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7.2.2 Demographics

7.2.2.1 Introduction

This subsection describes the approach and applicable regulatory framework for the assessment of the Valued Component (VC) Demographics.

The potential demographic effects of the proposed Blackwater Gold Project (the Project) on communities in the Socioeconomic Regional Study Area (SERSA) will ultimately depend on the extent to which Project construction and employment result in people moving into the SERSA, either permanently or temporarily. Typically, the temporary population increase would occur during the construction phase, and workers would be housed in construction camps at the mine site. During the operations phase, site camps would continue to be provided, but some workers could decide to move permanently to the SERSA. This could lead to an increase in population and possibly change the demographic composition of the region. The assessment of this VC is informed by the assessment of Regional and Local Employment and Businesses VC (Section 6.2.3).

There is no specific legislative requirement for consideration of Project effects on regional population and demographics. However, it is common practice to evaluate potential population changes because it directly affects the quality of life in a region and assists public and private agencies in planning for future capacity requirements for various services. This VC is included in the Application Information Requirements (AIR) and Environmental Impact Statement (EIS) Guidelines for the Project.

The data used for this analysis were drawn from a number of sources. Current and historical population information was obtained from the individual community profiles from the 2011 and 2006 Canada censuses, and population projections were obtained from BC Stats. Most of the other demographic information is based on the 2006 and 2011 census and the 2011 National Household Survey (NHS), which replaced the long-form census. Statistical information was also collected from BC Stats, Vital Statistics BC, and local municipalities. Additional qualitative information was taken from various reports provided by BC Stats, as well as recent community and regional reports from government agencies, community profiles produced by municipalities, community and regional websites, and various social profiles of communities in the SERSA. Relevant community knowledge information gathered during the engagement and consultation process for this Project was also incorporated when available.

7.2.2.2 Valued Component Baseline

This subsection provides a summary of baseline information on the population and demographics in the Local Study Area (LSA) and the SERSA and the source of the information; identifies past, present or future projects/activities that may impact the VC; and describes traditional ecological or community knowledge, where available.

A full description of the demographics in the SERSA is available in the Social Baseline Report (Appendix 7.1.1A).
Overall, the SERSA reported a small but positive population growth from 2006 to 2011; however, the total population remained below the 2001 levels. Birth rates across the SERSA were above the provincial average, as was teen pregnancy. Death rates across the SERSA were on a par with or below the BC average. The SERSA is located within the Bulkley-Nechako and Fraser Fort George Regional Districts. Between 2006 and 2011, rates of out-migration were higher than in-migration in both regional districts. Residents of the LSA were slightly less mobile than residents of the Regional Study Area (RSA). Demographic mobility was notably low among the on-reserve Aboriginal population. The RSA had a higher concentration of visible minorities, while the LSA had a larger portion of Aboriginal residents. Both the LSA and RSA report similar age populations, with Vanderhoof, Fort St. James, and the RSA on-reserve populations reporting the largest proportion of residents age 0 to 14, while Burns Lake and Vanderhoof reported the highest concentration of people age 75+. Most SERSA residents were married.

Population projections by BC Stats anticipate slow, sustained growth for the region, with the RSA growing slightly faster than the LSA. The regional population increased by 2.21% between 2006 and 2011 across the SERSA and is forecast to increase 1.96% between 2011 and 2016, 1.11% between 2016 and 2021, 0.72% between 2021 and 2026, 0.82% between 2026 and 2031, and 1.03% between 2031 and 2036. This represents a total of 5.83% increase by 2036 over the 2011 population.

The overall demographic characteristics of the LSA are as follows:

- In 2011, the population of the LSA was 12,043, an increase of 2.2% since 2001. Vanderhoof population accounted for 37% of the LSA population and was estimated at 4,500;
- The area demonstrates a higher-than-average (BC) level of residential stability, with 60% of residents having lived at the same address for five years or more;
- Approximately 21% of the LSA population were Aboriginal and 2% were visible minorities in 2011; and
- The LSA had the largest proportion of younger and older people in the SERSA; 33% of the population was age 0 to 24 and 26% was over the age of 55. In addition, 72% of the population was classified as married couple families.

