# 7-B: Socio-Economic Assessment Update



## Appendix 7-B - Socio-Economic Assessment Update

Whale Tail Pit - Expansion Project

Submitted to:

**Nunavut Impact Review Board** 

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Appendix 7-B - Socio-Economic Assessment Update

1896037

December 2018



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2018 Socio-Economic Baseline Update Summary

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### 7-B-1 SOCIO-ECOMONIC ASSESSMENT

### 7-B-1.1 Introduction

The purpose of this section is to address updates to the Whale Tail Pit Project (Approved Project), in relation to the impacts of the expansion of Whale Tail Pit, development of the IVR Pit, and underground operations (Expansion Project or Project) for socio-economics.

### 7-B-1.1.1 Valued Components

The VCs for the Expansion Project are consistent with those for the Approved Project, and include:

- Economic development
- Employment and training
- Individual and community wellbeing
- Population
- Housing, Services and Infrastructure

### 7-B-1.1.2 Infrastructure and Services Spatial and Temporal Boundaries

### 7-B-1.1.2.1 Spatial Boundaries

The spatial boundaries for the socio-economic effects assessment are delineated as either local or regional and are consistent with the Approved Project. The local study area consists of the Kivalliq region, and the regional study area is the territory of Nunavut. While potentially impacted in terms of environmental effects, the Hamlet of Chesterfield Inlet is not expected to experience pronounced socio-economic impacts beyond those expected for other Kivalliq communities. Most socio-economic effects are driven by wage employment, incomes, and population change associated with in-migration. Chesterfield Inlet does not supply a large labour force to Agnico Eagle's Nunavut operations. Further, it is unlikely that speculative migrants would choose to relocate to the community over Rankin Inlet or Baker Lake, given its remote location and relative lack of amenities and housing.

### 7-B-1.1.2.2 Temporal Boundaries

The socio-economic assessment determines the effect of the Expansion Project on baseline conditions, and identifies the role of the Expansion Project in relation to Agnico Eagle's other Kivalliq projects (the Approved Project, the Meadowbank Mine, and the Meliadine Mine). In this regard, the assessment takes a cumulative approach that considers the timing of other developments in the analysis of the Expansion Project's socio-economic impacts within Kivalliq.

The assessment begins in 2020 when the Expansion Project is initiated and the Meliadine Mine enter operations. The Expansion Project will continue to operate at full capacity until operations ramp-down in 2026. During this period, a small amount of ongoing capital construction activities will occur in tandem with mine operations. These activities will, however, not generate economic impacts of note relative to the operation of the Expansion Project. Thus, the assessment is focused on the Expansion Project's operational impacts. While Agnico Eagle will, if feasible and in the future, explore the possibility of extending full operations into 2026, this assessment has been conducted assuming ramping-down of mining activities and closure in 2026. During this time, the Meliadine Mine will continue to operate for a further six years until 2032.



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For the purpose of the socio-economic assessment, the closure period is considered the period in which socio-economic elements (e.g., employment, operational expenditures, capital construction activities) of the Expansion Project cease. In this regard, the socio-economic assessment does not consider longer-term closure activities such as pit re-flooding, which generate little or no socio-economic impacts. Agnico Eagle is currently developing a conceptual Socio-Economic Closure Plan per Condition 51 of the Project Certificate No. 008. The Socio-Economic Closure Plan will include a conceptual assessment of socio-economic effects of the closure of all of Agnico Eagle's approved Nunavut mining operations, and will identify strategies for mitigating adverse effects. The Socio-Economic Closure Plan will also seek to identify opportunities for sustained benefits in communities affected by the Meadowbank, Meliadine, and Whale Tail developments. The schedule for the respective developments is presented in Table 7.1-1.

Table 7.1-1: Labour Force Transition Assumptions in the Socio-Economic Effects Assessment

Project	2018	2019	2020	2021	2022	2023	2024	2025	2026
Meadowbank		*	Meadowbank mill and camp will continue to operate						
Meliadine									
Approved Project		*							
Expansion Project			*						
Construction Operations Ramp-Up Operations Operations Ramp-							np-Down		

<sup>\*</sup>labour force will be transferring to mine operations during this year.

Note: This table presents the assumptions used in the socio-economic assessment as related to the transition of Agnico Eagle's operational labour between the Company's Kivalliq operations. It is not reflective of the timing of capital or operational expenditures, or other economic elements of the Expansion Project.

### 7-B-1.2 Assessment Update

A summary of the key changes to the assessment of the socio-economic component for the Expansion Project compared to the FEIS developed for the Approved Project is provided in Table 7.1-2.

Table 7.1-2: Socio-Economics: Approved Project vs Expansion Project Comparison

Section of FEIS	Approved Project	Section of Addendum	Expansion Project
7.4.1 Incorporation of IQ	Review of:  Whale Tail TK Workshop (Agnico Eagle 2016 a-e);  Environmental Impact Statement Guidelines for the Meadowbank Project (NIRB 2004);  Traditional Knowledge Baseline for the Proposed Amaruq All-weather Exploration Road (Agnico Eagle 2014b); and  Community Consultations/Public Information Meeting Reports for 2014 and 2015 (NIRB 2014, 2015a).	7-B-1.2.1	In addition to these sources of information, community consultation conducted in July 2018 has also been reviewed, and the results incorporated.
7.4.2 Existing Environment	Presentation of existing conditions in communities based on information drawn from the 2015 Socio-Economics Baseline Report	7-B-1.3	Information has been updated with:  the 2016 Statistics Canada census results;  information from the Nunavut Bureau of Statistics; and  additional socio-economic monitoring research conducted for Agnico Eagle and the Kivalliq Inuit



Section of FEIS	Approved Project	Section of Addendum	Expansion Project
			Association through the IIBA regarding workforce barriers and the Kivalliq labour market.
7.4.3 Effects Assessment	Ten primary pathways were identified	7-B-1.4	Three additional primary pathways have been identified:  • potential for in-migration and population change in Baker Lake and Rankin Inlet;  • demand for housing; and  • demand for services and infrastructure.  Additional rational regarding the approach to determining significance has been added to reflect comments received on the Approved Project.
7.4.4 Residual Impact Classification	Residual impacts are classified as being significant. Positive residual effects are of moderate to high magnitude. Negative residual effects are of moderate magnitude.	7-B-1.5	Existing residual impact classifications remain unchanged. Additional adverse residual impacts associated with the additional pathways are of low to high magnitude and vary in significance. The exception is population mobility and change, which is neutral.
7.4.5 Cumulative Effects Assessment	The socio-economic assessment is inherently cumulative, as it factors in the existing Meadowbank Mine operation and future Meliadine Mine operation.	7-B-1.6	The approach to cumulative effects assessment remains unchanged. The discussion is updated to reflect the overlapping operation schedule of the Expansion Project and the Meliadine Mine.
7.4.6 Uncertainty	Factors contributing to uncertainty are listed.	7-B-1.7	Factors contributing to uncertainty remain the same, with the addition of a discussion of the uncertainty around population-related impacts.
7.4.7 Monitoring and Follow-up	Socio-Economics Management Plan	7-B-1.8	Updated Socio-Economic Management Plan will be implemented for the Expansion Project (Volume 8, Appendix 8-E.11).

### 7-B-1.2.1 Incorporation of Inuit Qaujimajatuqangit

Additional Project-related issues and concerns related to socio-economics were expressed by community members since the FEIS submission was made in 2016 for the Approved Project. Concerns and issues were identified through a review of community consultation notes (Agnico Eagle 2016h, 2016i, 2016j, 2016k, 2017b, 2017d; NIRB and NWB 2017; NIRB 2017), and consultation notes for the Expansion Project (Agnico Eagle 2018a). Project-related comments and concerns expressed by community members related to Socio-economics have been summarized below:

### **Employment/Workforce**

- Comments that the Baker Lake community has benefited from the mine because of employment opportunities and the community would like to ensure a smooth transition from the mining at Meadowbank Mine to Whale Tail Pit so they can continue to benefit (NIRB and NWB 2017; NIRB 2017).
- Comments that the business sector has benefited from Meadowbank mine because of business contracts, which they'd like to see continue (NIRB 2017).
- Comments that youth now have hope for a better future because of mining in Baker Lake, and the community would like to see these opportunities continue for youth (NIRB and NWB 2017; NIRB 2017).



- Comments that people have benefited from training, and have successfully attained their certification and are able to work, and they would like to see training opportunities continue, especially for youth (NIRB 2017).
- Question whether the work force would stay the same for Whale Tail Pit or if more people would need to be hired, and what the hiring process would be (Agnico Eagle 2016d).
- Interest job opportunities during construction and operations, including monitoring programs, and an interest in the work readiness program and apprentice program (Agnico Eagle 2016h, 2016i, 2016j, 2016k; NIRB and NWB 2017; NIRB 2017).
  - Interest was expressed in job opportunities for youth, including whether the student hiring program at the mine would still be available (NIRB and NWB 2017; NIRB 2017; Agnico Eagle 2018a).
- Questions about the hiring process in general and potential barriers to employment, including the lack of education and skills of some applicants, and opportunities being offered to non-locals (people from Quebec) rather than locals (NIRB and NWB 2017, Agnico Eagle 2018a).
- Concern about barriers to employment because of transportation issues (no taxis to get to airport), and intergenerational trauma, and lack of opportunities for advancement (NIRB 2017; NIRB and NWB 2017; Agnico Eagle 2018a).

### Culture/Language

Comment that the Inuit Impact Benefit Agreement (IIBA) and hiring plans should more fully reflect Inuit ways
of learning (i.e., learning experientially), rather than traditional approaches to education (NIRB and NWB 2017).

### Well-being

- Concern that workers are unable to speak out about bullying and language issues at work in part because of unequal gender representation, and concerns about fair treatment by supervisors (NIRB 2017; Agnico Eagle 2018a).
- Comment that workplace counselling, and mental health and family supports are a priority for the communities most affected by social issues arising from expanded mining (NIRB and NWB 2017; NIRB 2017).
- Interest was expressed in having Elders visit the site occasionally to provide emotional support for workers (Agnico Eagle 2018a).

### Benefits/IIBA

- Concerns about benefits from the mine not accruing to the community of Baker Lake (e.g., infrastructure and royalties) (NIRB and NWB 2017; NIRB 2017).
- Concerns about whether economic benefits under the IIBA will be fairly distributed throughout the region in communities such as Chesterfield Inlet (NIRB 2017).



### Safety

- Concerns about road safety, particularly vehicles travelling too fast, and ATVs using the All-weather Access Road (AWAR) (Agnico Eagle 2017d; NIRB and NWB 2017).
- Concerns about safety because of people hunting near the AWAR and not adhering to the no-hunting zone policy, and the need for increased policing (NIRB 2017).

#### Closure

Question about what happens to the workforce at closure (NIRB and NWB 2017; NIRB 2017).

The concerns as they pertain to the Expansion Project have been incorporated into Section 7-B-1-3 and Section 7-B-1-4 of the FEIS Addendum. For additional information refer to the Approved Project FEIS Volume 7, Section 7.4.1 (Agnico Eagle 2016g).

