refine Appendix B: GMRP Labour Requirements
GNWT ECE	High	<ul style="list-style-type: none"> Validate section 7.2 programs and identify any gaps
Aurora College	High	<ul style="list-style-type: none"> Improve understanding of training program success rates and timelines (i.e. how long the program may continue)
NWT Mine Training Society	High	<ul style="list-style-type: none"> Improve understanding of training program success rates and timelines (i.e. how long the program may continue)
N/A	Medium	<ul style="list-style-type: none"> Incorporate “other” Northern Aboriginal services and equipment suppliers (as identified in the Northern Aboriginal business listing and interviews with Aboriginal governments and organizations) that are relevant to the GMRP needs
N/A	Medium	<ul style="list-style-type: none"> Validate assumptions in Appendix A: NWT Aboriginal Business Listing, and update if needed
North Slave Regional Training Partnership	Medium	<ul style="list-style-type: none"> Engage with member organizations to understand whether this body is active or inactive If this body is active, validate section 7.2 programs and identify any gaps
CanNor	Medium	<ul style="list-style-type: none"> Validate section 7.2 programs and identify any gaps
GNWT ITI	Medium	<ul style="list-style-type: none"> Conduct an interview on the existing capacity and interests of NWT firms
NWT & Nunavut Chamber of Mines	Medium	<ul style="list-style-type: none"> Conduct an interview on the existing capacity and interests of NWT firms
Northern Construction Association	Medium	<ul style="list-style-type: none"> Conduct an interview on the existing capacity and interests of NWT firms
NWT Chamber of Commerce	Medium	<ul style="list-style-type: none"> Conduct an interview on the existing capacity and interests of NWT firms

Relevant Stakeholder	Priority	Action
Northern Aboriginal Business Association	Medium	<ul style="list-style-type: none"> • Conduct an interview on the existing capacity and interests of Northern Aboriginal firms
Yellowknife Chamber of Commerce	Low	<ul style="list-style-type: none"> • Conduct an interview on the existing capacity and interests of Yellowknife firms
NWT Association of Communities	Low	<ul style="list-style-type: none"> • Conduct an interview on the existing capacity and interests of NWT firms

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Appendix A: NWT Aboriginal Business Listing

The excel file that follows identifies Aboriginal businesses in GMRP communities and includes the following information for each business:

- Business name
- Organizational structure (e.g. joint venture, wholly owned subsidiary, corporation, etc.)
- Business office location(s)
- Applicable employee categories (e.g. Tłıchq, YKDFN, etc.)
- Overview of firm services
- Skill offerings applicable to GMRP
- Number of employees
- Contract experience (e.g. clients, projects, total sales)
- Key contact(s)

The skill offerings applicable to the GMRP were identified based on the overview of the firm services. In identifying the relevant skills, the following assumptions were made:

- If a description of services is not provided for a joint venture (JV), the services described are based on firm overviews from one or both of the companies in the JV.
- If a part of the firm overview did not have an obvious matching occupation, a matching occupation is not identified (e.g. site clean-up).
- References to construction or remediation services assume that labourers, truck drivers and equipment operators are available. In the case of remediation, an environmental technician is also assumed to be available.
- Truck drivers can drive all GMRP trucks listed.
- Equipment operators can operate all GMRP equipment listed.
- Services related to drilling or blasting exclude underground drilling experience, unless it is specifically identified in the firm services overview.
- Admin support and project management skills are only listed if they are applicable to a wide range of skills i.e. if admin support is only provided for pipe welding services, it is not included.
- Safety services are only identified if specified in the firm overview. First aid services is not assumed to satisfy the “safety officer” position requirements.
- Any reference to liner installations e.g. geomembrane lining systems, HDPE, etc. assumes a geofabric liner welder is available.
- Any reference to environmental services, wastewater or water management assumes an environmental technician is available.
- Any reference to water treatment skills assumes an ETP operator is available.
- Any reference to firearms operation assumes security personnel are available.
- Any reference to structural steel or structural engineering assumes an ironworker is available.
- A trades’ supervisor is identified when the majority of trades’ services are offered by the firm.
- Any reference to mechanical work assumes a mechanic is available.
- Any reference to mechanical systems or buildings assumes HVAC services is available.
- Any reference to piping work assumes a pipe fitter is available. A pipe welder is only identified if welding services are included in the firm overview.

GMRP Northern Aboriginal Business Listing

Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
Akaitcho Helicopters	JV between Denesoline Corporation and Great Slave Helicopters	Yellowknife, NWT (Denesoline HQ) Calgary, AB (Great Slave Helicopters HQ)	Aboriginal Northern NWT Akaitcho	Mining, Oil/Gas & Seismic Exploration, Forest Fire Suppression IFR and VFR Flight Operations, Wildlife Survey & Ecological Tourism Aerial Geophysics & Environmental Impact Surveys, Aerial Construction & Precision External Load Applications Utility Construction & Maintenance, DND Military Support Missions Emergency Response Call-Up Executive Charter Services, Film /TV Production & Aerial Photography Utility Infrared Integrity Pipeline Fugitive Emission Inspection	Environmental: Environmental monitor (aerial) Other: Emergency response	250 +	Department of National Defence	Denesoline Corporation: info@dcnwt.com (867) 873-5080 Great Slave Helicopters: Blair Elliott, Director of VFR Operations belliott@gsheli.com
Dene-Emco Ltd.	JV between Denesoline Corporation and Emco Corporation	Yellowknife, NWT (Denesoline HQ) London, ON (Emco HQ)	Aboriginal Northern NWT Akaitcho	Dene-Emco sells industrial, waterworks, HVAC and plumbing products to the mining industry in the Northwest Territories	Equipment supplier for: Technician: ETP operator Technician: Pipe fitter/welder Trades: HVAC			Denesoline Corporation: info@dcnwt.com (867) 873-5080 Emco Corporation: Allen Webb, Manager Awebb@emcoltd.com
Denesoline-Air Tindi	JV between Denesoline Corporation and Air Tindi	Yellowknife, NWT (Denesoline HQ) Yellowknife, NWT (Air Tindi HQ)	Aboriginal Northern NWT Akaitcho	Aircraft charters: 8 aircraft, fly up to 46 passengers or 10,000 pounds	Other: Air Transportation	180 (Air Tindi)	DeBeers Canada, Avalon Rare Metals Inc., BHP Billiton's EKATI Diamond Mine, Diavik Diamond Mines	Denesoline Corporation: info@dcnwt.com (867) 873-5080 Air Tindi: dispatch@airtindi.com
Ventures West Transport	JV between Denesoline Corporation and Ventures West Transport	Yellowknife, NWT (Denesoline HQ) Sturgeon County, AB (Ventures West HQ)	Aboriginal Northern NWT Akaitcho	A common carrier, specializing in bulk commodities (i.e. fuel hauls), and focusing on operations in Western Canada. Our fleet consists of: 207 Super B tankers 60 company owned heavy spec tractors 347 leased operators pulling our trailers	Other: Fuel Hauls			Denesoline Corporation: info@dcnwt.com (867) 873-5080 Ventures West Transport: Operations: operations@ventureswest.net (780) 998-7243
Denesoline-Dyno Nobel Explosives	JV between Denesoline Corporation and Dyno Nobel	Yellowknife, NWT (Denesoline HQ) Salt Lake City, UT (Dyno Noble HQ) + Multiple Locations worldwide	Aboriginal Northern NWT Akaitcho	Provides explosives for both Snap Lake and Gahcho Kue and operates across the Northwest Territories.	Blasting/Drilling: Surface blaster			Denesoline Corporation: info@dcnwt.com (867) 873-5080 Dyno Nobel, Americas Office: (801) 364-4800

GMRP Northern Aboriginal Business Listing

Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
Denesoline-CMS Mechanical	JV between Denesoline Corporation and CMS Mechanical	Yellowknife, NWT (Denesoline HQ) Melbourne, FL (CMS Mechanical HQ) + multiple locations in the United States	Aboriginal Northern NWT Akaitcho	We're capable of fabricating, installing and servicing unique parts for your application, and we're also skilled and experienced with these common process components: Structural and Platform Steel Pumpboxes Lined and Unlined Chutes & Hoppers Headframes On-Site Align Boring Ball Mill Alignment Storage and Leach Tanks Conveyance Systems (Integrated with Baldor-Dodge System 1 Modular Design Services)	Equipment supplier for: Technician: ETP operator			Denesoline Corporation: info@dcnwt.com (867) 873-5080 CMS Mechanical: Executive Facility Solutions efsservice@efsservice.com (877) 337-7782
Denesoline-ESS Compass Group Catering	JV between Denesoline Corporation and ESS Compass Group	Yellowknife, NWT (Denesoline HQ) Mississauga, ON (ESS Compass Group HQ) + London, ON; Lasalle QC; Ottawa, ON; Dartmouth, NS; Calgary, AB; Richmond, BC	Aboriginal Northern NWT Akaitcho	Provides catering/janitorial and housekeeping services to the mining industry throughout the Northwest Territories, including DeBeers Gahcho Kue mine.	Other: Catering Other: Housekeeping / Janitorial	30,000 (Canada) 500,000 (Globally)		Denesoline Corporation: info@dcnwt.com (867) 873-5080 ESS Compass Group: Mississauga Head Office: (800) 465-2203
Denesoline-Ryfan Electrical & Mechanical	JV between Denesoline Coporation and Ryfan Electrical	Yellowknife, NWT (Denesoline HQ) Yellowknife, NWT (Ryfan HQ) + Spruce Grove, AB	Aboriginal Northern NWT Akaitcho	Provides electrical and mechanical services to the mining industry in the Northwest Territories.	Trades: Electrician Trades: Mechanic			Denesoline Corporation: info@dcnwt.com (867) 873-5080 Rydan Electrical Chris Houghton, Project Manager choughton@ryfan.ca (867) 765-6111
Denesoline-Breakaway Drilling and Blasting	JV between Denesoline Coporation and Breakaway Drilling and Blasting	Yellowknife, NWT (Denesoline HQ) Yellowknife, NWT (Breakaway HQ)	Aboriginal Northern NWT Akaitcho	Provides Drill Blast Services in Akaitcho Territory, including Gaucho Kue.	Drilling Support Surface Drilling: All Blasting/Drilling: All, unsure if U/G drilling experience			None available
Denesoline Forestry / Fire Fighting	Subsidiary of Denesoline Corporation			Provides Forestry/Fire fighters to fight wildfires in the NWT in the summer months.	Other: Emergency Response			
Denesoline-Northern Food Services	JV between Denesoline Coporation and Northern Food Services	Yellowknife, NWT (Denesoline HQ) Yellowknife, NWT (Northern Food Service HQ) + Edmonton, AB	Aboriginal Northern NWT Akaitcho	Provides grocery, meat, seafood and fresh produce to mines and mining construction camps.	Equipment supplier for: Other: Catering			Denesoline Corporation: info@dcnwt.com (867) 873-5080 Northern Food Serives: Pietro Bertolini, Operations Manager (867) 873-5338 ext. 223