The overall demographic characteristics of the RSA are as follows:

- The population in the RSA was 84,380 in 2011, a decrease of 1.1% since 2001;
- Residents of the RSA have slightly higher rates, in the SERSA, of residential mobility; only 58% have lived at the same address for five years or more, although 27% changed address but stayed within the same community; and
- In the 2011 census, approximately 15% of the population were Aboriginal and 7% were visible minorities.
7.2.2.2.1 Past, Present and Future Projects and Activities

Section 4, Subsection 4.3.6.2, Table 4.3-11 shows the Summary Project Inclusion List developed for Cumulative Effects Assessment (CEA) (Appendix 4C contains the comprehensive Project Inclusion List). Activities associated with changes in population could include:

- Mining – exploration and existing;
- Forestry – logging; and
- Pipeline projects.

7.2.2.2 Traditional Ecological or Community Knowledge

No TK/TLU data was provided with respect to the demographics VC. However, First Nations did provide comments with respect to concerns regarding the stressing of community services by increased populations (Appendix 3.1.3B).

7.2.2.3 Potential Effects of the Proposed Project and Proposed Mitigation

This subsection:

- Identifies and analyses potential effects resulting from the Project’s construction, operations, closure and post-closure phases;
- Identifies and describes any potential effects from other known past, present, certain and reasonably foreseeable future project or activities in the Project area; and
- Describes measures to mitigate the potential adverse effects identified above.

7.2.2.3.1 Potential Project Effects

This section examines the potential changes in the resident population resulting from the Project, including anticipated population increases and decreases. The assessment of population effects is based on the assessment of Regional and Local Employment and Businesses (Section 6.2.3), which has been undertaken in the context of potential, reasonably foreseeable and near future changes in economic activity in the region. Table 6.2.3-7 provides a list of major projects in the region and the related text evaluates their relevance to the economic effects assessment. Section 7.2.2.3.2 describes potential adverse effects associated with past, present and future projects and activities that potentially interact with the demographics VC.

The types of interactions associated with project activities and project components in relation to the demographics VC are classified as: key interactions, moderate interactions, or negligible interactions (Table 4.3-2 Project Component and Activity Interaction Matrix for Selected VCs, Section 4). The interactions are with the Project as a whole and the Mine Site is selected as representative for the whole Project.
As addressed in Section 6.2.3, the Project will require labour to construct, operate, decommission, and close the mine. These increased employment opportunities could lead to population changes on the local communities (i.e., encourage an influx of new residents into local communities). The potential Project population effects would depend on whether Project-related jobs are filled by residents or by non-residents, and on whether non-residents relocate to the area or commute to work. The scale of other demographic changes (i.e., ethnicity, age/gender, etc.) is directly dependent on the magnitude of the population change, so the assessment of potential Project effects focuses on that indicator. Any such demographic changes could stimulate changes in other socio-economic VCs by increasing demand for public services and infrastructure, for example. The specifics of these potential effects are described and assessed where relevant in the VC sections which follow. Section 7.2.3.3 (Regional Community and Infrastructure) includes discussion on increase in demand for regional infrastructure and services due to changes in demographics.

Potential Project effects on regional population and demographics are summarized in Table 7.2.2-1.

Table 7.2.2-1: Potential Project Effects on Regional Population and Demographics

<table>
<thead>
<tr>
<th>Interaction with Project</th>
<th>Project Phase</th>
<th>Potential Project Effect</th>
<th>Likelihood of Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment, purchasing of goods and services</td>
<td>C</td>
<td>In-migration of construction workers</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Out-migration of temporary workers</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>In-migration of workers and their dependents</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>CL</td>
<td>Out-migration of workers and their dependants</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>Negligible effect</td>
<td>High</td>
</tr>
</tbody>
</table>

Note: C = construction; CL = closure; O = operations; PC = post-closure

7.2.2.3.1.1 Construction Phase

The estimated duration of the construction phase is two years, resulting in 2,436 person-years of employment. At peak, as many as 1,400 workers may be at the worksite. The on-site construction workforce will work 10-hour shifts, seven days a week. Hourly workers will work a 2-week-in and 2-week-out rotation, and senior management staff will work a 4-day-in and 3-day-out rotation. The Proponent will provide a camp for the construction workforce; it has procedures and dedicated people in place to ensure that the construction workforce accommodation planning meets and/or exceeds regulatory requirements and follows best industry practices.

