Chapter 4

Tahltan Application Information

SKEENA™ RESOURCES

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CONTENTS

LIST OF TABLES

LIST OF MAPS

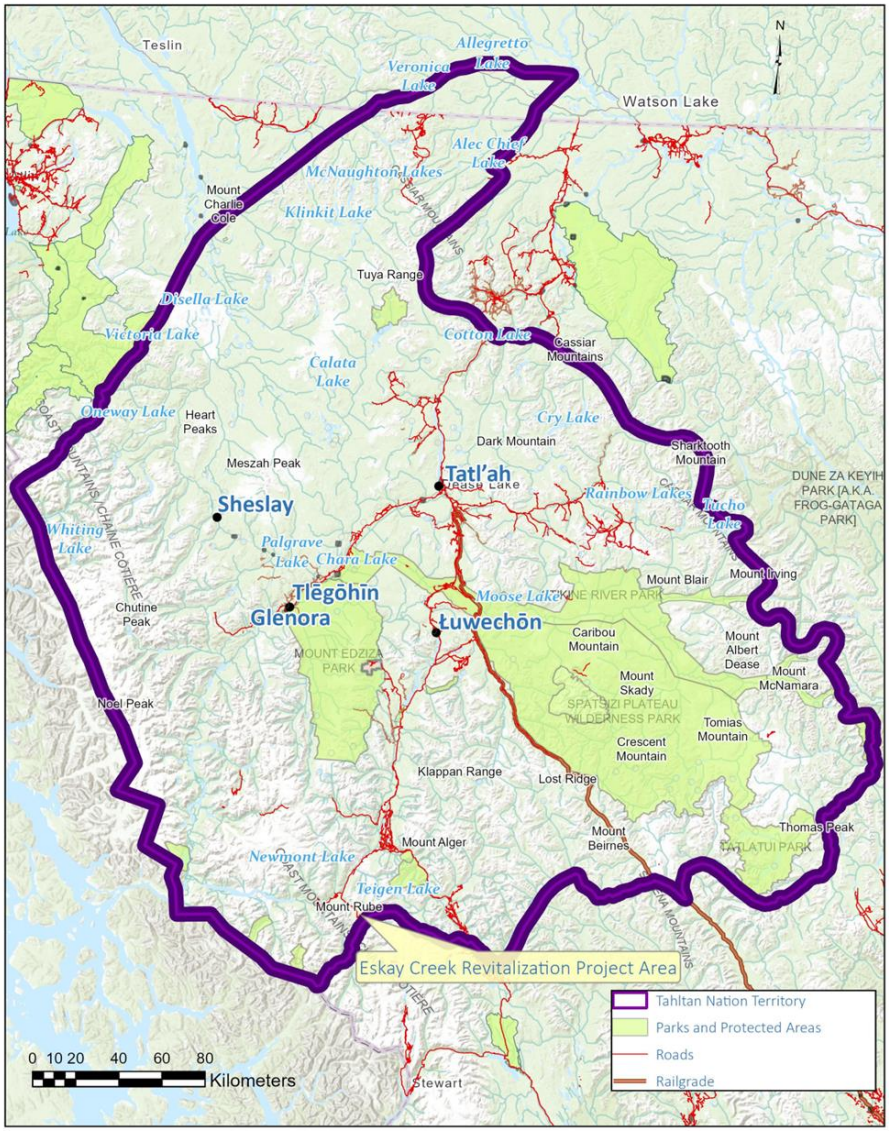
ACRONYMS AND ABBREVIATIONS

BC	British Columbia
DPD	Detailed Project Description
DRIPA	*Declaration on the Rights of Indigenous Peoples Act*
EAA	*Environmental Assessment Act*
EAC	Environmental Assessment Certificate
EAC Application	Application for an Environmental Assessment Certificate / Impact Statement
EAO	British Columbia Environmental Assessment Office
ECCC	Environment and Climate Change Canada
IAA	*Impact Assessment Act*
IAAC	Impact Assessment Agency of Canada
Hybrid AIR	Hybrid Application Information Requirements
the Project	Eskay Creek Revitalization Project
RIC	Resources Inventory Committee
RISC	Resources Information Standards Committee
Skeena Resources	Skeena Resources Limited
TCG	Tahltan Central Government
TEASF	Tahltan Environmental Assessment Strategy Framework
THREAT	Tahltan Heritage Resources Environmental Assessment Team
VC	Valued Component

4.0 TAHLTAN APPLICATION INFORMATION

4.1 Tahltan Application Information and Effects Assessment Requirements

Sustainability and stewardship are difficult and complex terms to define within Tahltan Nation (Map 1) as it can mean many things to members. It is recognized that understanding what is meant by these concepts is one of the key directions sought from community engagement and review of the EAC Application. To aid in the development of Tahltan Risk Assessment requirements, the following understandings of sustainability and stewardship are being used.



Map 1. Tahltan Nation Territory

4.1.1 Laws and Stewardship Principles

The word Tahltans use to describe our relationship to the land is Keyeh. This word is usually translated as village or place, but it means much more than this. Keyeh also means home—our home—the unique place where as Tahltans we belong. Keyeh can encompass all the country now called Tahltan Territory, it can refer to Tahltan village on the Tūdeẕe chō (Stikine) River, which is the spiritual centre of the Tahltan homeland, or it can simply refer to a village. Keyeh includes the specific geographic and environmental characteristics of our country, just as it includes all of its residents, human and non-human (Higgins 1982). It is an interconnected whole made up of the relationships between humans, animals, spirits, mountains, waters and weather systems. This whole has a cultural and spiritual meaning—the place that is home for us. As such, Tahltan Territory must be understood in its entirety, that is, as Tahltan's home.

The Tahltan view of stewardship arises from understanding the relationship Tahltan have to Keyeh. Belonging to the land means there is a reciprocal relationship between us and the land. A Tahltan Elder, says, "If we take care of the land, the land will take care of us." From Tahltan's perspective, stewardship is not only about looking after certain features of the land (for example, dēk'āne (salmon) habitat, hodzih (caribou) migratory routes, soil quality, heritage sites, and so forth), but requires attention to the relationships between these features. Keyeh, is an interconnected whole made up of reciprocal relationships. The human community is part of a larger community.

This means that adverse impacts to the land change the relationships that Tahltan have with the land. Tahltan identity, cultural integrity, community cohesion and individual well-being are connected to the health of the land. Tahltan stewardship means maintaining good relationships to the land (and by "land" we always mean the entirety of land, including all living things, spirits, waters, and mountains, and the relationships between them), across space and through time. It means honouring our ancestors that came before us and caring for the generations still to come. We call this the Tahltan Continuum (Klappan Strategic Initiative, 2015).

4.1.1.1 Connection and Hierarchy of Sustainability

Tahltan Law and Knowledge is based on the connection of Tahltan with the land and the inclusion of all Tahltan with land, water, and creatures. This foundational principle is a core element of sustainability (Jones et al. 2021).

> *"All animals were originally born of a woman called Atsentmā', meaning "meat mother" or "game mother" (Teit 1919: 231–32). This woman assigned each animal with its own appropriate habit and food source. The Meat-Mother was thought to live far in the north. Showing disrespect to animals or failing to make full use of them as food, would cause the Meat-Mother to call her children "home." While the punishment lasted, there would be a scarcity of game."*

Tahltan Law allows rights of access and use to non-Tahltan on Tahltan Territory, but does not allow for rights of exclusive management or exclusion. Land alienation is not an option under a proprietorship model of ownership, which sees ownership in terms of belonging over generations.

In relation to stewardship, some of the key principles to be aware of include:

1. Kinship is the oneness or interconnectedness of all things;

2. Respect where stewardship involves living in harmony with the land, recognizing that humans are just one part of a larger, interconnected community;
3. Ah'ī (Tahltan concept that refers to the bad consequences that follow when the right order has been violated – somewhat similar as the Precautionary Principle in western science) is a sacred law of the Tahltan regarding the consequences of bad reciprocity and describes both the type of action and the negative consequences of those actions. Any action characterized as Ah'ī might violate Tahltan ethical principles, such as sharing, or failure to observe protocols and ritual practices.; and
4. Sharing or generosity (reciprocity between all things) is the practice of sharing emphasizes the mutual relationships between humans and nature. The land is viewed as a shared gift across time and beings, including animals, plants, rocks, and rivers as being interconnected. Stewardship requires balancing present needs with those of future generations, reducing harm to the land while recognizing reliance on its resources.

Humans are part of the ecosystems and human actions have to be done in a way where the health of the ecosystems are not impaired. Tahltan oral histories, laws, and principles all indicate where these actions are not followed, significant impacts occur and relationships with the land and water are damaged to the detriment to all Tahltan.

The interconnection occurs across the Nation, a Chief or Head of Family area, and a family area as evident of Tahltan Stewardship Principles (Jones et al. 2021).

> *"The earth is animate and the same as our mother; for, if there were no earth, there would be no people. The latter are her children, and the animals also. She looks after them all, and provides food for all. The rocks are her bones, and water her milk. A child cannot live without sucking its mother's milk, and people cannot live without water" (Teit 1919: 227).*
>
> *"Sometimes the grounds of a clan got in bad shape, needed rest, for game and fur were getting scarce. Then they let part or all of it rest until the game became plentiful again, maybe from 2 to 5 years, and the clan hunted on the grounds of other people. This was always arranged in a friendly way without trouble. The Indians looked well after the fur and the game of the country so that they should not get scarce*." *(Teit n.d.)*
>
> *"…snares were kept in place until catch the yearlings (the one that walks around with mother) in the springtime, indicates that the mother caribou had chased the yearling away because she is going to have a calf. — the chief made a decision, a chief for the game, just like a game warden. — never set snare until the fall time when the calves are weaned, the young ones get big. Then they just live on fish." (Carlick n.d.)*

4.1.1.2 Sharing and Generosity

The land is not owned but shared with all living and non-living beings; stewardship requires the balance of providing for all now and for future generations, while setting the rules for allowable uses for accessing the land. In addition, accessing the land is based on the principle of sharing and sharing in a way which provides for today and future generations.