GMRP Northern Aboriginal Business Listing

Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
Denesoline-MacDougall Steel Fabrications	JV between Denesoline Coporation and MacDougall Steel Erectors Inc.	Yellowknife, NWT (Denesoline HQ) Borden-Carleton, PE (MSE Plant) + Edmonton, AB	Aboriginal Northern NWT Akaitcho	Provides steel fabrication services to the Mining Industry throughout the Northwest Territories. MS employs fabricators, welders, certified welding inspectors, erection specialists, project managers and administrative support staff. Working together we can meet or exceed our customer’s requirements; our turn-around time is unparalleled and our product and service is excellent.	Trades: Pipe Welder <i>Assumption - Admin Support / PM not included, as it is only applicable to pipe welding.</i>			Denesoline Corporation: info@dcnwt.com (867) 873-5080 MacDougall Steel Erectors Inc.: Dave Clark, CP and Director of Estimating dave@mseinc.ca (902) 855-2100 ext. 226
Denesoline-Petro-Canada Lubricants	JV between Denesoline Coporation and Petro-Canada Lubricants	Yellowknife, NWT (Denesoline HQ) Mississauga, ON (Petro-Canada Lubricants HQ) + Oak Parl, IL, USA; Solihull, United Kingdom; Shangahi, China	Aboriginal Northern NWT Akaitcho	Petro-Canada lubricants, specialty fluids and greases. Our focus is on developing tangible savings solutions that protect equipment, reduce downtime, increase productivity and save money. We track programs, recommend course corrections as needed and provide training for maintenance professionals.	Equipment supplier for: Other: lubricants	Petro-Canada Lubricants: 458		Denesoline Corporation: info@dcnwt.com (867) 873-5080 Petro-Canada Lubricants North American Office: (866) 335-3396
Denesoline-Western Explosives Ltd.	JV between Denesoline Coporation and Western Explosives Ltd.	Yellowknife, NWT (Denesoline HQ) Salt Lake City, UT (Western Explosives HQ)	Aboriginal Northern NWT Akaitcho	Presently providing all the explosives for Diavik Mines through a long term contract. Dyno Nobel is the North American leader in the supply of Ammonium Nitrate.	Blasting/Drilling: Surface blaster			Denesoline Corporation: info@dcnwt.com (867) 873-5080 Western Explosives Ltd.: (801) 484-6557 inquiry@wescoexplosives.com
Denesoline Investment & Management	Subsidiary of Denesoline Corporation.	Yellowknife, NWT	Aboriginal Northern NWT Akaitcho	Denesoline Corporation makes direct equity investments in industrial business ventures and real estate. We are actively seeking stand-alone companies with revenues of \$5,000,000 to \$200,000,000. We invest in growth companies with: - A quality management team with a track record of success - A sustainable competitive advantage - Superior operating margins and return on assets - Leadership in their market niche	N/A			
Denesoline-Discovery Mining Services	JV between Denesoline Coporation and Discovery Mining Services	Yellowknife, NWT (Denesoline HQ) Yellowknife, NWT (Discovery Mining HQ)	Aboriginal Northern NWT Akaitcho Tlicheo	Provides exploration/expediting and logistic services throughout the Northwest Territories. Discovery Mining is a subsidiary of Discovery Air.	N/A			Denesoline Corporation: info@dcnwt.com (867) 873-5080 Discovery Mining Services: info@discoverymining.ca (867) 920-4600

GMRP Northern Aboriginal Business Listing

Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
Denesoline- CGT Industrial	JV between Denesoline Coporation and The Gisborne Group	Yellowknife, NWT (Denesoline HQ) Burnaby, BC (Gisborne Group HQ) + Nisku, AB	Aboriginal Northern NWT Akaitcho	Drawing on over 110 years of combined industry service, CGT is able to leverage best practices across a number of construction and maintenance sectors. From design and conception, through to project completion, CGT has the expertise to aid you in any step of your project. Our services include: - Estimating & Procurement - Project Management & Constructability - Mechanical and Process Piping - Electrical & Instrumentation - Fire Protection - Carpentry - Site Work - Cast-In-Place Concrete - Metal Cladding & Deck Installation (Structural Steel) - Modular Construction (Gisborne is an industrial leader in the construction on mines and mining facilities.)	Labourer Truck Driver Equipment Operator Trades: Carpenter Trades: Ironworker Trades: Mechanic Trades: Electrician Trades: Pipe Fitter Trades: HVAC Trades: Trades Supervisor Supervisor: Project Manager Other: Cost Estimation	500+		Denesoline Corporation: info@dcnwt.com (867) 873-5080 The Gisborne Group: Carey Smood, Operations Manager (604) 520-7300
Denesoline-Kal Tire	JV between Denesoline Coporation and Kal Tire Mining	Yellowknife, NWT (Denesoline HQ) Vernon, BC (Kal Tire Administration Office)+ Multiple Global locations	Aboriginal Northern NWT Akaitcho	Povides full array of tires for mines in the Northwest Territories.	Equipment supplier for: Truck Driver (tires) Equipment Operator (tires)	5400 (Globally)		Denesoline Corporation: info@dcnwt.com (867) 873-5080 Kal Tire Mining: North American Office nthamerica@kaltire.com
Denesoline- Jivko Engineering	JV between Denesoline Coporation and Jivko Engineering	Yellowknife, NWT (Denesoline HQ) Yellowknife, NWT (Jivko Engineering)	Aboriginal Northern NWT Akaitcho	The Arctic’s premier civil engineering consulting firm. Established in 1998, Jivko Engineering Ltd. has built its reputation by completing projects on time, on budget and to the complete satisfaction of our clients. We are THE go-to engineering consulting firm in the Arctic offering integrated and specialized solutions for the unique and challenging demands of Canada’s North. We provide comprehensive services including: - Inspections - Assessments - Pre-engineering - Design - Cost estimation - Materials procurement contract preparation - Construction and construction management in heavy civil	Labourer Truck Driver Equipment Operator Trades: Ironworker Trades: Trades Supervisor Engineer: Civil Engineer Supervisor: Project Manager Other: Cost Estimation			Denesoline Corporation: info@dcnwt.com (867) 873-5080 Jivko Engineering: (867) 920-4455
Ta'egera Real Estate	JV between Denesoline Coporation and Ta'egera Real Estate	Yellowknife, NWT (Denesoline HQ)	Aboriginal Northern NWT Akaitcho	Owens and manages real estate in the Northwest Territories. Looking for multi-family residential and commercial real estate investments.	N/A			Denesoline Corporation: info@dcnwt.com (867) 873-5080

GMRP Northern Aboriginal Business Listing

Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
Bouwa Whee Catering	Subsidiary of Det'on Cho Corporation.	Yellowknife, NWT (Denesoline HQ) Yellowknife, NWT (Bouwa Whee Catering)	Aboriginal Northern NWT Akaitcho	Bouwa Whee means "I am hungry" in Weledeh. But we won't leave you hungry! Whether it's a one-time special event or the continual needs of remote mining or exploration camp, we're capable of serving up a delicious array of food, from traditional Aboriginal to international cuisine.	Other: Catering	3		Denesoline Corporation: info@dcnwt.com (867) 873-5080 Bouwa Whee Catering: admin@bouwawhee.com (867) 891-6439
Denesoline Community Development Corporation	Subsidiary of Denesoline Corpoartion	Yellowknife, NWT (Denesoline HQ) Yellowknife, NWT (Denesoline CDC HQ)	Aboriginal Northern NWT Akaitcho	The DCDC is focused on: Community readiness and skills enhanacement Small business development for community members Community economic development from tourism	Other: Training			Denesoline Corporation: info@dcnwt.com (867) 873-5080 DCDC: jesse@dcnwt.com (867) 370-3095
DTR First Nations Construction Corporation	JV between Denesoline Corporation, Westcan RTL and Tlichio Investment Coporation	Yellowknife, NWT (Denesoline HQ) Edmonton, AB (Westcan HQ) + AB Terminals: Calgary, Lloydminster, Grand Prairie + SK Terminals: Saskatoon, Moose Jaw + BC Terminals: Kamloops, Trail, Coquitlam, Prince George + ON Terminals: Toronto, London + NWT Terminals: Enterprise, Yellowknife Yellowknife, NWT (Tlichio HQ)	Aboriginal Northern NWT Akaitcho Tlichio	A true northen company with 100% northern ownership and 66.6% Northern Aboriuginal ownership. DTR's specialty is building ice roads.	N/A			Denesoline Corporation: info@dcnwt.com (867) 873-5080 Westcan RTL: Head Office, Terminal Manager Bill Clydesdale bclydesdale@westcanbulk.ca (780) 472-6633 Tlichio Investment Corporation Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichioic.com
Metcrete Services Ltd.	JV between Metcor Inc. and Multicrete Systems Ltd	Yellowknife, NWT (Metcor HQ) Winnipeg, MB (Multicrete HQ) + Thompson, MB; Snow Lake, MB; Flin Flon, MB; Saskatoon, SK; Spruce Grove, Ab; Blamertown, ON	Aboriginal NSMA	Shotcrete business	Other: Shotcrete		Metcor Total Sales: \$5,000,000 to \$9,999,999	Metcor Inc.: Keith Hamilton, CEO (867) 873-6762 keith@nsma.net Multicrete Systems Ltd: (204) 262-5922 info@multicretesystems.com

GMRP Northern Aboriginal Business Listing

Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
Metshaw Freighters Ltd.	JV between Metcor Inc. and Grimshaw Trucking	Yellowknife, NWT (Metcor HQ) Edmonton, AB (Grimshaw HQ) + High Level, Fairview, Peace River, Fort McMurray, Grande Prairie, High Prairie, Slave Lake, Valleyview, Swan Hills, Athabasca, Grande Cache, Lac La Biche, Bonnyville, Fox Creek, Whitecourt, Hinton, Edson (Alberta); Dwason Creek, Fort St. John, Fort Nelson (British Columbia); Fort Smith, Hay River, Yellowknife (NWT)	Aboriginal NSMA	Our best in class transportation solutions provide you with the confidence to know that whatever you need to get through your day (groceries, clothing, office supplies, farm supplies, or Industrial supplies) you can count on our experienced people and modern fleet to ensure safe, reliable delivery of your products. Our LTL Gateway Delivers: - Well established Grimshaw network - Over 300 northern communities supplied - Same day and overnight service - 19 service centers across Alberta, Northwest Territories and British Columbia	Other: Trucking Transportation		Metcor Total Sales: \$5,000,000 to \$9,999,999	Metcor Inc.: Keith Hamilton, CEO keith@nsma.net (867) 873-6762 Grimshaw Trucking L.P Head Office GRM-CustServ@stlp.ca (888) 414-2850
North Slave Freighters Ltd.	100% solely owned company		Aboriginal NSMA	Dry goods hauling	Other: Trucking Transportation			
Northcan Freighters Ltd.	JV between Metcor Inc. and Westcan RTL	Yellowknife, NWT (Metcor HQ) Edmonton, AB (Westcan HQ) + Alberta Terminals: Calgary, Lloydminster, Grand Prairie; Saskatchewan Terminals: Saskatoon, Moose Jaw; BC Terminals: Kamloops, Trail, Coquitlam, Prince George; Ontario Terminals: Toronto, London; Northwest Territories Terminals: Enterprise, Yellowknife	Aboriginal NSMA	Fuel haul contracts	Other: Fuel Hauls		Metcor Total Sales: \$5,000,000 to \$9,999,999	Metcor Inc.: Keith Hamilton, CEO keith@nsma.net (867) 873-6762 Westcan RTL: Head Office, Terminal Manager Bill Clydesdale bclydesdale@westcanbulk.ca (780) 472-6633
Metcor & Nuna Logistics	JV between Metcor Inc. and Nuna Logistics	Yellowknife, NWT (Metcor Inc.) Edmonton, AB (Nuna Logistics HQ) + Vancouver, Squamish (British Columbia); Yellowknife (NWT); Rankin Inlet (NU); Thunder Bay (Ontario); Prince Albert (Saskatchewan)	Aboriginal NSMA	Metcor and Nuna Logistics are working together at the Snap Lake and Gahcho Kue projects. There is no description of what services this JV provides. Nuna provides construction services (e.g. ice roads, air strips, earthworks, dams).	Labourer Truck Drivers Equipment Operators	Nuna Logistics: 600+	Metcor Total Sales: \$5,000,000 to \$9,999,999 Sample Contracts: Snap Lake Gahcho Kue	Metcor Inc: Keith Hamilton, CEO keith@nsma.net (867) 873-6762 Nuna Logistics: general@nunalogistics.com (877) 499-9114
Metcor & Stantec	JV between Metcor Inc. and Stantec		Aboriginal NSMA	Fuel haul contracts	Technician: Technician - Environmental Surveyor Supervisor: Project Management Management: Planner Environmental Engineer Other: Community engagement Other: Aboriginal engagement	Stantec Mining Group: 450+	Stantec: Diavik	Metcor Inc: Keith Hamilton, CEO (867) 873-6762 keith@nsma.net

GMRP Northern Aboriginal Business Listing

Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
Hyway 3 Transport	JV between Tlicho Investment Corp. and Northern Exposure	Yellowknife, NWT (Tlicho) Behchoko, NWT (Northern Exposure)	Aboriginal Northern NWT Tlicho	Express Freight Services: Edmonton - Yellowknife - Behchoko at reliable affordable rates and excellent service.	Other: Trucking Transportation			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Northern Exposure: (867) 392-6347
Highway Taxi - Hot Shot - Courier - Motor Coach Charters	JV between Tlicho Investment Corp. and Northern Exposure	Yellowknife, NWT (Tlicho) Behchoko, NWT (Northern Exposure)	Aboriginal Northern NWT Tlicho	Services for Highway 3.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Northern Exposure: (867) 392-6347
Trappers Hideaway Restaurant	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Behchoko, NWT (Trappers Hideaway Restaurant)	Aboriginal Northern NWT Tlicho	We provide casual food dining and pick-up orders to go seven days a week.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Trappers Hideaway Restaurant: (867) 392-6868
F.C. Services Ltd.	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Behchoko, NWT (F.C. Services)	Aboriginal Northern NWT Tlicho	Convenience store and fuel station for vehicles. We offer light mechanical service in Behchokø area.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com F.C. Services: (867) 392-9655
First North Productions	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Behchoko, NWT (First North Productions)	Aboriginal Northern NWT Tlicho	Audio/Video and Printed-media services. We also offer equipment rentals. First North Productions is 100% Aboriginal owned and operated, and was established in 2004 by John Gon. Since its inception, Northern-based First North Productions has become a fully integrated independent production company that offers services and develops and produces its own media programs. Our staff are professional First Nations' people, familiar with their cultures and traditions, their communities and the people of the Northwest Territories.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com First North Productions: (867) 873-6992 john@fnproductions.ca