### 7-B-1.3 Existing Environment and Baseline

The results of the socio-economic baseline report (Approved Project FEIS Volume 7, Appendix 7-B; Agnico Eagle 2016g) have been summarized in Attachment 7-B-1 supplemented with additional information from community consultations conducted by Agnico Eagle in 2016 and 2018 and additional up-to-date baseline information.

### 7-B-1.4 Effects Assessment

The methods used for the Approved Project assessment have been applied to the Expansion Project. Where possible effects have been quantified and described as direct, indirect or induced. Where not quantifiable, a qualitative description and reasoned narrative is provided. The assessment determines significance for each VSEC by considering the residual effects criteria assigned to effect pathways and is primarily determined qualitatively. The assessment draws upon observations of economic and social conditions and trends in Kivalliq during the development and operation of the Meadowbank Mine, and incorporates lessons learned from the mine, and from the Meliadine Mine FEIS. Conclusions are supported by a reasoned narrative. Feedback provided by the Government of Nunavut, Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC), and other parties that provided comments on the FEIS has also been considered and included where appropriate. Reporting of the Project's impact on economic indicators has been revised to show impacts accruing specifically to the territory (e.g., taxes), as requested in the Approved Project FEIS regulatory review.

### 7-B-1.4.1 Pathway Analysis Results

A pathway analysis was conducted to identify linkages between the Expansion Project and key features of the socio-economic environment. The full analysis, including a discussion of pathways with no linkage to the Expansion Project, is presented in Volume 3, Appendix 3-C, Table 3-C-10. Primary pathways are consistent with those presented in the Approved Project FEIS, with the addition of three pathways addressing population change, housing, and infrastructure and services (Table 7.1-3).



Table 7.1-3: Primary Pathways and Indicators

Project	vc	Pathway	Associated Indicators
	ctivity less nent	Continued territorial economic activity	<ul> <li>Project expenditures</li> <li>Procurement in the territory</li> <li>Contribution to Gross Domestic Product</li> </ul>
	Economic Activity and Business Development	Continued contributions to government revenue	Royalty payment Taxes
	ECO ag	Continued local economic activity	Local procurement     Contracting of Inuit-owned businesses
oject	and	Continued direct, indirect and induced employment	<ul> <li>Direct, indirect, and induced employment</li> <li>Employment by point of origin</li> <li>Employment by skill level</li> </ul>
sion Pro	Employment and Education	Continued direct, indirect and induced incomes	<ul><li>Employment incomes</li><li>Total territorial labour income</li></ul>
Approved Project and Expansion Project	Emplo	Provision of workforce training and support for community education	<ul> <li>On the job training</li> <li>Apprenticeships</li> <li>Provision of scholarships</li> <li>Support for education initiatives and programming</li> </ul>
oved Proje	eing	Continued community investment	<ul> <li>Access to education, consumer goods, and savings</li> <li>Community development</li> <li>Inuit Impact Benefit Agreements</li> </ul>
Appr	unity Wellk	Improved worker and public health and safety	<ul> <li>Worker health and safety training</li> <li>Provision of healthcare services on-site</li> <li>Community health and safety programming</li> </ul>
	d Comm	Potential for Project-related accidents and emergencies	<ul> <li>Risk of accidental injury and emergencies impact public health and safety</li> </ul>
	Individual and Community Wellbeing	Changes in family and community cohesion	<ul> <li>Substance abuse and addiction</li> <li>Family and intergenerational conflict</li> <li>Domestic violence and other crime</li> <li>Inequality between families, communities</li> <li>Changes in cultural practices and values</li> <li>Participation in community activities</li> </ul>
Only	ıcture	Population growth and demographic change	<ul> <li>Total population in destination communities</li> <li>Demographic composition</li> <li>Household size</li> </ul>
Project	nsion Project ( ation, Infrastru and Services	Change in demand for and availability of housing	<ul><li>Housing stock</li><li>Crowding</li></ul>
Expansion Project Only	Population, Infrastructure and Services	Change in demand for and capacity of services and infrastructure	<ul> <li>Healthcare and social services</li> <li>Educational services</li> <li>Emergency and protective services</li> <li>Transportation infrastructure</li> <li>Community infrastructure and utilities</li> </ul>

VC = valued component.



Given the expectation that they are not anticipated to be materially changed by the Expansion Project, the following topics have no associated primary pathway, and are not carried forward for further assessment:

- Quality of life associated with nuisance effects (dust, odour, noise)- Given that the Expansion Project will use existing infrastructure at Meadowbank Mine, on-site construction activities are not expected to generate additional nuisance effects on quality of life, and so no primary pathway related to nuisance effects on individual and community wellbeing is anticipated.
- Governance and leadership- The Expansion Project will contribute to government revenue, and will not have an adverse effect on government operations as Agnico Eagle will continue to operate in manner compliant with all relevant governing bodies.
- Non-traditional land use- The Expansion Project does not interact with commercial fishing operations, camping Inuujaarvik Territorial Park, canoeing on the Thelon River, or guiding or outfitting camps. In addition, the establishment of tourism facilities, conservation areas and parks within Special Management Area 167 is prohibited (NPC 2014).

### 7-B-1.4.2 Economic Activity and Business Development

### The Expansion Project will continue to contribute to territorial economic activity

The Expansion Project serves to continue territorial economic growth and expansion of Nunavut's GDP beyond the scheduled closure of the Meadowbank Mine and the Approved Project. While ongoing capital construction activities will continue in 2020 and beyond, their economic impact is extremely low relative to Expansion Project operations. The assessment of the Project's effects on GDP is, therefore, focused on the operations phase.

During operations, the Expansion Project will represent a contribution to the territorial economy, with total annual GDP contributions of \$100 million to \$120 million annually (Figure 7.1-1) (i.e., 5% to 6% of the current territorial GDP). The Expansion Project's full operational GDP contribution would begin in 2020, coinciding with the end of production at Meadowbank Mine, slowing of operational activities associated with the Approved Project, and initiation of operations at the Meliadine Mine. In 2025, production begins to ramp-down, and total territorial GDP contributions decline to around \$50 million. Ultimately, the Expansion Project represents the continuation of contributions to territorial GDP beyond 2021 (i.e., the end of production at the Approved Project), to 2025. The bulk of these contributions are associated with direct Expansion Project activities, and the indirect economic activity of their territorial suppliers of goods and services. Induced contributions to territorial GDP make up a smaller relative impact, as the bulk of consumer spending is expected to occur in the south. The Expansion Project's total annual contributions to total national GDP are heavily influenced by this induced activity, and range from \$200 million to \$440 million annually.

During operations, the Expansion Project's average annual GDP contributions are concentrated (i.e., 74%) in the mining and oil and gas extraction industry. Ongoing capital construction activities during operations will result in a further 8% of operational GDP contributions accruing to the construction industry, 7% to the transportation and warehousing industry, approximately 5% to the finance, insurance, real estate, rental and leasing industries each, and the remaining 6% spread across other industries (Attachment 7-B-2, Table 7.B-2-1).



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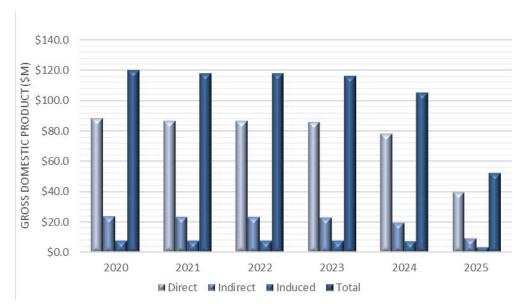


Figure 7.1-1: Project Contributions to Gross Domestic Product in Nunavut, 2020 to 2025

### ■ The Expansion Project will continue government revenues

The Expansion Project is expected to operate with fairly low to modest margins that consequently would result in little to no Project-specific corporate taxes paid to the territory or nation. The Expansion Project will, however, result in taxes on personal incomes of the employed, unincorporated businesses, and sales and excise (Attachment 7-B-2, Table 7.B-2-2). The Project's operational government revenue impact from taxes is projected to be approximately \$307 million, of which 14% (\$41.5 million) would accrue to Nunavut (i.e. 2% of the territorial budget and a fifth of the territory's total non-transfer payment revenue). Further revenues will be paid to the KivlA (royalties) and the NTI pursuant to the agreements negotiated with each body in relation to the Expansion Project.

Government tax revenues and royalties generated by Agnico Eagle's Nunavut operations are expected to continue between 2019 and 2026.

### ■ The Expansion Project will sustain local business development and contracting

Figure 7.1-2 shows the predicted Expansion Project procurement relative to procurement at the Meadowbank Mine.

Current procurement ratios within the Kivalliq, with 67% to Rankin Inlet, 32% to Baker Lake and approximately 1% to other communities are expected to extend into operation of the Expansion Project. It is expected that the Expansion Project will continue to source goods and services from Nunavut- and Baker Lake-registered companies, and that existing contracts with local businesses will be extended based on Project need.



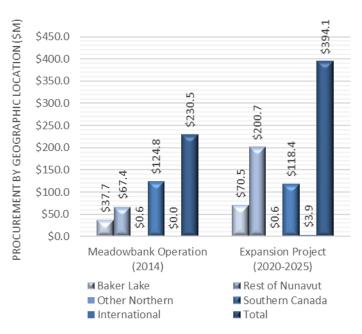


Figure 7.1-2: Project Procurement by Geographic Location and Phase

In 2017 with the signing of the IIBAs for Meadowbank and Whale Tail, as well as the revision of the Meliadine IIBA, all three sites are following a prequalification procurement process and NTI registered companies are eligible for preference points. In 2017, Agnico Eagle participated in a workshop at the 2017 Kivallig Trade Show in Rankin Inlet on prequalification, tendering, and one-on-one contract management support. Agnico Eagle also supports a program for businesses in Rankin Inlet regarding interpreting financial statements and managing and growing business incomes. Agnico Eagle is currently investigating providing on-line and in-person lessons and trainings to interested businesses, and regular contracting-related information and resources through a quarterly e-newsletter for businesses. The Expansion Project will continue to offer these programs, and will continue to prioritize Inuitowned businesses.

#### 7-B-1.4.3 **Employment, Incomes and Education**

### The Expansion Project will create direct, indirect and induced employment opportunities

Excluding the final year of operations when Project employment ramps down, direct average operational employment is expected to be 1,166 positions<sup>1</sup> (Attachment 7-B-2, Table 7.B-2-3). Of these, nearly half (491 or 42%) are expected to be filled by Nunavummiut, the majority of which are employed at the Meadowbank Mine and will move over to the Expansion Project. This is a 25% increase (99 additional Nunavummiut employment opportunities) relative to the Approved Project operations workforce requirements. The Expansion Project therefore represents both an extension of employment opportunities for those currently working, and a source of new employment for Nunavummiut. Agnico Eagle will continue to prioritize residents of the Kivalliq Region for these positions, and to offer pick-up points in communities in an effort to prevent migration from other parts of the territory,

<sup>1</sup> Average annual employment is reported for the purpose of the FEIS Addendum to avoid overstating or understating the employment benefit of the Project. Total operational employment fluctuates to a small degree with varying activities on-site. As a result, there may be temporary peak periods of activity wherein total employment is greater than 1,166. These peaks are anticipated to be limited in frequency and duration, and not require substantially more workers than the average annual.



or from within the Region to Baker Lake. Further benefit enhancement measures outlined in the SMP (Volume 8, Appendix 8-E.11), and recommendations from the IWBS study (MiHR 2018) aimed at recruiting locally and removing barriers are expected to improve the local labour force's ability to access direct Project operational employment.

