Constance Lake and Hearst Mining Readiness Strategy

Regional Assessment and Opportunities Report
Limitations

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- Data and information obtained from Hearst and/or Constance Lake;
- Statistics Canada; and
- Other relevant publically available studies, data and information.

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Executive Summary

The Constance Lake Development LP and Hearst Economic Development Corporation ("EDC") have entered into a partnership to develop a Mining Readiness Strategy, the basis of which is an integrated economic development plan for the Constance Lake and Hearst Region. Recent discoveries as well as known mining prospects are drivers of change and growth in the Constance Lake and Hearst Region - itself located on the traditional territory of Constance Lake First Nation.

The initial planning framework set forth for the Strategy stressed the urgent and critical need for a coordinated regional approach that above all else will need to confirm partners and their respective roles in preparing and implementing the plan. Using this collaborative approach, the Strategy is to answer: Where Are We Now, Where Are We Going, How Do We Get There, and How Do We Measure Success and Results. The Regional Stakeholder Committee (RSC) is tasked with representing the Constance Lake – Hearst Region in the creation of a Mining Readiness Strategy (i.e., the “Project”).

Resource regions are exposed to risk throughout the extraction process. Project induced growth is difficult to predict – projects themselves can take up to 20 years before the market conditions are appropriate to facilitate development. However, once projects come on-stream, population growth and service demands can easily overwhelm local communities. Market fluctuations also impact pace of growth within established regions, resulting in boom and bust growth cycles.

The regulatory context typically comprises of a continuum – with aspirational / voluntary measures on one end and compliance / legal requirements on the other. A mining readiness strategy is by nature aspirational - however, it can form partnerships and priorities that will assist a project in meeting regulatory requirements.
Key lessons can be derived from viewing resource preparedness or project impact mitigation initiatives in other regions including to encourage decision-making within multi-stakeholder processes or to create and support multiple economies often through local workforce development and immigration attraction and retention.

Future mining projects in the Region could generate up to 1200 direct and induced jobs in the construction phase and nearly 1000 direct and induced jobs in the operations phase while also generating some $271.4 million in spending in Ontario over the construction phase alone. Local employment, procurement and extent of supporting industries will inform the degree to which economic impacts remain in the Hearst - Constance Lake Region.

The first and in many respects most critical question to answer is when we anticipate the noted mining projects to commence construction. Unfortunately, it is very difficult to answer this question with any degree of confidence and ultimately market conditions play an important and indeed critical role in this regard.

Mining projects navigating both First Nation and Provincial requirements are best positioned to work towards obtaining a Social License to Operate that gains support of impacted communities and consent of First Nation communities. To support this process and to expedite access to land for project development, Constance Lake First Nation has identified a goal of establishing a First Nation-managed land administration process and are actively seeking to build capacity in this regard.

Given its location and distance from existing mining centres of Thunder Bay, Timmins and Wawa and with two projects in the feasibility stage and exploration activity ongoing in the region, Constance Lake and Hearst are well positioned to form a fourth mining region, providing logistical support and services to mining activities operating therein.

The Region is well served by infrastructure, with both projects in feasibility close to transportation and energy infrastructure. Current levels of service are also sufficient to incrementally meet demand of industry.

In terms of community facilities within the Region, a clear need exists for expansion / new seniors care facility to reduce dependency on hospital. Constance Lake and Hearst have a number of educational facilities that could provide or facilitate local training to help build capacity within the mining and resource sector.
A critical challenge currently facing Constance Lake and Hearst is a shortage of housing for both seniors, newcomers and young families. Given potential demands from mining projects within the Region, available housing in forms appropriate to various durations and types of tenancy will be a key component in ensuring local capture of investment from mining.

Rehabilitating existing housing stock, increasing availability of entry level and affordable housing and improving availability of services are key challenges facing Constance Lake First Nations in its efforts to more effectively retain current residents as well as attract new / returning residents drawn to mining activity.

It is important to note that the establishment of mining operations increases the demand for labour in a local community substantially during the construction phase but also during operations. Communities looking to benefit from a mining project need to have a supply of labour to meet this demand. Hearst, in particular, is facing a declining population and working age population, which can impact their ability to participate going forward.

Training programs are needed to overcome labour force challenges. Seeking partnerships with regional centres of mining excellence would assist the region in building awareness of training opportunities, transference of skills between sectors / occupations and possible set the stage for local satellite offices in the event of greater demand. Kiikenomaga Kikenjigewen Employment & Training Services (KKETS) works in affiliation with Mattawa First Nations to provide relevant training initiatives on reserve and create employment opportunities within its service area.

Timing of investment, compliance requirements, business, exposure to community, business and government risk and opportunities for more effective responses to mining challenges are closely aligned with the Project Cycle. The mining readiness Aligning the Mining Readiness Strategy to the Project Cycle will ensure to support implementation of a good proactive approach to mine development.

Based on the regional assessment and discussions with stakeholders in the region, opportunities are available to:
- Build awareness of the region within the mining industry and within various levels of government and market the region as a resource centre with a long, successful, history of industrial forestry
- Complete Indigenous Traditional Knowledge Studies for Constance Lake First Nations, identifying key traditional and subsistence activities that would minimize timelines and communication requirements in advanced feasibility and permitting phases of mining
- Involve First Nations in Caribou Management including working with the Province in delineating and refining caribou ranges within Constance Lake traditional lands.
- Establish a representative body of impacted communities including key members of government and industry to identify, review and assess priorities for mitigation of project impacts and long term development
- Establish a Worker Housing Strategy that would identify locations for new housing, a housing typology, income requirements and investment possibilities for partnerships with the mining industry, construction sector, government and financial service sector.
- Identify and assess an incremental approach to improving municipal infrastructure as mining activity increases through Capital Planning within a Regional Growth Strategy
- Work with industry partners to address technical labour needs across resource industry as nearly half of the labour force nears retirement
- Strengthen and improve First Nation business relationships with forestry and construction sector that will allow capacity building in transferable skills to the mining sector
- Build First Nation and local capacity in contracting and small business management to more effectively prepare local population to respond to resource opportunities
- Develop partnerships towards the establishment of welcoming centres to better attract and retain newcomers to the Region

A workshop was held with the Regional Stakeholder Committee (RSC) to review key findings and to set priorities for the mining readiness strategy. Committee members discussed risks / impacts / opportunities, aspirations / compliance and potential responses / existing mechanisms related to the mining project cycle. Five priority areas emerged from these discussions: 1. Community Participation; 2. IBA Frameworks; 3. Land Access / Tenure; 4. Environment; 5. Housing, Infrastructure and Support Services; 6. Labour / Procurement; and, 7. Funding and Communications.
Photo S5: Birds eye view of the Town of Hearst
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Photo 1.0: CLFN Community ice fishing
1.1 The Project

Constance Lake Development LP and the Hearst Economic Development Corporation ("EDC") have entered into a partnership to develop a Mining Readiness Strategy, the basis of which is an integrated economic development plan for the Constance Lake and Hearst region. The intent of the Constance Lake and Hearst Mining Readiness Strategy (the "Strategy") is to better position Constance Lake First Nations and the Town of Hearst to capitalise on major regional economic development opportunities over the next few years related to mining exploration and production.

Recent discoveries as well as known mining prospects are drivers of change and growth in the Constance Lake and Hearst Region. The recent discovery of the Albany Graphite Deposit on Constance Lake traditional territory and near the community of Constance Lake and within 30 kilometers of the Town of Hearst has led to increased exploration activities and investment in the region more broadly. Coupled with known resources such as the Martison Phosphate Project, Constance Lake and Hearst may form a new emerging mining region in the Province.

The initial planning framework set forth for the Strategy stressed the urgent and critical need for a coordinated regional approach that above all else will need to confirm partners and their respective roles in preparing and implementing the plan. Using this collaborative approach, the Strategy is to answer: Where Are We Now, Where Are We Going, How Do We Get There, and How Do We Measure Success and Results.

This Report in part answers the questions of Where Are We Now. It follows from initial atlasing, desktop literature review and field visit. The Report is comprised of 6 Chapters as follows:

1 **Introduction**: which provides a description of the Mining Readiness Strategy, establishes the context for the Study and describes the history of the Constance Lake and Hearst region;

2 **What is Mining Readiness**: which serves to frame mining readiness and establish the key challenges that the Mining Readiness Strategy will seek to overcome.

3 **Engagement and the Collaborative Process**: which provides an overview of the collaborative process that is to define the Strategy.

4 **Defining the Region and Its Communities**: which serves to better define the “Region” and its “Communities” and assess its current state of readiness.

5 **Economic Drivers and Anticipated Growth**: which establishes the current and future drivers of change and growth in the “Region”.

6 **Mining Readiness and the Project Cycle**: where opportunities and barriers are identified according to the different phases of the Mining Project Cycle and existing challenges within the “Region”.
1.2 Project Approach

A Mining Readiness Strategy will enable both communities to fully participate in mining projects expected to be developed in the region in the next several years. Constance Lake Economic Development LP and Hearst Economic Development Corporation have engaged SvN Architects + Planners (“SvN”) to assist both communities in developing a Mining Readiness Strategy on a collective basis working with mining companies and other key stakeholders. Collins Barrow Toronto Infrastructure Advisory (“CBTIA”) has been engaged by SvN to conduct a high level assessment regarding potential opportunities for Constance Lake and Hearst to inform the development of the Mining Readiness Strategy.

It is important that the Strategy bring both communities, Constance Lake and Hearst, together to address the economic opportunities and impacts of mining on the two communities. More importantly, the Strategy is an opportunity to mediate between the mining projects, affected communities, industry and government.

If done correctly, the Strategy will facilitate a process that improves community readiness and capacity to capture project-induced opportunities. Furthermore, it can serve as a model to attract investment in resource development that benefits both communities as well as the mining companies. Initially, the process is to serve as a “Negotiation” about a framework for future agreements with respect to mine development. Understanding both the needs of the communities and the region requires an approach that is both Bottom-Up (Communities) and Top-Down (Regional).

The Mining Readiness Strategy is be prepared over three phases:

Phase 1: Project Framework and Regional + Local Assessment
- Assess capacity and demand
- Identify regional + local drivers
- Initiate Regional Stakeholder Committee
- Identify Needs and Opportunities

Phase 2: Strategy Development
- Confirm Needs and Opportunities
- Establish Priority Actions
- Finalize Strategy

Phase 3: Implementation
- Monitoring and Evaluation

The Project is currently in the First (1st) Phase that involves setting the Project Framework and completing an assessment of regional and local needs. Given that construction of a mining project is at least 4 to 5 years away, it allows time for the Region to get prepared. The Second (2nd) Phase of the Project establishes a long list of priorities/directions for the Region and the Strategy itself will establish a number of Priority Actions for implementation. In this context, it is important to bring the key stakeholders to the “Table” to ensure the Strategy is consensus based and is the result of direction established in the RSC.

1.3 Project Goals

The following goals were established during the Project Start Up meeting and are subject to refinement within the Mining Readiness Strategy. By the year 2017, resource development in the region will:

- Ensure preparedness prior to key triggers (i.e., understanding phasing) of investment and growth in the community – (to avoid premature investments by local government and business)
- Build awareness and catalyze opportunities for constructive interaction between communities and the mining sector
- Capture investment from the Albany Project, Martison Project or other mining projects within the local economy to the extent possible
- Prioritize Constance Lake and Hearst residents and businesses in employment, training and local procurement
- Transfer skills to youth within Constance Lake and Hearst necessary for local employment
- Position local business to supply materials and services to mining projects
- Plan and build infrastructure necessary to accommodate local needs of mining projects
- Support the ongoing implementation of the Strategy and the guidance of a representative decision-making body
- Minimize FIFO to those skills and labour not available locally
- Attract workers and their families to Constance Lake and Hearst Region communities.
1.4 Study Area

An area of influence surrounding Constance Lake and Hearst was examined to appropriately capture aboriginal and non-aboriginal communities, land administration and mining interests (see Figure 1.5a). Atlasing was carried out and considered in the process of refining the Study Area, including examining the communities of Constance Lake and Hearst. Additional information on the Region and its communities appear in Chapter 4.

1.5 History of the Region

Pre-Contact Era

First Nation relations, community, trade and travel patterns constituted the earliest extent of the region and local economy. The Cree, Oji-Cree and Ojibway ancestors of Constance Lake First Nations inhabited the Kenogami, Kabinakagami, Nagagamisis, Nagagami, Pagwachuan, Fushimi, Pledger Lake, Little Current, Drowning, Ridge, Albany, Kabinakagami, Nagagami and Shekak River systems. These rivers provided early transportation routes between the shores of James Bay, Lake Superior, Lake Winnipeg and the Ottawa River and served to integrate the area within the North-South American Aboriginal Economy. Trade included supplies, tools, food, clothing and other essentials for survival. Trade occurred between families, friends and neighbouring First Nations at sacred gathering places. Survival in this era required hard work, good planning and an attitude of always being prepared for the worst.

Post-Contact Era

Within the post-contact era the region was dramatically transformed through the fur trade and establishment of a new economic relationship between initially European traders and First Nations. The fur trade rapidly expanded the region – initially through trade routes that brought fur from the James Bay lowlands and the shores of the great lakes through

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8 https://en.wikipedia.org/wiki/Constance_Lake_First_Nation

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Figure 1.5a: Study Area
Montreal then over a wider territory with the expansion of operations of the North West Company and Hudson’s Bay Company. Trading posts centred around York Factory, Fort Albany and Moose Factory on the shores of Hudson’s Bay became a critical link in trade that extended to the West Coast of modern day Canada and the U.S.A. During this time trade partnerships between First Nations and fur companies supported a global trade empire10 (see Figures 1.5b11 and 1.5c12). The fur economy also meant that First Nations stopped trading amongst themselves and started trading with the Fur Trading Posts and their white Managers to access new and better tools, sugar, flour, tea and guns.13 It signified the end of the traditional economy of First Nations and the beginning of the fur trading economy.

Over the years, First Nations learned tough lessons through the trading post experience as their value system comprised of trust, respect and honour was taken advantage of by traders. Through experience, among others, First Nations learned not to trust European Traders and that jobs were considered something of value. Between the 1780’s and 1960’s First Nations took over available jobs in the region eventually taking all the available transportation jobs with Hudson Bay Company (HBC). First Nations also become HBC managers and ran the HBC operation, by which they were able to build their capacity to conduct the work and trade in an equitable fashion with First Nation peoples14. This transition represented a new era of Business Management for First Nations people.

Trapping remains an important local industry although in a steady state of decline. The harvest from traplines on the Missinaibi declined by half from the 1,866 pelts registered in 1976 to today. For all of Ontario, the yearly number of pelts is less than one third what it was in the 1970’s.15

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### Industrial Era

The central role that the waterways of James Bay played in the North American economy was diminished with the advancement of rail in the region16. Supported by both Federal and Provincial levels of government, the advancement of rail into the region corresponded with the signing of treaties. The establishment of Treaty No. 9, negotiated in 1905-1906, is the dramatically influenced the region. It resulted in the drawing of boundaries and establishment of semi-permanent settlements for First Nation communities as well as a written agreement from which the Government of Canada was able to develop the lands.