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Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
Frontier Coachlines	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Behchoko, NWT (Frontier Coachlines)	Aboriginal Northern NWT Tlicho	Schedule bus service to and from Yellowknife to communities along the Mackenzie Highway, and connecting service with Greyhound throughout Canada. In addition to passenger service, we also offer freight and charter services.	Other: Bus Transportation			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Frontier Coachlines: (867) 873-4892
Northern Store	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Behchoko, NWT (Northern Store)	Aboriginal Northern NWT Tlicho	Northern is the largest retailer of Food and General Merchandise in the Canadian North. Our Behchoko store has a Post Office and Gas Bar. Has an ATM in both locations. Offers Tax preparation, Hot Beverages. Pre-Paid Visa cards. Calling cards.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Northern Store: Store: (867) 392-6301 Gas Station: (867) 392-6018
Our Video Store	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Behchoko, NWT (Northern Store)	Aboriginal Northern NWT Tlicho	Local convenience store in providing a variety of products and services to the community.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Our Video Store: Store: (867) 392-6719
Rabesca Resources Ltd	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Behchoko, NWT (Rabesca Resources Ltd.)	Aboriginal Northern NWT Tlicho	Services include hospitality facilities, guide services, and big game outfitting. Services also offered include programs on management consulting and cultural integration workshop. Offered year round are accommodations, meeting facilities and meals for small groups in a comfortable and beautiful setting.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Rabesca Resources Ltd.: Store: (867) 371-3144 jrabesca@netkaster.ca
Tlicho Online Store	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Behchoko, NWT (Tlicho Online Store)	Aboriginal Northern NWT Tlicho	Welcome to the Tłı̨chǫ Online Store, selling handmade authentic native art and crafts made by the Tłı̨chǫ, including First Nations and artists from the Northwest Territories.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Tlicho Online Store: Giselle Store: (867) 392-6925 onlinestore@tlicho.com

GMRP Northern Aboriginal Business Listing

Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
Somba K'e Dental Clinic	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Yellowknife, NWT (Somba K'e Dental Clinic)	Aboriginal Northern NWT Tlicho	Welcome to Somba K'e Family Dental where we strive to exceed your expectations through our friendly staff, modern office, and professional results. Dr. Hazen Kobaisy travel from Yellowknife to Behchokö on Thursdays throughout the year. Our Behchokö Clinic is located in the Tłjcho Hotel on the main floor.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Somba K'e Dental Clinic: Store: (867) 873-2027 reception@sombakedental.com
Behchoko Towing Services	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Behchoko, NWT (Behchoko Towing Services)	Aboriginal Northern NWT Tlicho	24-hour roadside assistance and towing services from Yellowknife to Fort Providence on the Mackenzie Highway (Highway #3), Northwest Territories. Services also include Boosting, Lock-Outs, Auto Towing 4x4 recovery to local, long distance and ice roads.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Behchoko Towing Services: Store: (867) 765-5308
Rae-Edzo Dene Band Development Corporation ("Behchoko Development Corporation")	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Behchoko, NWT (Rae-Edzo Dene Band)	Aboriginal Northern NWT Tlicho	Rae-Edzo Dene Band Development Corporation Ltd. owns and leases 60,000 square feet of office and retail space in Behchokö.	N/A			Rae-Edzo Dene Band Development Corporation: (867) 392-6911 dmarion@tlicho.com
Tlicho Learning and Development Centre	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Behchoko, NWT (Learning and Development Centre)	Aboriginal Northern NWT Tlicho	Seasonal Firefighting services Slashing and clearing Brush Clearing Rights of Way	Other: Emergency Response			Tlicho Learning and Development Centre Jim Golchert, General Manager (867) 766-4909
Tlicho Road Constructors	Owned by Tlicho Investment Corp. and Behchoko Development Corporation	Yellowknife, NWT (Tlicho) Behchoko, NWT (Road Constructors)	Aboriginal Northern NWT Tlicho	Tlicho Road Constructors is owned by Behchokö Development Corporation. The company brings together winter road equipment and expertise from both Tłjchq Road Constructors Landtran and Nishi Khon Freeway.	Other: Road Construction			Luke Grosco (867) 444-2877 Tlicho Road Constructors Peter Stenne, General Manager (867) 766-4909 pstenne@tlichologistics.com
Tlicho Construction Ltd.	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Behchoko, NWT (Tlicho Construction Ltd.)	Aboriginal Northern NWT Tlicho	Building contractors / Housing construction.	Other: Home Construction	~45		Tlicho Construction Ltd. Betty Ann Nockerson, Senior Manager (867) 920-7288 ext. 225 bnickerson@tlichologistics.com

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Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
Tlicho Air	JV between Tlicho Investment Corp. and Air Tindi	Yellowknife, NWT (Tlicho) Yellowknife, NWT (Air Tindi)	Aboriginal Northern NWT Tlicho	Tlicho Air Inc. operates a diverse fleet of aircraft offering charter air services throughout the Tłjcho region. Scheduled air passenger and cargo service to the Tłjcho communities are provided by Air Tindi Ltd.	Other: Air Transportation			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Air Tindi: (867) 669-8200 (888) 545-6794 dispatch@airtindi.com
Gameti Gas Station	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Gameti, NWT (Gameti Gas Station)	Aboriginal Northern NWT Tlicho	Gas station for vehicles and home fuel delivery service for the Community of Gamètì.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Gameti Gas Station: Office: (867) 997-3031
Rae Lakes General Store Ltd	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Gameti, NWT (Rae Lakes General Store)	Aboriginal Northern NWT Tlicho	The Store provides the following services: post office cash machine groceries hardware dry goods postcards & souvenirs community bulletin board financial service	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Rae Lakes General Store: Mabel Gon, General Manager rlg_store@airware.ca (867) 997-3281
Gameti Development Corporation (GDC)	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Gameti, NWT (GDC)	Aboriginal Northern NWT Tlicho	GDC offers services to our community members and operates the Gamètì Motel Gamètì Gas Station Aurora Caribou Camp Fishing Camp. GDC is 100% owned by the Tłjcho Investment Corporation.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Gameti Development Corp.: Judal Dominicata, General Manager (867) 997-3202
Gameti Motel	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Gameti, NWT (Gameti Motel)	Aboriginal Northern NWT Tlicho	We have eight spacious rooms, with private bath, satellite TV in living room, coffee shop, laundry, and home cooked meals for \$210/night. We also have special tourist rates, day trips, and packages	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Gameti Motel: Office: (867) 997-3032

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Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
Wekweeti Hotel / Snare Lake Lodge	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Wekweeti, NWT (Wekweeti Hotel / Lodge)	Aboriginal Northern NWT Tlicho	Our Lodge can accommodate up to 10 people in comfort and style. Situated above the shores of Snare Lake, the lodge has a fully-equipped kitchen and a dining room with a beautiful view of the Lake facing towards the airport with a beach which is excellent for fishing during the summer and surrounding woodlands. The rate of \$250/night includes all meals GST not included.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Wekweeti Hotel / Snare Lake Lodge: Emily & Carol Arrowmaker (867) 713-2700
Wekweeti Development Corporation (WDC)	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Wekweeti, NWT (WDC)	Aboriginal Northern NWT Tlicho	The WDC, Hozila Naedik'e General Store, Dechi Laoti First Nation Holding (DLFN Holdings) and 5352 NWT Ltd are companies 100% owned by the Tłı̨chų Investment Corporation. Services to our community members include: fuel delivery gas station general store taxi service post office rental properties Wekweeti Hotel.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Wekweeti Development Corp.: Carol Arrowmaker, Manager (867) 713-2841
Hozila Naedik'e General Store	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Wekweeti, NWT (Hozila Naedik'e General Store)	Aboriginal Northern NWT Tlicho	The local store in town providing: groceries camping supplies gifts lumber materials money transactions.	N/A			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Hozila Naedik'e General Store: Tracy Rabesca, Manager (867) 713-2205
Lac La Martre Development Corporation	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Whati, NWT (Lac La Martre Development)	Aboriginal Northern NWT Tlicho	The Lac La Martre Development Corporation is 100% owned by the Tłı̨chų Investment Corporation. We offer affordable services to community members, and support local community initiatives. Services include: property management rental properties home fuel delivery gas station heavy equipment rentals home construction	Other: Road Construction Other: Home Construction Equipment supplier for: Equipment Operator			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Lac La Martre Development Corp. Ltd. George Nitsiza, Office Manager (867) 573-3244 georgenitsiza@tlicho.com

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Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
Nishi Khon Key West Travel	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Yellowknife (Key West Travel)	Aboriginal Northern NWT Tlicho	Nishi Khon Key West Travel is your American Express Travel Services representative in Yellowknife with over 20 years of experience operating in the north. We are a full service agency offering air, hotel, automobile, cruise and tour vacation packages. We specialize in: corporate travel management for mining companies oil & gas exploration government board agency conference travel arrangements.	Other: Air Transportation			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Nishi Khon Key West Travel (867) 873-2121 travel@keywesttravel.ca
Aboriginal Engineering Ltd.	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho) Yellowknife (Aboriginal Engineering Ltd.)	Aboriginal Northern NWT Tlicho	AEL has completed large construction survey projects, including the construction of Diavik diamond mine and the construction of the DeBeers Snap Lake diamond mine. We have completed large scale quality control, including the construction of A154 dyke at Diavik. The firm completes a wide variety of services including; Construction surveying, Legal surveying, Quality Control, Environmental Engineering, Contaminated Site Remediation, Bio-remediation, Vegetation enhancement, earthworks design, quantity calculations, analytical chemistry, construction inspection, training	Labourer Truck Driver Equipment Operator Technician: Technician - Environmental Surveyor Supervisor Environmental Other: Environmental Engineer	25	Total Sales: \$1,000,000 to \$4,999,999 Diavik mine construction; Snap Lake mine construction; Tundra mine remediation; Colomac mine remediation; Discovery mine remediation	Tlicho Investment Corp.: Luke Grosco (867) 444-2877 Aboriginal Engineering Ltd. General Manager (867) 766-4909
Nishi Khon Freeway	Owned by Tlicho Investment Corp.	Yellowknife , NWT (Tlicho) Behchoko, NWT (Nishi Khon Freeway)	Aboriginal Northern NWT Tlicho	Ownership is under the Tłı̨chǫ Investment Corporation. The primary activities of Nishi Khon Freeway include: Land Development Freight Hauling Gravel, Crushing, Sales and Delivery Heavy Equipment services & civil construction projects	Labourer Truck Driver Equipment Operator Other: Trucking Transportation			Tlicho Investment Corp.: Luke Grosco (867) 444-2877 Nishi Khon Freeway Jim Golchert, General Manager (867) 766-4909
Tlicho Domco Inc.	JV between Tlicho Investment Corp. and Domco Foodservice Group	Yellowknife, NWT (Tlicho) Toronto, ON (Domco)	Aboriginal Northern NWT Tlicho	On September 1, 1999, Dechi Laot'i First Nation and Domco Foodservices Group of Canada entered into a remote site services which includes catering, housing keeping and janitorial service for the mining sector. Since 1945, Domco has been one of the leaders in providing catering, housekeeping and janitorial service to Canada's mining, construction and exploration sectors from coast to coast.	Other: Catering Other: Housekeeping / Janitorial			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Domco Foodservice Group: Sylvie Ratheir Director, Sales & Marketing (416) 449-7333 sylvie.ratheir@comcofoodservice