Construction employees are expected to live in several local and regional communities and in communities outside the SERSA. Vanderhoof will serve as a transportation hub for workers living within the SERSA. Regional staff and contract workers will not be permitted to drive personal vehicles to and from the proposed mine site. They must leave their vehicles at a muster point located at or adjacent to Vanderhoof and take buses provided by the Proponent to and from the proposed mine site.
The Proponent will build an airstrip to transport construction workers commuting from outside the SERSA. In addition, the Proponent will provide daily busing services for workers between the mine, the airstrip, and the camp (more details in Section 7.2.3.2.2 Regional Transportation).

It is estimated that residents of the SERSA will provide 20% of the BC portion of total labour; this amounts to 485 person-years. This would be equivalent to 195 jobs over the two years of construction, with an extra 95 jobs in the second year (Section 6.2.3.3.1). These estimates reflect the labour force information, including experience by industry and occupation, (and implicitly, the level of training and education), competing demands from other projects and the Project commitments to local hiring.

Most of the construction workers are expected to be contracted and given the short duration of the construction phase and that the Proponent will house construction workers in fly-in camps, it is expected that construction workers hired from outside the SERSA will neither establish residence themselves nor relocate their families to the SERSA during the construction phase. As a result, there will be no appreciable population effect on the communities of the SERSA. Some of the construction workers, however, may transition and continue working during the operations phase. In addition, hiring for operations workers is expected to be gradual and begin during the construction phase. These workers will work directly for the Proponent and some of them may decide to relocate to the SERSA; however, the number of early movers is expected to be minimal. For the purpose of this assessment it is assumed that the majority of population changes will occur during the operations phase.

7.2.2.3.1.2 Operations Phase

The estimated duration of the operations phase will be 17 years. As discussed in Section 6.2.3 Regional and Local Employment, the average number of operations workers is estimated at 495 annually. Of these, 72% will be employed in mining operations, 21% in processing, and 7% in general and administrative positions. Around 10% will be mine managers and superintendents. The Proponent is committed to developing and hiring most of the operations workforce (65%) from within the SERSA. However, it is recognized that the Project will face competition from other mines such as Mount Milligan and Endako and that the number of local qualified workers would not fully satisfy the Project demands, in particular for highly skilled positions. Consequently, it is estimated that the Project will hire 175 workers (35%) from outside the SERSA. It is expected that most of these positions will be mine managers and technical specialists (e.g., mining engineers, metallurgist, etc.).

During the operations phase it is not anticipated that proposed pipeline projects would compete directly with this Project for local workers due to their short-term nature and the mobility of their workforce. Construction projects such as pipelines, typically involve numerous tradespeople working sequentially and for short time periods. Based on the review of available information at the time of writing this Application, it is expected that pipeline projects would provide construction camps to house temporary construction workforce; therefore no permanent residents are expected as a result of these projects being undertaken (Coastal Gas Link, 2014).
The Project will also create additional indirect jobs (from buying goods and services locally) and induced jobs (from spending wages and salaries) in the SERSA. These positions, however, are expected to be filled by local residents, since they would be less specialized positions. There is a high level of unemployment in the region and an available capacity in the retail and services industries to absorb additional demands.

Similar to the construction phase, the Proponent will provide a camp for all its operation workers. The camp will have a capacity of 500 beds and will meet and/or exceed regulatory requirements and follow best industry practices. During the operations phase, the use of the airstrip to transport workforce from outside the SERSA will be discontinued and the Proponent will provide busing services from Vanderhoof for all operations workers.