Based on the journals of the commissioners appointed by the Government of Canada and not the oral recollection of the Constance Lake First Nation, the history of Constance Lake since signing of Treaty 9 is described as follows:

Constance Lake First Nation is primarily the successor of the English River First Nation, which was considered an off shoot of the Albany Band by the commissioners at the time of signing and conclusion of Treaty 9. In 1901, a Canadian census recorded that 85 people were living at English River.

Shortly after Treaty 9 was concluded, the commissioners arrived at English River on July 27, 1905. They decided that the Indians at English River were really a branch of the band residing at Albany, and as such, it was not necessary to have them sign the Treaty separately – they were already Treaty beneficiaries. However, the people living there were given their own reserve at English River, described as follows:

“On the Kenogami or English River in the Province of Ontario, beginning at a point three miles below Hudson Bay Post on the North side of the River known as English River then north a portage of 3 miles and of sufficient depth to provide 1 square mile for each family of five upon the ascertained population of the band.”

The area to be set aside at the time was to be 12 square miles. This 12 square-mile reserve was included in the schedule of reserves attached to Treaty 9. Its selection was approved by Ontario in 1907 through an Order in Council, but it was not surveyed or set aside as a reserve until 1912.

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12 http://farm1.staticflickr.com/1043/1223191524_35a85cb002.jpg


14 IBID


Figure 1.5b: Archaeological Investigations at the Site of the Longlac Historic Trading Post indicating strategic post between Lake Superior and James Bay

Figure 1.5c: Tabula Novae Franciae (Franciscus Creuxius 1660) indicating routes between James Bay and Ottawa River and Lake Superior
The people at English River did not elect their first Chief until 1921. Between 1925-1940, many families from English River re-located to Pagwa (approximately 80 kilometers WNW of the present-day Constance Lake reserve) to follow employment opportunities. People from Fort Albany and Moose Factory also moved to Pagwa around that time.

The historical report cites correspondence between a reverend and Indian Affairs. Reverend Clarke requested funding for a school at Pagwa but received the response that Indian Affairs did not fund schools off reserve. As such, Clarke began to lobby for a reserve to be established at Pagwa, rather than forcing the Indians to return to the reserve at English River “which was uninhabitable”.

Figure 1.5d: Railway Territories, 1915
A report in May 1940 documented that the majority of the English River Band resided at Pagwa, but it was not until 1943 that Indian Affairs began to contemplate creating a new Band of Indians for those living at Pagwa.

Inspector Arneil surveyed the area to find a suitable area for a reserve and chose Calstock. He also recommended that those members of Albany and Moose Factory (Attawapiskat) Bands who resided at Pagwa should be transferred to the new Band. So, the new Band absorbed essentially the whole of the English River Band and also members of the Albany and Moose Factory Bands who lived nearby. As such, the request was made to Ontario for land to accommodate “a future population where there would be home sites, garden lands, sufficient pastureage for a cow or a couple of goats for each family.”

The province tentatively agreed to provide land and include the water body of Constance Lake. There was also mention of returning the English River Reserve to the province. However, this never took place because the province did not feel that the land had any value. On February 11, 1944, an Order in Council was passed regarding the purchase of this land for the new Constance Lake Band.

A survey of the Calstock Reserve, now named Constance Lake, was completed on September 21, 1944, and it was vested in Canada on January 9, 1945. On March 16, 1945, an Order in Council was passed setting aside the land as an Indian Reserve for the use and benefits of Constance Lake First Nation.

Today, Constance Lake First Nation is located in the District of Cochrane, 32 km. west of Hearst, Ontario. Its population is 1470 members. The reserve is 7686 acres in size and includes Constance Lake itself.

With the advancement of rail into the region, Constance Lake First Nations resettled to Pagwa to work for the railway or for the local mill or the local trade hub that included Revillons Freres and served communities on the coast of James Bay. Similar to First Nation advancement to managers in the Fur Trade economy, local First Nations took jobs initially with National Transcontinental Rail and then Canadian National Railways. The line from Hearst to Nakina in 1915. When the Pagwa line was closed by CNR in 1986, Constance Lake First Nation members held 38 of 40 maintenance jobs. Due to pressure from road transport and the Polar Express line extended from Cochrane to Moosonee, Pagwa became a lower priority in regional trade. Upon closure of the line, those members who wished to remain working with CNR were relocated to the Main Line across northern Ontario.

Incorporated communities, including the Town of Hearst and Township of Mattice-Vale Côté, and unorganized communities including Pagwa and Calstock west of Hearst and Hallebourg and Fryatt east of Hearst had their beginnings with the eastward completion of the National Transcontinental Rail (see Figure 1.5d). Stops between Pagwa and Hearst recorded in 1916 included Pagwa, Teltaka, Savoff, Fraser, Nagogami, Ameson, Bertram, Wapiti, Kabina (now Calstock), Akova, Holland, Ryland, and Hearst. East of Hearst, stops included Hallewood (now Hallebourg), Omo (later Glenomo), Cote Siding (now Vale- Côté), Emra (now Fryatt) and Mattice.

Unorganized communities southwest of Hearst, including Jogues, Mead and Coppell were opened for settlement with the completion of the northern extension to Hearst of the Algoma Central and Hudsons Bay Railway in 1914. Stops southwest of Hearst recorded in 1923 included Hazel, Wyborn, Stavert (now Jogues), Coppell and Horsey. Later stops recorded in 1952 included Delray, Ripco and Mead.

Jim Fergusson’s Railway and Tramway Station Lists, Ontario (North) Railways Passenger Stations & Stops. Accessed on May 20th at: http://www.railwaystationlists.co.uk/
Stops along the railway served either as intermodal junctions (rail to river) or locations of freight and passenger transfer for agricultural or pulp and paper industry. Notably in 1915, Pagwa, located at the rail crossing of the Pagwa River, became the location of Revillion Freres’ starting point to barge in and out of James Bay. The trading post was taken over by Hudson’s Bay in 1936 and remained operational until the 1960’s. Pagwa went on to further prominence, serving from 1953 to 1963 as the site for one of the radar stations in the Pinetree Line.

In tandem with the advancement of rail to and through the region, the Cochrane District experienced its fastest rate of growth, doubling from 1911 to 1921 and again between 1921 and 1931. This growth was partly due to the result of regional development policy through the Minister of Department of Lands, Forests and Mines to farm the Clay Belt in Northern Ontario – comprising an area of 63,455 square kilometers (See Figure 1.5e).

Renamed “New Ontario” advertisements promised the “Greatest Expanse of Fertile Soil in the World” due to the uniqueness of the “deep chocolate clay soil”. Reality proved different. A 13-year record of frost recording indicated average last frost in Spring on June 8th and first frost in Fall on September 14, significantly shortening the growing season compared with lands in Southern Ontario. Settlement was also poorly planned and orchestrated, farmers without the benefit of surveys to indicate where the best soils could be found often cleared poorly drained land or land of poor soil quality. By the 1930’s, the Province abandoned its support to settle the clay belt. Instead it focused on the growing forestry industry that had grown and developed in part through land clearance and access to rail.

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22 Ibid
In 1927, the Province completed the Ferguson Highway from North Bay to Cochrane and extended it west to Hearst in 1937. In 1986, CNR abandoned a 122 mile section of line between Calstock and Nakina. The stops along this route have all but disappeared with the exception of Pagwa.

The Town of Hearst was initially populated by homesteaders drawn to the region in part by Provincial promotion and incentives to settle the Clay Belt. With settlement, demand grew for wood products and the first sawmills were developed to provide wood for construction of housing, barns and other structures necessary for the new agricultural economy. Over the years, emphasis within the local economy shifted to forestry. Many of the local sawmills can trace their beginning to Francophone settlers from Quebec that helped transition Hearst to the Francophone community that it is today.

Early sawmills were established near train stops in Hearst, Jogue, Mead, Mattice, Kabina, and Calstock with other mills operating near waterways. Under Canadian National Railway (CN) stops were added west of Calstock at Arrowhead Logging Company in 1945 and at Lecours in 1956. The first plywood mill was established by the Levesque family in 1962 in Hearst.

As forestry became the dominant industry in Hearst, investment in mill improvements required access to increased timber supply. The Hearst Lumberman’s Association pressured government to obtain access to larger logging territories. With increased competition and larger capital investment requirements, local ownership of Hearst sawmills ended in the 1990’s. Tembec bought the Malette sawmill and Colombia Forest Products bought Levesque Plywood. Lecours Lumber Co. Ltd remains as the only independent sawmill in Hearst.

The establishment of the ArrowTimber Company mill in Calstock in the 1940’s initiated the last round of resettlement of the Constance Lake First Nation where jobless First Nations were asked to relocated to Calstock with the promise of jobs at the new mill resulting in a splitting of the community with half remaining in Pagwa and the other half moving to Calstock. This resulted in the creation of the CLFN Reservation #92. Members of Constance Lake First Nations moved to the reserve as recently as the late 1980’s – the last round of First Nations coming from Pagwa after the closure of the Nakina line (see Figure 1.5f). The industrial era for First Nations resulted in an emphasis on jobs. The promise of jobs in forestry did not meet expectations of First Nations with participation rates in non First Nation forestry operations low in the community.

Mining activity was focused to the west in the area of Long Lac and to the east in the Kirkland Lake and Timmins region and later in the Kapuskasing area. Closer to Hearst and Constance Lake, the Martison Project, discovered in 1987, is the oldest proven deposit in the region. The Albany graphite deposit was discovered in 2012. In addition, Constance Lake First Nation is one of the nine First Nations in the mineral-rich Northern Ontario Ring of Fire area, a massive planned chromite-mining and smeltering development project in the mineral-rich area of the James Bay Lowlands. Exploration for copper, gold and diamonds in the series of extrusions known as the “Arc of Fire” has been actively explored and Constance Lake and Hearst serve as a staging area for exploration in the James Bay Lowlands and “Arc of Fire” area.

Energy, quarrying and other infrastructure related projects have injected investment and extended the reach of businesses based in the region. Together with the forestry sector, this investment supports the broad employment base in the region. Facing internal growth within their community and shrinking INAC funding, First Nations have refocused their attention from jobs (and the promise of jobs) to exploring business opportunities. New businesses in logging, trucking and general contracting in addition to joint ventures with developers has resulted in a new entrepreneurial era within the region, providing new opportunities for participation of First Nation and other businesses in the region.

Understanding the region brings important lessons to the Mining Readiness Strategy, including:

- plan and support local participation of all impacted communities within new economy to ensure fairness in practice and support of local communities;
- plan for economic diversification efforts, to ensure skills and knowledge can be transferred with changing economic circumstances; and
- follow through on commitments in the spirit of good faith negotiations.

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25 http://www2.agoracom.com/ir/KWG/forums/discussion/topics/631933-the-road-to-pagwa/messages/1982328
26 Correspondence with Roger Wesley.
Members of the Project Team will engage residents and stakeholders throughout the Mining Readiness Strategy. A key component of the engagement strategy is the creation of a Regional Stakeholder Committee (RSC) comprised of representatives from Constance Lake First Nations, Town of Hearst, Provincial and Federal Government, Industry and other representatives. A key objective of the RSC is to facilitate cross cultural communications to assist in breaking down cultural divides in the community and herald in a new participatory approach to resource management.

**Setting the Table**
The RSC will be tasked with representing the Constance Lake – Hearst Region in the creation of a Mining Readiness Strategy (i.e., the “Project”). As representatives of the Constance Lake and Hearst Region, RSC members will develop and decide on a path forward to better prepare the Region for mining readiness. The RSC will participate in the overall process of developing and implementing the Strategy – including reviewing baseline material and potential strategies for increasing mining readiness, articulating opportunities for mining readiness within the Region and identifying implementation strategies to realise these priorities.

Representation within the RSC reflects interests of key constituents within the Region that will be involved/impacted within the Mining Readiness Strategy, as follows:
- Committee Chair
- Constance Lake First Nation Representation
- Town of Hearst
- Representative of Mining Industry and Business
- Provincial Government Representative
- Federal Government Representative

SvN acts as “Secretary” to the Committee to provide guidance, technical input and advisory services. Three scheduled RSC workshops have been established at the outset:

**Regional Assessment Workshop #1:**
- RSC to review and discuss initial findings of the Regional Assessment, including current economic/social conditions, key economic drivers and issues, and early directions
- Additional external stakeholder engagement workshops can be held to review more specific technical or thematic components or issues, the results of which are to be brought back to the RSC in the next Workshop

**Opportunities and Priorities Workshop #2:**
- RSC to review and discuss results of the Detailed Needs and Opportunities Assessment including key opportunities and priority actions for bringing the Region closer to Mining Readiness
- Additional external stakeholder engagement workshops can be held to review more specific technical or thematic opportunities to arrive at a more refined outcome in terms of technical directions, the results of which are to be brought back to the RSC in the next Workshop

**Priority Actions Workshop #3:**
- RSC to review and discuss overall strategy comprised of draft priority actions presented as specific framework plans for further refinement selection towards final draft priority actions
- Additional external stakeholder engagement workshops can be held to review framework plans in more specific technical detail to arrive at a more refined outcome, the results of which are to be brought back to the Public Open House
3 Mining Readiness

3.1 Resource Regions

Many resource regions are located along the Mid-Canada Corridor that roughly aligns with the Boreal Forest Region – a belt that stretches across Canada defining the northern extent of the treeline. It is further demarcated by resource regions - areas endowed with natural resources – that are commonly characterized as remote with an underserviced geography. Within this geography, First Nation communities are the fastest growing segment of the population - one with constitutional rights to traditional uses of land and resources. As a result, First Nation communities take on a dual role of participating in the economy and serving as stewards of the environment. Conventional settlements within the Mid Canada corridor are heavily dependent on resources and trade within the global economy (see Figure 3.1).

Resource regions are exposed to risk throughout the extraction process. Project induced growth is difficult to predict – projects themselves can take up to 20 years before the market conditions are appropriate to facilitate development. However, once projects come on-stream, population growth and service demands can easily overwhelm local communities. Market fluctuations also impact pace of growth within established regions, resulting in boom and bust growth cycles. In the boom times, extreme pressure is exerted locally to accommodate population influx. Pressure on land, resources and services can lead to local conflict. Without sufficient attention to economic diversification, project closure or slow downs can lead to detrimental impacts – or a bust economy.

Ensuring resource regions have sufficient resiliency to manage risk and the unpredictability of resource development is an important aspect of Mining Readiness – or Resource Readiness. Providing tools to the region and local communities enabling them to respond and adapt to changing circumstances is a key component in building a Resource Strategy.

Figure 3.1: Mid-Canada Corridor
3.2 Mining Readiness and the Project Cycle

The Mining Readiness Strategy will examine opportunities to improve mining readiness of the region within each project phase to retain investment, increase local employment, derive larger share of local revenues and improve local services (see Figures 3.2a and 3.2b). Given the investment required to bring a project through to a decision on investment (i.e., Bankable Feasibility Study), becoming mining ready also implies that the region is prepared to collaborate in the development of a mining project.
3.3 Challenges

Mining projects typically face a variety of challenges. Ontario is not unique in terms of the range of challenges a project will need to overcome - these challenges affect projects around the world (see Figure 3.3a, 3.3b and 3.3c)) with nearly half of all projects experiencing delays and only 30% of projects delivered according to schedule. A significant proportion of delay is due to sustainability-related causes led by social opposition and environmental concerns.