> *"In the Tahltan cycle of stories dealing with Big Raven in his role as transformer or shaper, a recurring theme is how Raven, travelling along the coast in the post-Flood world, destroys the*

> *monopoly control that certain powerful figures have over many of the goods and resources necessary to life, such as water, light, fire and knowledge. Raven steals these goods and resources and distributes them among all the people, so that their benefits can be enjoyed by all. The story which explains the origin of the tides (controlled by a man who refused to allow the tides to recede, thus blocking access to tidal foods), begins by describing a world of scarcity: "Now the people in many parts of the country had no food. Game and all kinds of food were in the possession of a few persons (or families), who alone controlled these things. Thus many people were constantly starving" (Teit 1919: 201). Scarcity and the hoarding of food and resources are the realities that define the world as it was before Raven set to work transforming it.*
>
> *In the words of Carolyn Doody (Thompson 2012: 121), the connection between the Tahltan language and the land points to the reality of "interdependency, the land provides for us and in turn we take care of it."*

Finally, the principles can be summarized as "…ownership cannot be separated from belonging; in fact, ownership is belonging. To claim possession of a piece of land is to assert not only that the land belongs to you but that you belong to the land." (Jones and McLaren 2021).

Tahltan stewardship practices are guiding principles in our implementation of the Tahltan Risk Assessment for this project. These include the principles and criteria as identified in Chapter 2 for the Tahltan Risk Assessment Factors, Sustainability Requirements, and the following stewardship priorities (Tahltan Core Priorities):

Priority 1. Maintaining the long-term health of the land (including all of its terrestrial and aquatic ecosystems) is a mandatory condition for any kind of land use in all areas within Keyeh.

Priority 2. The land must be able to continue supporting our Tahltan way of life while meeting the "health of the land" condition established under priority 1. Tahltan way of life includes maintaining our personal connection with Keyeh, being able to live off the land, sustaining our harvesting and hunting patterns, engaging in our cultural and spiritual practices, most of which are tied to the land, and earning a reliable living.

Priority 3. Tahltan rights and title must be protected, upheld and continue to be exercisable for current and future generations.

Priority 4. Land that has been impacted or degraded through industrial use must be healed, through reclamation, restoration, and ritual ceremony to support priorities 1, 2, and 3.

4.2 Tahltan Knowledge and Application in Regulatory Reviews

4.2.1 Application of Indigenous Knowledge and components of Tahltan Knowledge

During the Application Development stage of the environmental assessment, Skeena Resources collaborated with THREAT through TCG on permit applications, baseline programs and reporting, workshops, and available draft EAC Application chapters. However, due to the timing of chapters being completed, particularly those chapters related to Tahltan Common Values identified in Sections 4.2.10 and 4.2.11 not being available until very close to Skeena Resources EAC Application submission date, there was insufficient time for Tahltan

review and the input to be captured in the EAC Application. It also meant there was insufficient time for TCG to assess Skeena Resources' technical methods, existing conditions, potential singular and cumulative effects information with Tahltan Knowledge to complete our assessment requirements.

During the Application Review stage, Skeena Resources determined, after two rounds of technical review, to table a project optimization design related to water management and modelling on December 12th,2024 with technical details to be provided in January and February 2025 (Technical Memo 68). This resulted in revisions to the application with the detailed technical results expected to be delivered within the remaining 49 days of the 180 Application Review Stage of the environmental assessment. TCG provided an updated chapter to Skeena Resources on January 31st with the considerations additional information was being delivered through the water optimization process which will require further updating of the chapter once all the information has been reviewed and finalized for the application.

During the Application Review period, several water optimization technical submissions were delayed, creating challenges in ensuring sufficient time for comprehensive technical review by all parties. Several of these submissions were delivered later in the review timeline, with some arriving after the formal review period had concluded. These delays affected the ability to finalize the Application within the legislated timeframe.

In response, the Tahltan Central Government (TCG) and the Environmental Assessment Office (EAO) worked collaboratively with Skeena Resources to establish a reasonable process for receiving and reviewing outstanding content after the close of the Application Review Stage. This included aligning efforts with the ongoing closure pathway assignments for comments received up to that point.

The Application Review Stage formally concluded on February 18th, with the *Joint Notice Regarding Application Review* issued by TCG and EAO on February 20th. After this date, key submissions related to geochemical source terms, the project overview, surface water, groundwater, and fish and fish habitat were still being provided beyond the February 18th deadline.

To ensure these late submissions were given proper technical consideration, reviewers were granted until March 14th to submit their assessments. Skeena Resources subsequently provided responses to technical comments during the first week of April.

The *Joint Notice Regarding Application Review* reflected the completion of the 180 day Application Review phase of the Environmental Assessment for the Eskay Creek Revitalization Project. The contents of this Notice included:

- An overview of the feedback the TCG received from Tahltan communities during community engagement sessions;
- An overview of the feedback the EAO received from the public during the public comment period, including feedback received from the Community Advisory Committee;
- The EAO's and the TCG's direction to Skeena Resources respecting the next steps in the EA process.

Skeena Resources was provided direction on updating the Application materials and resolving issues and outstanding gaps to support development of a Revised Application.

After the Application Review stage was completed, Skeena Resources had up to a year to address the items in the Joint Notice and submit a Revised Application. Skeena Resources identified it was working to submit a Revised Application by mid April 2025 (approximately 8 weeks). This resulted in the ongoing review of technical submissions related to the potential effects to groundwater, surface water, water quality, fish and fish habitat, and the interconnected Tahltan Values into early April. In addition, over the 8 weeks, TCG worked with Skeena Resources and EAO on assigning closure pathways for comments to determine if they were closed, updated in the Revised Application, a follow-up commitment, carry forward to permitting, a potential EA condition, or a potential Tahltan condition. Potential Tahltan Conditions will be further identified in the effects and mitigations sections primarily in 4.4.9 and 4.4.10.

Between December 2024 and March 2025, the TCG engaged with Tahltan communities to share information about the Application, gather feedback on the proposed project, and incorporate additional Tahltan Knowledge and guidance into the assessment process. Further details related to socio-cultural information, potential effects, and proposed mitigations are provided in Sections 4.3, 4.4.9, and 4.4.10.

At each round of community meetings, TCG distributed information packages to ensure members had time to review project materials from Skeena Resources, as well as TCG's assessments and proposed mitigation measures. In support of ongoing transparency and accessibility, TCG finalized an internal website and other digital media tools to provide members with continued access to relevant information as the assessment transitions into the Tahltan Risk Assessment stage.

The delivery of new and revised information related to water optimization sections and chapters—alongside the technical reviews of these materials, Skeena Resources' responses, and the extension of reviews beyond the legislated Application Review period—required additional time and effort. Additionally, the process of assigning closure pathways to technical comments further constrained the timeline. As a result, TCG did not have sufficient time to complete a comprehensive review of Skeena Resources' technical methods, baseline conditions, and potential singular and cumulative effects, integrated with Tahltan Knowledge, in alignment with the expected timeline for the Revised Application submission.

This necessitated additional time for TCG to update this chapter following the Revised Application submission. From TCG's perspective, the priority was to support the delivery of Skeena Resources' Revised Application, engage with Tahltan communities, and advance the closure pathway process—efforts that collectively enabled the initiation of the 45-day Adequacy Review period.

The updated Chapter 4 is intended to support Tahltan in progressing to the Tahltan Risk Assessment following the Adequacy Decision. The information presented is designed to assist TCG in evaluating the significance of potential effects with communities during the Risk Assessment phase. It is not intended for external parties to review or use in determining project outcomes.

All the chapters have been reviewed to ensure Tahltan information only available in the public domain was considered in the submission and was considered appropriately. This chapter has been updated with additional management directions from the Tahltan Stewardship Plan, additional review and engagement with Tahltan communities, and the review of the potential Tahltan singular and cumulative effects with all the available Tahltan Knowledge and western science information available for this process. Tahltan met its commitment to provide updated public information within the legislated window of the Application Review Stage (180 days) of the EAA. Through this ongoing work, TCG has determined what can be included as

public domain information to ensure requirements of the Process Orders and the Declaration Act Agreement are met, while ensuring confidential and sensitive information is not inadvertently included.

The updated information with the project and this chapter will be the basis for supporting our Tahltan Risk Assessment and for continued implementation of the Declaration Act Agreement[1] as identified in Chapter 2.

As before, with the updated Chapter 4 as part of the Revised Application, TCG has determined what can be included as public domain information to ensure requirements of the Process Orders and the Declaration Act Agreement are met, while ensuring confidential and sensitive information is not inadvertently included.

4.2.2 Tahltan Ancestral Study (TAS)

Tahltan Knowledge is both spatial and non-spatial with linkages between knowledge sources. It provides strong information on ecological themes within ancient, historic, current, and future settings.

TAS is a study based on map-based interviews with Tahltan elders carried out over a number of years, beginning in the early 1980s and is confidential. Tahltan Knowledge Agreements, with legal protections on its use and ownership, are required by all parties to be able to access the information. The information contained in these interviews is now available in a geographic information system (GIS) database, supplemented with data from an ethnographic/historical literature review.

TAS provides a solid basis for the land use and occupancy component of Tahltan Knowledge; and also has good information relating to Tahltan Knowledge about the environment.

It is a complex source of knowledge and Tahltan are in a good position to use this complex information to support land and resource management by the Nation.

Tahltan Ancestral Study information for the Areas of Interests (AOI) identified in Section 4.4 was compiled and is included in the Tahltan Assessment information. Tahltan Knowledge is sensitive and confidential and is not part of the public domain, like the EAC Application. Tahltan Knowledge has and is being shared with the proponent through information sharing agreements and Tahltan and the EAO may share knowledge in ways identified in Part 11 of the Declaration Act Agreement.

4.2.3 Tahltan Land Use Studies (TLUS)

TCG through a Tahltan Knowledge Protocol Agreement with Skeena Resources, agreed to develop a Tahltan Land Use and Occupancy Study for the Project which was provided in 2020. The TLUS provides confidential and sensitive Tahltan information, in and around the Eskay Creek Mine project located at the headwaters of the Unuk River in northwestern British Columbia. It was developed from Tahltan Knowledge digital information, maps from interviews, community engagement, Indigenous oral histories, ethnographic monographs and field notes, historical documents and archaeological reports. The report provides evidence of Tahltan use of the region from ancient times up to the present.

[1] *Declaration Act Consent Decision-Making Agreement for the Eskay Creek Project*

The report is not part of the public domain, and remains confidential as it contains sensitive Tahltan Knowledge.

It is a component of Tahltan Knowledge being applied in the Tahltan Risk Assessment.

4.2.4 Tahltan Ecological Knowledge

Information on Tahltan ecological values, with a focus on the values identified in Sections 4.2.10 and 4.2.11 were collected as part of compiling Tahltan Knowledge for the environmental assessment. Information from Tahltan Ancestral Study dataset, the Tahltan Land Use and Occupancy Study, socio-cultural assessments, community engagements, and the Tahltan Stewardship Plan are used to support Tahltan Assessment requirements. Where public domain information is available, it is provided in the below relevant sections; however, additional information has been provided as Tahltan continued the assessment review of the EAC Application with Tahltan communities and members through the early to late stages of the Application Review stage. The potential Tahltan effects and cumulative effects with all the allowable public Tahltan Knowledge and western science information will be updated in the EAC Application.