Project operations is expected to generate an average of 2,084 indirect and induced employment positions (Attachment 7-B-2, Table 7.B-2-3). Most (68% or 247 positions) indirect employment will occur in southern Canada, where industries servicing the Expansion Project's demand for specialized goods and services are concentrated. Indirect employment occurring in Nunavut is expected to be filled by the existing contractor's workforce or businesses supplying Meadowbank Mine, representing an extension of employment, rather than new opportunities. Induced employment impacts are those generated by direct and indirect workers spending their incomes. As a result, nearly all (97%) induced employment impacts would be expected to accrue to Southern Canada where the bulk of consumer spending occurs. Goods purchased locally in the North would not induce northern manufacturing positions, for instance, as the goods sold are typically manufactured in the south.

The majority (55%) of the Expansion Project's direct operational employment will be entry level or semi-skilled in nature (Figure 7.1-3). Skilled, professional and management positions will make up smaller portions of the direct operational workforce (28%, 10%, and 8%, respectively). For those Nunavummiut currently working at Meadowbank Mine, it is expected that they would transition into Project positions of similar skill requirements. The estimated additional 99 Nunavummiut directly employed by Expansion Project operations will likely be in positions concentrated in the entry-level and semi-skilled categories.

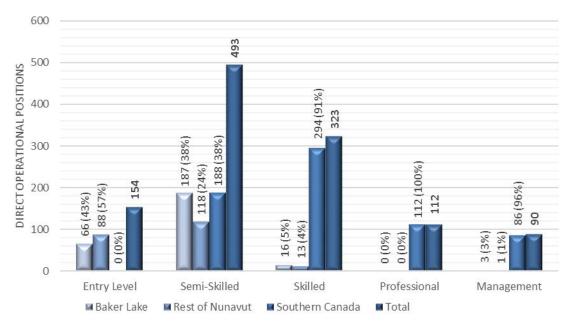


Figure 7.1-3: Predicted Project Direct Operational Employment by Skill Level and Point of Origin

Agnico Eagle's commitment to sourcing employment locally involves the provision of employment opportunities that match the skill level of the local labour force as follows:

Approximately 43% (66) of entry level positions are expected to be filled by residents of Baker Lake.



- Approximately 57% (88) of entry level position are expected to be drawn from other parts of Nunavut.
- Nunavummiut are expected to fill nearly two thirds (62%, or 305 positions) of all semi-skilled position, with 61% (187) of Nunavummiut employees coming from Baker Lake.

The above analysis is a description of the Project's incremental employment impacts. As the Expansion Project overlaps temporally with the Meliadine Mine, beginning full operations in the same year, it is expected that both projects will draw on the Kivalliq labour force to meet their workforce demand at the same time. Assessing the magnitude and significance of the Expansion Project's employment impacts on the Kivalliq labour market cannot be done in incremental terms without considering that it operates in tandem with an approved project in the same region. Thus, the ultimate employment impact of the Expansion Project is assessed in consideration of its interaction with the Meliadine Mine.

With the Meadowbank Mine's workforce transitioning to the Approved Project and, later, to the Expansion Project, the Meliadine Mine will require a new operational workforce. The Approved Project is projected to generate 100 additional employment opportunities for Nunavummiut over those already employed at the Meadowbank Mine. The Expansion Project is projected to generate a further 99 opportunities for Nunavummiut for a combined total of 199 Nunavummiut opportunities extra to the Meadowbank Mine. The Kivalliq Labour Market Analysis (KLMA) (MiHR 2018b) suggests that, in a scenario where 5% of the non-Agnico Eagle labour force in Kivalliq is tapped for employment, it is possible that 255 Inuit candidates could take up employment generated by the combined Kivalliq mining operations. It is important to note that this figure of 255 includes both labour with experience and training relevant to the Expansion Project. For the 255 to be realized, on-the-job training and pre-employment training of those without relevant mining experience would be required. The Approved Project and Expansion Project could, theoretically, draw from the pool of 255 to maintain an employment ratio of Nunavummiut to southern workers of 42:58. The analysis of the Project's employment impact above is based on this assumption.

By drawing from the potential Inuit employment candidates noted in the KLMA, the Expansion Project directly impact's the ability of the Meliadine Mine to source Kivalliq Inuit employees. The KLMA predicts that the Meliadine Mine will require an average of 550 operations workers. Assuming the Expansion Project successfully draws 199 workers from the 255 potential Inuit employment candidates noted in the KLMA, this leaves 56 potential Inuit candidates that could be employed by the Meliadine Mine. Some of the remaining demand for employment (494 workers) could be met by non-Inuit Nunavummiut, particularly given the proximity of the Meliadine Mine to Rankin Inlet. The Hamlet has a larger non-Inuit labour force from which Agnico Eagle could draw, relative to other hamlets in the region. However, the majority of the non-Inuit Nunavummiut labour force in Rankin Inlet is already employed, and thus may not be likely to leave their current employer for Agnico Eagle. It is, therefore, unlikely that the Meliadine Mine would be able to reach a Nunavummiut:southern employment ratio of 42:58. Agnico Eagle will continue to work with communities to identify local labour and strategies to remove barriers to employment.

Given the above, while the Expansion Project creates employment opportunities (99) for Nunavummiut additional to those created by the Approved Project, ultimately it will compete with the Meliadine Mine for labour. With a limited labour pool to draw from in Kivalliq, it is expected that the Expansion Project and the Meliadine Mine will exhaust the regional labour force, necessitating a larger number of workers from outside the region. It is anticipated that the relatively small incremental demand for out-of-area workers extra to that already predicted for each project<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> Refer to Figure 7.1-3 for a breakdown of the Expansion Project's projected workforce by location, and the Meliadine Mine FEIS (Agnico Eagle 2016) for a breakdown of the mine's projected workforce by location.



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would be met, in part, by the southern labour force experienced in mining on a fly-in, fly-out rotation. This workforce would be housed in camp accommodations. In this scenario, the combined demand of the Expansion Project and the Meliadine Mine for Nunavummiut labour is not likely to result in the need for substantial numbers of workers from other regions of Nunavut. In the event that a small number of workers are drawn from other parts of Nunavut, they will be provided means with which to travel to site, and will be housed in camp accommodations.

### ■ The Expansion Project will generate direct, indirect and induced incomes

Incomes are predicted to be consistent with the Approved Project Annual incomes paid by the Expansion Project will be high relative to local and territorial incomes, ranging from \$50,000 to \$100,000 annually. During operations, the Expansion Project is projected to generate \$421.1 million (cumulatively) in direct labour income in Nunavut, and \$509.3 million in total territorial labour income (Attachment 7-B-2, Table 7.B-2-4).

### ■ The Expansion Project will provide workforce training and support community education

The Expansion Project will continue the workforce training programs in place at Meadowbank Mine and the Approved Project. Training hours for Inuit employees have ranged from around 40 between 70. This is expected to continue with training for the Expansion Project's additional workforce demand, and that associated with regular turn-over. Workforce training at Meadowbank Mine that will be carried over for the Expansion Project is described in detail in the SMP (Volume 8, Appendix 8-E.11, Section 5.3) and the 2017 Socio-Economic Monitoring Report (Stratos 2018).

Continuing programs is expected to provide benefits consistent with the Approved Project. In continuing these programs, the Expansion Project continues to build capacity in its workforce. As Nunavummiut employees achieve further training and education, it is expected that they will be better poised to advance to more skilled positions as they arise, thereby increasing representation of Nunavut residents in the skilled, professional and management employment categories. Further, training and education attained in association with the Expansion Project is, in many cases, transferrable, and does not disappear with the closure of the Expansion Project. Instead, the skills developed through Project employment and associated training will carry forward into the future, improving people's access to other employment opportunities that may arise when the Expansion Project is finished its operational life.

As with workforce training, the Expansion Project will continue to support educational attainment in communities through the initiatives outlined in the SMP (Volume 8, Appendix 8-E.11, Section 5.3) and the Meadowbank Gold Project Annual Report (Agnico Eagle 2015d, Section 11.11.5).

In contributing to skills development and educational attainment in communities, the Expansion Project will enhance the ability of the local labour force to respond not only to Project-related employment, but also future employment in other industries. Many skills associated with mining employment are transferrable, as are those learned through programs like the Work Readiness Program or Math and Science Camps. The provision of scholarships to community members creates opportunities to obtain the education required to access skilled and professional employment. Overall, the Expansion Project is expected to have a positive effect on educational attainment, both at the level of the employee, and the community.

### 7-B-1.4.4 Individual and Community Wellness

### The Expansion Project will continue positive effects in communities

The Expansion Project continues the benefits to communities predicted in the Approved Project FEIS, including:



- Incomes with which families can buy nutritious food, access services, and resources to participate in traditional activities
- Benefits, including health benefits
- Work readiness training
- Employee and Family Assistance Program (EFAP)
- Community programming
- Community donations
- Community engagement initiatives.
- IIBA and NTI contributions

### ■ The Expansion Project may improve worker and public health and safety

The Expansion Project is expected to have an overall positive effect on worker and public health and safety through the provision of training, on-site health services, and public education programs on safe and healthy lifestyles. The SMP (Volume 8, Appendix 8-E.11, Sections 5.4, 5.5, and 5.6) details specific benefit enhancement measures through which the Expansion Project's health and safety-related benefits will be realized.

By creating modest additional employment opportunities and extending the duration of employment beyond the period assessed in the Approved Project, Project-related training, education and on-site services will reach a larger number of workers, for a longer period of time, further enhancing this beneficial effect on community health and safety.

### ■ The Expansion Project has the potential to result in accidents and emergencies

The effects of accidents and emergencies are expected to be consistent to those identified in the Approved Project. While the Expansion Project's planned activities are expected to yield an overall positive effect on worker and public health and safety, there remains potential risks associated with accidents and emergencies. Agnico Eagle will operate the Expansion Project to the highest standard of health, safety and risk management. Planning traffic and shipment schedules to avoid public traffic and communication with hamlets, in addition to driver safety training, will help to minimize the risk of traffic accidents. Project risk management and emergency response planning preemptively establishes procedures to minimize risk of injury to workers, communities, and the environment associated with Project-related accidents. Project facilities with the potential to pose public health risks will be secured to prevent access and potential resultant injury. Despite best efforts on the part of Agnico Eagle to mitigate risks to public health and safety as related to accidents of emergencies, by their very nature, accidents may still occur, creating potentially significant impacts at the individual level.