Managing these risks is necessary to successfully lead a mining project through development and operation. Acquiring a Social License to Operate is a critical component to both managing risk and overcoming challenges. Notably, acquiring a Social License to Operate is one of the top three metals and mining business risks identified by Ernst and Young. An effective Mining Readiness Strategy can serve to build trust and good faith between projects, communities and regulators becoming a critical first step in acquiring a Social License.

3.4 Regulatory Framework

Preparation of a Mining Readiness Strategy needs to consider the regulatory context within which the region operates. The regulatory context typically comprises of a continuum – with aspirational / voluntary measures on one end and compliance / legal requirements on the other. A mining readiness strategy is by nature aspirational - however, it can form partnerships and priorities that will assist a project in meeting regulatory requirements.

The Minerals and Metals Policy of the Government of Canada


Figure 3.3a: Delayed Extractive Projects 2008-2014 (PDAC 2014: CSR Panel)

Duty to Consult

Under the Canadian Constitution Act, 1982, mining projects trigger the Crown’s Duty to Consult which involves assessing the nature and strength of any rights that Aboriginal communities have claimed or asserted and how government’s proposed decision may affect those rights (A Practitioner’s Guide to Planning and Permitting a Mineral Development Project in Ontario, MNDM). Within Ontario, when the Crown’s Duty to Consult is triggered, consultation generally involves:
- Providing timely and accessible information to the Aboriginal community on the proposed project, activity or decision;
- Obtaining information on any potentially affected rights;
- Listening to any concerns raised by the Aboriginal community; and
- Determining how to address these concerns, including attempting to avoid, minimize and/or mitigate adverse impacts on Aboriginal or treaty rights.
Treaty 9 (James Bay Treaty)

Signed in 1905 and 1906, Treaty 9 included Western James Bay Cree and Ojibway Indians that established domain over Treaty Lands by government in exchange for the rights of Indians to live, hunt and fish on a continuous basis on the lands and access government services. The Treaty established a number of reserves that would serve as settlements for Treaty Indians. Court decisions continue to interpret the rights conveyed by Treaties – including oral interpretation passed down within First Nation communities. (Treaty Map: http://www.archives.gov.on.ca/en/explore/online/james_bay_treaty/expedition_1905.aspx)

Regional Framework Agreement

A Regional Framework Agreement (RFA) was signed by the Province of Ontario and Nine Matawa Member First Nations in 2014. Signatories agree to move forward with a negotiation process on a community-based regional approach to development of the Ring-of-Fire. The RFA seeks to negotiate one or more agreement(s) on:

- Long term environmental monitoring
- Industrial and regional infrastructure planning and implementation
- Improving community and social economic development supports in the First Nations
- the equitable sharing of the economic benefits of mineral and related development

The RFA is also established to ensure the enhanced participation of First Nations in the environmental assessments that have been commenced in respect of mineral development and related infrastructure projects in the Ring-of-Fire8

UNDRIP

Canada officially removed its objector status to the UN Declaration on Rights of Indigenous Peoples in May 2016 and is now assessing how to harmonize Canadian Law with the Declaration. UNDRIP provides a framework for supporting rights of indigenous peoples including decision-making within traditional lands. Much of the focus is currently on Article 32 of the Declaration which states9:

"1. Indigenous peoples have the right to determine and develop priorities and

strategies for the development or use of their lands or territories and other resources.

2. States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water, or other resources.

3. States shall provide effective mechanisms for just and fair redress for any such activities, and appropriate measures shall be taken to mitigate adverse environmental, economic, social, cultural or spiritual impact.”

Whether legal or aspirational, obtaining “free and informed consent” from First Nation communities requires relationship-building, capacity building and resourcing, negotiation and commitment from the outset of project development.

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**Ontario Mining Act and Mineral Development Strategy**

Mining projects in Ontario must comply with requirements set forth in the Mining Act 1990. Efforts are also underway to modernize the Act including the establishment of a Mineral Development Strategy in 2015. A key platform of the Strategy is to improve cost competitiveness by making strategic investments in mining and community-related infrastructure with the private sector, Aboriginal partners and other levels of government. Key policy contained within the Mineral Development Strategy includes the following:

**Establish Sociocultural-economic Conditions Needed To Advance Major Mining Projects**
- Support community readiness strategies broadly targeting community well-being, quality of life; and
- Support collaborative approaches including government, community and industry partnerships to better position communities to benefit from mining development

**Build A Highly Skilled Workforce**
- Develop a ready and competitive local workforce; and
- Work with KIIKENOMAGA KIKENJIGEWEN Employment and Training Services (KKETS), interested colleges and universities to develop programs that address the future needs of the mining industry.

**Protect the environment, reduce the impacts of exploration and mining and address the climate change challenge**
- Framework for Aboriginal participation in long-term environmental monitoring in future mineral development areas.

**Improve regulatory efficiency, predictability and transparency**
- Industry, key stakeholders and Aboriginal communities to provide input and explore proposals on how to further streamline regulatory processes and coordinate consultation processes to reduce the cost and time.

**Enhance Aboriginal voices and meaningful participation in economic development**
- Invest in relationship building with Aboriginal communities by strengthening capacity building in key areas of governance, business partnership and entrepreneurship; and
- Support capacity building, resourcing and skills development.

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Figure 3.4a: Northern Ontario Growth Plan, 2005
Environmental Assessment

Environmental management and mitigation will need to comply with the Ontario Environmental Assessment Act and potentially the Canadian Environmental Assessment Act. Environmental assessments are usually conducted within the advanced exploration or development phase of a Project. Environmental assessments and traditional ecological knowledge are to be used as a planning and best management decision-making tool so that potential environmental effects are considered before a project begins. Consideration of social impacts is generally conducted in relation to valued components – or in relation to environmental impacts such as social impacts from reduction in fish habitat. Valued components can also be established through consultative process of prioritizing potential effects at the outset of an EA process.

Provincial Growth Plan

In addition to the Mineral Development Strategy 2015, the Province established the Northern Ontario Growth Plan, prepared under the Places to Grow Act, 2005. The Act sets out direction and policy towards diversifying the economy, building strong communities, utilizing infrastructure, planning for growth and other growth and economic diversification initiatives including for the minerals sector and mining supply and services such as:

- Enabling new mining opportunities
- Facilitating partnerships among communities and industry to optimize community employment and benefits
- Facilitating the entry of new participants and entrepreneurs, including Aboriginal businesses, co-operatives and commercial developers.

Towards Sustainable Mining

Industry has also led the charge in sustainable mine development. The Mining Association of Canada established Towards Sustainable Mining with the following mandate:

- We believe that our opportunities to contribute to and thrive in the economies in which we operate must be earned through a demonstrated commitment to sustainable development.
- Accordingly, our actions must demonstrate a responsible approach to social, economic and environmental performance that is aligned with the evolving priorities of our communities of interest. Our actions must reflect a broad spectrum of values that we share with our employees and communities of interest, including honesty, transparency and integrity. And they must underscore our ongoing efforts to protect our employees, communities, customers and the natural environment.

Mining readiness is also informed by international policy and standards, including the following:

- Global Reporting Initiative (GRI): which provides an industry standard for reporting on environmental, social and economic performance in the industry. Projects can more easily be evaluated against industry benchmarks to assess sustainable development performance.
- Extractive Industry Transparency Initiative: is a set of principles and procedures aimed at strengthening accountable and transparent government in resource-rich countries.
- IFC Performance Standards: a set of performance based standards applicable to all projects with IFC or MIGA investment that utilizes a risk management and participatory project-based approach to managing project induced social and environmental impacts.
- ICMM Sustainable Development Framework: Provides 10 principles of sustainable development
- UN’s Guiding Principles on Business and Human Rights: Establishes the UN position on corporate duties towards human rights
- Equator Principles: Principles commercial banks apply to project lending in line with IFC Performance Standards.
- UNDRIP: see above.

Mushkegowuk Environmental Research Centre (MERC)

MERC is an independent First Nations organization whose programs and services are created to support environmental research and stewardship in Kitaskiminano – “Our Land”. MERC’s staff, associates and network of Indigenous and non-Indigenous experts engage in programs, projects, and services that help build capacity to support communities and agencies in environmental research, education, training, stewardship and management. Drawing upon traditional and contemporary values, knowledge and technical expertise The work of MERC in research, facilitation and technical expertise informs and supports the needs and interests of Indigenous Peoples, First Nations, Northern Communities and Clients in Tribal Councils, Government, Industry and ENGOs\(^\text{10}\).

Far North Act

The Far North Act came into effect on January 31, 2011. The purpose of the Act is to provide for community based land use planning in the Far North, that:
- sets out a joint planning process between First Nations and Ontario
- supports the environmental, social and economic objectives for land use planning for the peoples of Ontario
- is done in a manner that is consistent with the recognition and affirmation of existing Aboriginal and treaty rights in section 35 of the Constitution Act, 1982, including the duty to consult

In 2014, Constance Lake First Nation and the Ministry of Natural Resources and Forestry signed the Terms of Reference for the Constance Lake First Nation Community Based Land Use Plan. The Terms of Reference identify the need for the creation of a Shared Lands Committee to use best efforts to reach agreement with neighbouring communities. Many First Nations including Nishnawbi Aski oppose the Far North Act as it did not recieve Free, Prior and Informed Consent of First Nation groups.11

3.5 Precedents

A number of precedents exist that help identify a growing practice in creating long last positive outcomes in resource regions. Key lessons can be derived from viewing resource preparedness or project impact mitigation initiatives in other regions in other jurisdictions including Athabasca Basin (Alberta and Saskatchewan), NWT and Nunavut, Newfoundland and Labrador and Queensland, Australia. Generalizations of these lessons include:

Set the table: establish roundtables at the community, regional, provincial and national levels to discuss and promote Integrated Regional Development that is both top-down and bottom-up with decision-making fostered within multi-stakeholder processes;
Create and support multiple economies: work with the Primary Resource Economy: to create and support multiplier economies that ease the boom and bust resource cycles and can run independently after closure;
Promote local workforce development + immigration: address historic failures and under funding to improve education and training to increase local First Nation labour force participation first, local labour force second, regional labour force third and immigration fourth as well form partnerships with resource centres and immigration agencies towards an integrated labour force base that reduces dependency on FIFO models;

Plan for environment, resources, infrastructure and settlements simultaneously: ensure communities and government are able to invest in infrastructure and services in an environmentally and socially responsible manner that is linked to growth induced by resource development.
Foster innovation: supports spirit of independence in remote and northern communities, while recognizing new opportunities through participation in emerging economies, policy changes (e.g., climate change) and innovative partnerships.
Identify roles and responsibilities: promoting participation in a region’s success involves all parties at the table becoming accountable for decisions, funding and implementation of plans.

North West Territories

The Government of North West Territories (GNWT) has referred to their approach as a “collaborative consent” process where all levels of government – both aboriginal and non-aboriginal – work to achieve each other’s consent through collaborative processes. The process is used to draft legislation as well as sector specific agreements on resource management with various working groups – or Boards – created to monitor project progress. These Boards are viewed positively by the Government of Canada as it determines best practice for implementation of the UN Declaration on the Rights of Indigenous Peoples (UNDRIP).

A collaborative process has ensured mining-specific “resource readiness” demonstrated in part through exploration and production activities associated with diamond mining. Projects are assessed based on impacts to indigenous cultures as well as key social components related to housing and employment. Socio-Economic Agreements are signed off by indigenous communities, government and proponents. On-going monitoring of agreements is conducted through the Communities & Diamonds Initiative – an annual reporting initiative to monitor mining’s effects on a full range of socio-economic indicators in communities. Monitoring is based on the GNWT Sustainable Development Policy five-point framework:

1. Community, family and individual well-being
2. Cultural well-being and traditional economy
3. Non-traditional economy
4. Net effect on government; and
5. Sustainable development

A number of studies and plans have been developed for the Oil Sands and for communities within the oil sands. The Comprehensive Regional Infrastructure Sustainability Plan (CRISP) was an initiative undertaken by the Alberta Treasury Board to define an infrastructure plan that takes into account development of the bitumen resource in the Athabasca Oil Sands Region. Growth modelling was conducted based on location of resource and infrastructure and labour requirements to extract the resource. Various options for settlement were presented, including establishment of new regional centres to be built as resource development moves away from the traditional centre of Fort McMurray. CRISP evaluated permanent housing scenarios versus FIFO models including footprint analysis of transportation and infrastructure requirements to serve both. Through extensive consultation with stakeholders a final Plan was identified that serves as the blueprint for capital investment in infrastructure.

Fort McKay First Nation

Located on the banks of the Athabasca River in the Regional Municipality North of Fort McMurray, approximately 400 Dene, Cree and Metis residents live in Fort McKay, alongside the industrial development of the Oil Sands Region. Fort McKay is attempting to both retain and preserve traditional ways alongside participation in sustainable and responsible oil sands development. To this end, Fort McKay has initiated partnerships with government and industry towards ensuring responsible development of the oil sands as well as participating in the various opportunities available to them. Fort McKay has a Sustainability Department which reviews projects on behalf of the community resulting in the First Nation taking an active role in engaging its community members and interacting at a project level with industry and government. Importantly, the Fort McKay process allows the community to interact with multiple projects without becoming fatigued from consultation and information requests. The Sustainability Department is also responsible for independent research into oil sands development including environmental assessment of cumulative impacts resulting in scenario-based modelling regarding anthropogenic

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footprints in their traditional territory, impacts to wildlife and opportunities for traditional activities within the changing landscape.

Athabasca Basin, Saskatchewan & Alberta

At a regional level, the Athabasca Working Group (AWG) was established in 1993 to manage the concerns identified by Aboriginal and non-aboriginal communities and to increase impacted community's share in the benefits resulting from development of the mining industry in the region. The AWG is comprised of representative of industry and communities that created an Impact Management Agreement in 1999 to cover issues related to employment, training and business development, environmental protection and benefits to the communities. The AWG also provides a forum for communicating and discussing issues and building long-term trust. It meets quarterly to discuss business and workforce development initiatives and Cameco and AREVA's ongoing operations in the region. The AWG has led to increased local hiring and procurement of services.

Labrador City & Wabush Town, Newfoundland & Labrador

Municipalities have also led the creation of regional resource planning initiatives to provide more effective tools in managing cumulative impacts – or impacts magnified by several projects that may not otherwise be significant from a stand-alone project. Labrador City and Wabush Town prepared a regional plan to tackle the boom and bust dynamic of the region’s iron ore mines where, in peaks, housing supplies did not grow sufficiently to meet demand (often from new mine employees) resulting in housing shortage while in troughs mortgage holders could find themselves underwater given falling prices. Influx management had not historically been a part of city planning in these towns. The towns initiated a regional growth strategy to more fully integrate within opportunities in the local economy. The Labrador West Regional Plan is not yet complete but originally intended to include an infrastructure assessment, land use study, regional in-depth economic profile, socio-economic profile and detailed land development plan. Of note is the recent bust cycle within which the region is witnessing mine closures, spiking unemployment and crashing real estate market.