4.2.5 Archaeology

Archaeological sites provide physical, on-the-ground evidence for land use and occupation and time depth. As such, they are an important part of Indigenous Knowledge.

The BC Archaeology and Yukon Heritage Branches maintain databases of archaeology sites and archaeologists working under permit must register all identified archaeology sites with these branches. However, most archaeological sites are unrecorded as only a fraction of the Territory has been surveyed under permit and following alignment with the Tahltan Archaeological Standards.

Archaeological evidence can have significant time depth and provide additional physical evidence of Tahltan land uses and occupancy for the past generations over the Tahltan Continuum.

Archaeological information was collected for the AOIs by THREAT as baseline information to support the Tahltan Assessment. Information on the archaeological values are identified by AOI in Section 4.4. In addition, THREAT collaborated with Skeena Resources in reviewing and providing input on archaeology permitting, fieldwork plans, baseline reporting, and draft Heritage Resources Chapter contents.

Archaeological sites identified in the BC Archaeology and Yukon Heritage Branches databases, were located throughout Tahltan AOIs with the following summary of sites:

1. Regional - 100 known sites
2. Low Elevation – Iskut River – 61 known sites
3. Low Elevation – Unuk River - 11 known sites
4. Low and Upper Elevation – Oweegee – 11 known sites
5. Upper Elevation – More Creek – 6 known sites
6. Upper Elevation – Zippa Mountain, Upper Bell-Irving River, RN Mountain – 2 known sites
7. Upper Elevation - Consent Area and Mountain Pass-Prout Plateau – 13 known sites

8. Upper Elevation – Project Footprint – 5 known sites
9. Cumulative Effects – 387 known sites

4.2.6 Current Use and Management of Tahltan Territory

Tahltan Knowledge is not static and needs updating on current uses to support Tahltan governance as elaborated on below. For EA processes, this is required to add to the knowledge set and support identifying additional current and future uses for the area.

This can be accomplished under additional knowledge collection through Tahltan Knowledge processes, or as part of socio-cultural assessments.

As identified in the above sections, continued Tahltan Knowledge collection has occurred for the EAC Application through the development of a Tahltan Land Use and Occupancy Study in 2020; the Tahltan Stewardship Plan development process with communities and members; knowledge gained through TCG department programs such as land use and harvesting/gathering surveys; knowledge gained through ongoing regulatory reviews with other major projects in the Nation; and through review of the existing knowledge datasets.

The Tahltan Stewardship Plan is an endorsed Tahltan plan, a public version will not be available until later this year, but the management directions are being applied in our assessment. The directions provide additional support and guidance with the Tahltan Risk Assessment Factors and Sustainability Principles. To assist in advancing Tahltan Assessment information, a limited copy of the plan was shared with Skeena Resources during the Application Review Stage and prior to the release publicly later this year. It is not included with the Application at this time, with further information to be included in the Tahltan Risk Assessment, where applicable.

An aspect of considering current use and management activities is the recognition of the relationship of the land, water, creatures, and Tahltan people. Where permanent or temporary barriers (both direct and indirect) exist to one being, it has an effect on all. An issue that frequently comes up in connection with resource development in general is access. Tahltan have indicated that once a resource development project was put in, access becomes closed or restricted. An example is with Eskay Creek Mine, Coast Mountain Hydro, commercial forestry, and other projects in the area using the industrial roads originating in the Bob Quinn area, access to the lower Iskut by way of Highway 37 was closed/restricted. Prior to the development, the area was used often for hunting and gathering. Closing access to the land presents a barrier to practicing the exercise of traditional land use activities and way of life.

Potential effects on the availability of wildlife and łuwe (fish) are also a significant possible barrier. Ensuring the land and waters are capable of supporting viable łuwe (fish) and wildlife populations is critical for the future of Tahltan culture and traditional practices. Closing access to the land presents barriers to multiple Tahltan values if not mitigated.

Examining barriers and conditions within this context helps to understand the environmental setting and human footprint, along with the Tahltan way of life and its fulfillment. This include the sensory, familial, social, and visual elements, as well as the impact of the non-Tahltan human footprint, which can aid in assessing past conditions and their relation to current conditions and necessary requirements for future conditions.

Additional details on the information has been updated as identified in Section 4.2.1.

4.2.6.1 Ancient and Historic Knowledge

TCG has collaborated with Skeena Resources on collecting information on past resource development activities and human footprints in predominately historic times (7 generations), and where available a longer back cast of up to 15 generations. This includes the materials identified by Skeena Resources in the relevant chapters and additional Tahltan public materials will be included through the updating process for the EAC Application.

4.2.6.2 Current and Future Uses Knowledge

TCG has collaborated with Skeena Resources on collecting information for recent and current resource development activities and human footprints in a shorter time frame (1-3 generations), and as part of the ongoing internal work on the Tahltan Assessment for future uses of the land. The information identified in Section 4.2.6 is being used to support these assessment requirements and it includes the materials identified by Skeena Resources in the relevant chapters.

Determining the existing conditions for non-Tahltan footprint and engagement was relatively straight forward. There is a spatial component where the existing human footprint is assessed using all information available. The non-spatial component is assessing the existing, and potential barriers to Tahltan. It included determining the ability of Tahltan to meet way of life, the current health of the land and Tahltan relationship with the land, the ability to recover/reclaim the land for future generations against the potential effects, mitigations, and reclamation strategies.

Some of the measures used for existing and future conditions relate to the inability to:

- Use areas due to clearing, industrial development, or habitat fragmentation;
- Lack of access to harvest or gather as in the past (e.g., ebaldzē (mushrooms), kedā (moose), jije (berries));
- Changes in access and non-Tahltan densities having influence in being on the land, land uses, harvesting and/or gathering practices;
- Drink water from streams and water sources;
- Visual, smell, and audible disruptions practicing way of life;
- Not being able to use existing areas and having to go farther to meet Peaceful Enjoyment and way of life needs;
- The importance of visiting (Kotah) and the inability to visit areas to pass along sense of belonging, connection and the spiritual and cultural identify of keyeh through teachings on the land; and
- To share the land with family in the way to support sharing and learning Tahltan way of life with children and grandchildren and share learnings for their future uses.

4.2.7 Synthesis of Tahltan Knowledge for Areas of Interest

Tahltan Knowledge for the project has been compiled, and where gaps are identified additional knowledge has been sought.

To support the synthesis, Tahltan have been following the guiding principles of Tahltan stewardship, which are based on Tahltan worldview. Tahltan worldview understands the reality of the world in a very different manner than what is presented by modern science. We recognize, however, that many disciplines within science have shifted considerably over time. This is especially the case with regard to understanding the natural environment, owing to the development of ecology over the past 100 years. Ecological science has come a long way towards adopting more Indigenous understandings of nature.

For this reason, it is helpful to compare the principles of Tahltan stewardship with some of the principles of ecosystem- based management, which does not focus on single species but on ecosystem relationships, that is to say, on the interconnections between the land, waterbodies, air and all living and non-living beings, including human communities.

The principle of kinship recognizes the interconnectedness between all things. This is fundamental to the ecosystem-based management principle of integrated management, and requires a stewardship approach for environmental assessments and regulatory reviews of resource development and other human activities. Interconnections must be accounted for across spatial and temporal scales, so short-term, long-term, and cumulative effects of land use must be considered. The land as a whole and each of its parts must remain healthy to ensure ecosystem resilience and integrity.

The principles of respect and ah'ī, which are really two sides of the same coin, require a precautionary approach. Land uses and development can have unexpected and adverse consequences for the land itself and the living and non-living beings dependent upon it. For this reason, developments which pose a threat of irreparable environmental damage are not consistent with Tahltan Sustainability Requirements (Principle 1 of the Tahltan Resource Development Policy).

The scales of assessments are identified by the AOIs where cumulative effects, regional, and landscape AOIs have been identified in Section 4.2.9 and initially described in Section 4.4. Site specific features are included within each of the landscape AOIs and are included within the Tahltan Assessment requirements. The updating of the EAC Application during the Application Review stage, and Revised Application stage has attempted to summarize the sensitivities and concerns with values at each scale both singularly and together; sacred or sensitive areas; connectivity features across scales and values; and summarizing Tahltan management directions for the identified areas and values based on the directions, law and stewardship rules, Tahltan land use plans, and community directions. As this is the first of Tahltan Assessments to come in the Nation, approaches being used will be adjusted for future applications and with the lessons learned from this review.

The outcomes presented in this updated chapter is part of the public foundation to support Tahltan undertaking the Tahltan Risk Assessment and is intended to support Tahltan considerations in making decisions on the project.

4.2.8 Tahltan High Sensitivity Areas

In July 2024, the Tahltan Stewardship Plan was endorsed by the Tahltan Annual General Assembly which provides directions for protection, avoidance, mitigations, and recovery for sensitive areas like wetlands, wetland complexes, gravesites, sacred sites, villages, assembly areas, harvesting sites; landscape areas such as natal/spawning areas for łuwe (fish) and wildlife, family areas, sacred areas, gathering, celebration and assembly areas; and, regional areas such as core areas in the Nation, clan areas, Chief/Head of Family areas, headwaters or source watersheds, large river corridors, upper elevation harvesting areas/plateaus.

Tahltan policy, governance, and management directions from the plan are included in Section 4.4 to form part of the Tahltan Assessment.