### Project incomes may affect family and community health and cohesion

Despite the many positives associated with employment and regular income, adverse effects can occur because of the challenges of rotational work, poor spending choices, rising inequalities between 'haves' and have nots' and changes in traditional values that may bring about conflict between generations. These effects are not directly within the control of Agnico Eagle to mitigate. However, Agnico Eagle has taken an interest in providing support to individuals, families and communities in managing the potential for adverse effects such as those mentioned above. The Expansion Project is not expected to change the impacts on community health and cohesion stemming from additional incomes predicted in the Approved Project FEIS, including:

- Substance abuse
- Sexual misconduct
- Family violence
- Crime
- Income disparity
- Social disparity

Recent perception-based research has drawn a connection between employment at the Meadowbank Mine and adverse effects on families (Pauktuutit Inuit Women of Canada and the University of British Columbia 2016). The study surveyed women aged 19 and older in Baker Lake, including a number of participants who had either worked at the mine (26.7% of respondents), were currently employed by the mine (6.7%), or had a family member working at the mine (43.1%). While 75% suggested that the mine had created positive opportunities for their families (e.g., supporting relatives, buying goods and vehicles), a large majority also identified a number of social ills stemming from the mine. Seventy one percent identified problems associated with increased substance abuse. The loss of traditional and cultural practices in the community was noted by 64%. Racism and sexual harassment at the Meadowbank Mine were also identified by respondents (58% and 49%, respectively). Within the community, a number of respondents felt that STIs (46%) and prostitution (14%) had also become more problematic since mining began.

To minimize the potential adverse effects of the Expansion Project on family and community cohesion, Agnico Eagle will continue to offer work readiness training to prepare prospective employees for dealing with all aspects of wage employment, and will continue to provide access to an EFAP to help both new and existing employees and their families cope with the stresses of employment and managing incomes. Both programs will also address the importance of making healthy lifestyle choices, such as avoiding illegal drugs and minimizing alcohol consumption, and maintaining positive home lives. The Meadowbank onsite counsellor and elder visitation initiatives will also be extended with the Expansion Project to provide employees and their families with both professional and traditional sources of emotional support, with a view to balance wage employment with traditional culture and practices in pursuit of healthy lifestyles. Providing Inuit workers with access to Elders is also expected to help validate and maintain traditional values such as sharing and volunteering; values that are integral to reducing the vulnerability of those not benefiting from wage employment.

As a deterrent to substance abuse, Agnico Eagle will continue to have a zero-tolerance policy for drug and alcohol abuse while on, or in transit to/from site, and will perform random drug and alcohol testing, as well as testing



following any onsite incidents where substance abuse is suspected as a contributing factor. This is expected to reduce substance abuse amongst the workforce, and in turn may allow employees to share what they have learned about healthy lifestyle choices in their communities.

Mitigation and benefit enhancement measures outlined in Sections 5.4, 5.5 and 5.6 of the SMP (Volume 8, Appendix 8-E.11) and detailed above are expected to minimize or alleviate some of the adverse effects of increased incomes on family and community cohesion. There is, however, great uncertainty regarding individual responses to increased incomes, the ability or willingness of those affected to take up related programming, and the way in which families and communities will respond to changes in income distribution. As a result, increased incomes from the Expansion Project have the potential to have deleterious effect on families, communities and on community cohesion.

### Project rotational employment may affect family and community health and cohesion

The Expansion Project is not expected to change the impacts on community health and cohesion stemming from additional incomes predicted in the FEIS, including:

- Providing sufficient time to participate in traditional activities while employed
- Sharing of harvested resources with the community
- Time away from families
- Jealousies and accusations of infidelity while spouses are away
- Reduced time for volunteering
- Fading traditional values and language

To maintain and build upon the beneficial aspects of rotational employment, and address, where possible, its negative effects, Agnico Eagle will implement mitigation and benefit enhancement measures outlined in Sections 5.4 and 5.5 of the SMP (Volume 8, Appendix 8-E.11). These mitigations and benefit enhancement measures are expected to alleviate some of the adverse effects on family and community cohesion as related to rotational employment. Agnico Eagle will encourage employees to use the programs presented in the SMP, and will evaluate program success. Where programs are not being taken up by employees and their families, or where programs are identified as ineffective, Agnico Eagle will adaptively improve them.

### 7-B-1.4.5 Population, Housing, Services and Infrastructure

### Project employment opportunities could spur migration to Baker Lake and Rankin Inlet

Roughly 80% (931 workers) of the Expansion Project's workforce requirement is expected to be met by the existing Meadowbank Mine workforce. The remaining labour demand of the Expansion Project is around 235, of which 58% (136 workers) are expected to be drawn from outside of Nunavut. Consistent with the Meadowbank Mine operations, to outside workforce is not expected to relocate to the Kivalliq Region and would be on a rotation schedule that would see them housed at the on-site camp for two weeks at a time. The remaining 99 workers would be drawn from Kivalliq communities where fly-in, fly-out arrangements are already available, removing the need to relocate for Expansion Project employment. As a result, the direct labour requirement of the Expansion Project is not expected to induce a meaningful scale of intra-regional migration within Kivalliq.



As described in greater detail in Section 7.B-1.4.3, the Expansion Project will enter operations in 2020 at the same time as the Meliadine Mine, competing for labour. The majority of the Approved Project workforce that would have otherwise transitioned to the Meliadine Mine will instead transition to the Expansion Project. The gap between the demand for Nunavummiut labour from both projects and the potential recruitable supply within the Kivalliq labour force is expected to be filled by either non-Inuit Nunavummiut from Rankin Inlet or, southern workers on a fly-in, fly-out basis. Either workforce would likely be housed in camp accommodations while on rotation. In this scenario, the combined demand of the Expansion Project and the Meliadine Mine for Nunavummiut labour is not likely to result in the need for substantial numbers of workers from other regions of Nunavut. In the event that a small number of workers are drawn from other parts of Nunavut, they will be provided means with which to travel to site, and will be housed in camp accommodations. Given the above, the direct labour requirement scenario created by the Expansion Project is not expected to induce a meaningful scale of in-migration to the Kivalliq Region.

There is, however, the possibility for speculative migration between Kivalliq communities in response to the Expansion Project. Individuals may choose to relocate in hopes of obtaining work without having secured an offer of employment from Agnico Eagle. It is also possible that some new hires may prefer to live in Baker Lake or Rankin Inlet, rather than other Kivalliq communities with fewer amenities. In 2010 when the Meadowbank Mine opened, and in the year preceding, population change in Baker Lake was slightly elevated, but in line with regional and territorial levels. Past population change in Baker Lake in the year following the opening of the Meadowbank Mine is indicative of the potential for speculative migration, and the data suggest that speculative migration in hopes of seeking employment with the Expansion Project could yield a small change in population.

In advance of construction and operations, Agnico Eagle will clearly communicate labour force requirements to community liaisons, and will work with communities and local governments to provide clear information regarding the recruitment process for Project employment opportunities. Through this engagement, Agnico Eagle hopes to limit the potential for speculative migration in hopes of securing employment. It is, however, recognized that the decisions of individuals in terms of movement between communities are outside the control of the developer, and some may still choose to relocate. In a context where housing, services and infrastructure are already stretched to near, or in some cases, beyond capacity, even a small population increase can have some level of adverse effect. As a result, population-based stress on housing, services, and infrastructure has been described below.

### Project-induced in-migration could increase demand for housing in Baker Lake and Rankin Inlet

It is not possible to say with any certainty if such speculative migration will occur, or to what extent, and so the potential effect on housing is identified only in terms of potential to occur. In-migration of any scale can exacerbate pressure on already constrained housing conditions. Even if a small number of people move from other parts of Kivalliq to Baker Lake and Rankin Inlet in hopes of securing employment at the Expansion Project, the stressed housing situation in each community could be exacerbated. It is unlikely that those moving would be able to access subsidized housing given wait lists in communities. Further, the development of market housing in Kivalliq is highly constrained. As a result, those who move to Baker Lake and Rankin Inlet seeking work would likely stay with people they know in each community. This in turn can contribute to crowding.

Agnico Eagle will continue to engage with communities regarding changing socio-economic conditions. Agnico Eagle will also continue the socio-economic monitoring program in place for the Meadowbank Mine during Project construction and operations, which includes monitoring of migration, community population, housing stock and condition, and use of physical infrastructure and services. Should adverse changes in these areas arise, Agnico Eagle will continue to collaborate with the Government of Nunavut and communities to develop issue-specific



mitigation. The Socio-Economic Management and Monitoring Plan (Volume 8 Appendix 8-E.11) identifies Agnico Eagle's approach to managing and monitoring potential socio-economic issues associated with their Kivalliq operations. Issue-specific implementation plans are developed as part of Agnico Eagle's adaptive management process.

### Project-induced in-migration could increase demand for services and infrastructure in Baker Lake and Rankin Inlet

As with housing, even a small level of population-driven change in demand for services and infrastructure can create pressure requiring management in an already constrained system. While most utility infrastructure in Baker Lake have the capacity to support additional demand, most other services and infrastructure in the hamlet and Rankin Inlet are in need of repair, or replacement. Should even a small number of job seekers relocate to either community, their demand for childcare (should they relocate with families), healthcare services, waste disposal, and other services and infrastructure currently under pressure would likely require action and management by governments.

Agnico Eagle will continue to work with communities to identify areas of priority for community investment, and, as noted above, will continue to monitor changing socio-economic conditions in communities, including service and infrastructure capacity.

### 7-B-1.5 Residual Impact Classification

To determine whether an impact may have a significant residual adverse effect on a VC following mitigation and benefit enhancement, each impact was assessed according to the criteria and descriptions in Volume 3, Section 3.7. All sources of information (i.e., existing and collected data, new analyses, existing publications, and IQ) were considered equally in the classification of residual impacts. When assessing the magnitude and significance of Expansion Project impacts, the approach is to consider the *extension* of impacts beyond the closure of the Approved Project into 2025 as that is when impacts are the greatest.

The assessment of the Expansion Project's effects on individual and community wellbeing is subject to uncertainty (as described further in Section 7-B-1.7), as the choices and response of individuals to the Expansion Project and its direct effects will vary and will be difficult to predict. Further, the uptake of Project initiatives and programs aimed at enhancing benefits and minimizing adverse effects are voluntary and their effectiveness has to be regularly evaluated. As such, magnitude has been assigned based on the assumption of the effectiveness of mitigation. The determination of an effect's significance is not, however, based purely on the assessment criteria. A pronounced effect on even a small portion of the population can be significant when impacting wellbeing.

Table 7.1-4 provides a summary of the residual effects classification for socio-economic effects.