Queensland

In Australia, Queensland is leading efforts to support coal seam gas (CSG) to liquefied natural gas (LNG). The Government of Queensland committed to conducting regional planning to lead coordination of industrial mining development and address cumulative impacts of projects. Regional plans address key economic, social and environmental issues, prioritise infrastructure and service needs, coordinate investment to maximise benefits and manage impacts, drive innovation and productivity, mobilise the public, private and community sectors and align efforts across all agencies and levels of government. To date the state government has initiated a Land Access Working Group with particular focus on compensation and mitigation of impacts to agricultural land, a housing policy for resource communities, a SIA Unit to develop community services initiatives, social infrastructure assessment study, a regional development plan and growth management plan focused on economic diversification and management of rapid growth.

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14 http://www.naturalresourcesmagazine.net/?article=waiting-game
In 2010 Vale announced it would transition its nickel operations located in Thompson, Manitoba from smelting and refining to mining and milling. Closure of the smelting facility would result in the transfer of jobs to its Sudbury facility, resulting in job losses and associated economic multipliers within Thompson. Vale in partnership with the municipality engaged in a process to overcome the challenge associated with the forthcoming job losses, and identify ways to further leverage the region's resource sector, increase jobs in Thompson and region through economic diversification, provide a high level of service within Thompson to the rapidly growing and changing region and invest in infrastructure to better accommodate the growing population. The result was the formation of the Thompson Economic Development Working Group (TEDWG) and initiation of a regional planning process (http://www.thompson.ca/index.aspx?page=231). Through the broad-based consultation process, TEDWG members resulted in identifying and forming several action plans that were based on consultative-based priority identification, including restorative justice, education and training, housing, local and regional identity and economic development.

Figure 3.5b: Thompson Economic Development Working Group (TEDWG)
Defining the Region and Its Communities

The baseline research conducted by SvN revealed a number of emerging themes that would help to understand, assess and define a Region of focus for the Strategy. The following provides a summary of the key components of the region with respect to population, settlements, environment, resources and economy, transportation, infrastructure and community facilities.

From these findings, SvN developed several options defining the region which were presented at Regional Stakeholder Meeting #1. This section also provides a summary of RSC #1 and the resulting refined region as per comments and suggestions made at this meeting.

4.1 Mining Regions in Northern Ontario

Northern Ontario is comprised of several mining regions including those centred on Thunder Bay and the Ring of Fire, Timmins and Wawa. A number of producing mines (gold, diamond, amethyst and copper) are within these regions as well as mining development projects including the Hardrock Gold Mine project in the Municipality of Greenstone, west of Constance Lake and Hearst.

Constance Lake and Hearst are well positioned adjacent to these existing mining regions as well adjacent to emerging mining regions that could include the Albany Graphite and Martison Phosphate projects.

Photo 4.1: CLFN students learning to trap

Photo 4.2 Downtown Hearst
Figure 4.1a: Mining Regions
Figure 4.1b: Mineral Deposits
4.2 Land Administration

The larger region containing Constance Lake and Hearst is defined by three major land administrative boundaries which include the area defined in Treaty 9, the Matawa Shared Traditional Territory and the District boundaries of Cochrane, Thunder Bay, Kenora, Algoma and Sudbury along with locations of reserves and settlements (see Figure 4.2).

Treaty 9

Treaty 9, signed in 1905, is an agreement between the Canadian Government and First Nations people, including Constance Lake, which resulted in the relocation of First Nations people to dedicated land claims (reserves) and allowed the Government to continue expansion and development into norther Ontario including the construction of railways and other public works developments. The agreement also guarantees the protection of First Nations hunting, trapping and fishing rights on Crown lands and in some cases the provision of school buildings and teachers' salaries and agricultural implements.

Within Treat 9 lands, two reserves are set aside for Constance Lake First Nation - Constance Lake 92 comprising 3110.5 hectares which houses on-reserve population 30 minutes west of Hearst off Highway 11 and English River 66 comprising 3108 hectares on the east bank of the Kenogami River. Both mining projects in the feasibility stage are located within the traditional lands of Constance Lake First Nations.

Matawa Shared Traditional Territory

Matawa First Nations Management (MFNM) is a tribal council with nine member Ojibway and Cree First Nations including Constance Lake First Nation. The MFNM manages and delivers a variety of advisory services and programs to these communities, operating within the Matawa Shared Traditional Territory. These services and programs include economy development, financial, health, housing and technical advisory services.

Districts

Several districts make up the larger region in which Constance Lake and Hearst are located including the District of Cochrane. Districts are regional areas that do not serve a government function and contain incorporated cities, towns, townships, First Nation reserves and unorganized areas. Cochrane District administers a Social Services Administration Board with an Ontario Works and Children's Services office in Hearst. Cochrane District is also a census division in Northeastern Ontario, with a population of approximately 81,000 people in 2011. As a social service provider, the District of Cochrane is a key partner in ensuring appropriate levels of service delivery as demand increases due to mining activities.

Within the District of Cochrane, the Town of Hearst is responsible for lands within its municipal boundaries. Along with Constance Lake First Nation, it will face the largest impact from mine development. Hearst is only responsible for administration of lands within its municipal boundary in accordance with the Municipal Act, 2001 and the Ontario Planning and Development Act, 1994. As an impacted community and service centre for resource activity, and as such its influence reaches beyond its municipal boundaries.

Key Findings

The interpretation of land and resource rights within Treaty Lands by the Courts is creating a shift in the regulatory and policy framework with respect to resource management. In particular, activities within First Nations lands more and more are requiring consent of Chief and Council to successfully proceed. To support this process and to expedite access to land for project development, Constance Lake First Nations have identified a goal of establishing a First Nation managed land administration process and are actively seeking to build administrative capacity in this regard. Assisting Constance Lake in building capacity early in the mine development process will ensure timelines for EA's and permitting are minimized.

Mining projects navigating both First Nation and Provincial requirements are best positioned to work towards obtaining a Social License to Operate that gains support of impacted communities and consent of First Nation communities as supported by policy at both Provincial and Federal levels.

A partnership opportunity exists to establish a representative body of impacted communities including key members of government and industry to identify, review and assess priorities for mitigation of project impacts and long term development. The representative body would better enable integration of local economy with the mining economy and actively seek out funding from both industry and government towards programming and implementation in support of priorities.
Figure 4.2: Land Administration
4.3 Environment

The Study Area is home to a number of significant natural heritage features, lakes, rivers and wildlife. Constance Lake and Hearst are located within the Boreal Forest region which cuts east-west across Northern Ontario. All communities including First Nations benefit from the Boreal Forest region primarily through resource-related industries, hunting, fishing and tourism.

There are a number of significant water features which help to define the Study Area including the Albany River to the north, the Missinaibi and Mattagami Rivers to the east, the branch of the Kenogami River that flows through Constance Lake First Nation reserve and the Nagagami River and Klotz Lake to the west.

The thriving local wildlife in the Study Area includes rabbit, beaver, moose, mink, marten, lynx and muskrat. An abundance of fish can also be found in the surrounding lakes, rivers and streams including trout, whitefish, pickerel and perch.

As projects proceed through the Advanced Feasibility Phase, environmental assessments conducted under Ontario Environmental Assessment Act or Canadian Environmental Assessment Act would identify valued components and effects of project activities on the environment.

Woodland Caribou

In addition to this existing wildlife, woodland caribou are also native to northern Ontario and live in a continuous distribution across the region, generally north of Highway 11. In 2008 the woodland caribou were assessed as a threatened species, meaning that the species while not endangered is likely to become endangered if measures are not taken to address factors threatening it. Threats to the woodland caribou include habitat loss, degradation and fragmentation due to human settlement and development activities such as forestry, mining, hydro corridors and roads.

Ontario's Woodland Caribou Conservation Plan provides broad policy direction regarding conservation and recovery as well as a number of action items that the Ontario government intends to take on with respect to recommendations in the Ontario Woodland Caribou Recover Strategy. The Plan also outlines initiatives to support Woodland Caribou recovery, one of which is the implementation of effective caribou habitat management. This will require resource-related activities to avoid or develop mitigation strategies to address impacts on caribou habitat.

Discussions are ongoing as to how the Conservation Plan is to be applied to lands north of Highway 11 and south of the James Bay Lowlands. Constance Lake First Nations is seeking an active role in identifying and monitoring caribou within its traditional lands, serving as both steward of the land as well as ensuring the land remains a working landscape that provides opportunities for the next generation within Constance Lake. Constance Lake First Nations is currently working on a Traditional Land Use Study which will assist in defining use, occupancy and cultural knowledge within the landscape.

Matawa First Nations Management has an environmental services group - Four Rivers - established to assist Matawa Member First Nations to build capacity in environmental stewardship.

Findings

Opportunities are present at the outset of mining activities to involve First Nations in Caribou Management including First Nation and Provincial cooperation in delineating and refining caribou ranges within Constance Lake traditional lands. Such efforts can involve industry - to ensure mine planning (even in early pre-feasibility and feasibility phases) is accounted for in delineating ranges. Such research can reduce and minimize time requirements within Environmental Assessment and permitting phases for mine development. Industry also has the ability to support and invest in Caribou Conservation within a Project's Area of Influence.

Opportunities are also present to assist Constance Lake First Nations in completing its Community Land Use Plan as well as build institutional land administration capacity. Such an entity would serve as an effective First Nations partner to work with industry in identifying, assessing and communicating impacts and mitigation to residents in Constance Lake and surrounding region.

The above opportunities would serve First Nations in efforts towards self-governance, industry in achieving its Social License to Operate and government in meeting Duty to Consult and environmental assessment process.
Figure 4.3: Caribou Management Area
4.4 Population and Communities

The Region is comprised of several communities centred around resources, transportation, and energy. Hearst forms the main centre in the Region with many residents in surrounding communities commuting to Hearst for employment and services. West of Hearst, adjacent to Constance Lake and the Albany deposit, Constance Lake First Nations is the only First Nations community in the Region. Combined, the Regional population comprises approximately 6,460 people, 670 of which live in Constance Lake.

Constance Lake

Constance Lake is experiencing a slight growth in population. Constance Lake administers its own population numbers due to unreliability of Census Canada numbers. Current population estimates provided by the Band indicate an on-reserve population of 900 persons. This represents a % increase / decrease over counts from 2006. In contrast with Hearst, Constance Lake's population is comprised of a large proportion of individuals aged 34 years and younger as of 2011. However there has been a recent trend of youth moving away from the community and only visiting Constance Lake as opposed to living there.

There are a total of 280 dwellings within Constance Lake, with just over 70% constructed since 1990. Notwithstanding the age of the majority of the housing stock, over half of all dwellings are in need of major repair or replacement. Furthermore, a lack of affordable housing is driving youth and families away.

In terms of accommodating additional growth within Constance Lake, the key challenge remains waste water treatment. New subdivisions in Constance Lake will require expansion of the lagoon system.

Hearst

Following the trend of many towns in northern Ontario, the Town of Hearst's population has been experiencing a decline over the last decade. Between 1996 and 2011, the population has decreased from 6,049 people to 5,090 people. A large drop of 9.4% was experienced between 2006 and 2011. The Town’s population is aging with approximately 1000 individuals between the age of 55 and 69 in 2011.

As of 2011, there were 2,401 dwellings in Hearst, a slight drop from the 2006 total of 2,547. Just under two-thirds of these dwellings are single-detached, semi-detached or row houses, approximately one-third are apartment buildings with fewer than five storeys / duplexes and the remaining 5% are movable homes (e.g. mobile homes). New building permit activity is very low - two new residential buildings and one mobile home were permitted in 2013/2014. More residential buildings were demolished than built in 2013/2014 exacerbating a tenuous housing shortage and latent demand both for retirement / seniors housing and entry level housing. Housing for newcomers drawn from other parts of the world to college / university and employment opportunities is similarly problematic. Communications with industry indicate that finding housing for new employees is a major challenge to attracting and retaining labour in Hearst. In the absence of a professional real estate body in Hearst, home sales are privately conducted and rental accommodation is found through local networks.

The lack of new housing is primarily related to a shortage of investment rather than available construction industry. With several construction firms based in Hearst that serve a region stretching across Highway 11 from Geraldton to Timmins, construction of new housing can be completed locally.

The Cochrane District Social Services Administration Board (CDSSAB) helps provide and administer a number of affordable housing units in Hearst, including 71 family units, 72 seniors units and 32 accessible units and 4 urban native units. There are currently 70 people on the waitlist for CDSSAB housing, many of whom are seniors. The lack of affordable housing for seniors means that many stay within their existing homes, and as a result, the intergenerational turnover of housing units is lower than what would be expected based on market need.

In terms of available land to accommodate new growth, Hearst has 47 vacant parcels, 15 of which are zoned for residential use and are fully within or adjacent to the municipal water and sanitation serviced area. These 15 residential parcels have a total area of approximately 35.46 hectares (ha). While the specific residential zoning on each of these parcels does differ, assuming that all these vacant residential parcels were built to the same average residential density as currently exists in Hearst (76 units/ha), these parcels could accommodate roughly 270 new units of housing and 700 people (2011 average household size for Ontario of 2.6 persons).
Figure 4.4a: Communities
Figure 4.4b: Constance Lake First Nation
Figure 4.4c: Town of Hearst
Figure 4.4d: Town of Hearst - Zoning
Figure 4.4e: Town of Hearst
Mattice-Val Côté

The nearby municipality of Mattice-Val Côté, composed of the smaller rural communities of Hallebour, Val Côté and Mattice, has a combined population of 686 people (2011 Census), a drop of 11% from the 2006 population of 772. Only about 30 kilometers east of Hearst, Mattice is located adjacent to the Missinaibi Heritage River. Primarily a Francophone community, Mattice-Val Côté also accommodates more than 65 First Nation and Metis residents. There are a total of 353 dwellings in Mattice-Val Côté, of which 80 units are in need of major repairs.

Unorganized Communities

Hearst is the local centre for a number of smaller unorganized communities including Jogues, Coppell and Mead. Approximately 46 units of housing are located within the unorganized communities and approximately 120 residents. Based on Cochrane District National Housing Survey, approximately 7 units are in need of major repair.

Findings

A critical challenge currently facing Constance Lake and Hearst is a shortage of housing for both seniors, newcomers and young families. On the other hand, within Hearst there is ready and available serviced land to accommodate new development. Given potential demands from mining projects within the Region, available housing in forms appropriate to various durations and types of tenancy will be a key component in ensuring local capture of investment and economic diversification that follows mining projects.

CLFN requires attention to rehabilitating existing housing stock, increasing availability of entry level and affordable housing and improving availability of services to more effectively retain current residents as well as attract new / returning residents drawn to mining activity.

To a lesser extent, and depending on the location of projects, additional growth can be accommodated in Mattice-Vale Cote although there is limited municipal capacity to manage larger housing projects and for the Albany Project, these communities are on the range of acceptable commuting times (less than 60 minutes).