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Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
Tlicho Landtran	JV between Tlicho Investment Corp. and Continental Cartage	Yellowknife, NWT (Tlicho) Yellowknife, NWT (Continental Cartgage) + Edmonton, AB	Aboriginal Northern NWT Tlicho	Tli Cho Landtran Transport is based in Yellowknife and offers regularly scheduled services between points in North America and the Northwest Territories. They are a preferred certified carrier for northern diamond mines, and pioneers of Canadian ice road travel and construction. In a partnership between the Tli Cho Nation and Landtran Systems Inc., Tli Cho Landtran offers a range of transportation services including: ice road construction freight management air expediting arrangements rock quarry services.	Other: Trucking Transportation Other: Road Construction Other: Air Transportation		Northern diamond mines	Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Continental Cartage: Shawn Talbot (867) 873-4044 Shawn.Talbot@continentalcartage.com
Tlicho Logistics	Owned by Tlicho Investment Corp.	Yellowknife, NWT (Tlicho)	Aboriginal Northern NWT Tlicho	Our activities include the provision of site services at Diavik and Snap Lake, site management and maintenance services at Colomac mine remediation and bulk fuel trucking to Diavik and Snap Lake in 2007. Since 1999, Tli Cho Logistics has provided Diavik with site services including road maintenance, facility management (airport, power house, water and sewage treatment), and oversees fuel handling services.	Labourer Truck Driver Equipment Operator Technician: Technician - Environmental Technician: ETP operator Trades: Electrician Supervisor Environmental	140+	Diavik mine site services Snap Lake mine site services Colomac mine remediation	Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com Tlicho Logistics: Betty Anne Nickerson, General Manager (867) 920-7288 bnickerson@tlichologistics.com
Tlicho / McCaw North	Jv between Tlicho Investment Corp. and McCaw North Drilling and Blasting Ltd.	Yellowknife, NWT (Tlicho) Yellowknife, NWT (McCaw North)	Aboriginal Northern NWT Tlicho	McCaw North has a strong working relationship with the Tlicho Aboriginal Group of companies based in Yellowknife. Together with the Tlicho Group we are currently in the process of developing a training program for First Nations peoples focusing on the construction trades. McCaw North provides drilling/blasting services.	Labourer Truck Driver Equipment Operator Drilling Support Surface Drilling Blasting/Drilling (unsure if UG)			Tlicho Investment Corp.: Kelly Brenton, CEO (867) 766-4909 ext 222 kbrenton@tlichoic.com McCaw North: (867) 769-2660
Denesoline / McCaw North	Jv between Denesoline Corporation Ltd. and McCaw North Drilling and Blasting Ltd.	Yellowknife, NWT (Denesoline Corp.) Yellowknife, NWT (McCaw North)	Aboriginal Northern NWT Akaitcho	The origin of this working relationship was based on the common goal of keeping a strong local economy. We actively work towards this goal by hiring northern and aboriginal workers along with buying locally and subcontracting northern and aboriginal businesses whenever possible. McCaw North provides drilling/blasting services.	Drilling Support Surface Drilling Blasting/Drilling (unsure if UG)			Denesoline Corporation: info@dcnwt.com (867) 873-5080 McCaw North: (867) 769-2660
Denendeh Investments Inc.	Owned by the Denendeh Developoment Corp. and Denesoline Corp.	Yellowknife, NWT (Denedeh Investments) Yellowknife, NWT (Denesoline HQ)	Aboriginal Northern NWT Akaitcho	Denendeh Investments Incorporated (DII) was created to hold for-profit investments made collectively by the Dene First Nations of the Northwest Territories on behalf of the people of Denendeh. DII is a significant player in the economy of Northern Canada and contributes to Denendeh’s sustainable economic development. DII is committed to investment opportunities and new opportunities for growth.	N/A			Denendeh Investments Inc. (867) 920-2764 ddc@denendeh.ca Denesoline Corporation: info@dcnwt.com (867) 873-5080

October 6, 2016

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Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
A & A Technical Services	JV between Tlichon Logistics and Nuna Logistics	Yellowknife, NWT (Tlichon Logistics) Edmonton, AB (Nuna Logistics HQ) + Vancouver, Squamish (British Columbia); Yellowknife (NWT); Rankin Inlet (NU); Thunder Bay (Ontario); Prince Albert (Saskatchewan)	Aboriginal Northern Tlichon	Supply and installation of engineered Geomembrane Lining Systems. Textured HDPE, LLDPE (ultraflex), geotextiles, Colentanche bituminous geomembranes. Provide Q/C testing and inspection services for major civil construction projects	Technician: GeoFabric Liner Welder	A & A Technical Services: 25 Nuna Logistics: 600 +	Diavik mine; Debeers Canada Tahera Corp; GNWT; LDG Constructors Peter Keiwi/Nuna Logistics	A & A Technical Services al@aatechnical.ca (867) 669-7022 Nuna Logistics: general@nunalogistics.com (877) 499-9114
Det'on Cho Corporation	100% solely owned company	Yellowknife, NWT	Aboriginal Northern YKDFN	Helicopter services, freight and logistics, drill, blast and crushing, road construction, camp catering to the mining and construction industries in NWT and NU	Drilling Support Surface Drilling Blasting/Drilling (except UG) Technician: Crusher/screener operator Other: Trucking Transportation Other: Air Transportation Other: Logistics Other: Road Construction Other: Catering	400		Rick Miller, Manager rick@detoncho.com (867) 873-6533
Det'on Cho Construction	Subsidiary of Det'on Cho Corporation.	Yellowknife, NWT	Aboriginal Northern YKDFN	Road construction, ice road construction, maintenance, drilling, blasting, crushing HDPE, geosynthetic clay and geotextile liner installation for containment facilities	Drilling Support Surface Drilling Blasting/Drilling (except UG) Technician: GeoFabric Liner Welder Other: Road Construction			Det'on Cho Construction (867)-873-6583
Det'on Cho Nahanni Construction	Subsidiary of Det'on Cho Corporation.	Yellowknife, NWT	Aboriginal Northern YKDFN	Turnkey operations and logistical services, year round concrete foundations and batch plant operations	Other: Logistics Other: Concrete Operations			Det'on Cho Nahanni Construction (867) 873-6355
Det'on Cho Ryfan	Subsidiary of Det'on Cho Corporation.	Yellowknife, NWT	Aboriginal Northern YKDFN	Supply, install and test high voltage, power generation, distribution systems, med/low voltage control and power systems, instrumentation, heat tracing, piping and mechanical services, testing, commissioning, installation of mechanical equipment	Trades: Mechanic Trades: Electrician Technician: Instrument technician Trades: Pipe fitter Trades: Pipe welder			Det'on Cho Ryfan (867) 873-6158
Det'on Cho Foraco	Subsidiary of Det'on Cho Corporation.	Yellowknife, NWT	Aboriginal Northern YKDFN	Drilling contractor	Drilling Support Surface Drilling Blasting/Drilling: Surface driller			
Det'on Cho Logistics	Subsidiary of Det'on Cho Corporation.	Yellowknife, NWT	Aboriginal Northern YKDFN	Expediting logistics, freight forwarding and consolidation, and air cargo handling services. From exploration through remediation, DCL can put together and deliver the needed services: camp set up and construction logistics; camp catering and maintenance, supply logistics and expediting, and site cleanup and remediation	Other: Logistics Other: Air Transportation Other: Trucking Transportation Other: Catering			Det'on Cho Logistics matt@detoncho.com OR stu@detoncho.com (867) 873-6970

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Business Name	Org Structure	Office Location(s)	Employee Categories	Services Overview	Skills	# of Employees	Contract Experience	Key Contact(s)
Det'on Cho Medic North	Subsidiary of Det'on Cho Corporation.	Yellowknife, NWT	Aboriginal Northern YKDFN	Provide clients with a complete package of medical care requirements for their employees, from fitness assessments and routine medical procedures to medical emergencies	Other: Medical services			Det'on Cho Medic North (867) 669-9111 ext 1504
Det'on Cho Mining Supplies	Subsidiary of Det'on Cho Corporation.	Yellowknife, NWT	Aboriginal Northern YKDFN	Dewatering pumps Ground support systems Welding consumables	Equipment supplier for: Pumps Ground support systems			
Kete Whii / Procon	Subsidiary of Det'on Cho Corporation.	Yellowknife, NWT	Aboriginal Northern YKDFN	Provides underground mining operations to BHP Billiton's Ekati Diamond Mine and participates in the construction of De Beers' underground operations at its Snap Lake Mine Site	Labourer Truck Driver Equipment Operator Underground Miner		Ekati mine Snap Lake mine	Det'on Cho Corporation (867) 873-6355
Det'on Cho NUNA	Subsidiary of Det'on Cho Corporation.	Yellowknife, NWT	Aboriginal Northern YKDFN	Maintenance of site facilities and equipment; maintenance of underground access and hoisting and pumping equipment; site security; demolition of bulk fuel storage; demolition of obsolete buildings; upgrading of pipe works; improvements to surface water management; operation of the effluent treatment plant; construction of a 70' clear span steel bridge to support heavy equipment traffic	Labourer Truck Driver Equipment Operator Technician: Security Personnel Technician: ETP Operator Technician: Technician - Environmental Trades: Ironworker Trades: Pipe fitter Environmental: Environmental monitor		Giant mine	Det'on Cho NUNA (867) 873-6533
Det'on Cho Stantec	Subsidiary of Det'on Cho Corporation.	Yellowknife, NWT	Aboriginal Northern YKDFN	Capital cost estimating; commissioning and training support; conceptual design and project modeling; detailed civil, mechanical and EI & C engineering; environmental compliance; feasibility studies; material specification and procurement support; materials handling; process engineering and optimization; project and construction management	Engineer: Civil engineer Engineer: Mechanical engineer Engineer: Electrical engineer Environmental Supervisor: Project Manager Supervisor: Supervisor Other: Cost Estimation			Det'on Cho Stantec (867) 873-6355
Det'on Cho Scarlet Security	Subsidiary of Det'on Cho Corporation.	Yellowknife, NWT	Aboriginal Northern YKDFN	Mine and pipeline security; physical plant security; winter road security; basic or advanced first-aid training; by-law enforcement; training programs for future security officers	Technician: Security Personnel			Det'on Cho Scarlet Security (867) 873-3059

Appendix B: GMRP Labour Requirements

The excel file that follows provides a detailed breakdown of GMRP labour requirements by occupation, position, and work type (e.g. underground, care and maintenance, etc.), as identified by Merit in March 2016 (Merit, 2016).

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The following sections are included in this excel workbook, sourced from initial forecasts by Merit in March 2016. To navigate to the various sections of this excel workbook, you can click on any of the buttons below.

1. Total Number of FTEs per Year across Positions

2. Number of FTEs per Year across Work Packages

Site Care & Maintenance	Landfill (Demo and Debris)	Borrow Sources	Demo & Debris	Freeze
Underground Stabilization	Baker Creek	Effluent Treatment Plant	Contaminated Soils	Open Pits
Openings to Surface	Tailings	Surface Water Management	Monitoring	Security

Total Number of FTEs per Year across Positions (Source: Merit March 2016)