Table 7.1-4: Residual Impacts Classification and Determination of Significance for Socio-Economics

vc	Pathway	Direction	Magnitude	Extent	Duration	Significanc e	Consequence of Proposed Change: Determining Significance
nic Ind SS nent	The Expansion Project will continue to contribute to territorial economic activity	Positive	High	Regional	Medium-term	Significant	No change
Economic Activity and Business Development	The Expansion Project will continue government revenues	Positive	High	Regional	Medium-term	Significant	No change
Ec Act Bu Dev	The Expansion Project will sustain local business development and contracting	Positive	High	Local to Regional	Medium-term	Significant	No change
and ر	The Expansion Project will create direct, indirect, and induced employment opportunities	Positive	Moderate	Local to Regional	Medium-term	Significant	No change
Employment and Education	The Expansion Project will generate direct, indirect, and induced incomes	Positive	High	Local to Regional	Medium-term	Significant	No change
Emp	The Expansion Project will provide workforce training and support community education	Positive	Moderate	Local to Regional	Long-term	Significant	No change
unity	The Expansion Project will continue positive fiscal effects in communities	Positive	High	Local to Regional	Medium-term	Significant	No change
d Comm being	The Expansion Project may improve worker and public health and safety	Positive	Moderate	Local to Regional	Long-term	Significant	No change
Individual and Community Wellbeing	The Expansion Project has the potential to result in accidents and emergencies	Negative	Not Applicable	Not Applicable		Significant	No change
Indivi	Expansion Project incomes and rotational employment may affect family and community cohesion	Negative	High	Local to Regional	Long-term	Significant	No change
Sing,	(NEW) Expansion Project employment opportunities could spur migration to Baker Lake and Rankin Inlet	Not Applicable	Low	Local	Long-term	Not Applicable	Not applicable - dependant on scale of speculative migration
ion, Hou vices and sstructure	(NEW) Expansion Project-induced in-migration could increase demand for housing in Baker Lake and Rankin Inlet	Negative	Moderate	Local	Long-term	Potentially Significant	Potentially significant - dependant on scale of speculative migration
Population, Housing, Services and Infrastructure	(NEW) Expansion Project-induced migration could increase pressure on services and infrastructure in Baker Lake and Rankin Inlet	Negative	Moderate	Local	Long-term	Potentially Significant	Potentially significant - dependant on scale of speculative migration

Note: For further information on consequence of proposed change: determining significance for the Expansion Project refer to Volume 3, Table 3.4-2.



### **Summary of Residual Effects**

### **Territorial Economic Activity**

The Expansion Project's positive GDP effect is pronounced at 5 to 6% of the current GDP of Nunavut. This effect will persist through Project operations to 2025, extending the GDP contribution of Approved Project beyond planned closure (2021). This effect is, therefore, considered to be of high magnitude, regional extent, and medium-term duration. Overall, the Expansion Project's positive effect on the GDP of Nunavut is assessed as significant.

#### **Government Revenues**

Project-related tax generation will amount to a sizable contribution to government revenue in Nunavut equivalent to about 2% of the territory's total annual budgeted revenue. When transfer payments are deducted, Project-related revenues to government are predicted to be roughly equivalent to a fifth of Nunavut's total own-source budgeted revenue. This effect will occur through Project operations to closure. This effect is, therefore, assessed to be of high magnitude, regional extent, and medium-term duration. Overall, the Expansion Project's positive effect on government revenue in Nunavut is assessed as significant.

### **Local Business Development and Contracting**

Project procurement of goods and services will be substantial. Once operational, the Expansion Project's demand for goods and services is expected to be substantially higher than the Approved Project, with about \$271 million procured from Nunavut-registered companies. Of this, roughly 84% (\$223 million) will be through Kivalliq-registered businesses. In turn, of the portion of spending occurring with Kivalliq businesses, 67% is expected to accrue to those in Rankin Inlet, with 32% accruing to those in Baker Lake. Closure will result in a drop off of procurement of this scale. This effect is, therefore, assessed to be of high magnitude, local to regional extent, and medium-term duration. Overall, the Expansion Project's positive effect on local business development and contracting is assessed as significant.

### **Employment**

The Expansion Project serves to extend employment opportunities for the Approved Project workforce, and adds a projected 99 opportunities for Nunavummiut. When the Expansion Project comes into full operation in 2020, the outgoing Approved Project workforce will transition to the Expansion Project. The Project will also, however, compete with the Meliadine Mine for labour, introducing a scenario where total demand for Nunavummiut labour could exceed the recruitable supply. This effect is, therefore, assessed to be of moderate magnitude, local to regional extent, and medium-term duration. Overall, the Expansion Project's positive effect on employment in Nunavut, Kivalliq Region and, especially, Baker Lake, is assessed as significant.

#### **Incomes**

As with employment, the Expansion Project's primary income effect will be the continuation of high paying wage employment from Meadowbank Mine. Employment incomes for current employees are not expected to change significantly, but will be extended by the Expansion Project beyond the Approved Project's closure in 2021, extending to 2025. The Expansion Project will also generate new incomes associated with a limited amount of new employment, and will sustain indirect and induced incomes, through to closure. This effect is, therefore, assessed to be of high magnitude, local to regional in extent, and medium-term duration. Overall, the Expansion Project's positive effect on incomes in Nunavut, Kivalliq Region and, especially, Baker Lake, is assessed as significant.

### **Education and Training**

The Expansion Project is expected to continue to provide the education and training opportunities currently supported by the Approved Project to both its workforce, and Kivalliq Region communities. While this does not represent a change in programs offered or funding for educational initiatives, uptake of educational opportunities



during operations is expected to continue to build capacity in the labour force, and promote educational attainment for youth and the broader community. Capacity building and education does not end with Project closure, instead persisting into the future. It is not known, however, how exactly workers and communities will respond to educational programming and initiatives offered or supported by the Expansion Project. This effect is assessed to be of moderate magnitude, local to regional in extent, and long-term duration. Overall, the Expansion Project's positive effect on education and training is assessed as significant.

#### **Positive Effects in Communities**

The Expansion Project's overall effect of continued incomes, community contributions and the Meadowbank and Whale Tail IIBAs are expected to have a positive effect on the wellbeing of individuals and communities. Regular incomes can help lift or keep people out of poverty; provide access to nutritious food, education, and recreation; and allow for savings. Community and IIBA contributions are substantial, and support community development and wellbeing initiatives. Both will occur throughout the Kivalliq Region, but will be concentrated in Baker Lake over the operational life of the Expansion Project. This effect is, therefore, assessed to be of high magnitude, local to regional in extent, and medium-term duration. Overall, the Expansion Project's positive effect on wellbeing related to disposable incomes, community contributions, and the continuation of the IIBAs is assessed as significant.

#### Worker and Public Health and Safety

Project health and safety training is expected to improve health and safety awareness amongst employees, their families, and other members of their communities, as are community-based health and safety-related programming and policies. The extent to which this benefit will be realized is difficult to predict, as it may influence the behavior and decision making of some more than others, and because it is not known how individuals will react. Monitoring by Agnico Eagle (e.g., interview worker families to gauge health and safety understanding) is expected to confirm this benefit. The effect of improved health and safety awareness, like education, does not end with the closure of a project, but instead continues to influence people's behavior into the future. This effect is, therefore, assessed to be of moderate magnitude, local to regional in extent, and long-term duration. Overall, the Expansion Project's positive effect on worker and public health and safety is assessed as significant.

### **Accidents and Emergencies**

As noted above, attempting to assess the magnitude of a risk of accidents and emergencies is problematic. Should neither occur, there will be no associated effect. However, it can also not be assumed that either or both *will* occur definitely, or to what extent. Mitigations measures, emergency response planning, and training can all play a role in reducing risk or the severity of the outcome of an accident or emergency, but the effectiveness of each is unknown. For these reasons, residual effects criteria have not been assessed for accidents and emergencies. To do so would require further risk analysis beyond the scope of this Addendum to the Approved Project FEIS. However, in the event that an accident or emergency does manifest, it can be conservatively assumed that there is the potential for the effect on an individual or community to be adverse, potentially catastrophic, and, therefore, significant.

### **Family and Community Cohesion**

As noted above, while incomes can have a positive effect on the fiscal wellbeing of some, they can also have a negative effect if income earners and their families use their incomes unwisely. Property theft, increased substance abuse, family violence, and debt are all often associated with new money or wealth. Incomes for some and not others results in social disparity between families and communities, and can further highlight existing vulnerability of those unable to access employment opportunities. The existing Meadowbank Mine workforce transitioning to the Approved Project and, ultimately, to the Expansion Project has experience in managing their finances, and it is unlikely that they would change their current behavior or lifestyle in an adverse way as a result of the Expansion



Project. Conversely, where issues with substance abuse, gambling, family violence, and other issues related to increase incomes are already occurring, the Expansion Project would not alleviate them. Recent research noted in Section 7-B.1.4.4 suggests that such issues are not only already affecting families in Baker Lake, but that they are doing so in a large number of households. Additional workers could mean that more families could need access to support. The limited number of new Nunavummiut employees required for Project operations may, however, struggle with the adaptation to high wage employment.

Mitigation measures offered to new employees are expected to alleviate some of the social ills associated with increased incomes in the local population, however it is not known to what extent, or how individuals will react. Further, the efficacy of Agnico Eagle's current social management programming is not fully understood. Continued monitoring (e.g., Baker Lake Wellness program) and evaluation of the uptake and outcome of programs is required to determine with greater certainty the Expansion Project's residual effect on family and community cohesion. If the adverse effects noted above do materialize in already vulnerable communities, despite mitigation, the residual effect could be pronounced.

Rotational employment can be a positive approach to wage employment, giving people long periods of time off and resources for traditional pursuits and other activities. It can also, however, have negative effects on cohesion, taking workers away from their communities and families for extended periods of time, and can erode traditional values. As with other effects to individual and community wellbeing, it is difficult to assess both the extent of these effects, the effectiveness of mitigation and benefit enhancement measures, and the response of individuals, families and communities to both. The positive effects of rotational employment end with Project closure, however changes in family and community cohesion would persist into the future.

Based on the discussion above, the Expansion Project's residual effect on family and community cohesion is considered to be of high magnitude<sup>3</sup>, local to regional in extent, and long-term duration. Overall, the potential adverse social impacts associated with Project incomes and rotation on family and community cohesion are assessed as significant.

### **Population Change**

Population change is not, in itself, positive or negative. Rather, it is a driver of other potential socio-economic effects such as changes in demand for services, housing, and infrastructure. As a result, it is not appropriate to assign a direction or significance to population change. The potential for population change can, however, be described in terms of residual effects criteria. As discussed above in Section 7-B-1.4.5, the Project's direct demand for workers in concert with that of the Meliadine Mine is not expected to draw workers from other parts of Nunavut, instead taking up the remaining regional labour force and supplementing with the experience mining workforce in the south. As a result, the potential for population change is expected to be limited to those migrating to Baker Lake and Rankin Inlet based on the speculation that doing so would give them access to Project employment opportunities. Past population change in Baker Lake response to the Meadowbank Mine was not pronounced, or at a level out of line with other communities, the region, or the territory at that time. As an expansion to an existing project, the Expansion Project could have even less of an impact on population change in Baker Lake and Rankin Inlet. As a result, the magnitude of population change potentially induced by the Expansion Project is assessed as low. The effect would be local to the two communities, and would persist into the long-term.

<sup>3</sup> Given the unknown success of mitigation and the results of recent research noting the prevalence of issues in Baker Lake families associated with mining.



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### Housing

In the event that some level of speculative in-migration to Baker Lake and Rankin Inlet does occur, the impact on the already stressed housing situation in both communities would be adverse. Given the limited potential for substantial population change to result from speculative migration, the impact on housing would not be expected to pervade into a large number of households. Those household impacted would, however, have the potential to experience crowding. As a result, the magnitude of the potential effect on the housing situation in Baker Lake and Rankin Inlet is not assessed as low in line with the magnitude of population change, but rather as moderate. The effect would be local to the two communities, and would persist into the long-term. The Expansion Project's impact on housing is, therefore, assessed as being potentially significant depending on the scale of speculative migration.