Opportunities exist currently for the Region to establish a Worker Housing Strategy that would identify locations for new housing, a housing typology, income requirements and

Figure 4.4e: Mattice-Val Côté and Unorganized Communities
### Figure 4.4f: Constance Lake First Nation - Population Table

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>% Change from Previous Years</th>
<th>Median Age</th>
<th>Total Private Dwellings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>596</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2001</td>
<td>723</td>
<td>21.3%</td>
<td>-</td>
<td>207</td>
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<tr>
<td>2006</td>
<td>702</td>
<td>-2.9%</td>
<td>26.6</td>
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<tr>
<td>2011</td>
<td>670</td>
<td>-4.6%</td>
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</table>

### Figure 4.4g: Constance Lake First Nation - Age Distribution Pyramid

![Age Distribution Pyramid](image.png)
Figure 4.4h: Town of Hearst - Population Table

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>% Change from Previous Years</th>
<th>Median Age</th>
<th>Total Private Dwellings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>6,049</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2001</td>
<td>5,825</td>
<td>-3.7%</td>
<td>37.5</td>
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<tr>
<td>2006</td>
<td>5,620</td>
<td>-3.5%</td>
<td>41.5</td>
<td>2,547</td>
</tr>
<tr>
<td>2011</td>
<td>5,090</td>
<td>-9.4%</td>
<td>45.1</td>
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</table>

Figure 4.4i: Town of Hearst - Building Permits Issued

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<th></th>
<th>2009</th>
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<th>2011</th>
<th>2012</th>
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<td>Residential Major</td>
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<td>10</td>
<td>2</td>
<td>7</td>
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<td>7</td>
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<td>Residential Minor</td>
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<td>125</td>
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<td>127</td>
<td>120</td>
<td>162</td>
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<tr>
<td>Residential Demolition</td>
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<td>5</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Non-Residential Major</td>
<td>2</td>
<td>9</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Non-Residential Minor</td>
<td>29</td>
<td>20</td>
<td>21</td>
<td>32</td>
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<td>Non-Residential Demolition</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>9</td>
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<tr>
<td>Total Value ($)</td>
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<td>$12,771,987</td>
<td>$5,301,004</td>
<td>$6,834,378</td>
<td>$3,962,806</td>
<td>$11,919,005</td>
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</tbody>
</table>

Figure 4.4j: Town of Hearst - Age Distribution Pyramid
4.5 Resources and Economy

Mining

The Region is home to an array of mineral deposits including graphite, phosphate, copper, gold, diamond, silver, iron and zinc. There are several producing mines in this larger region as well as developed prospects with reserves. Within the immediate vicinity of Constance Lake and Hearst, there are two mining development projects: the Albany Graphite project and the Martison Phosphate project.

The Albany Graphite project is expected to produce 30,000 tonnes of graphite per year with a mine life of at least 22 years. It is anticipated to provide 500-600 jobs during construction and 300 during operations. It requires a 115kV power line, 5km access road, and connection to the natural gas TransCanada Mainline. This new infrastructure has an estimated cost of $70 million out of a total estimated capital cost of $703 million for the mining project.

The Martison Phosphate project is anticipated to provide approximately 200 mining operation jobs and 122-135 jobs at an off-site phosphate plant. It requires an upgraded 90km access road, a new 115kV power line, and a buried slurry pipeline, all running along the same corridor. The total estimated capital cost for this project range from $1-2 billion.

In addition to the Albany Graphite and Martison Phosphate mining development projects, there are a number of developed prospects with reserves in the vicinity of Constance Lake and Hearst. Developed prospects with reserves are identified deposits that meet the minimum requirement for a producing mine. Those that are close to Constance Lake and Hearst include deposits of clay, silica sand, rare earth elements, niobium and magnetite.

Hearst is used as a staging area for exploration activities up to the Albany River Watershed, providing the most direct access by air. Hearst Air, Independent Grocer and other businesses have established themselves as capable of providing services to mining companies. Exploration efforts continue in the Arc of Fire which forms an outer arc of mineral deposits from the Ring of Fire. Building awareness in the mining community of available services and minimizing cost by using Hearst-Constance Lake as a staging area would be a key component in making the region mining ready.

The Region is bisected by Highway 11, the Ontario Northland Railway and the Canadian

Figure 4.5: Traplines in the Matawa Homelands
National Railway. As per the transportation analysis completed for the Northern Ontario Multimodal Transportation Study, the volume of truck and rail movement along these corridors signify their importance to the mining sector and they are thus considered Key Mining Routes for the purpose of this study.

Additionally, the close proximity of the Albany Graphite and Martison Phosphate projects open up the potential for new mining routes through Constance Lake and Hearst.

**Forestry**

With the decline of the fur trade, expansion of rail and limited agricultural opportunities, forestry has dominated the local economy. With forestry in decline over the last decade, the communities have similarly contracted as residents moved elsewhere looking for different opportunities. Currently forestry employs nearly 10% of the workforce in the region.

Within the Study Area, there are eight managed forests (Hearst Forest, Gordon Cosens Forest, Kenogami Forest, Big Pic Forest, Pic River Forest, Nagagami Forest, and White River Forest) and four Sustainable Forest Licensees (Hearst Forest Management Inc., Tembec, Nagagami Forest Management Ltd, and White River Forest Products Ltd).

Forest resources are processed at one of 10 mills within the Study Area, five of which are in close proximity to Constance Lake and Hearst. These five mills include the Lecours Lumber Sawmill, Atlantic Power Bioproduct Mill, Colombia Forests Products (Levesque Plywood Veneer Mill), Tembec Sawmill, and Cyprien Lachance Saw and Planer. As with the mining industry, the key routes for the forestry industry are also along Highway 11, the Ontario Northland Railway and the Canadian National Railway.

**Traditional**

Members of Constance Lake First Nation access traplines within the Study Area, notably in the area on either side of the Nagagami River (see Figure 4.5, preceding page). In addition, band members also access trapline areas south of Hornepayne. Constance Lake First Nation is currently in the process of documenting traditional use of the land towards establishing land stewardship and protection objectives and policies including location of sacred sites, spawning areas, burial sites and other tangible landscape features. Traditional land use information will be used to support self-governance efforts by Constance Lake First Nation toward increased partnerships and revenue sharing with private sector and other levels of government. Revenue generation is critical to CLFN’s ability to govern and administer its lands. CLFN is not against new development but must be at the table where they can raise awareness that a balance is to be struck in development with traditional pursuits and activities.

**Key Findings**

Given its location and distance from existing mining centres of Thunder Bay, Timmins and Wawa and with two projects in feasibility stage and exploration activity ongoing in the region, Constance Lake and Hearst are well positioned to form fourth mining region, providing logistical support and services to mining activities north to Albany River watershed and the shores of James Bay.

Key challenges include:
- a labour force that is nearing retirement - with nearly 50% of the labour force retiring in the next 10 years;
- a lack of participation of Constance Lake First Nations in forestry work and high levels (31%) of unemployment; and
- minimal partnerships between First Nation and non-First Nation businesses in the region, including in the housing and construction sector.

Opportunities are available to:
- Build awareness of the region within the mining industry and within various levels of government and market the region as a resource centre with a long history of industrial forestry;
- Complete land use and occupancy studies for Constance Lake First Nations, identifying key traditional and subsistence activities that would minimize timelines and communication requirements in advanced feasibility and permitting phases of mining;
- Work with industry partners to address technical labour needs across resource industry as nearly half of the labour force nears retirement;
- Deepen First Nation business relationships with forestry and construction sector that will allow capacity building in transferable skills to the mining sector;
- Build First Nation capacity in contracting and small business management to more effectively prepare local population to respond to resource opportunities; and
- Develop partnerships towards the establishment of welcoming centres to better attract and retain newcomers to the Region.
Figure 4.6: Resource
4.6 Transportation and Infrastructure

Municipal Infrastructure

The condition of municipal infrastructure in the Town of Hearst is fair to poor. The water and wastewater network is in fair condition as a result of upgrades to the treatment plant and sewage lagoons; the lagoon is currently used to only 50% of its total capacity. Roads and sidewalks are in fair to good condition while bridges in Hearst are generally in poor condition and in need of reinvestment / upgrade. The water and wastewater network in Constance Lake is in fair condition with a new treatment plant being commissioned presently, however, its sewage lagoon is at capacity. East of Hearst, Hallebourg and Mattice Vale-Cote are served by separate communal lagoons. All other unorganized communities are on private services.

Ground Transportation Network

The ground transportation network is composed of Highway 11 and three rail lines, including the Canadian National Railway line that runs north from Sault Ste. Marie to Hearst, the Ontario Northland Railway line that parallels Highway 11 heading east from Hearst towards Cochrane, and the CNR line that runs northwest from Sudbury through Hornpayne, Longlac and Greenstone. As previously mentioned, all of the above (with the exception of the Sault Ste. Marie – Hearst CNR line) are identified as key transportation routes for the mining and forestry sectors.

The Ministry of Transportation Ontario is conducting a Northern Ontario Multimodal Transportation Study which is identify capacity improvements to the existing network. The MTO study has prepared forecasts for demand of transportation of goods and people which takes into account mining projects with proven reserves. Due to the pre-feasibility status of both projects, they are not identified as growth factors within the MTO study. Research to date by MTO does indicate sufficient capacity in both road and rail components of the network in and around Hearst / Constance Lake. The MTO study also acknowledges the load / freight stacking limitations in the rail corridor between Hearst and Sault Saint Marie which limits the corridor to passenger transportation. The Study is not currently assessing rail or road linkages from Nakina to the Ring of Fire.

Another component of the ground transportation network is the traditional river routes along the Missinabi, Kenogami, Pagwachuan and Albany Rivers which in the past served as transportation routes between James Bay and the shores of Lake Superior and continue as sites of cultural and recreational significance.

Air Transportation Network

The Study Area is well served with air transportation infrastructure, including a total of eleven airports (1 regional airport, 4 community airports and 6 sea plane bases). The Hearst Municipal Airport features routes that connect both to the regional airport in Kapuskasing and to airports in Thunder Bay, Winnipeg, Timmins, Sudbury and Montreal although no regularly scheduled commercial flights are currently operating.

Additionally, Hearst Air Service Limited provides flights out of the sea plane base south east of Constance Lake, with routes to the Ring of Fire, James Bay, and settlements in Ontario’s far north. Hearst Air serves as a logistics centre serving as the staging location for mining exploration activities, tourism activities and passenger connections to James Bay.

Potential Future Transportation Connections

There are three potential future road or rail transportation connections identified within the Study Area. One potential connection runs north from Hearst to the Martison Phosphate Project. A second connects the Albany Graphite Project to Highway 11 through Constance Lake. The third potential connection branches off the Canadian National Railway line at Nakina and heads northward to the Ring of Fire.

Energy Infrastructure

The TransCanada Mainline System, which transports natural gas from western Canada to markets in eastern Canada and the United States, crosses through the Study Area. Within northern Ontario, the Mainline System is composed of three pipelines that all run roughly parallel to the route of Highway 11. There are currently seven compressor stations located within the Study Area, with four located between Geraldton and Hearst and three located between Hearst and Smooth Rock Falls.

As part of its broader Energy East oil pipeline project, TransCanada has proposed converting one of the three Mainline System natural gas lines in Northern Ontario. This conversion would require the construction of seven new pump stations within the Study Area. These pump stations would be constructed in close proximity to the existing natural gas compression stations. TransCanada's Energy East application is currently being
Figure 4.6a: Transportation Network
reviewed by the National Energy Board.

There are currently 11 hydroelectric generating stations within the Study Area, with five located on the Mattagami River, three on the Abitibi River, and one each on the Pic, Shekak and Groundhog Rivers. The total capacity of these generating stations is 1545 megawatts (MW). Over 90% of this capacity comes from the stations on the Mattagami and Abitibi Rivers.

An additional four hydroelectric generating stations are proposed for the Kabinakagami River just north of Constance Lake. These four stations would have a combined capacity of 26 MW. The proponent and First Nation have ended their relationship and shelved the project due to financial and project concerns. The project is waiting for a new proponent to proceed. There are several electricity transmission lines that connect to the existing hydroelectric generating stations within the Study Area. There is a relatively dense network east of the Study Area connecting to the generating stations on the Mattagami and Abitibi Rivers. This network runs east of the Mattagami along Highway 11 to Constance Lake, continues north of the Study Area along the Abitibi, and runs south and east, connecting to southern Ontario and Quebec. In the western portion of the Study Area, there is a single transmission corridor that runs from Hornepayne to Manitouwadge and south towards Lake Superior.

In addition, Atlantic Power operates the 38 MW biomass generating facility in Calstock and Brookfield operates a 19MW hydro station on the Shekak River. Atlantic Power and other generation stations are controlled through the Ontario Grid Control Centre, which draws power from the region when necessary. Stations typically generate at capacity only during peak events within the Provincial Grid. Hearst is connected to the Kapuskasing Transmission Station via the 115kV single circuit transmission line F1E. Hearst Power Distribution Company Limited is responsible for power distribution within Hearst. West of Hearst, the Hydro One H2N circuit connects Calstock Distribution Station and Atlantic Power and Brookfield Generating Stations.

Some island capability exists within the system that would allow opportunity for local generation and distribution. The Independent Electricity System Operator (IESO) has no plans for major expansion of the system near Hearst. Any system expansion would be driven by developers. Current demand for power from potential mining projects is minor within the system. IESO also views proposals to connect the 115kV transmission line to the 230kV transmission line ending in Long Lac as not viable at this time. Notwithstanding, developers of the Energy East Pipeline Project may require expansion of the transmission system between the two lines. Hydro One indicates that there are voltage drops at the end of the 115kV line. Mine projects would require end of line solution to maintain voltage. More than sufficient generation capacity exists locally.

With the projected energy needs of the Ring of Fire, there is the potential to expand the transmission line network along two corridors. The first corridor could run northward from Long Lac and the second could run roughly northwest from Kipling Generating Station, the northernmost hydroelectric station on the Mattagami River.

**Key Findings**

The Region is well served by infrastructure, with both projects in feasibility close to transportation and energy infrastructure. Current levels of service are also sufficient to incrementally meet demand of industry.

From a municipal servicing perspective, Hearst is in a relatively good position to accommodate new growth related to mining with capacity in both water and sewage infrastructure. Constance Lake's biggest challenge is with the capacity of its sewage lagoon. Opportunities exist for limited development in Mattice-Vale Cote and in the unorganized communities through combinations of connections to private and communal services.

The other main challenge in the region is with respect to transit, which is underserved by passenger rail, bus and taxi service. This remains a point of issue with newcomers to Hearst, who face travel limitations without use of a private automobile.

An opportunity exists to create greater energy independence for Hearst and area with generous generating capacity available locally. Local generation could also be used to drive mining activities and associated industrial processes.

Lastly, Capital Planning could be initiated within a Regional Growth Strategy to identify and assess an incremental approach to improving municipal infrastructure as mining activity increases. Key priorities such as sewage capacity improvements and bridge repairs would be considered in such a Strategy.
Figure 4.6b: Energy and Infrastructure
4.7 Community Facilities

Many of the larger communities in the Study Area host significant community facilities, including education institutions, hospitals and courthouses.

In terms of education institutions, there are four post-secondary institutions (Université de Hearst, Confederation College, Northern College and Collège Boréal) with a presence in the Study Area. These institutions are located at five campuses, including one in Geraldton (Confederation College), three in Hearst (Université de Hearst, Northern College and Collège Boréal) and two in Kapuskasing (Université de Hearst and Collège Boréal). In addition to these campuses, there are nine Contact North Access Centres distributed across the communities along and to the north and south of Highway 11. In addition, KIKENOMAGA KIKENJIWEWEN Employment and Training Services (KKETS) operates in cooperation with Constance Lake First Nations.