Further, as part of its recruitment approach, the Proponent will encourage its management team and others to relocate to the region and provide relocation incentives. The Incentives and Inducements Program will be targeted to workers who are interested in moving in permanently with their families and relocating to Vanderhoof and Fraser Lake in the LSA.

It is hard to estimate the number of operations workers who will choose to relocate permanently with their families. Many economic, cultural, social, and geographical factors can affect the decision to relocate. This decision will also depend on less observable factors such as personal and family preferences (e.g., willingness to relocate to a small community). Based on the local labour market analysis, experiences in similar mining projects in BC, the Proponent’s policy to encourage its managers to relocate to the region and the Incentives and Inducements Program, it is expected that up to 100 workers (out of the 175) currently living outside the SERSA will choose to relocate to the SERSA. These 100 positions will be highly specialized and unlikely to be filled locally (refer to Section 6.2.3.3.1.2).

All remaining operations workers will maintain their residence elsewhere and fly in per the rotation schedule, and therefore, will have no effects on the demography of the SERSA. Only non-residents who choose to relocate to the LSA or RSA will have effects on the population of the SERSA. In order to estimate the total population effects from the Project the following assumptions are made:

- The use of the camp during operations will encourage some workers to maintain their residence elsewhere and live in the camp during the rotation schedule;
- Indirect and induced jobs created in the SERSA will be filled by local residents and are not expected to trigger additional migration;
- It is likely that most Project workers who choose to relocate to the SERSA will choose to live in Prince George, which has a wider range of services and facilities than do other communities;
- Twenty percent of workers who choose to relocate will choose to live in Vanderhoof, in the LSA, and benefit from the Proponent’s Incentives and Inducements Program, while the other 80% will choose to live in Prince George, the biggest community in the SERSA;
• Only one member in the in-migrant family will be employed at the mine; and

• Most in-migrants are expected to migrate from other parts of Canada; the average family size in Canada is 2.9 persons (Statistics Canada, 2012).

Based on the above, the Project would directly add 100 workers to the local population. Assuming that there will be only one employed person at the mine per family moving into the region, this would result in 100 families or a total of 290 people (2.9 persons per family) as the Project contribution to the population of the SERSA. Twenty families (or 58 people) will move to Vanderhoof and 80 families (or 232 people) will relocate to Prince George.

The arrival of approximately 58 people to Vanderhoof in the SERSA could result in a minor change in its demography (1.3% increase), which is within its current capacity and approved expansion plans. In addition, a positive influx of permanent residents is desirable since it aligns with the District's plans to attract residents and increase the local tax base.

Similarly, the influx of 232 people to Prince George would increase its total population by 0.3%. This would represent a small change to its current population and would be within the city’s current capacity. As shown in the baseline report, the population of Prince George declined by 2% between 2001 and 2006. Its population then recovered between 2006 and 2011, but it remained below 2001 levels (0.6% below the 2001 population). The addition of 232 people to Prince George will slightly increase its total population, but it will still remain below 2001 levels.

Some local governments in rural areas of the north have experienced a growing number of people living adjacent to their borders. These people are either seeking work or accompanying those working at a site. They create a ‘shadow population’ that could place additional pressure on services provided by these communities. The Project is remotely located and accessible by either a long drive on a FSR or by flying into the site. The remote Project location does not support workers living adjacent to the camp. Workers are anticipated to be housed in the camp and no personal vehicles will be allowed to transport workers to site, and therefore no ‘shadow population’ is anticipated.

7.2.2.3.1.3 Closure Phase

The duration of the closure phase is estimated at 17 years. Activities will include decommissioning of plant facilities and infrastructure and their abandonment and removal from the mine site, and the implementation of the site reclamation plan. In terms of workforce, it will go from the operations staff down to a small complement of staff (three–five people) within two years. It is expected that decommissioning workers would have previously been employed in the Project during operations and at least half of them will be recruited from within the SERSA. The size of the workforce from elsewhere is too small to create any effects on the SERSA population and demography.