#### Services and Infrastructure

In the event that some level of speculative in-migration to Baker Lake and Rankin Inlet does occur, the impact on the already stressed services and infrastructure in both communities would be adverse. Given the limited potential for substantial population change to result from speculative migration, the impact on services and infrastructure would not be expected to push capacity beyond a manageable level. As a result, the magnitude of the potential effect on the housing situation in Baker Lake and Rankin Inlet is not assessed as low in line with the magnitude of population change, but rather as moderate. The effect would be local to the two communities, and would persist into the long-term. The Expansion Project's impact on housing is, therefore, assessed as being potentially significant depending on the scale of speculative migration.

### 7-B-1.6 Cumulative Effects Assessment

Direction provided by CIRNAC regarding the approach to cumulative effects assessment to be taken in the Approved Project FEIS indicates that "[g]iven the current and increasing levels of mineral development in the Kivalliq Region ... [the] cumulative effects assessment [should focus] on impacts from reasonable foreseeable mine and transportation infrastructure developments" (AANDC 2016).

The approach to cumulative social and economic effects is, in some respects, different from that taken by the physical and biological disciplines. When describing conditions and trends beyond present day, the socio-economic impact assessment considers all reasonably foreseeable projects. Only projects with proven economics (e.g., financing, some approvals) and a strong likelihood of proceeding are considered in the interest of providing a meaningful projection of future social and economic conditions. The socio-economic assessment considers the reasonably foreseeable developments in the Kivalliq Region potentially coinciding to have cumulative socio-economic effects. The cumulative effect of Agnico Eagle's existing Meadowbank Mine operations (and its closure), and the development of the Meliadine Project are assessed in conjunction with the Expansion Project. The residual effects assessment for socio-economics is, therefore, cumulative in nature.

Data regarding the current Meadowbank Mine operation suggests that the vast majority of the Inuit workforce is from the Kivalliq Region. Of the Inuit workforce in 2015 (302), 93% resided in Kivalliq. The remaining 7% (21) residing outside of Kivalliq had relocated to the south (Stratos 2017). Agnico Eagle prioritizes the Kivalliq labour force for employment opportunities and, as noted above, provides fly-in fly-out services in Kivalliq communities. Agnico Eagle does not provide fly-in fly-out services in Kitikmeot or Baffin communities, and does not target the labour force in these regions for employment to the extent done in Kivalliq. Similarly, Agnico Eagle targets Kivalliq suppliers for contracting and procurement opportunities (Agnico Eagle 2016g). The Approved Project and Expansion Project are expected to extend the prioritization of Kivalliq employment candidates and businesses, and



the commitments regarding procurement identified in the IIBA. As a result, potential for overlapping employment demand from developments in other regions is considered limited to none.

Mining and large transportation projects within Kivalliq were considered for the socio-economic cumulative effects assessment. Those without approval, or that do not temporally overlap with the Whale Tail Pit Project are not considered as reasonably foreseeable developments from a socio-economic perspective. The AREVA Kiggavik Project was considered, but ultimately not included in the cumulative effects scenario for the socio-economic assessment based on the affirmative CIRNAC Ministerial decision regarding NIRB's recommendation that the project not be approved. While the Greyhound exploration property is located in close proximity to the Whale Tail Pit Project, exploration and development is not at a stage that would suggest definitive construction and operations periods coinciding with the respective phases of the Whale Tail Pit Project. Ownership of the property is still in option, and a Preliminary Economic Assessment may be forthcoming. Thus, the ability for the Greyhound Project to interact cumulatively with the Expansion Project to compete for employment and contractors (and associated knock-on effects) is not considered likely in the near future. The Manitoba to Nunavut road could be expected to have pronounced economic and social effects in the future; however, there are currently no plans to construct the road over a period overlapping Project construction or operations.

While Back River occurs during the Expansion Project timeframe, primary communities potentially affected by the mining project (i.e., Kugluktuk, Cambridge Bay, Gjoa Haven, Kugaaruk, and Taloyoak) do not coincide with those potentially impacted by the Expansion Project (Sabina 2015). The cumulative effects assessment for Back River does not identify the Meadowbank Mine as an existing Project with potential for cumulative effects on Back River's primary communities. Given this determination, and that the Expansion Project is an extension of the Meadowbank Mine that continues to focus on the Kivalliq Region, the Back River Project has not been included in the cumulative socio-economic effects assessment presented in the FEIS.

### 7-B-1.7 Uncertainty

Factors contributing to uncertainty in the socio-economic impact assessment are consistent with those presented in the Approved Project FEIS. In addition, the propensity of people to relocate to be closer to amenities and Project employment opportunities is not predictable with any reasonable certainty. Population change is therefore only assessed in terms of the potential to occur. Responding to community-level changes in demand for housing, schools, healthcare, and policing is under the purview of local, territorial, and federal authorities with a mandate to ensure that services are provided to the community. The nature of their response in the face of population change that may or may not occur is unknown. Given these points, confidence in the assessment of population change and associated effects on infrastructure and services is moderate.

### 7-B-1.8 Monitoring and Follow-up

The SMP provided in Volume 8, Appendix 8-E.11 provides a full discussion of Agnico Eagle's monitoring measures.

The SMP is currently being updated to address concerns and commitments raised during the regulatory process for the FEIS of the Approved Project. The mitigation for Expansion Project will be the same as for the Approved Project FEIS.

Consistent with Project Certificate No. 008, Agnico Eagle is required to mitigate, monitor, and adaptively manage potential impacts to socio-economics, including:



- Continued participation in the Kivalliq Socio-Economic Monitoring Committee (T&C #44).
- Development and establishment of a project specific Whale Tail SEMC to oversee the project specific monitoring program (T&C #45).
- To develop and undertake a project specific socio-economic monitoring program (T&C #46).
- Identification of risks and potential effects of temporary mine closures on communities and develop appropriate offsetting measures (T&C #47).
- Produce accurate labour market information regrading available Project employment and skill requirements for the Project to support economic and employment forecasting (T&C #48).
- To collaborate with the Government of Nunavut's Career Development Officer, Regional Manager of Career Development, and Director of Career Development, to ensure long-term success for employment and training of Nunavummiut (T&C #49).
- Provide updated results of Labour Market Analysis and Inuit Work Barrier Study to the Kivalliq SEMC and indicate how the results have been integrated into the Project specific SEM program. (T&C #50).
- Develop a conceptual Socio-economic Closure Plan to ensure workers at the Project would be supported once operations cease in the event of temporary closure (T&C #51).
- Develop and maintain measures to maximize opportunities for the regional workforce to obtain transferable skills and certification (T&C #52).
- Providing for collection and sharing of information related to monitoring demographic changes affecting the Kivalliq communities and territory (T&C #53).
- Demonstrating the incorporation of IQ in Agnico Eagle's monitoring plans (T&C #54).
- Promote employee health and well-being including education programs and updating of the Occupational health and Safety Plan (T&C #57).
- Encourage participation and effective coordination between health series provided by Agnico Eagle and those provided by local communities (T&C #58).
- Support elimination of cultural barriers and promote recognition for IQ to establish a healthy workplace for employees (T&C #59).
- Engage with the GN to identify trends and provide understanding of potential Project specific impacts to local community Health Services (T&C #60).
- Improve access to benefits and associated support (i.e. housing, life skills, financial planning etc.) (T&C #61).
- Work cooperatively with GN to address impacts to community infrastructure (T&C #62).

Where applicable to the Expansion Project, Agnico Eagle has updated associated plans or reports as may be directed by the NIRB. Agnico Eagle considers, the existing terms and conditions of the Project Certificate issued for the Approved Project are sufficient to protect, mitigate and monitor socio-economic impacts associated with the Expansion Project.



Any new required mitigation measures related to primary effects for the Expansion Project are described in relation to the predicted effects and summarized in pathway tables provided in Volume 3, Appendix 3-C.

Agnico Eagle is committed to incorporating any new mitigation measures in the applicable management plan.



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### **ATTACHMENT 7-B-1**

2018 Socio-Economic Baseline Update Summary



### **POPULATION**

The Kivalliq region (10,528 [2016 population]), Baker Lake (1,997), and Rankin Inlet (2,675) have seen consistent population growth of between 1% and 3% per year since 2006. During this period, the composition of the population exhibited modest changes. The male and non-Inuit populations in Baker Lake grew quicker than the female and Inuit populations, as did the proportional representation of the working-age population. This pattern can be explained by increased intra-territorial in-migration to the region and, in particular, to Baker Lake. About half (40 people) of in-migrants were of working age, and around the same number were from outside Nunavut. This movement of working age population to the Kivalliq region and Baker Lake coincides with an increase in the representation of Kivalliq workers at Meadowbank Mine, which increased by 40% (100 workers) between 2010 and 2011.

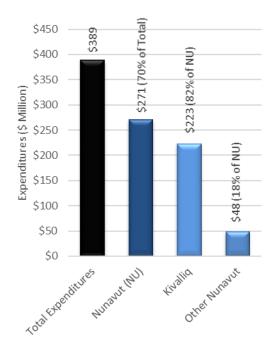
While there was some change in population composition in the Kivalliq region during the construction and operation of the Meadowbank Mine, overall population change has been in line with that experienced at the regional and territorial level. This is true not only for the entire period, but also in the first year of operation (2010). The same is true in communities from which a substantial portion of the Meadowbank Mine workforce was, and continues to be drawn from (i.e., Baker Lake, Rankin Inlet, and Arviat).

### **ECONOMIC ACTIVITY AND BUSINESS DEVELOPMENT**

The relative proportion of Meadowbank Mine contract expenditures in Nunavut has remained around the 50% mark since the beginning of operations. In 2014, contract expenditures with businesses registered in Baker Lake amounted to \$38 million (16% of total contract expenditures), while contract expenditures with businesses registered in other parts of Nunavut totalled \$67 million (29% of total contract expenditures). In absolute dollar terms, the annual value of Agnico Eagle contract expenditures at Meadowbank Mine has fallen since 2012, as exploration activities shifted to Meliadine Project. Expenditures on Inuit-owned businesses (NTI-registered), though lower in absolute dollars, have increased in terms of their relative share of total contract expenditures, representing 37% of total contract expenditures in 2014.

In 2017, the value and representation of Agnico Eagle's Meadowbank Division expenditures in Nunavut, Kivalliq, and Baker Lake grew from previous years, largely due to increased spending associated with the development at the Whale Tail site. Expenditures accruing within Nunavut totalled \$271 million (70% of total division expenditures). Of this, \$223 million (82%) was spent with Kivalliq vendors. The large majority of Kivalliq-sourced expenditures occurred in Rankin Inlet (\$151 million or nearly 68%) and Baker Lake (\$71 million or 32%). Spending with NTI-registered businesses amounted to \$213 million (55% of total expenditures). Almost all spending in Baker Lake (\$70 million or 99%) is with NTI-registered vendors, while roughly two thirds (\$94 million or 62%) of spending in Rankin Inlet is with NTI-registered vendors. Figure 7-B-1-1 depicts the expenditure breakdown in 2017.