There are six hospitals in the Study Area, all of which are classified by the Ministry of Health and Long-Term Care as Group C (chronic care, less than 200 beds) and Group G (general care, less than 100 beds). These hospitals include the Smooth Rock Falls Hospital, the Sensenbrenner Hospital (Kapuskasing), Hopital Notre Dame (Hearst), Manitouwadge General Hospital, and Geraldton District Hospital.

The Foyer des Pionniers Nursing Home is located in Hearst which is a 67-bed long-term care facility and currently has a wait list.

The Study Area includes seven courthouses, with locations in Geraldton, Longlac, Manitouwadge, Hornepayne, Hearst, Kapuskasing, and Smooth Rock Falls.

Key Findings

In terms of community facilities within the Region, a clear need exists for expansion / new seniors care facility to reduce dependency on hospital. Another effect is that additional senior’s care facilities would open up housing within Hearst.

KKETS offers community based skilled trades training in Constance Lake. Since its inception in 2012 KKETS has assisted members in attaining individual training, training supports and First Nation job creations. KKETS has introduced a number of initiatives to meet the needs of their members in the up and coming labour market surrounding the skilled trades and mining industry.

Other skilled trades training institutions are located in Timmins or in Sudbury, requiring study outside of the Region to complete the training. Training programs are needed to overcome labour force challenges. Seeking partnerships with regional centres of mining excellence would assist the region in building awareness of training opportunities, transferance of skills between sectors / occupations and possible set the stage for local satellite office in the event of greater demand.

In addition, the Region can continue to explore opportunities for partnerships with recruitment and settlement organisations to support immigrants relocating to the Region.
Figure 4.7: Community and Institutional Facilities
4.8 Defining the Region

The Project Team initially prepared several options to define / describe an area of influence that would constitute the geography of Readiness Strategy. Several factors were examined including:

- Administration and settlement boundaries
- First Nation traditional territory
- Potential mining projects and resources
- Transportation and infrastructure
- Watershed and sub-watersheds

Options were identified and discussed within the Regional Stakeholder Committee. A preferred option was identified based on the following factors:

- Existing settlement patterns and dependency on Hearst and employment / service centre which ruled out extending the region to the shores of James Bay which is served more by Kapuskasing;
- Traditional lands of Constance Lake First Nations including trap lines and rivers and which delineate a boundary between traditional First Nation lands to the west and the northeast;
- Cochrane District boundaries that serve to define a southern boundary;
- Lands defined by Constance Lake First Nation traditional knowledge boundaries; and
- Watershed boundaries that serve to capture both traditional lands of Constance Lake as well as environmental bio-regions

Importantly, the Region may change as the Hearst / Constance Lake based mine economy builds momentum. Moreover, economic relationships may alter the area of influence from mining projects as they draw from established centres in the Province and internationally.
Figure 4.10d: Final Option
5 Economic Drivers and Growth

The objectives of this section are listed and described below:
- Describe at a high level how Constance Lake and Hearst can potentially participate in the mining projects including potential tools to facilitate participation.
- Assess overall demand based on each mining project’s expenditures by phase (exploration, construction, operation and decommissioning).
- Assess supply factors to assess the scale of the opportunity for Constance Lake and Hearst and to identify potential areas of opportunity.

It is important to note that this is a high level study and more work needs to be done to validate this study's conclusions and key findings.

Approach

The approach we employed to complete this study is briefly listed below:
- Reviewed background information including preliminary work completed by SvN and preliminary feasibility studies for mining projects in the region surrounding Constance Lake and Hearst – notably the Albany Project (Zenyatta Ventures Ltd.) and the Martison Project (PhosCan Chemical Corporation).
- Conducted a very high level economic assessment to determine and quantify aggregate demand resulting from mining projects in the region and what this potentially means for Constance Lake and Hearst.
- Assessed current and expected future supply conditions based on existing data and information to identify areas of opportunity.
- Prepared this report, which summarizes our key findings.

How communities participate in projects?

Introduction

Mining projects have the potential to generate significant economic benefits for adjacent communities. The scale and nature of these benefits depends on how local communities participate in these projects. Moreover, there are many ways adjacent and impacted communities can participate in a mining project. This section of the report provides a high level overview of these mechanisms as context to the rest of the study.

Equity/royalties

Local communities can participate in mining projects by taking an equity stake in the project and/or receiving royalty or streaming payments from the mining company developing the project. In Canada, federal and provincial governments collect royalties in one form or another once projects are operational. Proceeds from royalties collected at a federal or provincial level can be used to support development in impacted communities and to compensate them for any potential negative impacts. For instance, providing support to local communities to enable diversification and economic development is a basic principle underlying Quebec’s Plan Nord.

Community Impact Benefit Agreements

Community Impact Benefit Agreements (“IBA”) can also have certain local payment provisions, which can be tied to certain performance measures. Local communities and notably First Nations communities can directly participate in mining projects by taking or acquiring an equity stake in the project. As an example, the First Nations Major Projects
Coalition in British Columbia is looking to obtain loan guarantees from the Federal Government to purchase equity stakes in major projects including mining projects. Other aspects of project participation can be brokered within an Impact Benefit Agreement, including employment, procurement, environmental monitoring and remediation, community facilities or other aspects necessary to communities to mitigate impacts from mining or support development and economic diversification efforts.

**Local employment**

Local employment is often seen by local communities as another important way they can participate in a mining project. Mining companies are often keen to leverage local employment sources given pervasive labour shortages and challenges in the mining sector especially in more remote communities. For many northern communities, local employment opportunities can bring people to a community and support population retention. Local employment also has the potential to spread and disperse the benefits of the mining project across and throughout the community. This is especially the case for mining projects that tend to employ a large amount of individuals. However, investments are typically required well before construction begins to train a local employment base particularly in regions where mining is new. Other investments in housing and supporting infrastructure may also be required to enable a community to participate in a mining project via local employment. Local employment can also be important to enabling other forms of participation. It is also important to note that an increase in mining investment in remote areas can also result in increased prices and labour costs in other sectors and that housing stress for low income households can increase. A proactive local employment strategy can potentially address some of these challenges.

**Local procurement**

Communities with an existing supplier base can also participate in a mining project through local procurement where the mining company taps into the local supplier base to source some of their inputs across the project cycle. This can help expand existing businesses in the region, which would also likely result in existing employment opportunities for the community. Increased scale can also help improve the competitiveness of the supplier base to win work in other regions. Many mining companies operating in Canada have local procurement programs and in some cases mining companies can play a more proactive role in helping the local supplier base gear up or retool to better supply the mining project. This form of participation can require significant investment up front depending on the size, nature and scale of the existing supplier base.

**Indirect/induced impacts**

Spending in one industry generates spending in other industries that supply and service the “front end” industry. For example, a local metal fabricator that supplies purchases as inputs a significant amount of transportation services. Communities that have an existing base of supporting industries to “front-end” industries can further benefit from local procurement by localizing a higher proportion of economic impacts. Employees earning wages from these suppliers creates further spending and spin-offs within local communities.
Infrastructure
The development of a mining project in some cases can result in the development of transportation, energy or other types of infrastructure that can generate very significant and in some cases transformational economic benefits for local communities. For example, the development of the Renard Diamond Mine in Northern Quebec also resulted in the extension of Autoroute 167, which provides all season access to the mine and connects the communities of Mistissini and Chibougamau to the provincial highway system in Quebec13. There are also several examples in Canada where mining companies provide funding for the development of community infrastructure such as ice rinks, stadia, recreation centres or other forms of community infrastructure14.

Skills capacity building
Local communities can also benefit from a mining project through the building of human capital in the region. This can occur directly through the establishment of specific training programs or indirectly from experience and training gained on the job. Economic benefits from human capital deepening can be quite significant and like the provision of infrastructure can generate benefits over the long run.

Key findings
There are many ways local communities participate in a mining project. The discussion above lays out some of these mechanisms and approaches based on what we have seen in the past. It is important to note that the specific demand and supply factors, which vary from project-to-project and community-to-community, play an important role in determining the way in which communities participate.

Demand and supply considerations

Introduction

This section of the report provides an overview of the key demand and supply factors impacting Constance Lake and Hearst. We first assess the demand factors and specifically the demand for labour, equipment, materials, supplies and other items required by mining companies operating in the region to develop their projects. From a supply side, we assess at the current supply of labour in the region and projections going forward and assess current capabilities in the region from a supply chain perspective. It is important to stress that this is a high level analysis based on aggregated data and more work needs to be done validate our key findings.

Demand factors

Timing
From a demand perspective, the first and in many respects most critical question to answer is when we anticipate the noted mining projects to commence construction. Unfortunately, it is very difficult to answer this question with any degree of confidence and ultimately market conditions play an important and indeed critical role in this regard. The diagram below shows the Bank of Canada Metals and Minerals Commodity Price Index and the Forestry Price Index, which we will refer to later.

From January 2011 to January 2016, metals and minerals prices, as estimated by the Bank of Canada Metals and Minerals Price Index, decreased substantially and dramatically, by over 36%. Not surprisingly, investment in the mining sector has dramatically decreased as well. The diagram below shows capital expenditures in the mining sector (specifically the mineral extraction industry).

![Figure 5c: Capital Expenditures in the Mineral Extraction Industry, 2011 to 2015 (2015 based on spending intentions)](image-url)

From 2012 to 2015, capital expenditures in the mining sector decreased from $16.9 billion to $10.9 billion, which represents a decrease of 36% - an annual decrease of nearly 14%. Capital expenditures in the mining sector typically lag exploration activity. For this reason, exploration expenditures are often viewed as the lifeblood of the mining industry. The diagram below shows how mining exploration and deposit appraisal expenditures have changed since 2011.

Figure 5b: Bank of Canada Metals and Minerals and Forestry Price Index, January 2011 to May 2016

Figure 5d: Mining Exploration and Deposit Exploration Expenditures, 2011 to 2016 (2016 based on spending intentions)
From 2011 to 2015, mining exploration and deposit appraisal expenditures decreased from $4.2 billion to $1.7 billion – a decrease of 60%. Based on spending intentions, mining exploration and deposit appraisal expenditures are expected to decrease even further to $1.4 billion. The mining sector is facing very significant challenges and investment in the sector has decreased considerably over the last several years.

However, there are some positive signs that are important to note. SNL recently reported that in April of 2016 global mining capital expenditures totalled $108 billion in the last five months, which is $50 billion more than what they were in the 5 months leading up to November of 2015 (based on planned expenditures). Nearly all of this growth was associated with copper and gold projects. Figure 5b also shows a slight uptick in metals and minerals prices. Since the beginning of 2016, metal and minerals prices increased by slightly over 7%, which is a significant increase given how precipitously commodity prices have fallen since 2011.

What does this all mean for Constance Lake and Hearst in the context of developing a mining readiness strategy? Mining is cyclical and risky business and mining companies have faced considerable challenges over the last several years. It is very difficult to know exactly when and if a mining project that is currently in an advanced exploration phase will ultimately become a producing and operation mine. That being said, jurisdictions that take a proactive approach – like Constance Lake and Hearst – will fare better than those that do not. Canada’s consistent regulatory and supportive policy environments are big reasons why Canada has performed relatively better than other jurisdictions in terms of investment in the mining sector.

**Potential economic impacts**

The economic impacts of when a mine gets developed are significant and transformative. The table below shows the average annual economic impact to Ontario of the construction of the Albany Project and Martison Project. It is important to note that economic impact estimates presented below are indicative and based on a very high level data and information and more work needs to be done to validate these estimates.

Indicative economic impact estimates shown in Figure 5e illustrate that the construction of the Albany Project and Martison Project are expected to generate significant economic impacts across Ontario. However, what proportion of these economic impacts will remain in

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**Economic impact analysis key terms:**

- **Direct impacts** are changes that occur in “front-end” businesses that initially receive expenditures and operating revenue as a direct consequence of operations and activities conducted.

- **Indirect impacts** arise from changes in activity for suppliers of the front-end business. For example, the purchase of rebar from a steel product manufacturer requires that the steel product manufacturer purchase refined steel from a steelmaker.

- **Induced impacts** occur when employees, from businesses stimulated by direct and indirect expenditures, spend their income on consumer goods and services.

- **The total economic impact** equals the sum of the direct, indirect and induced economic impacts.

- **Gross output** is the gross value of all business revenue. This is the broadest measure of economic activity and indicates the total sales and transactions triggered by operations.

- **Value-added** or **Gross Domestic Product** (“GDP”) is the value added to the economy or the unduplicated total value of goods and services. GDP includes only final goods to avoid double counting of products sold during an accounting period. So, for instance, if a producer of a widget sells each widget for $100 and purchased $40 of goods from suppliers to produce the widget then the value-added or GDP impact would be $60 for each widget sold. Accordingly, GDP is a narrower, more focused and more accurate measure of economic activity since it avoids double counting.

- **Wages and salaries** equal the total value of wages and salaries associated with employment impacts. Labour income is an even narrower measure of economic activity and comprises an important part of GDP.

- **Employment** refers to the number of jobs created or supported. It is expressed as the number of full-time equivalent (“FTE”) jobs indicated in person-years.

- **Government tax revenues** are the amount of total tax revenues generated. In this study, total taxes are calculated leveraging relationships between GDP and total tax revenues.
Constance Lake and Hearst? The answer depends on the following key factors:

- **Local employment** – employing more individuals that live and work in the region will increase the proportion of the direct and induced economic impact that stays in the region (where a person lives determines to a large extent where they will spend their earnings).

- **Local procurement** – increasing purchases of equipment, materials, supplies and services from local suppliers increases the direct and indirect economic impacts staying in the region.

- **Extent of supporting industries** – indirect and induced economic impacts involve successive and multiple rounds of spending and continue until an initial shock in the economy eventually dissipates. The extent of supporting industries, ones that supply initial mining suppliers and ones that provide goods and services to households, determines the degree to which indirect and induced impacts stay in a region.

As the list above suggests, local supply conditions play an absolutely essential and critical role in determining the degree to which economic impacts remain in or leak from a region. The next section of the report identifies likely impacted industries from the construction and operations of a mine.

**Impacted industries**

The specific industries that are impacted by the construction and establishment of mining operations vary depending on the specific mining project. The type of commodity being mined, the mining method and a host of other factors determine impacted industries. Using data from the Statistics Canada Input-Output Tables it is possible to identify these industries. The establishment of mining operations involves several phases. For the purposes of this study, we have shown the inputs of the Other Engineering Construction Industry to represent the construction phase and other mining and the Non-Metallic Mineral Mining and Quarrying Industry to represent the operations phase of a mining project.