At the end of operations, some out-migration of operation workers is expected. It is difficult to determine the magnitude of the population outflow, since this decision depends on the regional work opportunities available at the time of closure and personal and family interests. However,
one could assess the most conservative scenario and assume that all operations workers that choose to relocate to the SERSA decide to leave. The departure of 58 people from Vanderhoof will create low effects in the demography of Vanderhoof. Similarly, the departure of 232 people from Prince George will be hardly noticeable and will be much lower than the recorded population decline between 2001 and 2011.

Finally, the post-closure phase of the Project requires very limited workforce and as such, no effects on the SERSA population and demography are anticipated.

7.2.2.3.2 Past, Present and Future Projects and Activities

Activities associated with changes in population have the potential to affect the demographics VC, including those listed in Section 7.2.2.2.1. These include demographic changes attributable to in and out-migration associated with workforce demands in these industrial sectors. Mining exploration and logging activities are already part of the inherently cumulative project-specific effects assessment because they are incorporated in BC Stats official population projections.

7.2.2.3.3 Mitigation Measures

As discussed earlier, the Proponent intends to hire the majority of the workforce from within the SERSA and provide camps for workers during construction and operations. These policies will minimize the expected migration to the SERSA. However, the Proponent will encourage its management team to relocate to the region and provide an Incentives and Inducements Program for workers who are interested in relocating permanently to the LSA and encourage the Proponent’s management team to reside in the SERSA. Table 7.2.2-2 summarizes the proposed Mitigation Measures and potential residual effects.
### Table 7.2.2-2: Mitigation Measures and Potential Residual Effects for Demographics

<table>
<thead>
<tr>
<th>Project Phase</th>
<th>Potential Project Effect</th>
<th>Mitigation and Management</th>
<th>Type of Residual Effect</th>
<th>Potential Residual Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>In-migration of construction workers</td>
<td>Use of a camp with capacity to accommodate 1,500 workers. Provision of an airstrip on-site to transport construction workers from outside the SERSA. Short duration of construction phase. Success Rating: Good.</td>
<td>Neutral</td>
<td>No appreciable population effect is expected</td>
</tr>
<tr>
<td>O</td>
<td>In-migration of workers and their dependents</td>
<td>The Proponent intends to develop and hire the majority of the operations workforce from within the SERSA. Use of operations camp with capacity to accommodate 500 workers. Provision of busing between Vanderhoof and the camp site. The Proponent will provide Incentives and Inducements to relocate to the LSA. The Proponent will encourage its management team to reside in the SERSA. Success Rating: Good.</td>
<td>Beneficial</td>
<td>In-migration of workers and their dependents would create minor changes in the SERSA population, which is within its current capacity and approved expansion plans. If up to 20 families (58 people) choose to relocate to Vanderhoof and 232 people to Prince George, both communities have enough capacity to deal with this increase.</td>
</tr>
<tr>
<td>CL</td>
<td>Out-migration of operations workers and their dependents</td>
<td>The Proponent intends to hire the majority of the CL workforce from within the SERSA. Success Rating: Good.</td>
<td>Adverse</td>
<td>Out-migration of workers would create minor changes in the SERSA population. If all 100 operations workers and their families that moved in permanently chose to leave, the small size of the population outflow would create low effects. The small size of the CL workforce and short duration of closure phase will create low or no effects on the population and demography of the SERSA.</td>
</tr>
<tr>
<td>PC</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Note:**  
C = construction; CL = closure; O = operations; PC = post-closure; n/a = not applicable
Table 7.2.2-3 provides ratings for effectiveness of mitigation measures to avoid or reduce potential effects on demographics during mine site development. Mitigation measures will be based on site-specific information and construction engineering and are therefore preliminary at this stage.