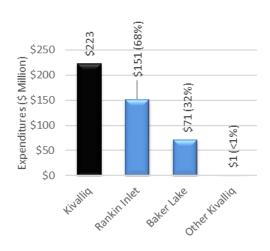


Figure 7-B-1-1: Meadowbank Division Procurement by Location, 2017

Nunavut's GDP grew steadily between 1999 and 2008, prior to the global recession. When the Meadowbank Mine began production in 2010, Nunavut's GDP began to increase again and at a higher rate. Between 2010 and 2014, the contribution of the mining and construction industries to GDP grew by \$298 million dollars, accounting for around 70% of overall territorial GDP growth during that period. In 2017, Nunavut had a Gross Domestic Product (GDP) of \$2.2 billion. Of this, the mining and construction industries accounted for \$391.4 million (18%) and \$310.8 million (14%), respectively (Statistics Canada 2018).

The territorial budget for the 2018-2019 operating year predicts government revenue of \$2.177 billion. Of this, the vast majority (i.e., \$1.947 billion, or 89%) comes from federal transfer payments and third-party transfers. Taxes make up a further 6% (\$119.7 million) of revenue. The remaining 5% of territorial government revenue comes from recovery of revenue from the prior year, revolving funds, and other government sources (GN 2018).

Meadowbank Mine employment taxes provide an average \$30 million per year to the federal government, and \$3 million per year to the GN. Property taxes paid to the GN by Agnico Eagle are on average \$1.1 million per year. Since 2007, Agnico Eagle has provided over \$11 million to NTI and the KivIA.

### **EMPLOYMENT**

The Kivalliq labour force grew by 360 (11.1%) between 2006 and 2011. Over a third of this growth (130 people active in the labour force) occurred in Baker Lake. Employment growth during this period did not keep up with growth of the labour force, with only 155 additional people employed of the 360. Most of this employment was associated with the construction of Meadowbank Mine, and most of the employed (105 people) were from Baker Lake. During this period, labour force participation rates increased; however, given the size of employment expansion relative to the larger labour force expansion, unemployment rates increased.



In the years following the beginning of operations at Meadowbank Mine, the Kivalliq labour force grew in size at a much higher rate than in previous years, increasing by 28% (995 people) between 2011 and 2016. Labour force growth in Rankin Inlet during this same period (35% or 400 people) heavily influenced regional change. While not growing at this same rate, the Baker Lake Labour force grew substantially by 20% (155 people). Growth in the labour force does not coincide with population growth in either community. This suggests that labour force growth is likely in response to existing regional residents entering the labour force in hopes of securing employment with major economic developments in the region: namely, operation of Meadowbank Mine, and preparation for the construction of the Meliadine Project. Not all those who entered the labour force were able to find employment at these projects, or in other sectors of the regional economy: unemployment rates actually increased between 2011 and 2016 in the region, and both communities.

Since the beginning of operations, Nunavummiut representation at Meadowbank Mine has remained relatively stable at around one third of the total operational workforce. Of the Nunavummiut employed at the Mine, over half reside in Baker Lake. The representation of Inuit in the overall Meadowbank operational workforce has remained similarly steady at between around 30% since 2012. Inuit participation in Meadowbank Mine's temporary workforce is much higher, representing 95% of all temporary employment. The annual turnover rate for both permanent (28%) and temporary (50%) Inuit workers has increased since operations at Meadowbank Mine commenced, but has begun to stabilize in recent years.

Both Meadowbank's Kivalliq and Inuit workforce is almost evenly split between genders, with marginally more men employed than women. While Agnico Eagle is placing considerable effort on training women that are interested in haul truck driver positions or other mining-related trades, attraction and retention of female employees (especially those with children) remains a challenge. Efforts to date have resulted in the representation of women in the Meadowbank Mine workforce increasing from 10% in 2013 to 20% in 2017, surpassing the national mining industry average (17%).

Employment incomes paid at Meadowbank Mine are high (e.g., around \$50,000 to \$100,000 annually for salaried positions) relative to local and regional averages. As noted above, over half of Nunavummiut employment at Meadowbank Mine is taken up by residents of Baker Lake. The Hamlet has had the highest percentage increase in median income of all the Kivalliq communities (52%) since 2005. The highest increases in median income in Baker Lake came between 2007 and 2009, during the construction of Meadowbank Mine, when median incomes peaked at \$30,000 in 2008. Hamlet residents have noted that, for many, new income from employment at the Meadowbank Mine has enhanced their quality of life by improving access to food, hunting equipment, and consumer goods (e.g., vehicles and entertainment systems), and allowing workers to assist their extended families (Agnico Eagle 2015b; Agnico Eagle 2016e).

### **EDUCATION AND TRAINING**

Regional and community-level education services are provided by Kivalliq School Operations, Nunavut Arctic College and, until recently, the Kivalliq Mine Training Society. The Nunavut Arctic College offers programming in pre-apprenticeship, apprenticeship, and trades programs. In 2016, a Women's Focus Group in Baker Lake noted the availability of training in careers such as heavy equipment operation and mechanics (Agnico Eagle 2016e).

The portion of the Kivalliq Region population 15 years and over with no certificate, diploma, or degree, decreased from 65% in 2006, to 61% in 2011 (Statistics Canada 2013a). In the years following the start of operations of the Meadowbank Mine, educational attainment amongst the Kivalliq population improved substantially, with the portion of the population 15 and over with no certificate, diploma or degree decreasing to 48% in 2016. During this period,



educational attainment in all measured categories improved, with the greatest growth in those with a college diploma.

Recent trends in graduation rates also signal that educational attainment continues to rise in the Kivalliq Region. Since 2009, graduation rates in the Kivalliq Region have been higher than the territorial average, and the average for other regions. This may be in part due to employment opportunities available at the Meadowbank Mine and through contractors, and the associated reinforcement of the importance of educational achievement.

Until 2014, Agnico Eagle made total contributions of approximately \$284,000/year to a variety of school-based initiatives. These contributions reduced in 2015, due to the expiry of the memorandum of understanding (MOU) with the department of education. In 2017, Agnico Eagle's total contributions to school-based activities was \$55,000. Agnico Eagle's financial investments in externally-delivered training programs have been steady at approximately \$2.3 million per year for the past three years, with the Kivalliq Mine Training Society being the largest recipient. With the cessation of the Kivalliq Mine Training Society's federal funding in 2017, the future of the organization is unclear. As a result, Agnico Eagle's financial contributions to externally delivered training programs dropped to \$195,000 in 2017.

The scope of, and participation in, in-house training and apprenticeship programs have been relatively consistent throughout Meadowbank's operations. Annual fluctuations in the number of training hours and haul truck driver program graduates largely reflect changing demand at Meadowbank Mine for additional positions for which specific training is provided.

### INDIVIDUAL AND COMMUNITY WELLNESS

Wellness is multifaceted and influenced by a number of factors. The ability to participate in traditional activities such as hunting and fishing, and to practice and maintain traditional culture are important to both individuals and communities. Access to goods and services, such as nutritious food and education, also contribute to people's health, happiness and sense of wellbeing. Indicators of a community's wellbeing include safety and security, which can be measured using statistics on social ills, such as substance abuse, domestic violence, and crime.

Use of Inuktitut is lower in Baker Lake than in other Kivalliq communities, as is the rate of Inuktitut as a mother tongue (Statistics Canada 2016a). Knowledge and use of Inuktitut in Kivalliq communities has, overall, declined over the past decade. This is likely due to the growing non-Inuit population in the hamlet, the need to speak English to access most government services, and the influence of English language media in the home.

Limited statistical data are available at the regional level on the harvest and consumption of country foods. In 2006, average participation in traditional activities in Kivalliq communities was higher than in Nunavut as a whole (Statistics Canada 2011a-f). Baker Lake residents maintain a balance between wage employment to pay for commercial goods and services, and practicing traditional harvesting activities to feed their families and reinforce social relations (Peterson 2012). Hamlet residents estimated that approximately 90% of the community harvests regularly. These activities remain very important to the community for cultural, economic, and health reasons (Peterson 2012). Baker Lake residents continue to maintain close ties with the land, and hunting remains an important cultural activity. Subsistence wildlife harvesting plays an important role in the contemporary wellbeing of the Inuit of Baker Lake through the acquisition and sharing of knowledge through experience, and by providing an emotional and spiritual connection to the land (Makimowski 2014; Bernauer 2011). Today, many hunters continue to share their meat with family members and friends who have been less successful at harvesting, with preference often given to Elders (Ford and Berrang-Ford 2009, cited in Peterson 2012). The most commonly harvested species are caribou and lake



trout, with wolf, fox, ptarmigan, geese, Arctic char, whitefish, and grayling also contributing to harvesting activities (Priest and Usher 2004, cited in Bernauer 2011).

Community representatives have reported to Agnico Eagle an increase in the number of trips on the land by those with income from the mine who have an increased ability to purchase harvesting supplies. Further, it has been noted that access to harvesting areas has been improved by the AWAR (Peterson 2012). Others, however, have suggested that stress associated with work and school schedules limit the time that people have available to spend on the land. Elders have also perceived change in traditional values, decreased interest in harvesting, and a loss of land-based skills among the younger generation (Bernauer 2011; Maksimowski 2014).

Food costs in the Kivalliq Region are on average about twice as much as that of the rest of Canada (NBS 2015). Food costs in Baker Lake are among the lowest in the Region, and have been decreasing since 2011. Harvesting helps supplement the diet of Baker Lake residents (Maksimowski 2014). Baker Lake Elders have reported that caribou is a primary food source that sustains their community, with fish providing an important secondary food source (Cumberland 2005b; AREVA 2011; NIRB 2015a).

Elders have indicated that food was traditionally shared amongst Inuit in times of need, including during starvation times, which ensured the survival of families (Bennett and Rowley 2004). Caribou meat helps combat food insecurity in the community, especially for Elders who can no longer hunt or for families who cannot afford store-bought meat (Peterson 2012). Baker Lake residents interviewed for the Meadowbank Project's Public Information Meeting reiterated the importance of caribou and fish to the Inuit, and expressed concerns about their food security, which relates strongly to the continued ability to harvest caribou (NIRB 2015a).

Incomes associated with employment at Meadowbank Mine has enhanced the quality of life of employees by offering a reliable means to afford food as well as hunting equipment. While some employees reported enjoying time off for camping and harvesting, others reported decreased harvesting activities due to a lack of time and resources, and decreased caribou availability and accessibility (Maksimowski 2014). Baker Lake residents raised concerns regarding the maintenance of Inuit wellbeing, including the loss of community feasts, the weakening of community sharing, and threats to food security (Maksimowski 2014). Other residents have expressed concerns related to food security and the decrease in caribou due to the Expansion Project (NIRB 2015a).

Baker Lake residents have expressed concern about the proportion of income spent on alcohol, drugs, and gambling. Residents have noted to Agnico Eagle that drug and alcohol use is affected by underlying social issues (e.g., a history of drug or alcohol use and abuse in the family), rising incomes, the two-week rotational schedule, and crowding. The two weeks of downtime without structure, combined with a lack of money management skills, was also identified as a cause of reckless spending (Agnico Eagle 2015b). The SEIIBR identified drug and alcohol use as both a concern related to mining, and as a major issue in communities.