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Category	Occupation	Position	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total Years		
Entry Level	Labourer	General Labourer	0	0	2	2	2	20	41	37	31	26	26	2	0	0	0	0	0	189		
		Flag Person	0	0	0	0	0	4	6	6	6	6	4	1	0	0	0	0	0	33	222	15%
Sub-totals	Entry Level		0	0	2	2	2	24	47	43	37	32	30	3	0	0	0	0	0	222		
Semi-Skilled	Truck Driver	Atriculated dump truck	0	0	0	0	0	10	16	16	32	31	14	2	0	0	0	0	0	121		
		5 Ton (Mixer/Water/Flat Deck w Picker/Vac/Tandem Dump/Compactor)	0	0	0	0	0	23	27	21	10	10	18	3	0	0	0	0	0	112		
		Skid Steer / Telehandler / Mini Excavator/Manlifts	0	0	0	0	0	2	14	7	2	2	4	0	0	0	0	0	0	31		
	Equipment Operator	Excavator	0	0	0	0	0	9	17	13	15	14	13	4	0	0	0	0	0	85		
		966 Loader	0	0	0	0	0	8	11	11	13	12	7	4	0	0	0	0	0	66		
		Grader operator	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	6		
		Dozer operator	0	0	0	0	0	6	7	7	11	11	8	2	0	0	0	0	0	52		
		Jumbo operator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		LHD operator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		U/G Dump Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		U/G man carriers	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	6		
	Drilling Support	Driller's helper	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	6		
		Rod man	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Admin Support	Clerk	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	6	491	32%
Sub-totals	Semi-Skilled		0	0	2	2	2	64	98	81	83	80	64	15	0	0	0	0	0	491		
	Truck Driver		0	0	0	0	0	35	57	44	44	43	36	5	0	0	0	0	0	264		
	Equipment Operator		0	0	1	1	1	26	38	34	39	37	28	10	0	0	0	0	0	215		
	Drilling Support		0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	6		
	Admin Support		0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	6		
Skilled	Technician	Lead instrument technician	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Instrument technician	0	0	0	0	0	1	1	1	3	2	0	0	0	0	0	0	0	8		
		Technician - GeoFabric Liner Welder	0	0	0	0	0	5	3	3	3	2	4	0	0	0	0	0	0	20		
		Technician - Environmental	0	0	3	3	3	7	13	6	6	6	6	0	0	0	0	0	0	53		
		Technician - Civil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		ETP operator	0	0	4	4	4	4	4	4	4	6	2	0	0	0	0	0	0	36		
		Crusher/ screener operator	0	0	0	0	0	5	7	7	5	5	3	3	0	0	0	0	0	35		
	Trades	Security Personnel	0	0	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	54		
		Carpenter	0	0	2	2	2	2	1	5	6	4	3	0	0	0	0	0	0	27		
		Ironworker (Rebar or Structural)	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	8		
		Trades Supervisor	0	0	1	1	1	1	3	1	0	0	0	0	0	0	0	0	0	8		
		Crane Operator	0	0	0	0	0	1	3	1	2	0	0	0	0	0	0	0	0	7		
		Mechanic	0	0	1	1	1	7	11	11	14	12	8	1	0	0	0	0	0	67		
		HVAC	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	4		
		Electrician	0	0	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	16		
		Millwright	0	0	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	16		
		Pipe fitter	0	0	0	0	0	8	8	8	12	2	0	0	0	0	0	0	0	38		
		Pipe welder	0	0	0	0	0	4	4	4	6	1	0	0	0	0	0	0	0	19		
		Hazmat crew workers	0	0	0	0	0	3	23	0	0	0	2	0	0	0	0	0	0	28		
		Hazmat FM	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	8		
	Surveyor	Quantity surveyor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Surveyor	0	0	1	1	1	6	6	7	6	4	4	1	0	0	0	0	0	37		
	Surface Drilling	Driller	0	0	0	0	0	9	9	9	8	4	4	4	0	0	0	0	0	47		
		Driller's helper	0	0	0	0	0	12	12	12	12	4	2	2	0	0	0	0	0	56		
	Blasting/Drilling	Surface driller	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	4		
		Surface blaster	0	0	0	0	0	4	4	4	6	6	4	4	0	0	0	0	0	32		
		Underground driller	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3		
	Underground Miner	Underground shift boss	0	0	1	1	1	2	2	2	0	0	1	0	0	0	0	0	0	10		
		Underground miners	0	0	2	2	2	7	3	3	0	0	1	0	0	0	0	0	0	20		
	Supervisor	Project Manager	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Supervisor	0	0	0	0	0	5	8	8	7	6	5	1	0	0	0	0	0	40		
		Shift foreman	0	0	0	0	0	3	11	8	6	6	4	1	0	0	0	0	0	39	740	49%
Sub-totals	Skilled		0	0	25	25	25	108	154	115	124	84	63	17	0	0	0	0	0	740		
	Technician		0	0	13	13	13	28	34	27	27	21	3	0	0	0	0	0	0	206		
	Trades		0	0	8	8	8	31	64	34	50	25	17	1	0	0	0	0	0	246		
	Surveyor		0	0	1	1	1	6	6	7	6	4	4	1	0	0	0	0	0	37		
	Surface Drilling		0	0	0	0	0	21	21	21	20	8	6	6	0	0	0	0	0	103		
	Blasting/Drilling		0	0	0	0	0	5	5	5	8	8	4	4	0	0	0	0	0	39		
	Underground Miner		0	0	3	3	3	9	5	5	0	0	2	0	0	0	0	0	0	30		
	Supervisor		0	0	0	0	0	8	19	16	13	12	9	2	0	0	0	0	0	79		
Professional	Management	Planner	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Accountant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Environmental	Environmental superintendent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Environmental monitor	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	4		
	Safety	Safety supervisor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Safety officer	0	0	1	1	1	6	10	8	6	5	4	1	0	0	0	0	0	43		
		Underground safety	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3		
	Engineer	Civil engineer	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2		
		Mining engineer	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3		
		Chemical engineer	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1		
		Mechanical engineer	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1		
		Electrical engineer	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	58	4%
Sub-totals	Professional		0	0	1	1	1	8	13	15	7	6	5	1	0	0	0	0	0	58		
	Management		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Environmental		0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	4		
	Safety		0	0	1	1	1	7	11	9	6	5	4	1	0	0	0	0	0	46		
	Engineer		0	0	0	0	0	1	1	5	0	0	1	0	0	0	0	0	0	8		
TOTAL		Total Employees per year	0	0	30	30	30	204	312	254	251	202	162	36	0	0	0	0	0	1511		100%

May 16, 2016

Number of FTEs per Year across Work Packages

from borrow area

year 2 erect and install equipment and commission + pipeline and outfall construction

crew in the contaminated soils area and a crew at the washing and screening area

assume work for five (5) months / year for year 1 and 2, nine (9) months for year 3 and ten (10) months for year 4

May 16, 2016

Number of FTEs per Year across Work Packages

[illegible]

GMRP REMEDIATION RESOURCING ESTIMATE

May 16, 2016

Number of FTEs per Year across Work Packages

[illegible]

May 16, 2016

	Site Care & Maintenance <i>Mine systems and utilities, internal roads, sewer, water, electrical, former Hwy 4, demolition, health & safety</i>
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ETP operates 4-5 mos/yr HVAC personnel work on ETP in summer and boilers in Winter
ETP needs to run in 2025 as a 1 yr overlap with the New ETP

GMRP REMEDIATION RESOURCING ESTIMATE
May 16, 2016

Number of FTEs per Year across Work Packages

			Landfill (Demo and Debris)																	ALL WORKPACKAGES by YEAR																	TOTAL Man	
			Siting and design																																		Years	
Category	Occupation	Position	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032		
Entry Level	Labourer	General Labourer						6	1	1	1	1	1	6						0	0	2	2	2	20	41	37	31	26	26	2	0	0	0	0	0	189	
		Flag Person						1	1	1	1	1	1							0	0	0	0	0	4	6	6	6	6	4	1	0	0	0	0	0	33	
Semi-Skilled	Truck Driver	Atriculated dump truck						4												0	0	0	0	0	10	16	16	32	31	14	2	0	0	0	0	0	121	
		5 Ton (Mixer/Water/Flat Deck w Picker/Vac/Tandem Dump/Compactor)						6	1	1	1	1	1	4						0	0	0	0	0	23	27	21	10	10	18	3	0	0	0	0	0	112	
	Equipment Operator	Skid Steer / Telehandler / Mini Excavator/Manlifts																		0	0	0	0	0	2	14	7	2	2	4	0	0	0	0	0	31		
		Excavator						2	1	1	1	1	1	2						0	0	0	0	0	9	17	13	15	14	13	4	0	0	0	0	85		
		966 Loader						1	1	1	1	1	1	1						0	0	0	0	0	8	11	11	13	12	7	4	0	0	0	0	66		
		Grader operator																		0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	6			
		Dozer operator						2	1	1	1	1	1	2						0	0	0	0	0	6	7	7	11	11	8	2	0	0	0	0	52		
		Jumbo operator																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		LHD operator (Load /Haul/Dump)																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		U/G Dump Truck																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		U/G man carriers																		0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	6	
		Driller's helper																		0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	6	
	Rod man																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Clerk																		0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	6		
	Skilled	Technician	Lead instrument technician																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Instrument technician																		0	0	0	0	0	1	1	1	3	2	0	0	0	0	0	0	8	
			Technician - GeoFabric Liner Welder						2						2						0	0	0	0	0	5	3	3	3	2	4	0	0	0	0	0	0	20
		Technician - Environmental																		0	0	3	3	3	7	13	6	6	6	6	0	0	0	0	0	0	53	
		Technician - Civil																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		ETP operator																		0	0	4	4	4	4	4	4	4	6	2	0	0	0	0	0	0	36	
		Crusher/ screener operator																		0	0	0	0	0	5	7	7	5	5	3	3	0	0	0	0	0	35	
		Security Personnel																		0	0	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	54	
Carpenter																			0	0	2	2	2	2	1	5	6	4	3	0	0	0	0	0	0	27		
Ironworker (Rebar or Structural)																			0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	8		
Trades Supervisor																			0	0	1	1	1	1	3	1	0	0	0	0	0	0	0	0	0	8		
Crane Operator																			0	0	0	0	0	1	3	1	2	0	0	0	0	0	0	0	0	7		
Mechanic							1	1	1	1	1	1	1						0	0	1	1	1	7	11	11	14	12	8	1	0	0	0	0	0	67		
HVAC																			0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	4		
Electrician																			0	0	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	16		
Millwright																			0	0	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	16		
Pipe fitter																			0	0	0	0	0	8	8	8	12	2	0	0	0	0	0	0	0	38		
Pipe welder																			0	0	0	0	0	4	4	4	6	1	0	0	0	0	0	0	0	19		
Hazmat crew workers																			0	0	0	0	0	3	23	0	0	0	2	0	0	0	0	0	0	28		
Hazmat FM																			0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	8		
Surveyor	Quantity surveyor																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Surveyor						1						1						0	0	1	1	1	6	6	7	6	4	4	1	0	0	0	0	0	37		
Surface Drilling	Driller																		0	0	0	0	0	9	9	9	8	4	4	4	0	0	0	0	0	47		
	Driller's helper																		0	0	0	0	0	12	12	12	12	4	2	2	0	0	0	0	0	56		
Blasting/Drilling	Surface driller																		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	4		
	Surface blaster																		0	0	0	0	0	4	4	4	6	6	4	4	0	0	0	0	0	32		
Underground Miner	Underground driller																		0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3		
	Underground shift boss																		0	0	1	1	1	2	2	2	0	0	1	0	0	0	0	0	0	10		
Supervisor	Underground miners																		0	0	2	2	2	7	3	3	0	0	1	0	0	0	0	0	0	20		
	Project Manager																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Supervisor						1						1						0	0	0	0	0	5	8	8	7	6	5	1	0	0	0	0	0	40		
	Shift foreman						1	1	1	1	1	1	1						0	0	0	0	0	3	11	8	6	6	4	1	0	0	0	0	0	39		

May 16, 2016

			Borrow Sources																ALL WORK PACKAGES by YEAR																	TOTAL Man
Category	Occupation	Position	Interim operation of borrow source, design, construction, long-term quarry																2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Years
			2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032																	
Entry Level	Labourer	General Labourer						2	2	2	2	2	2	2																				189		
		Flag Person						1	1	1	1	1	1	1																			33			
Semi-Skilled	Truck Driver	Atriculated dump truck						2	2	2	2	2	2	2																			121			
		5 Ton (Mixer/Water/Flat Deck w Picker/Vac/Tandem Dump/Compactor)																																		
		Skid Steer / Telehandler / Mini Excavator/Manlifts																															112			
		Excavator																															31			
	Equipment Operator	966 Loader																															85			
		Grader operator																															66			
		Dozer operator																															6			
		Jumbo operator																															52			
		LHD operator (Load /Haul/Dump) U/G Dump Truck																															0			
		U/G man carriers																															0			
	Drilling Support	Driller's helper																															6			
		Rod man																															0			
	Admin Support	Clerk																															6			
		Lead instrument technician																															0			
Skilled	Technician	Instrument technician																															8			
		Technician - GeoFabric Liner Welder																															20			
		Technician - Environmental																															53			
		Technician - Civil																															0			
		ETP operator																															36			
		Crusher/ screener operator																															35			
	Trades	Security Personnel																															54			
		Carpenter																															27			
		Ironworker (Rebar or Structural)																																		

work two D/B faces, one sediment removal area, dump in one pit, load from borrow area