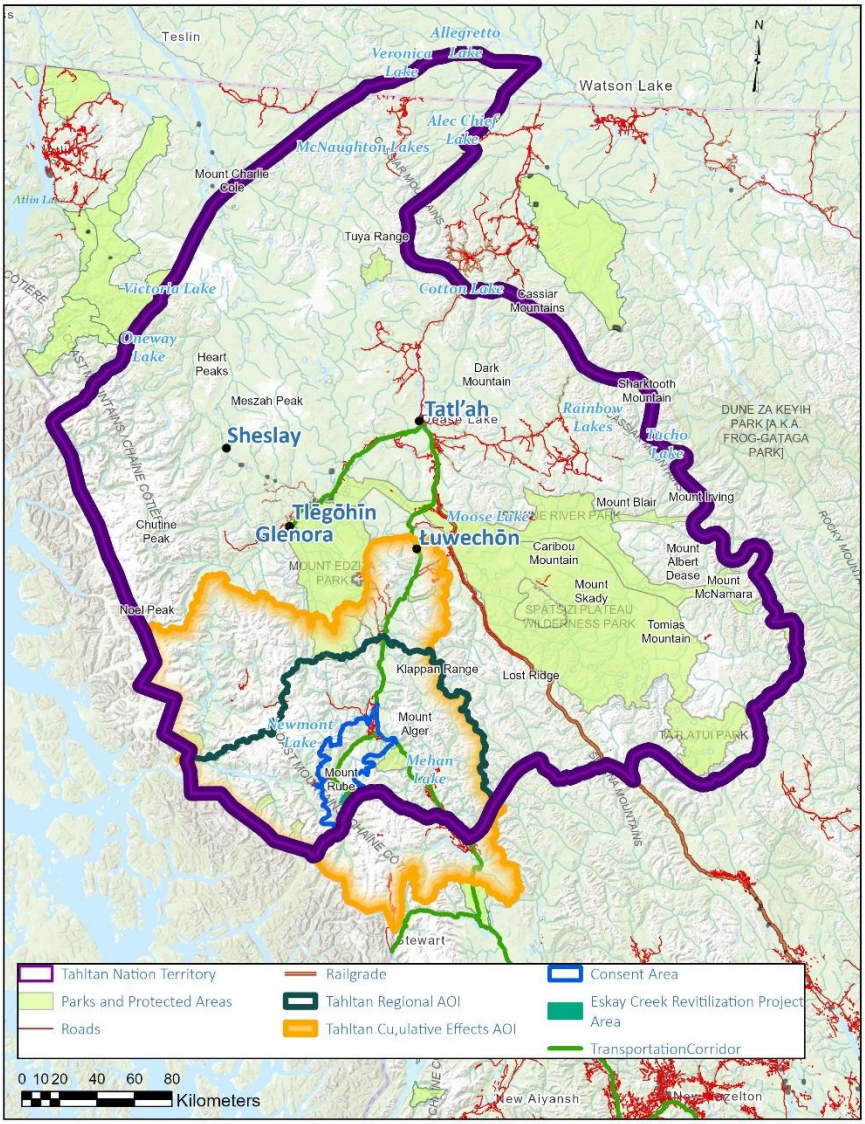
4.2.9 Areas of Interest / Assessment Boundaries

Based on Tahltan values and knowledge, Tahltan identified the following AOI for the environmental assessment process (Map 2-5), with additional details for each area identified in Section 4.4:

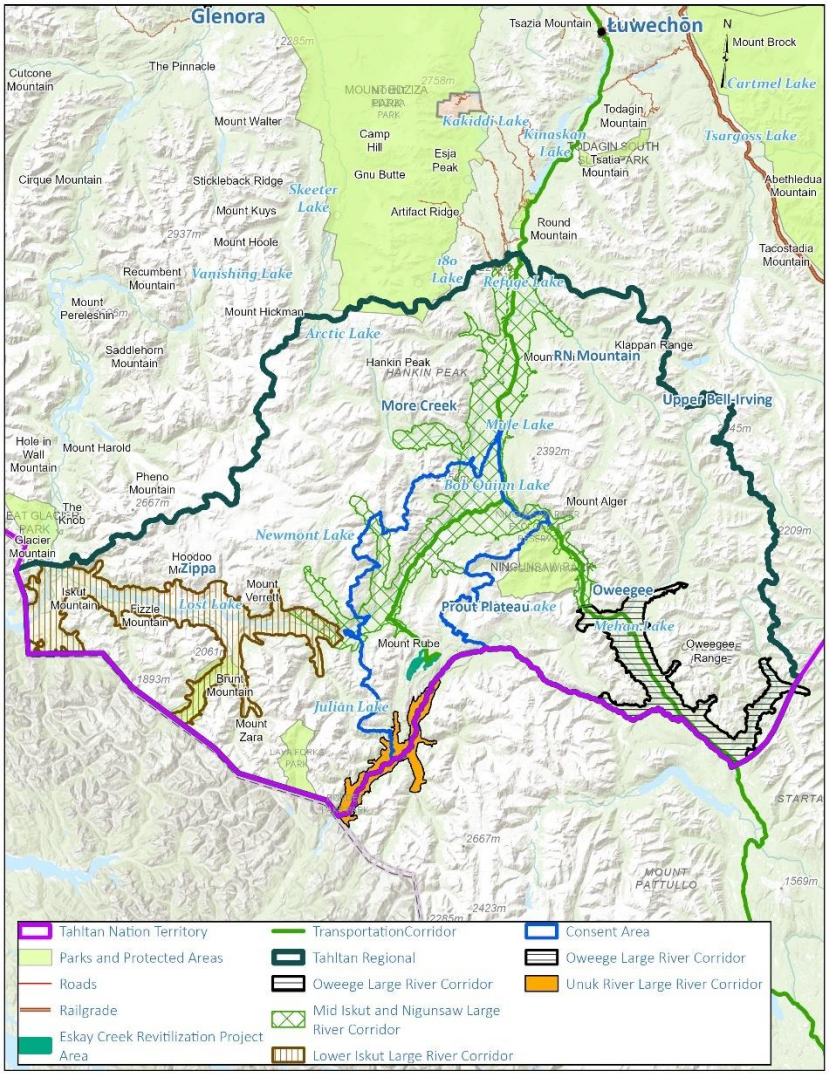
1. Regional
2. Low Elevation – Iskut River
3. Low Elevation – Unuk River
4. Low and Upper Elevation – Oweegee
5. Upper Elevation – More Creek
6. Upper Elevation – Zippa Mountain, Upper Bell-Irving River, RN Mountain
7. Upper Elevation - Consent Area and Mountain Pass-Prout Plateau
8. Upper Elevation – Project Footprint
9. Cumulative Effects

The AOIs are identified by geographic areas for now, but Tahltan terms for the areas are possible if approved by Tahltan through the internal review of information during the Application Review stage and revision of the application. Where applicable, new terms for the AOI’s will be finalized in the Revised Application.

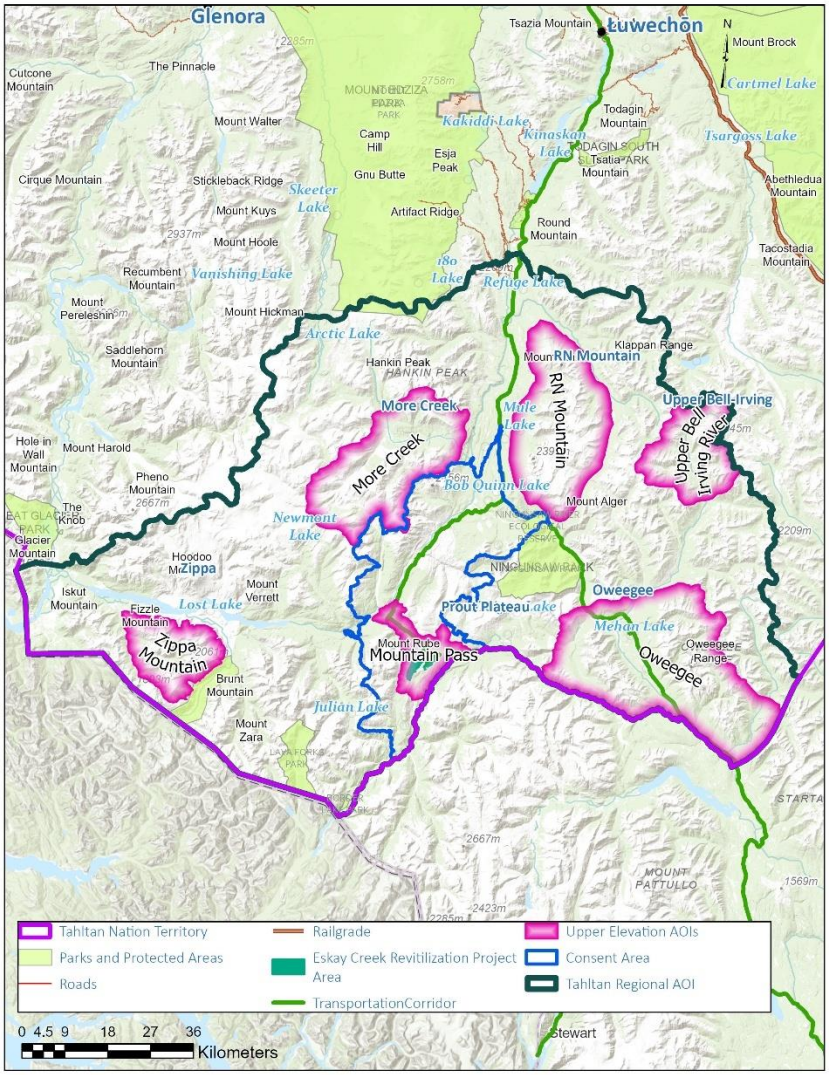
The site specific AOIs are situated within the regional and landscape AOIs, and include sensitive confidential information. The AOIs were shared through community engagement and will be included as part of the ongoing internal review. In addition, the project footprint and infrastructure as defined in the Process Order documents will be considered as site specific AOIs. This includes site specific features situated in the mountain pass from the mouth of Ketchum Creek north to Iskut River; sites identified within the consent area; and sites identified within the transportation corridor in Tahltan Nation Territory.