There is ongoing concern that employment of one or more spouses at the Mine is affecting familial relationships in a negative way in the community of Baker Lake (Pauktuutit Inuit Women of Canada and the University of British Columbia 2014). Concerns expressed at community meetings stated that the two-week rotation at Meadowbank Mine has contributed to spousal stress in Baker Lake, and that gossip and rumours of infidelity are causing relationship problems. A recent study focused on the impacts of mining on Baker Lake women, found that the jealousies created by having a partner working away from home for weeks at a time can lead to an increase in domestic abuse files (Pauktuutit Inuit Women of Canada and the University of British Columbia 2014). The SEIIBR found that communities had mixed perspectives of how mining is, and will continue, to affect the wellbeing of children.



Population growth and an increase in consumer goods, drugs, alcohol, and gambling are perceived by residents of Baker Lake to be affecting crime rates, particularly thefts and home break-ins (Agnico Eagle 2015b). Concern has also been expressed that increased incomes due to employment at the Meadowbank Mine has increased access to and consumption of alcohol and associated binge drinking, with bootleggers of alcohol finding success (Agnico Eagle 2016e). In Baker Lake, rates of mischief, disturbing the peace, harassment, and theft more than doubled between 2010 and 2012. The rates of more serious crimes including assault and sexual assault also increased substantially (49 to 82%) during this period. Most violations decreased in 2013 (except assault, impaired driving, and drug violations), coinciding with the Hamlet's overall crime rate decrease that year (NBS 2014; Statistics Canada 2014).

### HOUSING, SERVICES AND INFRASTRUCTURE

Most residents in the Kivalliq Region live in subsidized non-market rental units maintained by the Nunavut Housing Corporation. Additional housing is needed throughout Nunavut to address the persistent issues of housing shortages, overcrowding and repairs. In 2011, 37% of private households in the Region and 32% of private households in Baker Lake did not have sufficient size nor bedrooms for their occupants compared to 31% in Nunavut as a whole (Statistics Canada 2013a-c).

Poor housing conditions in the region and in Baker Lake are due primarily to crowding. Demand for housing is high and significant portions of the Kivalliq Region and Baker Lake populations remain on the housing wait list. In 2010, there were 1,120 persons aged 15 years and over (17% of the total population 15 years and over) in the Kivalliq Region, and 300 persons aged 15 years and over (19% of the population 15 years and over) in Baker Lake, who were on the public housing wait list (Nunavut Bureau of Statistics and Statistics Canada 2011). In 2014, Baker Lake was amongst the Nunavut communities with the lowest shortage of public housing, with a 19% shortage.

With no roads connecting communities or territorial regions, the Kivalliq Region is dependent upon sealift for resupply shipments that are scheduled from July to September, and air transports for the other months of the year (Nunavut Sealink and Supply Inc. [NSSI] 2015; Prolog Canada 2011). Almost all non-perishable goods, such as fuel, construction materials, vehicles, and dry goods, needed in Nunavut move by water as it is a more economical method of transportation (Government of Nunavut – Department of Community and Government Services [GN – CGS] 2015). Sealifts of goods and supplies to the Kivalliq Region are offered by Nunavut Eastern Arctic Shipping and NSSI from Sainte-Catherine, Quebec and Churchill, Manitoba (NEAS 2015; NSSI 2015). Baker Lake has a marine dock, public dock, and community mooring bollards (Aarluk Consulting 2010).

Agnico Eagle's use of public physical infrastructure consists of use of Baker Lake airport (300 to 400 passenger trips/year) and the use of other Nunavut airports (200 to 400 passenger trips/year) (Stratos 2015).

Since the publication of Baker Lake's infrastructure investment priorities (Aarluk Consulting 2010), the water, wastewater, and sewage disposal needs of the Hamlet were addressed by upgrading of the water treatment and sewage disposal facilities, and a new water pump house. Water for the community is sourced from Baker Lake and delivered by scheduled, trucked services to all houses and other buildings (GN – CGS 2011).

Overall, power, water, sewage and waste infrastructure in Baker Lake has capacity to accommodate some level of population growth in the community. Power in Baker Lake is provided via three diesel fueled generators. The community's fuel storage tanks were upgraded in 2014, increasing storage capacity by 260% to 3,400 m³. A new water treatment facility was constructed to service the community in 2011, and water is delivered via truck to houses. Residential water use in Baker Lake is not expected to approach the annual 100,000 m³ authorized quantity limit



until 2030. Agnico Eagle is in discussion with Baker Lake regarding the expansion of water treatment capabilities in in the community via the construction of a passive sewage wetland as part of fish habitat compensation activities. There is a 25,000 m<sup>2</sup> solid waste disposal facility near the community to handle refuse disposal.

The 2017/2018 infrastructure plans for Baker Lake and Rankin Inlet identify a number of priority areas where infrastructure is in need of repair or replacement. Those of note for the assessment include:

#### **Baker Lake**

### Repair/Renovate:

- Fire hall
- Health centre
- Municipal roads
- Landfill
- Airport runway and terminal

### Replace:

- Ambulance
- Traditional food processing facility
- Youth center
- Elders center
- Airport terminal
- School
- Daycare
- RCMP detachment
- Public housing (including for Elders)
- Staff housing
- Water and sewage transport service
- Utilidor

### Rankin Inlet

### Repair/Renovate:

- SAS School
- Airport terminal
- Wastewater treatment plant
- Utilidor

### Replace:

- Community freezer
- Search and rescue office
- Addiction center
- Long-term care facilities
- Palliative care facilities
- Public housing (including for Elders)
- Daycare
- Landfill
- Recycling Centre
- Secondary water source
- Alternative power source

Trucked sewage collection services are provided to the residents of Baker Lake. A sewage disposal facility consisting of a passive wetland discharges effluent into Finger Lake (also referred to as Airplane Lake), which ultimately drains to Baker Lake. Sewage treatment is an issue for improvement, as the passive wetland site is no longer working efficiently. Residents have observed that the water in some parts of Baker Lake appear yellowish in colour, which makes them more hesitant regarding their drinking water. The Solid Waste Disposal Facility and the bulky metals/hazardous waste storage area is unlined and runoff drains directly into Finger Lake and the sewage treatment wetland.

Kivalliq communities have health centres managed and staffed by nurses, and emergency medical evacuation services. Communities also have access to regular fly-in specialists (e.g., psychiatrists, physiotherapists, dentists) and physicians at varying frequencies throughout the year. Rankin Inlet has a health centre staffed full time with doctors, nurses and midwives. Between 2009 and 2010, per capita visits to health centres increased in all Kivalliq communities except Coral Harbour. Since 2010, per capita visits have remained relatively steady in all communities except Chesterfield Inlet and Baker Lake, where visits have increased, though not substantially (GN – DOH 2014).

Demand for health care services has remained relatively stable throughout the eight-year period with only small or infrequent annual fluctuations in visits per capita. The number of Meadowbank Mine employees referred to community health centres for personal or work-related reasons has ranged from 14 to 47 people per year, and has



been highest in recent years. In 2013, the number of on-site accidents requiring use of Nunavut Health Centres (47) represented less than 1% of all visits to the Baker Lake Community Health Centre (Agnico Eagle 2015c).

Royal Canadian Mounted Police detachments are located in all Kivalliq communities (RCMP 2015), and the Nunavut Court of Justice's Circuit Court administers trials and sentencing (NCJ 2015). The Hamlet of Baker Lake has a fire hall and truck (both of which are in need of minor repairs) maintained by a Fire Chief and assistant Fire Chief, and approximately 20 volunteers (Aarluk Consulting 2010). Search and rescue services are also available in the community; however, equipment is in need of an upgrade (Aarluk Consulting 2010).



### **ATTACHMENT 7-B-2**

Detailed Economic Modelling Outputs



### **ECONOMIC**

Table 7.B-2-1: Project-Generated Economic Activity by Industry, Operations, \$ Million

Industry	Gross Output	GDP at Basic Prices
Mining and Oil and Gas Extraction	264.3	86.7
Construction	32.5	9.8
Transportation and Warehousing	18.6	8.4
Finance, Insurance, Real Estate and Rental and Leasing	7.5	5.5
Retail Trade	3.1	2.0
Government Sector	3.9	2.0
Information and Cultural Industries	0.7	0.6
Utilities	1.1	0.5
Wholesale Trade	0.5	0.4
Professional, Scientific and Technical Services	0.7	0.4
Administrative, Waste Management and Remediation	0.7	0.4
Non-Profit Institutions Serving Households	0.7	0.4
Accommodation and Food Services	0.7	0.3
Health Care and Social Assistance	0.4	0.2
Other Services (Except Public Administration)	0.4	0.1
Manufacturing	0.1	<0.1
Educational Services	0.1	<0.1
Total	336	117.9

Note: Totals may not match the sum of all values due to rounding.

GDP = Gross Domestic Product

Table 7.B-2-2: Project-Generated Fiscal Impacts to Government, \$ Million

Level of Government	Personal Income Tax	Corporate Income Tax	Taxes on Unincorporated Business Profits	Sales and Excise Taxes	Total Tax Revenue
Federal	135.7	6.8	11.1	4.4	158.0
Territorial	21.3	5.5	8.1	6.6	41.5
Total	157.0	12.3	19.2	11.0	307.3

Note: individual revenues may not add up to the sum total for each jurisdiction due to rounding.



Table 7.B-2-3 Project Operations Employment (Positions) by Location

Region	Employment Impact	2020	2021	2022	2023	2024	2025
Nunavut	Direct	478	498	499	499	466	337
	Indirect	137	134	136	133	113	51
	Induced	51	50	50	50	46	23
	Total	667	683	686	682	626	411
Southern	Direct	664	691	693	692	647	467
Canada	Indirect	290	282	286	280	236	109
	Induced	1,885	1,871	1,854	1,844	1,719	870
	Total	2,839	2,845	2,833	2,816	2,602	1,446
Total	Direct	1,142	1,190	1,192	1,191	1,113	804
	Indirect	427	417	423	414	349	160
	Induced	1,936	1,922	1,904	1,894	1,765	894
	Total	3,506	3,528	3,519	3,498	3,227	1,858

Note: Economic modelling has allowed for spending of incomes in Nunavut when determining induced employment impacts. Note: The totals for some categories may not reflect the sum of values due to rounding of indirect and induced employment.

Table 7.B-2-4: Operations Labour Income by Year and Location, \$ Million

Region	Income Impact	2020	2021	2022	2023	2024	2025
Nunavut	Direct	78.7	78.3	77.4	77.1	72.6	37.0
	Indirect	13.8	13.5	13.7	13.4	11.5	5.3
	Induced	3.2	3.2	3.2	3.2	2.9	1.5
	Total	95.7	95.0	94.2	93.6	87.0	43.8
Southern Canada	Direct	109.2	108.6	107.3	106.9	100.7	51.3
	Indirect	16.6	16.2	16.4	16.0	13.5	6.3
	Induced	84.7	84.1	83.3	82.9	77.3	39.1
	Total	210.5	208.9	207.0	205.8	191.5	96.8
Total	Direct	187.9	186.9	184.7	184.0	173.2	88.3
	Indirect	30.4	29.7	30.0	29.5	25.0	11.6
	Induced	88.0	87.3	86.5	86.0	80.2	40.6
	Total	306.2	303.9	301.2	299.5	278.4	140.5

Note: Direct, indirect, and induced incomes may not add up to the sum total for each jurisdiction due to rounding. \$M = million dollars.