From a demand perspective, the charts above suggest the following important

<table>
<thead>
<tr>
<th></th>
<th>Construction</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Output (millions)</td>
<td>GDP (millions)</td>
</tr>
<tr>
<td><strong>Albany Project</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct</td>
<td>$100.3</td>
<td>$49.1</td>
</tr>
<tr>
<td>Indirect and Induced</td>
<td>$79.5</td>
<td>$37.9</td>
</tr>
<tr>
<td>Total</td>
<td>$179.8</td>
<td>$87.0</td>
</tr>
<tr>
<td><strong>Martison Project</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct</td>
<td>$51.1</td>
<td>$25.0</td>
</tr>
<tr>
<td>Indirect and Induced</td>
<td>$40.5</td>
<td>$19.3</td>
</tr>
<tr>
<td>Total</td>
<td>$91.6</td>
<td>$44.3</td>
</tr>
</tbody>
</table>

Figure 5e: Indicative Economic Impact to Ontario of Construction and Operation of Albany Project and Martison Project (note - economic impacts for the operations phase are based on high-level assumptions and require substantial further verification)
Considerations.
- First and most importantly, regardless of whether the mining project is in construction or operational, wages and salaries are the largest input and represent of 33.9% and 29.0% of total costs respectively.
- In the case of construction, the provision of professional services—engineering, accounting, architectural, legal services—account for 17.5% of total costs. Services incident to mining (e.g., geotechnical services) account for a further 6.8%. Financial services also account for another 2.4%. Services account for at least 26.7% of total costs. From an operations perspective, services represent 14.8% of total costs of which services incidental to mining represent 10.1%. This all indicates that nearly half of costs associated with the establishment and operations of a mine are associated with people—employees or service providers.
- Energy is another major cost once operations are established. Diesel fuel, natural gas and electric power represents 19.6% of total costs.
- Prefabricated structures, fabricated metal products, spare parts, concrete products, building products are also important inputs into the construction and operations phase of a mining project.
- The purchase and/or leasing of specialized equipment and automotive equipment are other important inputs in the operational phase of a mining project.

The analysis above suggests highlights one important point in the context of developing a mining readiness strategy. People matter. Nearly half of all costs associated with the establishment and/or operations of a mine are associated with people (employees and providers of services). From Hearst’s and Constance Lake’s perspective, a mining readiness strategy focused on people is essential to ensuring that a high proportion of the economic impacts remain in the region.

Supply factors

As noted above, supply conditions and factors in a region to determine to a large extent the degree to which economic impacts brought on by the establishment of a mine impact local communities. The analysis above also suggests that to assess supply conditions we can focus on people and specifically the local labour force.


**Population**
The table below summarizes some of the key population trends in Constance Lake and Hearst.

From 2006 to 2011 (the last year of available data), the population in Constance Lake and Hearst decreased by 4.6% and 9.4% respectively. Hearst witnessed an even further decline in its working age population (individuals 15 to 65 years old inclusive) – it decreased by 12.0%. We understand that these trends are likely to continue going forward given the large number of individuals in Hearst approaching retirement age.

**Labour force statistics**
Labour force statistics include the unemployment rate, the labour forces participation rate and other similar metrics. Unfortunately, current labour force statistics are not available for Constance Lake and Hearst, but they are available for the Northeast Ontario Economic Region, which includes Hearst, Constance Lake, Sudbury, Timmins and other communities. The diagram below shows the unemployment rate in Northeast Ontario and all of Ontario as a comparison from 2001 to 2015.

The unemployment rate in the Northeast Ontario has changed considerably since 2001. It reached a low in 2008 of 6.2%, but shot up the following year to a high of 9.1% as a result of the Global Financial Crises and the associated decrease in commodity prices. Since then it has decreased reaching 6.9% in 2014. In 2015, the unemployment rate increased to 7.7%, which is nearly a full percentage point higher than Ontario's unemployment rate. The unemployment rate in Northeast Ontario is currently higher than it has been over the last several years in Northeast Ontario, which suggests that there may be some slack in the labour market. How labour market conditions change over the next several years will play an important role in determining to what extent economic impacts resulting from a mining project can be internalized by the local economy.

**Industrial/employment composition**
The industrial and employment composition of a region provides a snapshot of the capabilities of the local labour force. The diagram below shows the industrial composition of the labour force in the Northeast Ontario Economic Region and Ontario as a comparison.

The industrial composition in Northeast Ontario is skewed towards the extraction of natural resources. Nearly 10% of employment in the region is directly associated with the extraction of natural resources (agriculture plus resource extraction). In comparison, less than 2% of employment in all of Ontario is directly associated with natural resources extraction.

<table>
<thead>
<tr>
<th></th>
<th>Constance Lake</th>
<th>Hearst</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population 2011</td>
<td>670</td>
<td>5,090</td>
</tr>
<tr>
<td>Population 2006</td>
<td>702</td>
<td>5,620</td>
</tr>
<tr>
<td>Population growth</td>
<td>-4.6%</td>
<td>-9.4%</td>
</tr>
<tr>
<td>Working age population 2011</td>
<td>435</td>
<td>3,440</td>
</tr>
<tr>
<td>Working age population 2006</td>
<td>445</td>
<td>3,930</td>
</tr>
<tr>
<td>Working age population growth</td>
<td>-2.0%</td>
<td>-12.0%</td>
</tr>
</tbody>
</table>

*Figure 5h: Constance Lake and Hearst Population and Working Age Population, 2006 and 2011*
industries. Of course, the high degree of employment in the natural resources sector also suggests that supporting industries like construction and technical services are also likely skewed towards that sector. In comparison to the rest of Ontario, Northeast Ontario has a relatively smaller proportion of individuals employed in professional, scientific and technical services industries and the financial services industries. Northeast Ontario also has a smaller share of employment in the manufacturing industries. As was shown in the previous section of this report, these industries are important beneficiaries of the establishment of mining operations. Attracting companies and/or scaling up existing companies in these sectors could help Constance Lake and Hearst retain a higher degree of the potential economic impacts of establishing mining operations. Attracting companies and/or scaling up existing companies in these sectors could help Constance Lake and Hearst retain a higher degree of the potential economic impacts of establishing mining operations. A business inventory data file was provided to us that indicated that there are some companies in these industries in Hearst. Most tend to be one or two person shops that service the local forestry sector. However, there are some companies that are large enough to employ several individuals and could potentially play a role in helping service the mining sector.

**Occupation/employment composition**

The occupation/employment composition of a region provides an overview of the types of skills and capabilities available in a region and is related to a region’s industrial composition. The two diagrams below show the occupational composition of Northeast Ontario and for all of Ontario.

The construction and operations of a mine require a significant number of individuals in the trades, transport and equipment operators and related occupations as well technical professionals (i.e., natural and applied sciences and related occupations). As part of this study, we reviewed the occupational requirements associated with the Albany Project (based on the preliminary feasibility study) and they are consistent with these expectations. Northeast Ontario has relatively more available supply of trades, transport, equipment operators and related occupations than the rest of Ontario, but a lower supply of technical and scientific occupations. This appears also to be the case in Hearst given its focus in the forestry sector and judging from the business registry. Northeast Ontario and Hearst particularly aligns well to the mining sector from an occupational perspective. A notable concern would be the potential drain of skilled labour from forestry to mining.

![Unemployment rate in Ontario and Northeast Ontario Economic Region, 2001 to 2015](image)
Key findings

There are several ways local communities can participate in a mining project: equity/royalties, local employment, local procurement, indirect/induced impacts, infrastructure and skills deepening to name a few.

The mining sector has faced considerable challenges over the last several years:
- Commodity prices decreased substantially and investment in terms of capital and exploration expenditure have decreased markedly as well.
- Jurisdictions looking to attract investment in the mining sector need to understand that mining companies are operating in a difficult and challenging environment.

There are some positive signs to note:
- Since the beginning of the year global investment in mining has increased and commodity prices have ticked up.
- It is too soon to know if this is a start of a broader recovery or just a short term fluctuation.

People matter:
- The establishment of mining operations increases the demand for labour in a local community substantially during the construction phase but also during operations.
- Communities looking to benefit from a mining project need to have a supply of labour to meet this demand.
- This is a key mechanism by which local communities can participate in a mining project - a mining readiness strategy needs to focus on people.

From a supply side:
- Constance Lake and Hearst are well positioned to benefit from the establishment of mining operations from an industrial and occupational perspective.
- However, Constance Lake and Hearst are facing a declining population and working age population, which can impact their ability to participate going forward.
- Forestry industry faces possible double whammy of declining population and drain of resources to mining sector.
Mining Readiness and the Project Cycle

Given the uncertainty in terms of timing of when potential projects will be developed, the Mining Readiness Strategy will need to respond to various opportunities within each phase of the Project Cycle. Figure 6 indicates the Project Cycles and general works associated with each phase.

Underpinning all the phases of the project cycle is ongoing consultation and engagement to meet both Constance Lake First Nation requirements and Provincial requirements. Engagement conducted early in the process generally results in more effective participation of communities within a project.

Exploration

In Ontario the exploration phases primarily consist of prospecting activities which tend to be carried out initially by individuals, then carried out further by small companies. These activities are conducted for the most part on Crown Land. Key activities carried out include community consultation, prospecting, staking, surveying, mechanical sampling, permitting, and Environmental Baseline Studies.

Investment in this stage can range from $10,000 to more than $100,000.

Advanced Exploration

Within the Advanced Exploration Phase, a Proponent believes it has discovered a favourable deposit. As such, economic studies are undertaken to determine if the deposit is economically viable. If viable, Environmental Assessment activities can commence. Advanced exploration activities include consultation, environmental studies and/or monitoring, permitting, initiation of the environmental assessment, large scale mechanical activities such as drilling, stripping and bulk sampling and economic studies including preliminary economic assessment, pre-feasibility study and feasibility study. These activities may have high impact on the environment.

Investment in this stage can range from $10 million to more than $100 million.

Development

Once a company confirms that they have an economically viable deposit, usually following a feasibility study and detailed engineering of the project, the environmental assessment is completed and mine permits obtained. This phase ends with a production decision by the Proponent’s Board of Directors and completion of construction of the Project. Other activities include consultation, negotiation of Community Agreements, completion of environmental monitoring / studies and construction of the mine facilities and infrastructure.

Investment required to complete this stage varies depending on the size, scale and processing requirements for a project. Smaller mine projects can be built for $10 million while larger projects will require much more than $100 million to develop.

Production

Mine production starts after construction of the mine components are completed and all necessary permits are in place. Activities include the mining and processing of ore, operation of water, sewage and hydro facilities, smelting and refining, treatment of water effluent, control and monitoring of air emissions and waste management. Along side these activities the Proponent will continue with consultation activities, environmental monitoring and reporting.
Figure 6: Timelines and the Project Cycle
It is within the production phase of the cycle that a company makes a profit, once all pre-production costs are recovered. Revenue is captured within the production phase of the project, with local spending necessary to cover operation and maintenance costs.

**Closure**

Mine closure starts when production activity ceases. Closure can happen gradually or all at once. Activities include decommissioning or removal of infrastructure such as buildings, roads, power lines, etc., closure of opening, land remediation, ensuring physical and environmental safety, monitoring and undertaking necessary geotechnical and hydrogeologic studies as required.

Financial assurances will begin to be returned to the Proponent as the site is rehabilitated in accordance with the Mine Closure Plan. Financial requirements in the closure phase vary, according to the rehabilitation requirements set out in the Closure Plan.

**Post-Closure**

Within post-closure activities are primarily limited to monitoring, with some minimal lab testing depending on if agreements to do so are in place. Generally, land reverts back to the Crown once it has been rehabilitated.

Investment in this stage is limited to monitoring activities.

### 6.1 Timelines – What’s Ahead?

Timelines are extremely difficult to predict – and timelines within each phase also vary depending on the project. It is important to note that with the uncertainty around timelines, mining readiness needs to focus on what a region can do within each project phase.

Exploration can be as short as 2-5 years depending on the resource prices, company, funding for the project, and deposit. It can also take much longer. Within the Advanced Exploration Phase, economic studies undertaken during exploration can take minimum 2-5 years. Environmental baseline work often takes at minimum 2 years and the environmental assessment process itself can take 2-3 years. Both exploration phases can therefore require a minimum of 6 to 13 years.

Once the environmental assessment is complete and the project is receives go-ahead, obtaining necessary permits can take 1-2 years. Negotiating Community Benefit Agreements can take at least 1 year and actual construction can take another 1-2 years. At minimum the Development Phase can take 2-3 years to complete. Notably, between exploration and development, a project needs funding for at least 8 years before it has the opportunity to turn a profit.

The production timeline is identified initially in the Feasibility Study, Environmental Assessment and Closure Plan. The Zenyatta Project for example has an initial production timeline estimate of 22 years.

Within the Closure Phase of the Project, removal and rehabilitation can take at minimum 2 years and follow-up monitoring taking a minimum of 5-10 years.

Photo 6.1: Former Nagagami River Rail Crossing
• 2 to 5 years, but can take much longer
• Exploration activities: 2-4 years
• Economic studies: 2-5 years
• Environmental baseline activities: 2 years
• Environmental assessment: 2-3 years

• Permitting: 1 to 2 years
• Community Benefits Agreements: 1 year
• Construction: 1 to 2 years

• Minimum as set out in business plan
• Company will continue to explore for satellite deposits

• Removal and rehabilitation: 2 years
• Monitoring: 5 to 10 years

• Can be indefinite depending on community interests / needs

Figure 6.1: Timelines and the Project Cycle
6.2 First Nation Consultation and Engagement Requirements

A critical component underlying a Project’s ability to obtain a Social License to Operate is First Nation Consultation and Engagement. Typical First Nation consultation begins with the Province initiating notice of prospective indigenous land claims within project areas and proponents following up with respect interested parties. In an effort to facilitate First Nation engagement, Constance Lake First Nation has established a Mine Service Centre to facilitate early and advanced exploration works on their territory, with a series of agreements to formalize commitments by the mine proponent and Constance Lake in the project cycle. This partnership approach between the indigenous community and the proponent allows for early identification of critical needs of both parties and ability to partner in key areas of mine exploration, development and operation.

Constance Lake has already established exploration agreements with several companies operating in its traditional lands and is building capacity to more effectively administer mining activities as projects proceed to the bankable feasibility stage and beyond. Through this process, Constance Lake is able to support mining companies in reaching their commercial potential through certified agreements including Framework IBA agreements, that lend community support to a project. Project certification by Constance Lake will assure the investment community and regulators that within the area of influence of a project, indigenous leadership will be broadly supportive of a project. Such a process will also allow for more effective participation of indigenous communities within mining projects marking a return to earlier agreements and participation of indigenous communities in projects that pre-date the industrial forestry era.

Photo 6.1: Bringing the drum back to the homelands
<table>
<thead>
<tr>
<th>Pre-exploration</th>
<th>Exploration</th>
<th>Advanced Exploration</th>
<th>Development</th>
<th>Production</th>
<th>Closure</th>
<th>Post-Closure</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Proponent to Engage Constance Lake First Nation</td>
<td>• Utilise Constance Lake First Nation services</td>
<td>• Utilise Constance Lake services</td>
<td>• Utilise Constance Lake services</td>
<td>• Utilise Constance Lake services</td>
<td>• Utilise Constance Lake services</td>
<td>• Utilise Constance Lake Services in Monitoring</td>
</tr>
<tr>
<td>• CLFN to determine location with respect to Traditional Lands</td>
<td>• Share Results of Exploration with Constance Lake First Nation</td>
<td>• Identify project parameters and needs of Aboriginal Community</td>
<td>• Implement Impact Benefit Agreement</td>
<td>• Implement Impact Benefit Agreement</td>
<td>• Conclude Impact Benefit Agreement</td>
<td>• Ongoing training and capacity building</td>
</tr>
<tr>
<td>• Execute Exploration Agreement</td>
<td>• Establish Framework Impact Benefit Agreement</td>
<td>• Negotiate and Finalise Impact Benefit Agreement</td>
<td>• Ongoing training and capacity building</td>
<td>• Ongoing training and capacity building</td>
<td>• Ongoing training and capacity building</td>
<td></td>
</tr>
</tbody>
</table>
6.3 Regulatory Requirements Along the Project Cycle

Regulatory requirements within the Project Cycle begin in the exploration phase beginning with Duty of the Crown consultations whereby Ontario Ministry of Northern Development and Mines (MNDM) will send out notices to Indigenous Communities about claims recorded in known area of interest. At the same time, proponents are strongly encouraged to engage with Indigenous communities to understand community concerns about project activities. No similar requirement necessary for non-indigenous communities.