GMRP REMEDIATION RESOURCING ESTIMATE

May 16, 2016

Number of FTEs per Year across Work Packages

			Demo & Debris																				ALL WORK PACKAGES by YEAR																TOTAL Man
Category	Occupation	Position	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Years		
Entry Level	Labourer	General Labourer						4	24	16			2							0	0	2	2	2	20	41	37	31	26	26	2	0	0	0	0	0	189		
		Flag Person																		0	0	0	0	0	4	6	6	6	6	4	1	0	0	0	0	0	33		
Semi-Skilled	Truck Driver	Atriculated dump truck																		0	0	0	0	0	10	16	16	32	31	14	2	0	0	0	0	0	121		
		5 Ton (Mixer/Water/Flat Deck w Picker/Vac/Tandem Dump/Compactor)						4	13	7			1							0	0	0	0	0	23	27	21	10	10	18	3	0	0	0	0	0	112		
		Skid Steer / Telehandler / Mini																		0	0	0	0	0	2	14	7	2	2	4	0	0	0	0	0	0	31		
		Excavator/Manlifts						1	13	6			1							0	0	0	0	0	9	17	13	15	14	13	4	0	0	0	0	0	85		
	Equipment Operator	Excavator						2	8	4			1							0	0	0	0	0	8	11	11	13	12	7	4	0	0	0	0	0	66		
		966 Loader																		0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	6		
		Grader operator																		0	0	0	0	0	6	7	7	11	11	8	2	0	0	0	0	0	52		
		Dozer operator																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Jumbo operator																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		LHD operator (Load /Haul/Dump)																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		U/G Dump Truck																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		U/G man carriers																		0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	6	
	Drilling Support	Driller's helper																		0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	6	
		Rod man																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Admin Support	Clerk																		0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	6	
		Lead instrument technician																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Skilled	Technician	Instrument technician																		0	0	0	0	0	1	1	1	3	2	0	0	0	0	0	0	0	8		
		Technician - GeoFabric Liner Welder																		0	0	0	0	0	5	3	3	3	2	4	0	0	0	0	0	0	20		
		Technician - Environmental						1	7											0	0	3	3	3	7	13	6	6	6	6	0	0	0	0	0	0	53		
		Technician - Civil																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		ETP operator																		0	0	4	4	4	4	4	4	4	6	2	0	0	0	0	0	0	36		
		Crusher/ screener operator																		0	0	0	0	0	5	7	7	5	5	3	3	0	0	0	0	0	35		
	Trades	Security Personnel																		0	0	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	54		
		Carpenter																		0	0	2	2	2	2	1	5	6	4	3	0	0	0	0	0	0	27		
		Ironworker (Rebar or Structural)																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
		Trades Supervisor							2											0	0	1	1	1	1	3	1	0	0	0	0	0	0	0	0	0	0	8	
		Crane Operator							2											0	0	0	0	0	1	3	1	2	0	0	0	0	0	0	0	0	0	7	
		Mechanic																		0	0	1	1	1	7	11	11	14	12	8	1	0	0	0	0	0	67		
		HVAC																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
		Electrician																		0	0	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	16	
		Millwright																		0	0	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	16	
		Pipe fitter																		0	0	0	0	0	8	8	8	12	2	0	0	0	0	0	0	0	38		
		Pipe welder																		0	0	0	0	0	4	4	4	6	1	0	0	0	0	0	0	0	0	19	
		Hazmat crew workers						3	23				2							0	0	0	0	0	3	23	0	0	0	2	0	0	0	0	0	0	0	28	
		Hazmat FM						1	7											0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	8	
		Quantity surveyor																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Surveyor	Surveyor																		0	0	1	1	1	6	6	7	6	4	4	1	0	0	0	0	0	0	37	
		Driller																		0	0	0	0	0	9	9	9	8	4	4	4	0	0	0	0	0	47		
		Driller's helper																		0	0	0	0	0	12	12	12	12	4	2	2	0	0	0	0	0	56		
		Surface driller																		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	4		
	Blasting/Drilling	Surface blaster																		0	0	0	0	0	4	4	4	6	6	4	4	0	0	0	0	0	0	32	
		Underground driller																		0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3		
	Underground Miner	Underground shift boss																		0	0	1	1	1	2	2	2	0	0	1	0	0	0	0	0	0	10		
		Underground miners																		0	0	2	2	2	7	3	3	0	0	1	0	0	0	0	0	0	20		
	Supervisor	Project Manager																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Supervisor						1	3	2			1																										

GMRP REMEDIATION RESOURCING ESTIMATE

May 16, 2016

Number of FTEs per Year across Work Packages

			Underground Stabilization															ALL WORK PACKAGES by YEAR																	TOTAL Man				
			Drilling of stopes, risk assessment, design, backfill																																Years				
Category	Occupation	Position	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032			
Entry Level	Labourer	General Labourer						5	5	5										0	0	2	2	2	20	41	37	31	26	26	2	0	0	0	0	0	189		
		Flag Person						2	2	2										0	0	0	0	0	4	6	6	6	6	4	1	0	0	0	0	0	33		
Semi-Skilled	Truck Driver	Atriculated dump truck						2	2	2										0	0	0	0	0	10	16	16	32	31	14	2	0	0	0	0	0	121		
		5 Ton (Mixer/Water/Flat Deck w Picker/Vac/Tandem Dump/Compactor)																		0	0	0	0	0	23	27	21	10	10	18	3	0	0	0	0	0	112		
	Equipment Operator	Skid Steer / Telehandler / Mini Excavator/Manlifts						10	10	10											0	0	0	0	0	2	14	7	2	2	4	0	0	0	0	0	0	31	
		Excavator						1	1	1											0	0	0	0	0	9	17	13	15	14	13	4	0	0	0	0	0	85	
		966 Loader						1	1	1											0	0	0	0	0	8	11	13	12	7	4	0	0	0	0	0	66		
		Grader operator																			0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	6		
		Dozer operator						1	1	1											0	0	0	0	0	6	7	7	11	8	2	0	0	0	0	0	52		
		Jumbo operator																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		LHD operator (Load /Haul/Dump)																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		U/G Dump Truck																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Drilling Support	U/G man carriers						2	2	2											0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	6
		Driller's helper						2	2	2											0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	6
		Rod man																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Admin Support	Clerk																			0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	6	
		Technician	Lead instrument technician																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Skilled	Technician	Instrument technician																		0	0	0	0	0	1	1	1	3	2	0	0	0	0	0	0	0	8	
			Technician - GeoFabric Liner Welder						2	2	2										0	0	0	0	0	5	3	3	3	2	4	0	0	0	0	0	0	20	
			Technician - Environmental																		0	0	3	3	3	7	13	6	6	6	6	0	0	0	0	0	0	53	
			Technician - Civil																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ETP operator																				0	0	0	0	0	4	4	4	4	6	2	0	0	0	0	0	0	36		
Trades		Crusher/ screener operator						2	2	2										0	0	0	0	0	5	7	7	5	5	3	3	0	0	0	0	0	0	35	
		Security Personnel																		0	0	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	54		
		Carpenter																		0	0	2	2	2	2	1	5	6	4	3	0	0	0	0	0	0	27		
		Ironworker (Rebar or Structural)																		0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	8			
		Trades Supervisor																		0	0	1	1	1	1	3	1	0	0	0	0	0	0	0	0	0	8		
		Crane Operator																		0	0	0	0	0	1	3	1	2	0	0	0	0	0	0	0	0	7		
		Mechanic						2	2	2										0	0	1	1	1	7	11	11	14	12	8	1	0	0	0	0	0	67		
		HVAC																		0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	4	
		Electrician																		0	0	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	16	
		Millwright																		0	0	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	16	
Pipe fitter																			0	0	0	0	0	8	8	8	12	2	0	0	0	0	0	0	0	0	38		
Pipe welder																			0	0	0	0	0	4	4	4	6	1	0	0	0	0	0	0	0	0	19		
Hazmat crew workers																			0	0	0	0	0	3	23	0	0	0	0	2	0	0	0	0	0	0	0	28	
Hazmat FM																			0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	8	
Surveyor		Quantity surveyor																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Surveyor						2	2	2										0	0	1	1	1	6	6	7	6	4	4	1	0	0	0	0	0	0	37	
Surface Drilling		Driller						1	1	1										0	0	0	0	0	9	9	9	8	4	4	4	0	0	0	0	0	0	0	47
		Driller's helper						2	2	2										0	0	0	0	0	12	12	12	12	4	2	2	0	0	0	0	0	0	56	
Blasting/Drilling		Surface driller																		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	4	
		Surface blaster																		0	0	0	0	0	4	4	4	6	6	4	4	0	0	0	0	0	0	32	
		Underground driller						1	1	1										0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3	
Underground Miner		Underground shift boss						1	1	1										0	0	1	1	1	2	2	2	0	0	1	0	0	0	0	0	0	0	10	
		Underground miners						6	2	2										0	0	2	2	2	7	3	3	0	0	1	0	0	0	0	0	0	0	20	
Supervisor		Project Manager																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Supervisor						1	1	1										0	0	0	0	0	5	8	8	7	6	5	1	0	0	0	0	0	0	40	
		Shift foreman						1	1	1										0	0	0	0	0	3	11	8	6	6	4	1	0	0	0	0	0	0	39	
Professional		Management	Planner																	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			Accountant																																				

May 16, 2016

[illegible]

assume work for nine (9) months per year

work two D/B faces, one sediment removal area, dump in one pit, load from borrow area

GMRP REMEDIATION RESOURCING ESTIMATE

May 16, 2016

Number of FTEs per Year across Work Packages

			Effluent Treatment Plant																				ALL WORK PACKAGES by YEAR																TOTAL Man	
			Water quality assessment, sediment study, aquatic effects monitoring, design, construction																																				Years	
Category	Occupation	Position	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Years			
Entry Level	Labourer	General Labourer								4	6	2									0	0	2	2	2	20	41	37	31	26	26	2	0	0	0	0	0	189		
		Flag Person																			0	0	0	0	4	6	6	6	6	4	1	0	0	0	0	0	33			
Semi-Skilled	Truck Driver	Atriculated dump truck									1										0	0	0	0	0	10	16	16	32	31	14	2	0	0	0	0	0	121		
		5 Ton (Mixer/Water/Flat Deck w Picker/Vac/Tandem Dump/Compactor) Skid Steer / Telehandler / Mini Excavator/Manlifts																			0	0	0	0	0	23	27	21	10	10	18	3	0	0	0	0	0	112		
	Equipment Operator	Excavator									1										0	0	0	0	0	9	17	13	15	14	13	4	0	0	0	0	0	85		
		966 Loader									1										0	0	0	0	0	8	11	11	13	12	7	4	0	0	0	0	0	66		
		Grader operator																			0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	6		
		Dozer operator																			0	0	0	0	0	6	7	7	11	11	8	2	0	0	0	0	0	52		
		Jumbo operator																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		LHD operator (Load /Haul/Dump)																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		U/G Dump Truck																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		U/G man carriers																			0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	6		
	Drilling Support	Driller's helper																			0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	6		
		Rod man																			0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	6		
	Admin Support	Clerk																			0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	6		
Skilled	Technician	Lead instrument technician																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Instrument technician										2	2								0	0	0	0	0	1	1	1	3	2	0	0	0	0	0	0	0	8		
		Technician - GeoFabric Liner Welder																			0	0	0	0	0	5	3	3	3	2	4	0	0	0	0	0	0	20		
		Technician - Environmental																			0	0	3	3	3	7	13	6	6	6	6	0	0	0	0	0	0	53		
		Technician - Civil																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		ETP operator											2	2							0	0	4	4	4	4	4	4	4	6	2	0	0	0	0	0	0	36		
		Crusher/ screener operator																			0	0	0	0	0	5	7	7	5	5	3	3	0	0	0	0	0	0	35	
		Security Personnel																			0	0	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	54		
	Trades	Carpenter								4	6	4									0	0	2	2	2	2	1	5	6	4	3	0	0	0	0	0	0	27		
		Ironworker (Rebar or Structural)									4										0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	8		
		Trades Supervisor																			0	0	1	1	1	1	3	1	0	0	0	0	0	0	0	0	0	8		
		Crane Operator									1										0	0	0	0	0	1	3	1	2	0	0	0	0	0	0	0	0	7		
		Mechanic																			0	0	1	1	1	7	11	11	14	12	8	1	0	0	0	0	0	67		
		HVAC										2	2								0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	4		
		Electrician									2	2									0	0	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	16		
		Millwright									2	2									0	0	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	16		
		Pipe fitter									4	2									0	0	0	0	0	8	8	8	12	2	0	0	0	0	0	0	0	38		
		Pipe welder									2	1									0	0	0	0	0	4	4	4	6	1	0	0	0	0	0	0	19			
		Hazmat crew workers																			0	0	0	0	0	3	23	0	0	0	2	0	0	0	0	0	0	28		
		Hazmat FM																			0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	8			
	Surveyor	Quantity surveyor																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Surveyor								1	1										0	0	1	1	1	6	6	7	6	4	4	1	0	0	0	0	0	37		
	Surface Drilling	Driller																			0	0	0	0	0	9	9	9	8	4	4	4	0	0	0	0	0	47		
		Driller's helper																			0	0	0	0	0	12	12	12	12	4	2	2	0	0	0	0	0	56		
	Blasting/Drilling	Surface driller																			0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	4		
		Surface blaster																			0	0	0	0	0	4	4	4	6	6	4	4	0	0	0	0	32			
	Underground Miner	Underground driller																			0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3		
		Underground shift boss																			0	0	1	1	1	2	2	2	0	0	1	0	0	0	0	0	10			
		Underground miners																			0	0	2	2	2	7	3	3	0	0	1	0	0	0	0	0	0	20		
		Project Manager																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Supervisor	Supervisor								1	1	1									0	0	0	0	0	5	8	8	7	6	5	1	0	0	0	0	0	40		
		Shift foreman																			0	0	0	0	0	3	11	8	6	6	4	1	0	0	0	0	0	39		
Professional	Management	Planner																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Accountant																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Environmental	Environmental superintendent																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Environmental monitor																			0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	4			
	Safety	Safety supervisor																			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Safety officer									1	1	1								0	0	1	1	1	6	10	8	6	5	4	1	0	0	0	0	0	43		
	Engineer	Underground safety																			0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3			
		Civil engineer								1											0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2			
		Mining engineer																			0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3			
		Chemical engineer								1											0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1			
		Mechanical engineer								1											0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1			
		Electrical engineer									1										0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1			