**Table 7.2.2-3: Mitigation Measures and Effectiveness of Mitigation to Avoid or Reduce Potential Effects on Demographics during Mine Site Development**

<table>
<thead>
<tr>
<th>Likely Environmental Effect</th>
<th>Project Phase</th>
<th>Mitigation/Enhancement Measure</th>
<th>Effectiveness of Mitigation Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-migration of construction workers</td>
<td>Construction</td>
<td>Use of a camp with capacity to accommodate 1,500 workers</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provision of an airstrip on-site to transport construction workers from outside the SERSA</td>
<td>High</td>
</tr>
<tr>
<td>In-migration of workers and their dependents</td>
<td>Operations</td>
<td>The Proponent intends to develop and hire the majority of the operations workforce from within the SERSA</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use of operations camp with capacity to accommodate 500 workers</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provision of busing between Vanderhoof and the camp site</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Proponent will provide Incentives and Inducements to relocate to the LSA</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Proponent will encourage its management team to reside in the SERSA</td>
<td>Moderate</td>
</tr>
<tr>
<td>Out-migration of operations workers and their dependents</td>
<td>Closure</td>
<td>The Proponent intends to hire the majority of the closure workforce from within the SERSA</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

Note: LSA = Local Study Area; SERSA = Socio-economic Regional Study Area

In summary, low success rating means mitigation has not been proven successful, moderate success rating means mitigation has been proven successful elsewhere, and high success rating means mitigation has been proven effective. The effectiveness of mitigation measures was rated high because the proposed mitigation measures are widely used in mining and other industries and proven over a long period of time to be effective to mitigate demographic effects. Moderate ratings are assigned for mining mitigation measures that involve relocation incentives or local hiring.

### 7.2.2.4 Residual Effects and their Significance

This subsection:

- Identifies and describes any residual effects after mitigation;
- Where residual effects have been identified, provides an assessment of the significance of those residual effects considering, magnitude, geographic extent, duration, reversibility, frequency;
- Assesses the likelihood of the effect;
• Assesses the significance of the residual effects; and
• Assesses/discusses the level of confidence and risk in the determination of significance and likelihood of the residual effect.

The criteria used for determination of significance are described in Section 4.3.5.3 and Table 4.3-9 and have been well-tested in previous social effects assessments for resource developments in this and similar regions.

Given the short duration of the construction phase and the use of a camp, the population effect during construction is considered to be Not Significant (negligible), which is defined as no effects are evident; i.e., no project-related in-migration to the region is expected. The factors contributing to this determination are describes above in Section 7.2.2.3.1.1; i.e., fly-in/fly-out non-local worker rotation. It follows that the Project effect on the other demographic indicators (age, gender, and ethnicity) is also Not Significant (negligible).

Residual effects from in-migration of construction workers during the construction phase are expected to be neutral, low in magnitude, regional, short-term, continuous, reversible, low in likelihood and Not Significant (negligible).

During the operations phase, the use of an operations camp would also create a population effect that is Not Significant. However, the provision of relocation incentives and inducements could encourage up to 100 operations workers from outside the SERSA to move in permanently with their families to Vanderhoof and Prince George, increasing the SERSA population by 0.3% (290 people) and creating an effect that is Not Significant (minor); defined as having the attributes described below. The factors contributing to this determination are describes above in Section 7.2.2.3.1.2; i.e., fly-in/fly-out non-local worker rotation with some 100 workers choosing to re-locate their families (290 persons in total) to the region, which represents a 1.3% increase in Vanderhoof and only 0.3% in Prince George. It follows that the Project effect on the other demographic indicators (age, gender, and ethnicity) is also Not Significant (minor).

Residual effects from in-migration of workers and their dependents during the operations phase are expected to be positive, low in magnitude, regional, long-term, continuous, reversible, moderate in likelihood and Not Significant (minor).