In addition to consultation requirements, prospecting licenses are required and work permits may be required for camp or access roads as directed by the Ontario Mining Act. As the project progresses through feasibility, it will initiate formal filing of a Closure Plan with MNDM, as well as financial assurances for project activities.

The Development Phase must again fulfill Duty of the Crown Consultations as well as fulfilling necessary permitting and approvals within Ontario as directed by the Ontario Mining Act, *Ontario Environmental Protection Act*, *Ontario Water Resources Act*, *Ontario Occupational Health and Safety Act*, *Ontario Public Lands Act*, *Ontario Lakes and Rivers Improvement Act*, *Ontario Planning Act*, and *Ontario Environmental Assessment Act*. A project must also be compliant with the *Canada Fisheries Act*, *Canadian Environmental Assessment Act* and *Canada Explosives Act*.

In the Production Phase, project must again comply with the Duty of the Crown consultation requirements, acquire operating permits and meet the requirements of any formal company-community agreements.

In the Closure Phase, a project must demonstrate that it has met its obligations under the *Mining Act*, *Ontario Environmental Assessment Act* and the *Canadian Environmental Assessment Act*.

Photo 6.2: Nagagami River

Photo 6.3: Bear cubs enjoying a run along a road on CLFN territory
Figure 6.3: Regulatory Requirements and the Project Cycle

- Duty of the Crown consultations
- Encouraged to engage Indigenous communities
- Prospecting License

- Duty of the Crown consultations
- Formal filing of a Closure Plan
- Financial assurance for activities

- Duty of the Crown consultations
- Various Ontario Acts and legislation

- Duty of the Crown consultations
- Operating Permits acquired during development
- Requirements of any Company-Community Agreements

- Duty of the Crown consultations
- Requirements of various Ontario Acts and legislation

- None as site should have been rehabilitated
- Site probably reverted to the Crown
6.4 Risks to the Project

Proponents, communities and government all face exposure to risk throughout the Project Cycle. As discussed in Section 1, not acquiring a Social License to Operate is one of the largest risk factors facing projects. Typical business risk within the project cycle is identified in Figure 6.3b. When companies don’t properly ascertain social risk arising in different phases of the project cycle, they also fail to completely ascertain the value that is at stake. The business case for obtaining an SLO is becoming more clear to mining projects and mining regions alike. Costs can quickly escalate in situations where community performance is overlooked or efforts mislaid. In addition, obtaining an SLO also builds investor confidence. In an uncertain era in Canadian resource extraction, demonstrating successful partnerships and community building initiatives will more likely see a project through regulatory and investment hurdles.

Social risk is typically borne by communities within an area of influence of a mining project and can occur in different ways such as civic engagement (e.g., increase in community conflict), living standards and economy (e.g., increased social marginalization and inflation), culture (e.g., loss of traditional practices), environment (e.g., decreased access to potable water), health and well-being (e.g., increase in alcohol, drugs, tobacco use) and safety and security (increased crime / social disenfranchisement). Environmental risk and impacts are typically identified within the environmental assessment conducted for the project. Where communities interact with projects, social risk and effects identification and management can be included through the selection of valued components identified in an environmental assessment. However, environmental assessments typically focus on a projects footprint and associated facilities (e.g., access road, powerlines, etc.) and often miss both the opportunity to engage with affected communities to better anticipate and manage social effects in the region within which the Project resides. Without effective engagement on social risk at the outset of a project, obtaining a SLO can become more challenging.

Risk to government can occur through cyclical change within a region along side increased demands for infrastructure and services. Government is expected to prepare a region for mining often without taxation or royalties for at least 10 years until a project is operational. Without funding to conduct planning for resource development regions and their communities will not be prepared in the event a project comes on-line. If communities are late to the table or catching up with projects, opportunities for capturing investment locally or in the region will be missed. Missed opportunities often result in boom-bust economies – where rapid growth often leads to over-extension of local services and over-build of infrastructure in peaks followed by scarcity of users in troughs.

6.4 Actual / Ideal Process

The mining readiness strategy in part should identify and manage the above risk for all the key stakeholders in order to improve development outcomes of mining projects. If the region can become mine ready, communities, governments and proponents can partner to enhance performance of a project and enhance benefits to local communities. For example the two figures below identify a typical mining process from a proponents perspective versus an ideal process.
• Lack of funding for consultation
• Budgets between $10,000 to $100,000
• Ignore relationship building
• Difficulty to raise funds from investors
• Lack of engagement / participation in activities
• Duty of the Crown Consultation go unmet

• Budgets from $10M to more than $100M
• Focus on demonstrating economic viability
• Deposit may be shown to not be worth the effort (quality, quantity)
• Heightened expectations within community / increase community conflict / tension
• Increased borrowing against future gains
• Increase cost in planning and construction of infrastructure / provision of services to meet future demand

• Budgets from $10M to more than $100M
• Companies may not be able to raise money to fund development
• Permitting delays can have a devastating impact
• Social marginalisation / missed employment / training opportunities
• Increase in inflation / cost of living
• Loss of social and cultural capital
• Large capital investment requirements in infrastructure
• Increase in cost of labour and materials

• Project becomes un-economic
• Community concerns with mining operation create tension
• Unmet commitments to communities
• Social marginalisation / missed employment / training opportunities
• Loss of social and cultural capital
• Increase in service levels to meet demand
• Regional competition and duplication of capital investment
• Regional vulnerability to commodity cycles

• Rehabilitation not undertaken properly
• Physical hazards or environmental impacts
• Contraction / deflation in local economy
• Increase in community conflict / tension
• Decrease in taxation / revenue
• Inability to maintain level of service
• Devaluation of built assets

• Proponent released from any further obligations
• Closure and post-closure funding sources for ongoing community-led monitoring are critical

Figure 6.4b: Risks and the Project Cycle
• Company selling exploration project.
• Company does not meet with nearby communities for several reasons
• Usually have no contact person
• Oftentimes act opaquely
• Community liaison offices tend to open once several cycles of drilling, press releases, and media coverage/marketing are undertaken

• Interested in selling project to company with experience developing project.
• Information tends to be taken from aspirational marketing material
• Companies may be uncomfortable entering into formal agreements
• Companies avoid undertaking environmental baseline work, or do it in meaningless way
• Communities unable to provide meaningful input into baseline work
• Government reliance on proponent to meet Duty to Consult obligations

• Company may not have trust-based relationship based upon activities undertaken during exploration, advanced exploration
• Company will begin negotiations once the environmental assessment has commenced
• Communities not aware / or realize too late economic opportunities
• Communities able to provide stable supply of trained labour
• Construction of work camps and reliance on Fly In Fly Out staffing model

• Company will generally have community liaison – their seniority will determine their ability to ensure healthy relationships
• Environmental / social monitoring undertaken by mine staff and reported to government/community with varying degrees of detail
• External leakage of taxation and royalties
• Underinvestment in local infrastructure
• Competing demands for services

• Company will undertake work to requirements
• Out migration of youth and job seekers
• Shift in community needs to match aging population
• Deteriorating condition of infrastructure assets

• Company will not be responsible for activities and will not participate in post-closure activities

Figure 6.5a: Actual Process in the Project Cycle
Constance Lake and Hearst Mining Readiness Strategy

Regional Assessment and Opportunities Report

• Effective engagement with local communities
• Company meets with all nearby communities
• Key contact person
• Should act in an open manner
• Community liaison office should be opened
• Employs / works with community residents and business to meet logistic / servicing needs

• Understands the impact of engaging with communities
• Ensure project has trust-based relationship with community
• Meeting with the community on a regular basis
• Preparation of formal agreements w/ communities
• Undertaking environmental baseline work, especially water quality monitoring, with community involvement
• Preparation of community for economic opportunities
• Preparation of strategy for growth and capital investment in the region

• Company should have a trust-based relationship with communities
• Commenced formal agreement negotiations with Indigenous communities
• Partnership creation between indigenous communities and industry
• Investment in housing solutions that meets both local and industry need
• Procurement meets local content targets
• Hiring meets local content targets
• Guidance to influx that is in line with regional priorities for growth and investment

• Company should have systems, programs and procedures in place to ensure that community-company interactions are productive and value-driven
• Environmental / social monitoring should be seen to be 3rd party and/or independent
• Level of service in line with local revenue generation and income
• Accessible housing available in all settlements including First Nation communities
• Local business selling to other regions / sectors
• Continued attraction of investment

• Company will rehabilitate mine site to near-ideal conditions
• Centre for resource business and labour supply
• Diversification into resource supply chain services selling within and outside the region

• Set up long-term fund that enables funding of post-closure monitoring for agreed-upon timeframe

Figure 6.5b: Ideal Process in the Project Cycle
7 Opportunities

1.1 Establishing Opportunities

A workshop was held with the Regional Stakeholder Committee (RSC) to review key findings and to identify opportunities for development in the mining readiness strategy. Committee members discussed risks / impacts / opportunities, aspirations / compliance and potential responses / existing mechanisms related to the mining project cycle. Five priority areas emerged from these discussions:

1. Community Participation
2. IBA Frameworks
3. Land Access / Tenure
4. Environment
5. Housing / Services
6. Labour / Procurement
7. Funding and Communications

All of these seven opportunity areas will be further articulated through terms of reference that will be developed by SvN and Collins Barrow, with input from the RSC and other stakeholders. These terms of reference will identify potential initiatives, studies and processes that can be undertaken to mitigate risks and / or realize opportunities, time lines / trigger points for these initiatives, studies and processes related to the mining project cycle, and relevant precedents that can guide decision-making around the five priority areas.

Community Participation

Community participation was identified as a key opportunity that serves as an umbrella framework for identifying different ways in which communities can participate in projects. As an umbrella framework, community participation will borrow from other opportunity
areas and identify a road map for how communities can participate in the mining process.

**Community Impact Benefit Agreement Frameworks**

To prepare the Constance Lake – Hearst Region to meet demands related to formal agreements between resource companies and communities. Developing a framework for managing impacts and benefits is a process that will be used by Constance Lake First Nation and, where applicable, Hearst, to identify and track proposed resource development projects in the region and to assess the potential benefits (and to a lesser extent, impacts) of the proposed projects.

An initial step is to determine what exactly is (and is not) being negotiated. While simplistic, this begins with the name of the document; rather than being named (as traditional) an impacts and benefits agreements – the focus should be on the benefits that can accrue to the company and the community. By focusing on the mutual benefits, these agreements enable other, parallel, processes such as environmental assessments and management plans to focus on potential impacts and associated mitigation measures.

**Land Access / Tenure**

RSC members identified clarity on land access and tenure as a priority component of mining readiness. One example of a lack of clarity on land access and tenure provided by participants was the current Ministry of Northern Development and Mines (MNDM) policy on drilling permits whereby notices are distributed broadly to all First Nations and Métis communities with land claims. Constance Lake First Nation identifies the Albany and Martison projects as completely within their traditional territory and therefore that they are the sole impacted community. On the other hand, the application of the MNDM policy increases the perception that there are many First Nation and Métis communities that may be impacted by Martison and Albany and therefore ultimately party to an IBA.

For mining proponents, there is a desire to provide assurance to potential developers about which First Nations they would negotiate an IBA with. It was suggested that a mechanism could be established that would identify the affected area and that the community or communities within the affected area would then be responsible for coordinating directly with other communities who feel they may also be impacted.

The Constance Lake First Nation Land Use Plan was identified as an existing mechanism through which clarity around land access and tenure could be increased. Chief Allen stated that the Land Use Plan, which is currently being developed, will be used to assert jurisdiction over the lands that include the Martison and Albany projects and will be used as a basis to establish Memorandums of Understanding with adjacent First Nation communities. Moreover, Constance Lake is building capacity to properly administer mining and resource activities within its traditional lands leading to faster permitting and response times from both Constance Lake and the Province. These efforts will support Constance Lake in realizing self-governance and to improve development outcomes for Constance Lake through resource development.

**Environment**

RSC members identified clarity around caribou habitat and the application of the Endangered Species Act as priority components of mining readiness. They felt that a lack of clarity presented risks at the exploration phase in terms of the time it takes to receive approval for drilling permits. This risk is amplified during the development stage where the construction of new roads and other infrastructure is required and the Act calls for up to 40km buffers around sensitive habitat. It was felt that these risks can be so great as to prevent projects from moving forward.

It was suggested that the mining readiness strategy could identify a table composed of industry, First Nations and the Province to discuss these matters, as well as a potential monitoring framework that could feed information into these discussions, including identification of caribou range within Constance Lake traditional lands and both project’s area of influence.

**Housing / Services**

It was felt that there is an opportunity to provide mine labour force housing within Hearst and in Constance Lake given the projected longer term lifespan of the mining projects and the certainty of the assets as industrial minerals. The Town of Hearst noted that an increase in housing within its boundaries would be beneficial from a property tax revenue perspective and also in terms of increasing the overall supply of housing (there is currently a supply shortage for certain segments of the market and the Town is having difficulty finding developers because of construction costs and the ability to derive rent).

Constance Lake indicated that transitional housing (i.e. work camp to residential housing) would be welcome in Constance Lake. Given its proximity to the Albany Project, it would
provide immediate access to the project. Infrastructure necessary to service the work camp could transition into longer term use for the community.

Potential responses suggested included planning initiatives / studies that could explore land use, housing and infrastructure capacity. Participants also felt that the mining readiness strategy should identify trigger points at which Constance First Lake and Hearst should make investment decisions, e.g. the trigger point for new housing would be when a mining project begins construction.

**Labour / Procurement**

RSC members felt that there may be a labour supply shortage as a result of the impending retirement boom as well as anticipated investments and production increases at the mills. They felt that this potential shortage was not only a risk to mining readiness, but also that the development and operation of a mining project could draw labour from other local industries (e.g. construction and forestry), leading to sector-specific labour shortages.

RSC members also felt that there were opportunities for First Nation employment and capacity building throughout the mining cycle. To date, both mining projects have been working with Constance Lake First Nation during the exploration phase, both in terms of direct hiring as well as contract tendering. It was felt that these opportunities would expand during the construction and operations phase.

Potential responses suggested included a strategy to address supply chain opportunities and a gap analysis to better understand the nexus between labour requirements and labour supply. It was noted that the typical process for a mine proponent is to hire an engineering firm to run the project once it has moved beyond the bankable feasibility phase and that the strategy should be cautious to not overly constrain supply chain decisions. In addition, the analysis should consider potential partnerships between First Nation and local business towards future supply of mining and related services.

**Funding and Communications**

RSC members noted that there the Federal and Provincial governments provide funding to assist with nearly all of the five pillars and that the mining readiness strategy could identify these funding sources / programs. It was also noted that private investment could also become available recognizing the latent need currently for housing in the communities and potential future strain on available housing stock that project’s may demand.
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