GMRP REMEDIATION RESOURCING ESTIMATE
May 16, 2016

Number of FTEs per Year across Work Packages

			Tailings																				ALL WORK PACKAGES by YEAR																	TOTAL Man
			Options analysis, design, construction																				2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Years
Category	Occupation	Position	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032																					
Entry Level	Labourer	General Labourer										8	8	8																							189			
		Flag Person										2	2	2																							33			
Semi-Skilled	Truck Driver	Atriculated dump truck										10	10	10																							121			
		5 Ton (Mixer/Water/Flat Deck w Picker/Vac/Tandem Dump/Compactor)												4	4	6																					112			
	Equipment Operator	Skid Steer / Telehandler / Mini Excavator/Manlifts											1	1	1																						31			
		Excavator											1	1	1																						85			
		966 Loader											2	2	2																						66			
		Grader operator																																			6			
		Dozer operator											2	2	2																						52			
		Jumbo operator																																			0			
		LHD operator (Load /Haul/Dump)																																			0			
		U/G Dump Truck																																			0			
		U/G man carriers																																			6			
		Driller's helper																																			6			
	Rod man																																			0				
	Admin Support	Clerk																																			6			
		Lead instrument technician																																			0			
	Skilled	Technician	Instrument technician																																		8			
			Technician - GeoFabric Liner Welder											2	2	2																					20			
		Trades	Technician - Environmental																																			53		
			Technician - Civil																																			0		
			ETP operator																																			36		
			Crusher/ screener operator																																			35		
			Security Personnel																																			54		
Carpenter																																					27			
Ironworker (Rebar or Structural)																																					8			
Trades Supervisor																																					8			
Crane Operator																																					7			
Mechanic														2	2	2																					67			
Surveyor		HVAC																																			4			
		Electrician																																			16			
		Millwright																																			16			
		Pipe fitter																																			38			
		Pipe welder																																			19			
		Hazmat crew workers																																			28			
		Hazmat FM																																			8			
		Quantity surveyor																																			0			
		Surveyor												1	1	1																					37			
		Surface Drilling	Driller																																			47		
Driller's helper																																					56			
Blasting/Drilling		Surface driller																																			4			
		Surface blaster																																			32			
Underground Miner		Underground driller																																			3			
		Underground shift boss																																			10			
		Underground miners																																			20			
Supervisor		Project Manager																																			0			
		Supervisor																																			40			
		Shift foreman																																			39			
																																					0			
Professional		Management	Planner																																		0			
			Accountant																																		0			
	Environmental	Environmental superintendent																																		0				
		Environmental monitor																																		4				
	Safety	Safety supervisor																																		0				
		Safety officer																																		43				
	Engineer	Underground safety																																		3				
		Civil engineer																																		2				
		Mining engineer																																		3				
		Chemical engineer																		</																				

GMRP REMEDIATION RESOURCING ESTIMATE

May 16, 2016

Number of FTEs per Year across Work Packages

			Monitoring																				ALL WORK PACKAGES by YEAR																	TOTAL Man Years
Category	Occupation	Position	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032				
Entry Level	Labourer	General Labourer																		0	0	2	2	2	20	41	37	31	26	26	2	0	0	0	0	0	189			
		Flag Person																		0	0	0	0	0	4	6	6	6	4	1	0	0	0	0	0	33				
Semi-Skilled	Truck Driver	Atriculated dump truck																		0	0	0	0	0	10	16	16	32	31	14	2	0	0	0	0	0	121			
		5 Ton (Mixer/Water/Flat Deck w Picker/Vac/Tandem Dump/Compactor)																		0	0	0	0	0	23	27	21	10	10	18	3	0	0	0	0	0	112			
	Equipment Operator	Skid Steer / Telehandler / Mini Excavator/Manlifts																		0	0	0	0	0	2	14	7	2	2	4	0	0	0	0	0	0	31			
		Excavator																		0	0	0	0	0	9	17	13	15	14	13	4	0	0	0	0	0	85			
		966 Loader																		0	0	0	0	0	8	11	11	13	12	7	4	0	0	0	0	0	66			
		Grader operator																		0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	6			
		Dozer operator																		0	0	0	0	0	6	7	7	11	11	8	2	0	0	0	0	0	52			
		Jumbo operator																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
		LHD operator (Load /Haul/Dump)																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
		U/G Dump Truck																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	Drilling Support	U/G man carriers																		0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	6		
		Driller's helper																		0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	6		
		Rod man																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Clerk																		0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	6			
	Skilled	Technician	Lead instrument technician																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			Instrument technician																		0	0	0	0	0	1	1	1	3	2	0	0	0	0	0	0	0	8		
		Trades	Technician - GeoFabric Liner Welder																		0	0	0	0	0	5	3	3	3	2	4	0	0	0	0	0	0	20		
			Technician - Environmental				3	3	3	6	6	6	6	6	6	6					0	0	3	3	3	7	13	6	6	6	6	0	0	0	0	0	0	53		
			Technician - Civil																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			ETP operator																		0	0	4	4	4	4	4	4	6	2	0	0	0	0	0	0	36			
			Crusher/ screener operator																		0	0	0	0	0	5	7	7	5	5	3	3	0	0	0	0	0	35		
			Security Personnel																		0	0	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	54		
Carpenter																				0	0	2	2	2	2	1	5	6	4	3	0	0	0	0	0	0	27			
Trades			Ironworker (Rebar or Structural)																		0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	8		
		Trades Supervisor																		0	0	1	1	1	1	3	1	0	0	0	0	0	0	0	0	0	0	8		
		Crane Operator																		0	0	0	0	0	1	3	1	2	0	0	0	0	0	0	0	0	7			
		Mechanic																		0	0	1	1	1	7	11	11	14	12	8	1	0	0	0	0	0	67			
		HVAC																		0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4				
		Electrician																		0	0	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	16			
		Millwright																		0	0	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	16			
		Pipe fitter																		0	0	0	0	0	8	8	8	12	2	0	0	0	0	0	0	0	38			
		Pipe welder																		0	0	0	0	0	4	4	4	6	1	0	0	0	0	0	0	0	19			
		Hazmat crew workers																		0	0	0	0	0	3	23	0	0	0	2	0	0	0	0	0	0	28			
		Hazmat FM																		0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	8			
		Surveyor	Quantity surveyor																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Surveyor																				0	0	1	1	1	6	6	7	6	4	4	1	0	0	0	0	0	37			
Surface Drilling		Driller																		0	0	0	0	0	9	9	9	8	4	4	4	0	0	0	0	0	0	47		
		Driller's helper																		0	0	0	0	0	12	12	12	12	4	2	2	0	0	0	0	0	56			
Blasting/Drilling		Surface driller																		0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	4			
		Surface blaster																		0	0	0	0	0	4	4	4	6	6	4	4	0	0	0	0	0	32			
Underground driller		Underground driller																		0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3			
		Underground shift boss																		0	0	1	1	1	2	2	2	0	0	1	0	0	0	0	0	0	10			
Underground Miner		Underground miners																		0	0	2	2	2	7	3	3	0	0	1	0	0	0	0	0	0	20			
		Project Manager																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Supervisor		Supervisor																		0	0	0	0	0	5	8	8	7	6	5	1	0	0	0	0	0	40			
		Shift foreman																		0	0	0	0	0	3	11	8	6	6	4	1	0	0	0	0	0	39			
Professional		Management	Planner																	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
			Accountant																	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Environmental		Environmental superintendent																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Environmental monitor																		0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	4				
Safety		Safety supervisor																		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
		Safety officer																		0	0	1	1	1	6	10	8	6	5	4	1	0	0	0	0	0	43			
Engineer		Underground safety																		0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3			
		Civil engineer																		0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2				
	Mining engineer																		0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3					
	Chemical engineer																		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1					
		Mechanical engineer																	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1					
		Electrical engineer																	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1					
			0	0	3	3	3	6	6	6	6	6	6	0	0	0	0	0	0	0	0	30	30	30	204	312	254	251	202	162	36	0	0	0	0	0	1511			
			2017-2019 1 water - yr round / 1 - 6mos and 1 - air																																					1511

Appendix C: Aboriginal Community Profiles

In June 2016, Stratos interviewed individuals from Aboriginal communities and organizations in proximity to the Giant Mine to better understand current Northern and Aboriginal labour force and business capacity. Table 28 lists the individuals interviewed. The Deninue K'ue First Nation were also contacted, but they were not available to participate.

Table 27: Individuals Interviewed on Local Business Capacity and Interests

Organization	Individuals
Tłıchq Investment Corp.	Kelly Brenton, CEO
Yellowknives Dene First Nation*	William Lyons, Community Liaison
Det'on Cho Corporation*	Bob Murphy, President and CEO; Gord Kirby, General Manager; Nyasha Magony, Human Resources Manager
Det'on Cho Logistics	Matthew Mossman, President
Łutsel K'e Dene First Nation Denesoline Corporation Ltd.	Jesse Weng, Operations / Project Manager
Northwest Territory Métis Nation	Garry Bailey, President
North Slave Métis Alliance	Bill Enge, President

*Joint interview

This appendix provides a summary of the information collected through interviews, presented by Aboriginal community as follows:

- Tłıchq Government (communities of Behchokq, Gamètì, Wekweètì and Whatì)
- Yellowknives Dene First Nation (communities of Ndilo and Dettah)
- Łutsel K'e Dene First Nation (community of Łutselk'e)
- Northwest Territory Métis Nation (members reside in Fort Resolution, Fort Smith, Hay River and Yellowknife)
- North Slave Métis Alliance (represents Métis in Yellowknife, Behchokq, Whatì, Gamètì, Wekweètì, Dettah and Ndilo)

TŁĪCHQ GOVERNMENT

The Tłıchq government consists of four communities: Behchokò, Gamètì, Wekweètì, and Whati. Basic demographic and employment statistics are provided in the table below. The sub-sections that follow outline the skills, capacities and interests of Tłıchq communities, as identified in an interview with the Tłıchq Investment Corporation.

	Behchokò	Whati	Gamètì	Wekweètì
Population (2015)				
Total	2,104	514	269	136
Aboriginal (%)	92%	93%	99%	91%
15-24 yrs	366	90	52	15
25-44 yrs	599	176	71	48
45-59 yrs	323	57	41	21
60 yrs & Older	187	54	40	17
Education (2014)				
High School Diploma or More (%)	45.4%	43.1%	41.0%	35.9%
Employment (2014)				
Participation Rate (%)	56.9%	61.2%	56.5%	68.6%
Employment Rate – Total (%)	37.9%	39.5%	41.8%	55.3%
Employment Rate – Less than High School Diploma (%)	19.8%	31.3%	32.6%	40%
Employment Rate – High School Diploma or Greater (%)	61.6%	53.5%	57.9%	83.2%
Employment Rate – Aboriginal (%)	34.1%	35.9%	38.3%	53.4%

Existing Businesses / Services

The **Tłıchq Investment Corporation** is the parent organization owned by the Tłıchq Government. It owns 49 companies in total, which provide a range of services including trucking, remediation, logistics, road construction and civil works. Of these companies, four are community-based development corporations (i.e. one in each community - Behchokò, Gamètì, Wekweètì and Whati). Their website lists the following businesses and joint ventures:

- **Construction:** Aboriginal Engineering; Nishi Khon Freeway; Tłıchq Learning & Development Centre; Tłıchq Road Constructors
- **Community Operations (e.g. fuel dispensing; property management):** Gamètì Development Corporation; Lac La Martre Development Corporation; Nishi Khon Key West Travel; Rae-Edzo Dene Band Development Corporation; Wekweètì Development Corporation
- **Logistics:** Tłıchq Logistics
- **Joint Ventures:** Tłıchq Domco Inc. (catering, housing keeping and janitorial service for the mining sector); Tłıchq Landtran (transportation services)

Existing Skills / Capacity and Interests

As of June 2016, the Tłıchq Investment Corp. was working to finalize a database that layers community members' skills over community demographics; a main input to this database is a survey that asks each individual for his/her career aspirations. **Interests identified to date include:**

- Job readiness
- Heavy machinery operation
- Security training
- Class 1 driver training
- Leadership
- Carpentry
- Mechanical apprenticeships
- Aviation training
- Water management (e.g. testing or monitoring)

Capacity Building Programs

The Tłıchq Investment Corp. identifies talent within the organization and works to enhance skills for individuals to move on or to grow within the organization. The interviewee observed that the **most effective programs are done in-house**, using both external and internal trainers.