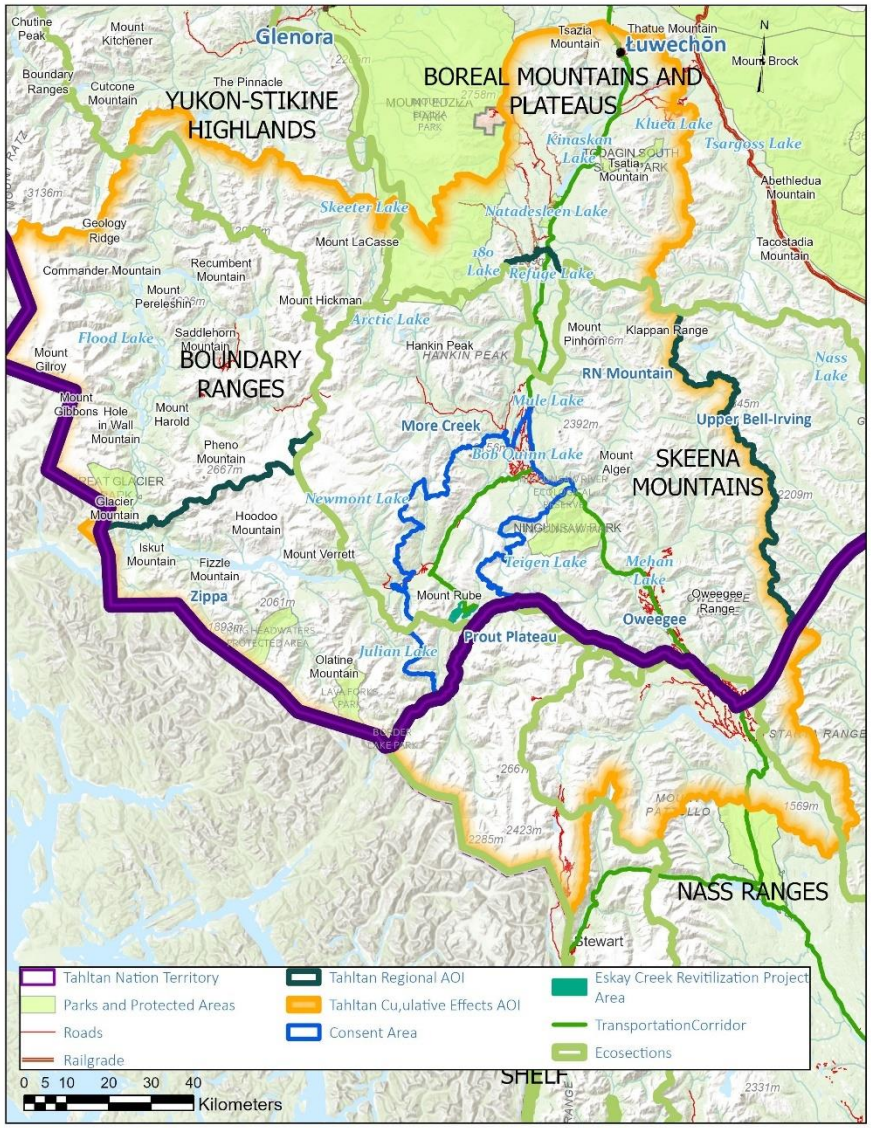
Map 2. Regional, Cumulative Effects, and Consent Area Areas of Interest boundaries.



Map 3. Low elevation Areas of Interest boundaries.



Map 4. Upper elevation Areas of Interest boundaries.



Map 5. Ecosections situated in the Tahltan Assessment Areas of Interest.

4.2.10 List of Ecosystem Communities and Species of Importance

As identified in the Hybrid Air Section 4.3.1 – *Table 4: Tahltan Ecosystem Communities and Species of Interest,* the wildlife, vegetation, and ecological communities and species are being considered as part of the EAC Application. Specific values or groups of values are captured in each of the AOI sections.

4.2.11 Common Tahltan Values with the Eskay Creek Effects Assessment

This section includes Tahltan Knowledge and Skeena Resources' technical information, specifically: information for each value where there is technical information to describe the value(s) across assessment scales; Skeena Resources' estimated effects on the values; relevant methods being considered; and revised estimated effects after considering Tahltan Knowledge and mitigations will be detailed.

Skeena Resources' technical information was evaluated and reviewed with the information, methods, estimated effects, and mitigations with Tahltan Knowledge as part of the Application Review, during the period required to develop a Revised Application based on the Notice Regarding Application Review, and as part of the Tahltan Risk Assessment stage.

Tahltan Knowledge for each value was considered, and is included in each value's section after determining its confidentiality and sensitivity for the public EAC Application. Each value was included in the updating process during the Application Review stage, during the period required to develop a Revised Application based on the Notice Regarding Application Review, and/or as part and application during the Tahltan Risk Assessment stage.

4.2.11.1 Ground Water

Groundwater technical information of the project is identified in Chapter 14, with information compiled by Skeena Resources associated with the Tahltan Consent, Project Footprint, and partially with the Mid Iskut and Nigunsaw Large River Corridor, Unuk River Large River Corridor AOI's (Section 14.3). The project-specific technical information was included for those specific AOI Sections. The remaining AOI's, where applicable, have reported groundwater information related to past regulatory reviews, studies, or relevant literature reviews to provide information to aid in determining effects.

In addition, groundwater is a topic where additional baseline, modelling, technical, and effects information was included as part of the Revised Application.

The effects identified in the relevant AOI's are included in the Tahltan Risk Assessment.

4.2.11.2 Surface Water

Surface water technical information of the project is identified in Chapter 15, with information compiled by Skeena Resources associated with the Tahltan Consent, Project Footprint, and partially with the Mid Iskut and Nigunsaw Large River Corridor, Unuk River Large River Corridor, and Regional AOI's (Section 15.3). The project-specific technical information was included for those specific AOI Sections. The remaining AOI's, where applicable, have reported surface water technical information related to past regulatory reviews, studies, or relevant literature reviews to provide information to aid in determining effects.

In addition, surface water is a topic addressed through the final Application Review Stage and included as part of the Revised Application.

The effects identified in the relevant AOI's are included in the Tahltan Risk Assessment.

4.2.11.3 Terrain and Soils

Surface water technical information of the project is identified in Chapter 17, with information compiled by Skeena Resources associated with the Tahltan Consent, Project Footprint, and partially with the Lower Iskut, Mid Iskut and Nigunsaw, and Unuk River Large River Corridors, and Regional AOI's (Section 17.3). The project-specific technical information are included for those specific AOI Sections. The remaining AOI's ,where applicable, have reported terrain and soils technical information related to past regulatory reviews, studies, or relevant literature reviews to provide information to aid in determining effects.

In addition, terrain and soils is a topic addressed through the final Application Review Stage and included as part of the Revised Application.

The effects identified in the relevant AOI's are included in the Tahltan Risk Assessment.

4.2.11.4 Aquatic Resources

Skeena has folded aquatic resources into the Fish and Fish Habitat chapter (Chapter 16), however there is separation of information related to existing fish barriers where aquatic ecosystem information is more prevalent in the project footprint watersheds, and the downstream watersheds where fish values are situated.

Aquatic resources technical information of the project is identified in Chapter 16, with information compiled by Skeena Resources associated with the Tahltan Consent, Project Footprint, and partially with the Mid Iskut and Nigunsaw, Unuk River Large River Corridors, and Regional AOI's (Section 16.3). The project-specific technical information was included for those specific AOI Sections. The remaining AOI's ,where applicable, have reported aquatic resources technical information related to past regulatory reviews, studies, or relevant literature reviews to provide information to aid in determining effects.

In addition, aquatic resources is a topic addressed through the final Application Review Stage and included as part of the Revised Application.

The effects identified in the relevant AOI's are included in the Tahltan Risk Assessment.

4.2.11.5 Fish and Fish Habitat

Fish and fish habitat technical information of the project is identified in Chapter 16, with information compiled by Skeena Resources associated with the Tahltan Consent, Project Footprint, and partially with the Mid Iskut and Nigunsaw, Unuk River Large River Corridors, and Regional AOI's (Section 16.3). The project-specific technical information are included for those specific AOI Sections. The remaining AOI's ,where applicable, have reported fish and fish habitat technical information related to past regulatory reviews, studies, or relevant literature reviews to provide information to aid in determining effects.

In addition, fish and fish habitat is a topic addressed through the final Application Review and included as part of the Revised Application.

The effects identified in the relevant AOI's are included in the Tahltan Risk Assessment.

4.2.11.6 Vegetation and Ecosystems

Vegetation and ecosystems technical information of the project is identified in Chapter 18, with information compiled by Skeena Resources associated with Tahltan Consent, Project Footprint and partially with the Lower Iskut, Mid Iskut and Nigunsaw, and Unuk River Large River Corridors, and Regional AOI's (Section 18.3). The project-specific technical information was included for those specific AOI Sections. The remaining AOI's ,where applicable, can have reported vegetation and ecosystems technical information related to past regulatory reviews, studies, or relevant literature reviews to provide information to aid in determining effects.

The effects identified in the relevant AOI's are included in the Tahltan Risk Assessment.

4.2.11.7 Wildlife and Wildlife Habitat

Wildlife and wildlife habitat technical information of the project is identified in Chapter 19, with information compiled by Skeena Resources associated with the Tahltan Consent, Project Footprint and partially with the Lower Iskut, Mid Iskut and Nigunsaw, Unuk River Large River Corridors, and Regional AOI's (Section 19.3). The project-specific technical information will be included for those specific AOI Sections. The remaining AOI's ,where applicable, have reported wildlife and wildlife habitat technical information related to past regulatory reviews, studies, or relevant literature reviews to provide information to aid in determining effects.

The effects identified in the relevant AOI's are included in the Tahltan Risk Assessment.

4.2.11.8 Human Health

Human health technical information of the project is identified in Chapter 20, with information compiled by Skeena Resources associated with the Regional and Cumulative Effects AOI's 9 (Section 20.3). This is in addition with the Tahltan Consent, and Project Footprint AOI's. This is predominately tied to the distribution of communities and human health information sources. The Human Health Risk Assessment was more focused on the Tahltan Consent, Project Footprint, and partially the Mid Iskut and Nigunsaw, and Unuk River Large River Corridors, and Regional AOI's (Section 20.3). The project-specific technical information was included for those specific AOI Sections. The remaining AOI's ,where applicable, have reported human health and Human Health Risk Assessment technical information related to past regulatory reviews, studies, or relevant literature reviews to provide information to aid in determining effects.

The effects identified in the relevant AOI's are included in the Tahltan Risk Assessment.

4.2.11.9 Heritage Resources

Heritage resources technical information of the project is identified in Chapter 25, with information compiled by Skeena Resources associated with the Tahltan Consent, Project Footprint and partially with the Lower Iskut, Mid Iskut and Nigunsaw, Unuk River Large River Corridors, and Regional AOI's (Section 25.3). The project-specific technical information was included for those specific AOI Sections. The remaining AOI's ,where applicable, have reported wildlife and wildlife habitat technical information related to past regulatory reviews, studies, or relevant literature reviews to provide information to aid in determining effects.

The effects identified in the relevant AOI's are included in the Tahltan Risk Assessment.

4.2.11.10 Current and Projections of Future Use of Land and Resources for Traditional Purposes (CFLUP)

Current and Future Use of Land and Resources for Traditional Purposes technical information of the project is identified in Chapter 26, with information compiled by Skeena Resources associated with the Tahltan Consent, Project Footprint and partially with the Lower Iskut, Mid Iskut and Nigunsaw, Unuk River Large River Corridors, and Regional AOI's (Section 26.3). The project-specific technical information was included for those specific AOI Sections. The remaining AOI's ,where applicable, have reported CFLUP technical information related to past regulatory reviews, studies, or relevant literature reviews to provide information to aid in determining effects.

The effects identified in the relevant AOI's are included in the Tahltan Risk Assessment.