The effects of mine closure on the population are described as negative, low in magnitude, local, long-term continuous and reversible. The final impact rating is Not Significant (negligible). There is a high level of confidence for these predictions. Table 7.2.2-4 summarizes these effects.
Table 7.2.2-4: Significance of Potential Residual Effects for Demographics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Stage of Development/Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Construction</td>
</tr>
<tr>
<td>Residual Effect</td>
<td>No appreciable population effect on the communities of the SERSA is expected</td>
</tr>
<tr>
<td>Effect Attribute</td>
<td>Neutral</td>
</tr>
<tr>
<td>Context</td>
<td>Neutral</td>
</tr>
<tr>
<td>Magnitude</td>
<td>Low</td>
</tr>
<tr>
<td>Geographic extent</td>
<td>Regional</td>
</tr>
<tr>
<td>Duration</td>
<td>Short-term</td>
</tr>
<tr>
<td>Reversibility</td>
<td>Yes</td>
</tr>
<tr>
<td>Frequency</td>
<td>Continuous</td>
</tr>
<tr>
<td>Likelihood Determination</td>
<td>Low</td>
</tr>
<tr>
<td>Level of Confidence for Likelihood</td>
<td>High</td>
</tr>
<tr>
<td>Significance Determination</td>
<td>Not Significant (negligible)</td>
</tr>
<tr>
<td>Level of Confidence for Significance</td>
<td>High</td>
</tr>
</tbody>
</table>

Notes: 1 Method for the consideration of context is discussed in Section 4, Assessment Methodology. n/a = not applicable

7.2.2.5 Cumulative Effects

This subsection determines the need for assessing cumulative effects.

The Project effects on population are driven by Project employment demands. During construction and closure, the adverse residual effects on demographics are expected to be negligible and thus are not required to be carried forward. During operations, the adverse residual effects are expected to be minor. Other existing and future projects and activities including mining, forestry (logging) and pipeline projects may cause employment and population changes that are similar to the proposed Project and that occur at a similar time. Because Project employment effects and related population changes were already analysed in the context of these current and foreseeable projects, the assessments are inherently cumulative in nature, and thus the assessment of minor residual effects during the operation phase is inherently cumulative.

7.2.2.6 Limitations

This subsection presents assumptions and limitations relative to the assessment of Project effects and the assessment of cumulative effects.

Given the Proponent’s expectations, most of its labour force will consist of SERSA residents. The accuracy of this estimate depends on the availability and capacity of the labour force in the
SERSA, the competing demands for labour, and the effectiveness of the commitments that the Proponent is making to local and regional hiring and training. The Proponent believes it will be competing with other projects for labour, and those other projects are offering subsidized travel to allow individuals to maintain existing household arrangements. The Proponent is therefore providing camp and busing during construction and operations and is proposing incentives and inducements for skilled operation workers from outside the SERSA who are interested in moving in permanently to the SERSA with their families. It was estimated that, up to 100 operations workers (57%) hired from outside the SERSA will choose to relocate to the SERSA. There will be exceptions to this planning assumption, as some employees may prefer to maintain their current residence and commute per their rotation schedule.

7.2.2.7 Conclusion

This subsection provides a conclusion regarding the significance of residual effects and cumulative effects if applicable.

Project effects on regional demographics will be Not Significant (negligible and minor) throughout the Project life. The Proponent intends to hire the majority of the workforce from within the SERSA and provide camps for workers during construction and operations. These policies will minimize the expected migration to the SERSA. However, the Project would result in population changes through workers hired from outside the SERSA who subsequently relocate to the area with their dependents.

Given the short duration of the construction phase and that the Proponent will house construction workers in fly-in camps, there will be no appreciable population effect on the communities of the SERSA during the construction phase.

During the operations phase the Project is expected to create minor changes in the SERSA demography, which is within its current capacity and approved expansion plans. A positive influx of permanent residents is desirable since it aligns with the SERSA plans to attract residents and increase the local tax base. Based on the local labour market analysis, experiences in similar mining projects in BC, the Proponent’s provision of relocation incentives and inducements, it is expected that up to 100 families or a total of 290 people currently living outside the SERSA will move to the SERSA, increasing the SERSA population by 0.3% and creating an effect that is Not Significant (minor).