Community members also use skills development and job readiness programs to improve skills, such as operation of large machinery.

Approximately sixteen community members are currently taking a **certificate in Leadership Development** through the University of Alberta.

Communication Tools

Community Development Officers are funded through the Tłıchq Government. Their role is to identify opportunities and workers for the Tłıchq Investment Corp., identify skill gaps and plans, and help to obtain employment for community members.

As opportunities arise, the Tłıchq Investment Corp. determines whether to pursue these opportunities. If they are not a fit for the corporation, opportunities are passed along to the Community/Career Development Officer.

All Tłıchq Investment Corp. employment opportunities are posted in communities.

Expected Future Employment

The Tłıchq Investment Corp sees employment opportunities increasing in **trucking, road construction, etc.** because of growth in **mining** and the spin-off industries. The Corporation is working to diversify its businesses and geography (e.g. NWT, Yukon and Western Canada).

YELLOWKNIVES DENE FIRST NATION

The Yellowknives Dene First Nation (YKDFN) are members of the Akaitcho Treaty 8 Tribal Corporation. The YKDFN consists of two communities: Ndilo and Dettah. Basic demographic and employment statistics are provided in the table below, including statistics for YKDFN members overall. The sub-sections that follow outline the skills, capacities and interests of YKDFN communities, as identified in an interview with the YKDFN and Det'on Cho Corporation.

	YKDFN	Ndilo	Dettah
Population	(2014)	(2011)	(2015)
Total	1,484	345	252
Aboriginal (%)	N/A	--	100%
15-24 yrs	--	--	52
25-44 yrs	--	--	66
45-59 yrs	--	--	66
60 yrs & Older	--	--	23
Education (2014)			
High School Diploma or More (%)	51%	51.5%	41.7%
Employment (2014)			
Participation Rate (%)	63%	56.0%	69.7%
Employment Rate – Total (%)	41%	36.6%	44.7%
Employment Rate – Less than High School Diploma (%)	--	30.3% ¹³	44.7%
Employment Rate – High School Diploma or Greater (%)	--	63.8% ¹	49.3%
Employment Rate – Aboriginal (%)	N/A	52.0%	43.8%

Existing Businesses / Services

The **Det'on Cho Corporation (DCC)** is 100% owned by Yellowknives Dene First Nation. There are six DCC wholly-owned subsidiaries, with multiple joint ventures.

- **Subsidiaries:** Deton'Cho Construction, Bouwa Whee Catering, Deton'Cho Mining Supplies, We Le Dai Corporation and two inactive subsidiaries (Deton'Cho Diamonds and Deton'Cho Training Centre)
- **Joint Ventures (51% ownership):** Det'on Cho Nahanni Construction Ltd., Det'on Cho Medic North Ltd., Det'on Cho Logistics Ltd. and Det'on Cho / Scarlett Security Services Ltd.
- **Additional Joint Ventures:** Det'on Cho Nuna, Yellowknife River Resorts, Aboriginal Diamond Group, KeTe Whii Ltd. and YK Airport Joint Venture

Existing Skills / Capacity and Interests

Neither the YKDFN nor the DCC formally track the skills and capacities of community members.

Heavy equipment operation is seen as a growing skill.

Capacity Building Programs

The DCC just signed a 4-year agreement to receive support for a **Job Creation and Training program (Dechita Naowo Program)**, which will be housed under the YKDFN Wellness

¹³ 2009 data sourced from De Beers Group and Companies Snap Lake Mine Socio-Economic Assessment Toolbox (SEAT) Report for the period 1 January to 31 December 2013.

Department and is primarily funded by CanNor. This program offers job counselling, personal counselling, targeted skills training and work integrated training opportunities.

The DCC will focus over the next three years on training / skills development for **construction** (e.g. camp site for the hospital), and **remediation of diamond mines**.

They have observed that the **NWT Mine Training Society** is expanding training venues.

Communication Tools

The YKDFN posts job opportunities at **band offices** and within the **YKDFN Wellness Department**.

Expected Future Employment

The DCC foresees substantial growth over the next 15 years, with 3 to 5 more **base/precious metal mines** and **remediation of diamond mines**.

An interview was also conducted with Det'on Cho Logistics, a joint venture of the DCC. The snapshot below summarizes additional information obtained through this interview.

Snapshot: Det'on Cho Logistics

Services

Det'on Cho Logistics (DCL) is a logistics company. Examples of services include freight solutions, travel coordination, project management (assessment of logistics), procurement, supply chain management, winter road logistics and trucking, inventory control, warehousing and charter operations.

Capacity Building Programs

Training is provided for **WHMIS, forklift operations, health and safety** and **handling dangerous goods**. **All training is provided in-house** by the Operations Manager, with some support from external trainers (e.g. training for loader, forklift operation, dangerous goods transportation). DCL is also looking to develop a logistics operator course with DCC.

Communication Tools

DCL lists job opportunities on its **job bank** and **Jobs North**, and sends each posting to DCC and to each band. DCL also attends **jobs fairs**.

Expected Future Employment

Due to slow growth in NWT, DCL is trying to be more geographically distributed (e.g. signing a joint venture with NanoTech, a company based in S. America) and is expanding to other locations (e.g. Edmonton).

ŁUTSEL K'E DENE FIRST NATION

The Łutsel K'e Dene First Nation (LKDFN) are members of the Akaitcho Treaty 8 Tribal Corporation. LKDFN members reside in Łutselk'e . Basic demographic and employment statistics are provided in the table below. The sub-sections that follow outline the skills, capacities and interests of the LKDFN, as identified in an interview with a LKDFN and Denesoline Corporation Ltd. representative.

Łutselk'e	
Population (2015)	
Total	313
Aboriginal (%)	89%
15-24 yrs	46
25-44 yrs	94
45-59 yrs	67
60 yrs & Older	36
Education (2014)	
High School Diploma or More (%)	38.3%
Employment (2014)	
Participation Rate (%)	69.6%
Employment Rate – Total (%)	52.9%
Employment Rate – Less than High School Diploma (%)	42.4%
Employment Rate – High School Diploma or Greater (%)	73.5%
Employment Rate – Aboriginal (%)	49.3%

Existing Businesses / Services

The parent company is **T'sa**, with Denesoline Corporation and Paegra Corporation as subsidiaries. **Paegra Corporation** is a property management company.

Denesoline Corporation has several joint ventures, including Akaitcho Helicopters, Dene-Emco Ltd., and Denesoline-Air Tindi. Services include: air freight, aviation, bulk freight, catering, drilling & blasting services, electrical and mechanical services, engineering services, expediting and logistics, general contracting, geomembrane lining systems, mine site maintenance, prefab buildings, steel fabrication, underground mining and winter ice road camps.

The Denesoline Corporation also has a subsidiary, the Denesoline Community Development Corporation, which focuses on tourism.

Existing Skills / Capacity and Interests

Training that has been completed by community members includes **chainsaw operation**, **construction** (through Aurora College), **boating**, and **firearms operation**.

There is interest within the community for jobs in **heavy equipment operation**, **drilling/blasting**, **construction**, **wildlife monitoring** and **catering**.

Capacity Building Programs

Aurora College and the band office have offered capacity building programs. The most popular programs include the **winter ice road employment program**, **first aid** and assistance with **resume development**. Customized training is also offered (e.g. the band office trains an individual to fill a position).

Communication Tools

The **community Facebook page** reaches the most community members. Job opportunities are also posted on the **co-op store and band office bulletins**. The **Operations/Project Manager and Human Resource Manager** also distribute opportunities.

Expected Future Employment

Tourism development is a focus and priority of the organization with growth potential.

NORTHWEST TERRITORY MÉTIS NATION

Members of the Northwest Territory Métis Nation (NWTMN) reside in four communities: Fort Smith, Hay River, Fort Resolution (Deninu Kue) and Yellowknife. Its membership is politically represented by the Fort Resolution Métis Council, the Fort Smith Métis Council and the Hay River Métis Government Council. Basic demographic statistics are provided in the table below; further detailed statistics on NWTMN members are not available. The sub-sections that follow outline the skills, capacities and interests of NWTMN members, as identified in an interview with the NWTMN.

	Fort Smith	Fort Resolution	Hay River	Yellowknife
Population (2006)				
Total	2,315	485	3,610	18,510
Aboriginal	1,460	450	1,600	4,105
Métis ¹⁴	615	125	755	1,385
Métis as % of Aboriginal population	42%	28%	47%	34%

Existing Skills / Capacity and Interests

The NWTMN does not currently track its members' skills and capacities. In general, they noted that the community members have a variety of skillsets, including: **heavy equipment operation, timber harvesting, road construction / maintenance, communicators for airports, business management, cooking, welding, carpentry, electrical, trucking, underground mining, plumbing, book-keeping and water treatment.**

Capacity Building Programs

The NWTMN use the **Aboriginal Skills and Employment Training Strategy program** and also work with the **NWT Mine Training Society** and **GNWT Education, Culture and Employment programs**.

Communication Tools

An **Economic Development Officer** posts job opportunities and helps with job applications. The **three Métis Councils** (Fort Smith, Hay River and Fort Resolution) receive business development opportunities from companies.

Expected Future Employment

NWTMN expects to see an increase in **mining development** and would like to see community members benefit from this development.

¹⁴ This refers to those in the community that self-identify as Métis, rather than as NWTMN members specifically.

NORTH SLAVE MÉTIS ALLIANCE

The North Slave Métis Alliance (NSMA) represents Métis in Yellowknife and Behchokò (Shiga, 2016). Basic demographic statistics are provided in the table below; further detailed statistics on NSMA members are not available. The sub-sections that follow outline the skills, capacities and interests of NWTMN members, as identified in an interview with the NSMA.

	Behchokò	Yellowknife
Population (2006)		
Total	2,104	18,510
Aboriginal	1,770	4,105
Métis ¹⁵	30	1,385
Métis as % of Aboriginal population	2%	34%

Existing Businesses / Services

Metcor Inc. is the parent company with several joint ventures and one subsidiary. The joint ventures are 51% owned by Metcor and include:

- **Metcrete Services Ltd. for shotcrete contracts** (joint venture between Metcor and Multicrete Systems Ltd.)
- **Metshaw Freighters** (joint venture between Metcor and Grimshaw Trucking)
- **Northcan Freighters Ltd. for fuel haul contracts** (joint venture between Metcor and Westcan)
- Joint venture between Metcor and **Nuna Logistics**
- Joint venture between Metcor and **Stantec**

All joint ventures operate out of Metcor's Yellowknife office, which has two full-time employees (the President and a controller) and a range of seasonal workers (up to 20 individuals during winter truck hauls).

Metcor's subsidiary (100% solely owned) is North Slave Freighters, which provides **dry goods hauling**.

Existing Skills / Capacity and Interests

The NSMA does not currently track skills or capacities of its members. The interviewee indicated that NSMA members are interested in **white collar jobs** (e.g. admin support, supervisor, etc.).

Capacity Building Programs

NSMA is a founding member of the **NWT Mine Training Society** and has been active in that forum. For example, they worked to create the Mineral Process Plant Operator Training Program, the Shotcrete Operators training program (i.e. coat walls of mines) and trained fuel haul operators. Federal and territorial funding have been used to support these programs. The interviewee has observed a cutback in program funding, with a reduction in programs offered at this time.

Communication Tools

When a contract is let, the RFP goes through the **Metcor President**, who notifies joint venture partners of job opportunities if it is relevant. If the opportunity is not relevant to joint venture

¹⁵ This refers to those in the community that self-identify as Métis, rather than as NSMA members specifically.

partners, the President contacts NSMA members who may have relevant businesses. NSMA puts its job opportunities on its **job board**.

Expected Future Employment

NSMA is cautiously optimistic there will be steady growth for NSMA businesses, especially due to the political change respecting Métis. NSMA expects that it will negotiate a land claim within the next 5 years, which is expected to be beneficial for NSMA business growth.