4.2.11.11 Quiet Enjoyment of Land

Quiet enjoyment of land (QEL) technical information of the project is identified in Chapter 27, with information compiled by Skeena Resources associated with the Tahltan Consent, Project Footprint and partially with the Lower Iskut, Mid Iskut and Nigunsaw, Unuk River Large River Corridors, and Regional AOI's (Section 27.4). The project-specific technical information was included for those specific AOI Sections. The remaining AOI's ,where applicable, have reported QEL technical information related to past regulatory reviews, studies, or relevant literature reviews to provide information to aid in determining effects.

The effects identified in the relevant AOI's are included in the Tahltan Risk Assessment.

4.3 Tahltan Socio-Cultural Assessments

Socio-cultural assessments are a critical component of a Tahltan Risk Assessment as they provide information across the Tahltan Continuum; directions on potential singular and cumulative effects; and identification of existing Tahltan social and cultural barriers to the land and Tahltan way of life.

TCG participated in a country food baseline project with Skeena Resources, and was involved in a regional socio-economic baseline project led by Skeena Resources and Newcrest Mining Limited. Results from the projects are reported by Skeena Resources in this EAC Application.

During the Application Review stage, further social baseline information was collected with Tahltan communities through ongoing environmental assessments include issues of community revitalization and the barriers that the communities face with:

- Declining populations in-territory
    - Young-adults and young families were the demographic that tends to leave the territory at the highest rates;
    - Aging population creates pressure on local services and infrastructure;
    - High paid mining jobs can enable people to move away from the territory, contributing to a decline in population; and
    - Attracting skilled workers with communities struggles to attract and retain skilled workers to provide essential services, which can impact living conditions.
    - Community infrastructure and housing declines or decreased availability are factors with people leaving the territory, poor health conditions, and attracting/holding skilled workers in the communities. This is linked to declining or poor medical/mental health/emergency services.
    - Transportation was identified related to the problems with increased road traffic creating higher potential accidents and declining road conditions/maintenance.
    - Other factors identified issues with language revitalization, revitalization of cultural/traditional practices, particularly through harvesting, hunting, and culture camps, and rising costs are creating greater food security issues with community members.

In December (1st -6th), 2024, TCG hosted a series of multiday in-person open house sessions in the Tahltan communities of Łuwechōn - Iskut, Tatl'ah - Dease Lake, and Tlēgōhīn - Telegraph Creek. These sessions were designed to provide Tahltan membership further opportunities in the absence of Skeena Resources and the EAO to review detailed information and facilitate open discussions on the Application through the distribution and review of the TCG Eskay Creek Revitalization Project Information Package provided in December.

Throughout these engagements, Tahltan community members had the opportunity to discuss the findings and predicted outcomes of the Application's contents and technical review, ask questions, seek clarification and express perspectives related to the positive aspects, negative aspects, and uncertainty and risk around Eskay Creek. The discussions enabled TCG to further gather feedback and membership input to assist in informing understanding of Tahltan perspectives on the Application.

During March (10th -15th), 2025, TCG hosted a series of multiday in-person open house sessions in the Tahltan communities of Łuwechōn - Iskut, Tatl'ah - Dease Lake, and Tlēgōhīn - Telegraph Creek. These sessions were designed to provide Tahltan membership further opportunities with Skeena Resources being present the first day to facilitate open discussions on the findings and predicted outcomes of the Application's contents and technical review, ask questions, seek clarification and express perspectives related to the positive aspects, negative aspects, and uncertainty and risk around Eskay Creek. The second day in each community, allowed community members to meet with TCG to have similar discussion on the project. As in December, TCG distributed and sought feedback of an updated TCG Eskay Creek Revitalization Project Information Package, reflecting more of the updated content and effects still being reviewed with the Application. These meetings occurred before Skeena Resources provided all their technical content and before the Revised Application was submitted.

The following are a summary of themes expressed during these meetings and also information in the Joint Notice report:

Water and Water Quality

- Questions, feedback and concerns were raised about Eskay Creek's impacts and influence on both surface and groundwater values in Tahltan Territory;
- Questions on the snowpack in the project area, with past projects challenges with snow and water in these ecosystems with the potential effect of greater contact water volume to manage with the proposed water management systems;
- Questions on the current knowledge of aquifer mapping and understandings of seepage pathways with the range of proposed mitigations;
- Questions, feedback and concerns were raised around seepage and water retention and treatment of water from the Mine Rock Storage Area (MRSA) and Tom MacKay Storage Facility (TMSF); and
- Questions, feedback, and concerns with water quality, water treatment requirements, duration of water treatment, potential effects related to the current and future health of plants, and wildlife.

Reclamation and Closure

- Questions around Tahltan co-management and further integration of Tahltan laws, principles, and sustainability into Eskay Creek's closure and post-closure designs were raised;

- Requests to ensure that the end closure and post-closure state of Eskay Creek provide opportunities for Tahltan to re-establish use and access long-term;
- Questions around the proposed life of mine timeline and short operational duration for an open pit; and
- Questions, and feedback on bonding; ensuring it is an amount that can recover the health of the land and water in the area; not be a negative legacy; and Tahltan input and co-management with the bonding amount and requirements.

Noise, Vibration and Air Quality

- Questions and concerns on the dust and its effects on human health, air quality, and ecosystems; and
- Questions and concerns were raised around air quality, noise and vibration disturbances on human and animal health when using the land for traditional purposes and while working at Eskay Creek.

Associated Projects

- Questions and concerns with the connections to other Skeena Resources properties, such as Snip, and not associating any positive outcomes with the Eskay Creek Project decisions with support for Snip and other potential projects in the Lower Iskut River. Concerns on potential cumulative effects and potential effects on salmon, water and Tahltan way of life were identified for the Lower Iskut River.

Workforce and Project Timeline

- Concerns around the proposed life of mine timeline and short operational duration for an open pit mine;
- Questions on the opportunities for partnerships with communities to support community growth and economic development; and
- Questions and interest were raised around employment and business opportunities for Tahltan members.

Human Health and Socioeconomics

- Concerns over increased stress on existing health, social and community services in Tahltan Territory;
- Concerns on mining revenues, benefits, services, infrastructure, housing, and employment have been leaving Tahltan Territory with communities shrinking over time. It is important to ensure communities are growing with the benefits, services, housing, and employment being available to meet specific community needs;
- Concerns on the social impacts with addiction, trauma, and other related factors with mine work life and shift work schedules;
- Concerns and questions related to impacts associated with mine work life and shift work schedules on Tahltan families;
- Interest about business, contracting, training, employment and educational opportunities; and
- Recommendations for positive legacy contributions (Benefits to Tahltan): Community housing, in-territory treatment facilities, elders care homes, youth recreational facilities.

Wildlife and Wildlife Habitat

- Questions and concerns with the current and future health of wildlife, plants and habitats associated with the project area and transportation corridor;
- Questions and concerns around impacts on wildlife and wildlife habitat; and
- Questions and concerns around land disturbance, increases on stress of traditional food availability, food security, wildlife health and successful harvest of traditional foods.

Tahltan Culture, Heritage, Way of Life

- Questions and concerns about the amount of Tahltan archaeological and cultural sites that could be influenced or impacted by the Eskay Creek Mine;
- Questions, concerns, and feedback on Tahltan managing access to harvest, gather, and traditional practices for the lands within the Eskay Creek Mine Access Road and Project Area;
- Concerns and questions raised around ensuring the protection of Tahltan cultural activities relating to access along the Eskay Creek Mine Access Road and Project Area; and
- Questions and concerns raised around Tahltan spirituality, connection to the land and waters and potential access barriers on Tahltan way of life.

Transportation

- Concerns on the vehicle combinations and concentrate tonnage with the estimated daily trips during operations; and
- Concerns around the transportation increases on Highway 37 and impacts on safety for Tahltan members and increases in wildlife mortality.

Fish and Fish Habitat

- Questions and concerns around potential impacts of the Eskay Creek Mine on salmon and other aquatic resources that could be impacted by the project in surrounding and downstream rivers and waterways.

Mine Design and Project Components

- Questions, feedback, and concerns identified with the TMSF, open pits, and MRSA related to mitigations to maintain hydraulic containment including seepage barriers, partial liners, seepage interception, and other approaches;
- Questions on the use of covers and liners with topsoil, ore and waste rock stockpiles, MRSA, and open pits;
- Questions, feedback, and concerns identified with the estimated duration for water treatment currently identified as in perpetuity; and
- Questions, feedback, and concerns on the potential for downstream effects with the proposed water management system, stability of the mine components, and potential effects from component failures.

TCG has identified potential mitigations and strategies to address these themes which are found in Sections 4.4.9 and 4.4.10 and where applicable, with the specific Tahltan Values in adjacent AOI's.

Tahltan Advisors, as members of THREAT, and working with THREAT Technical Advisors, reviewed the socio-cultural studies, assessment and mitigations developed by the proponent, and other mining companies in the Nation. The findings, mitigations, and recommendations related to the socio-cultural assessment for this project and others will be included as part of the Tahltan Risk Assessment.

Additional Tahltan information has been obtained through the confidential and sensitive information of the Tahltan Stewardship Plan process, community engagements, and through related projects through the TCG departments. As well, internal work is occurring as part of the THREAT review of the EAC Application and other major project regulatory reviews occurring in the Nation as identified in Section 4.2.

Further information has been included in this chapter after review to allow it's use as public information to support the Tahltan Assessment and additional information are expected to be addressed through the Tahltan Risk Assessment.

4.4 Tahltan Values

4.4.1 Rationales and Perspectives

The economy practiced by our Tahltan ancestors was based on sharing or reciprocity, as reflected in the words of an Elder :

> *"If we take care of the land, the land will take care of us."*

When prospectors and fur-traders arrived in the nineteenth century from the outside world, they brought with them a different kind of economy, based on extraction. The extraction economy is sometimes referred to as a "boom and bust" economy where it creates intense resource extraction and pressures such as the historic 1861 Stikine gold rush and 1874 Cassiar gold rush. Both of which overwhelmed Tahltan Territory with thousands of prospectors and irrevocably transformed Tahltan way of life.

Mineral exploration increased again in the 1950s and led to the opening of the Cassiar Asbestos Mine and the construction of the Stewart-Cassiar Highway. In 2019, exploration expenditures in Tahltan Nation Territory exceeded $135.5 million, and made up approximately 41% of B.C.'s exploration activities by expenditure (Tahltan Central Government 2020).

Today mining is the predominant form of economic activity in Tahltan Territory, and Tahltans have also come to rely on the industry for employment as compared to more traditional means of economy due from the industry influence in Tahltan Territory.

The bust occurs when market conditions change, resource deposits become exhausted, or other economic factors abruptly cease or reduce the economy, often with social, cultural, and environmental negative legacies still being addressed today.

Within an economy even partially based on extraction, unlike an economy of reciprocity, the benefits of economic development always have to be balanced against the obligation to maintain the health of the land, and the needs of the present generation have to be balanced against the needs of future generations.

As one of the core principles the Tahltan Elders Council speaks to is focused on the need for balance:

"Balance must be maintained between the needs of Tahltan people in the present and future generations. The benefits and risks of land and resource management must be shared equitably between Tahltan people and other beings, and between present and future generations. Any time something is taken from the land, the land must be treated in a way that it can heal."

This guidance is consistent with foundational information identified in the Hybrid AIR, Declaration Act Agreement, and Impact Assessment Policy. Finally, the Tahltan Risk Assessment Factors and Sustainability Requirements speak to the pace and scale of development measured against the health of the land and the social, economic, cultural, and environmental positive legacies a resource project can bring to the Nation now and for future generations.

4.4.2 Spatial Context

It is important to understand that when spatial information is provided through the Tahltan Ancestral Study, Tahltan Land Use and Occupancy Studies, Tahltan Stewardship Plan, or other sources of knowledge, it is not just a site, a line, or use area. In discussions with Tahltan hunters and elders, a hunting site such as a camp represents a day or two distance or area of influence where Tahltan would hunt and return or travel to the next camp. A cabin represents a larger area of connection and use, and a village site is even larger than a cabin, given the multitude of individuals, trade, social, cultural, community, and sharing. Cabin and village sites can represent seasonal importance, a higher density and magnitude of importance. A hunting or trapping use area relates to interconnection to the living and spiritual beings in the area, their use in and about the area, and the seasonal importance to both Tahltan and the beings can be larger in influence than the use area on a map or in a report.

Placenames have been identified in the guidance document already, and a similar approach when considering the importance of a placename is the spatial context of it as well. It can speak to the importance of a mountain block or riverine system and just not a point on the ground.

Understanding the area of importance associated with features can provide insight on the connection between and among the land, living beings, spiritual beings, elements, and Tahltan.

4.4.3 Tahltan Regional Area of Interest

The following descriptions and sources of information such as biogeoclimatic zones and ecosections of British Columbia are cited in the EAC Application in the relevant chapters. Similar to other sources Skeena Resources has used to support their Application. For brevity sake, only the sources not believed to be cited already are identified in this chapter and the list has been updated as part of the ongoing work.

4.4.3.1 Description

The Tahltan Regional AOI is situated within the Boundary Ranges and Skeena Mountains Ecoregions (Map 2 & Map 5). The Boundary Ranges area is a rugged, largely ice-capped, granitic and metamorphic-based

mountain range that rises abruptly from the coast. It has large alpine areas (Boreal Altai Fescue Alpine) mainly of large icefields, glaciers and barren rock dominating the region with the coastal forested valley bottoms being found at constrained lower elevations. Forested vegetation consists of the subalpine or Mountain Hemlock zone on the lower valley slopes; and Coastal Western Hemlock zone on the valley bottoms where Sitka Ts'ū (Spruce) becomes codominant with western hemlock. The Boundary Range is a coastal rainforest ecosystem and is heavily affected by moist Pacific air lying in the Gulf of Alaska and by cold Arctic air that passes over these mountains from the northeast. The large western facing valleys allow moist Pacific air to pass through to the interior and for cold Arctic air to pass onto the neighbouring Alaska panhandle.

The Skeena Mountains Ecoregion is an area of high rugged mountains and a moist, coast/interior transition climate. They are composed of folded sedimentary rocks with complex folds and recumbent outlines. Typically, the valleys and saddles are characterized by tight complex folding, whereas the broader massifs are commonly gently contorted or even flat lying. The peaks and ridges present a serrate and jagged profile that has developed under intense glaciation. Glaciation was heavy with much ice originating here then flowing northward or southward to coalesce with other moving ice. Many glaciers persist in the regional area. Interior Gatēle (Cedar) – Hemlock forests occur in the lower valleys; while Sub-Boreal Ts'ū (Spruce) forests occur in some of the northeastern valleys. Engelmann Ts'ū (Spruce)– Subalpine Ts'ōsts'iye (Fir) forests occur on all the middle slopes and alpine vegetation or bare rock occur on the upper slopes and ridges. There are glaciers occurring on the upper slopes in the northwest nearest the Boundary Range. The area is a transitional ecosystem from the coastal rainforest to the northern boreal ecosystems to the east and north. Westward flowing moist Pacific air can bring heavy cloud cover and precipitation either as rain in the summer or deep snow in the winter. Cold Arctic air is often stalled outside this ecosection, but it can often push westward over these mountains and through the valleys bringing intense cold conditions.

In addition, the Prout Plateau, a subalpine highland situated on the eastern flank of the Boundary Ranges, just west of the Unuk River is located in the range with numerous lakes interspersed among the rolling meadows and narrow ridges of this highland are drained by tributaries of the Unuk and Iskut Rivers. Creeks flowing through the mine property – Tom MacKay, Ketchum and Eskay – all drain into the Unuk. The 54.5 km access road to the mine begins at Highway 37 just south of Bob Quinn Lake, and follows the Iskut River Valley south for most of its length, before turning east and ascending a valley to the plateau. The high country of the upper Unuk River lies along the southernmost boundary of Tahltan Territory, which stretches from the confluence of the Iskut and Tūdeẕe chō (Stikine) Rivers 80 km to the west, across the Unuk River, and east to "Groundhog Country" around the upper Nass, Tūdeẕe chō (Stikine) and Skeena Rivers.

The descriptions for the landscape and site specific AOIs will focus on biophysical and ecological information specific to the areas as all are situated within this broader regional area.

4.4.3.2 Tahltan Values

The importance of this mountainous southwestern corner of the territory has, in part, to do with the resources provided by the rivers and forests: nust'ihe (marten), tsa' (beaver), tehjishe (mink), naghā (wolverine), sas and khoh (bear), iṣbā (mountain goat), ch'iyōne (wolf), tṣe'deṣ (fisher), tṣabā'e (trout) and dēk'āne (salmon). It was also the trade that travelled up the rivers and trails (coast-interior trade network which stretched from the Pacific coast to the boreal forests east of the Rocky Mountains).

Tahltan sites, land uses, and practices includes villages, obsidian mining, trapping, gathering, harvesting, fishing, travel, placenames, and trails throughout the region. Infrastructure includes bridges, stream and river trails, villages, cabins, campsites, and hunting/fishing/trapping/gathering camp sites.

Tahltan frequently travelled back and forth between villages on the Iskut and upper Nass and the tribal headquarters at the confluence of the Tūdeẕe chō (Stikine) and Tāłtān (Tahltan) rivers, using ancient trails that followed the course of rivers, including Treaty Creek, Ningunsaw River, Unuk River and Iskut River.

Until the discovery of gold in the Cassiar region in the 1860s radically altered the conditions and patterns of life for everyone in the northwest portion of what eventually became British Columbia, Tahltan guarded their position in a coast-interior trade network which stretched from the Pacific coast to the boreal forests east of the Rocky Mountains, and extended back in time over centuries. With the coming of the European fur trade, there was a dramatic increase in the wealth and status that could be acquired through controlling the coast-interior trade networks.

While the Iskut River was also used for trade, it was perhaps more important as a travel corridor, as it provided relatively easy access via the Ningunsaw River to the country draining into the west branch of the upper Nass River. The area has villages, cabins, and areas where Tahltan gathered, located throughout the region with larger villages in the Oweegee Lake/ Bell-Irving River area. It was centered around Treaty Creek and Oweegee Lake area, and included, to the west, the Unuk River headwaters and the lower Iskut; it also encompassed much of the mountain range now known as the Skeena Mountains, extending north to K'ineẕkehne (Kinaskan) Lake at the headwaters of the Iskut River, east to the Tla'bane (Klappan) River valley, and south to Mount Bell-Irving. Tahltan frequently travelled back and forth between villages on the Iskut and upper Nass and the tribal headquarters at the confluence of the Tūdeẕe chō (Stikine) and Tāłtān (Tahltan) rivers, using ancient trails that followed the course of rivers, including Treaty Creek, Ningunsaw River, Unuk River and the Iskut.

4.4.3.3 Common Tahltan Values Across AOI

The common values identified in 4.2.11 are found in the Regional AOI, with information in the Application found in chapters 12-20,25-27 primarily with information compiled by Skeena Resources associated with the Tahltan Consent, Project Footprint and partially with the Lower Iskut, Mid Iskut and Nigunsaw, Unuk River Large River Corridors, and Regional AOI's. The project-specific technical information, where applicable, will be included for those specific AOI Sections. The areas of the AOI's outside of the above list, have reported technical information related to past regulatory reviews, studies, or relevant literature reviews to provide information to aid in determining effects.

4.4.3.4 Ancient or Past Conditions

Ancient - Long Term Conditions (7-15 Generations 140 to 300 years or 1955 to 1724)

For thousands of years, Tahltan were living traditionally in the region following the harvesting, gathering, and social seasonal patterns with the movement of wildlife, availability of plant communities, and the salmon and fish cycles influencing traditional ways. Tahltan were also mining, primarily obsidian, and trading with Indigenous neighbours. The landscapes were intact and only affected from natural disturbances and events.

Placer mining has been identified occurring in the region by the early 1860's and in the 1870's the first mineral tenure systems was brought into force for the region. Some of the first claims in the region include

Johnny Mountain in 1907 with claims continuing to increase over time as access and exploration techniques advanced (Scannell 2012). Cominco staked the Red Bluffs claims in 1929 from where the Snip Mine originated in the 1980's.

Scannell (2012) also reports there is a history of speculative mining in the region which was non-documented …*"Since the gold rush 150 years ago, thousands of mines have been developed in the Stikine River and adjacent drainages (Baker 2002). Many of these mines were abandoned when few minerals were found or when mining became unprofitable. There remain many historic mine sites that have not been documented."*

Some of the relevant events occurring in the Region identified by Tahltan include (Tahltan First Nation and IISD 2003):

- *1901 - Yukon Telegraph Line completed to Dawson City using route of the 1865–66 Collins initiative.*
- *1910 - 1910 Tahltan Declaration of the Tahltan Tribe asks for resolution of land and rights issue through the development of a treaty among the Tahltan, the Government of Canada and the Government of British Columbia.*
- *1928 - The pack trail from Telegraph Creek to Dease Lake is upgraded to a road. The Stikine, Telegraph Creek and Dease Lake become essential transportation links between southern B.C. and the northern interior.*
- *1930s - Bush planes provide new means of access to remote areas.*
- *1941–1942 - Stikine River used to transport heavy equipment and supplies for construction of the Alaska Highway.*
- *1952 - Production at the Cassiar Asbestos Mine begins; continues until 1992.*
- *1950s and 1960s - A number of Tahltan worked in mineral exploration industry.*
- *1960s - Increasingly common use of fixed wing aircraft and the helicopter (which started in the 1950s) leads to the reduction in the use of Telegraph Creek as a staging point for exploration in Tahltan Country in favour of Smithers. Tahltan involvement in exploration activities declines as a result.*

Forestry, guide outfitting, trapping and other natural resource activities were occurring during the late 1870's to the mid 1950's but on a site specific scale or at minor levels than occurring during the Past -Short Term conditions period. The regions was predominately without roads and transportation was on foot or by river until fixed wing aircraft came into greater use in the 1950's.

The environment for this period is assumed to be self regulating based on the regional ecosystems and geomorphology driving the surface and ground hydrology, aquatic ecosystems functioning and fluctuating within the natural variation of the time, and terrestrial ecosystems being driven by their respective natural disturbances. Fish and wildlife populations important to Tahltan having naturally driven cycles of population ebb and flow not overtly influenced at regional scales from human effects. Tahltan way of life has been documented to live and move with these conditions until European presence in the mid to late 1800's began its effects.

Technical documentation of the natural environment on water, wildlife/fish, and ecosystems is limited to explorer's and other European sources with the wealth of information tied to Tahltan Knowledge for the

area. What can be shared has been identified in the Tahltan Values Sections in this chapter and other cross referenced chapters in the Application. Further information may be available during the Application Revision stage, Revised Application preparation, and as part of the Tahltan Risk Assessment where confidential or sensitive Tahltan Knowledge may become available for public documents.

Past - Short Term Conditions (1-3 generations 0 – 60 years or 2024 to 1965)

1960's to 2024

Road access has created significant effects in the Tahltan Nation and the region. Highway 37 initially began from the Alaska Highway where the road was constructed south (1959) to support the Cassiar Asbestos Mine. Over time the highway was constructed to Dease Lake where it connected to the Telegraph Creek Road (Highway 51) by the early 1970's. The southern section was a series of logging roads to Meziadin Junction until the highway construction continued north to Dease Lake in the mid 1970's. This was completed to support asbestos from the Cassiar Mine to shipped to the port of Stewart and as logistical support for the Dease Lake Railgrade extension. With the completion of the bridge near Kitwanga, the highway southern endpoint moved from New Hazelton to Kitwanga in the 1970's. With the advancement of the highway and the continued mineral exploration pressures, non-status roads (roads without legal designations) occurred where proponents created resource roads or "trails" to access mineral or placer tenures.

Commercial forestry is relatively recent to the area with forestry initially tied to Cassiar Forest District which operated as a forest district until the early 2000's where it was amalgamated with the Bulkley Forest District and became the Skeena Stikine Natural Resource District with the district operated from the Smithers office and the Coast Mountains Natural Resource District (office based in Terrace) (Table 10.10-4). Skeena Resources reports "*The largest TSAs in northwestern BC include the Cassiar TSA (BC largest and least populated TSA, covering 13.1 million ha), Nass TSA, MacKenzie TSA, Kispiox TSA, Prince George TSA and North Coast TSA (Government of BC 2023c; 2024b). The Cassiar TSA includes a First Nations Woodlands Licence1 held by the Tahltan Nation. As defined by the Cassiar Iskut-Stikine LRMP, the timber harvesting land base represents approximately 1% of the total area covered by the LRMP (ILMB 2000)*."

Timber harvesting has been limited to low elevation forests in the Regional AOI with an average harvest of 265 ha and 6 openings from 1978 to 2003[2]. Cumulatively, there has been 5,580 ha of timber harvested in the Regional AOI. With each of the openings has associated roads and increased access in the low elevation areas. Since 2004 there has been an increase in the rate of timber harvesting with annual harvest averages of 23 opening and 320 ha, with 6,080 ha timber harvested from 2004 to 2024. With each of the openings having associated roads and resulting increased access in the low elevation areas. The majority of the blocks harvested since 1978 (566 openings) are considered in the early seral stage in the low elevation forests in the area.

Mineral exploration has been occurring since ancient times by Tahltan and the mining of obsidian, and since 1861 with the Stikine Gold Rush. The Regional AOI is situated within the "Golden Triangle" is one of the richest and most active areas for mineral exploration and development in BC. There are numerous known mineral deposits, widespread mineral claim staking in the area, and a number of mineral mines in the area (Table 10.10-4). Currently, there are 1,460 active mineral tenures of 598,208 ha of the area, with 34 approved Notice of Work permits (placer and mineral) in 2024, 2 major mine permits (Eskay and KSM),

[2] https://catalogue.data.gov.bc.ca/dataset/harvested-areas-of-bc-consolidated-cutblocks-

and 2 past producer mine sites (closed or under care and maintenance Snip and Johnny Mountain). It includes existing airstrips at Bob Quinn, Snip Mine, and Johnny Mountain Mine, aircraft infrastructure at Bronson Slope, and helicopter activities tied to mineral exploration. In addition, the Bronson Slope Connector is situated in the region.

Chapter 21 provides information on infrastructure and services for the project, and Skeena Resources reports:

The development of infrastructure and services in the region has been largely influenced by the evolution of mining activities in the region, with the development of roads, a telegraph line, mail service, and steamboat service in response to demand related to gold rushes in northern BC starting in the mid-nineteenth century and furthered by the large surge of gold seekers who passed through the region on their way to the Yukon during the 1898 Klondike gold rush (Sheppard 1983). While mining development in the region has historically increased services available to local residents, mine closures and associated cessation of supporting activities at other times has resulted in the reduction of services as well. For example, Sheppard (1983, 240) notes that during the 1920s to 1940s, there were four competing general stores operating in Telegraph Creek in response to demand from "hunters, adventurers, miners, and airport construction". However, by the late 1950s, mining, big-game hunting, and construction activities had declined, and only one general store remained in Telegraph Creek. As well, the local office for the Indian agent responsible for fulfilling governmental obligations under the Indian Act (RSC 1985, c I-5; including management of housing and other infrastructure) closed around this time (Sheppard 1983).

Since then, notable infrastructure developments of geographic significance to the LAA include the opening of the Cassiar Asbestos Mine in the 1950s (Albright 1982), the completion of the Stewart-Cassiar Highway in the 1970s (McIlwraith 2007), and the construction of the BC Rail grade in the mid-1970s (McIlwraith 2007). This last development did not see installation of the planned track and therefore never supported a functional railway; however, its creation facilitated off-road and pedestrian access to the areas it crosses and continues to be used today.

Chapter 22 provides information on the non-traditional land uses and tenures within the Tahltan Consent, Project Footprint and partially with the Lower Iskut, Mid Iskut and Nigunsaw, Unuk River Large River Corridors, and partially within the Regional AOI's 9 (Section 22.4.3). In addition, recent information compiled for the *Red Chris Block Cave Project - Production Phase Application for an Amendment to Environmental Assessment Certificate #M05-02* (Newmont 2024) provides additional current information on the topic. Guide outfitting concessions, range tenures, and trapping concessions are the largest area based tenures in the AOI, but they are predominantly site specific activities occurring infrequently across the tenure (Table 4-7, Newmont 2024). They are predominantly consumptive based on wildlife or are focused on supporting horses for guide outfitting as range tenures. The predominant tenures and activities are tied to forestry and associated road, cutting, and other related permits and tenures; mineral exploration tenures and permits; and major mine permits (Section 22.4.3 and Newmont 2024). Associated with these activities are 1,138 km of roads with highway(141 km) and industrial roads (623 km) in place. Additional historical information relevant to the AOI is reported in Section 22.4.2.1.

Historical information on water is based a summary from Scannell (2012) using past water sampling by Environment Canada of the Stikine River upstream of the confluence with the Iskut River between 1981 and 1994 (Jang and Webber 1996, Table 3). During the same time period, flow data was collected at a

Water Survey of Canada flow gauge located 58 km southwest of Telegraph Creek and about 70 km upstream from the water quality station.

Environment Canada (2005) reported that there were "no environmentally significant trends in water quality" and that elevated metals likely were in particulate form. Environment Canada (2005) reported: "Total aluminum, cadmium, chromium, copper, iron, lead, manganese, nickel and zinc, organic carbon, apparent color, non-filterable residue and turbidity values did not meet various water quality criteria at times due to high levels of suspended sediment carried by high river flow. Copper levels exceeded the aquatic life criteria most of the time, suggesting a naturally high copper mineralization in the watershed."

The US Geological Survey sampled water quality in the Stikine River near Wrangell, Alaska from 1975 through 1993 (Alexander et al. 2001). Stream flow also was sampled at the same location from 1976 through 1993.

According to data from the US Geological Survey, water quality in the Stikine River near Wrangell was generally good (Table 4), although 13% of the samples exceeded the chronic criterion for Cu, 20% exceeded the chronic criterion for Cd and 38% exceeded the chronic criterion for Pb (US EPA 2009; Canadian Water Quality Guidelines for the Protection of Aquatic Life 2007; Nagpal et al. 2006). Al was sampled as total Al and the higher values are likely a result of suspended sediments. Only one sample was analyzed for dissolved Al; the concentration was lower than both the acute and chronic criteria. There was no apparent correlation with exceedances in water quality and stream flow (Alexander et al. 2001).

The author also summarizes information on the Iskut River where:

Environment Canada sampled water quality in the Iskut River below the Johnson River between 1980 and 2002 (BWP Consulting 2003, Table 5). Stream flow was sampled at a Water Survey of Canada flow gauge at the same location. BWP Consulting (who conducted the data analysis) concluded that "There were no obvious environmentally significant trends in water quality that could be identified through visual examination of the data.". . . maximum nonfilterable residue and turbidity values occurred during peak flows, and were probably a natural occurrence. BWP further reported: "Total aluminum, arsenic, cadmium, chromium, copper, iron, lead, manganese and zinc, organic carbon, apparent color, non-filterable residue and turbidity values did not meet various water quality guidelines due to the high levels of suspended sediment in the water during freshet." The report states that elevated metals occurred with elevated suspended sediments, indicating that metals were in particulate form. The authors do not speculate about the bioavailability of the elevated metals.

Scannell (2012) provides summary information on the Iskut River fish distribution with the lower portions of the Iskut River, below the Iskut Canyon near Forrest Kerr Creek, supports Chinook, coho, pink and sockeye salmon; Dolly Varden char; Rainbow, steelhead, bull, and cutthroat trout; mountain whitefish; arctic grayling; burbot; lake chub; lamprey; longnose sucker; three-spine stickleback; dace and sculpin species.

The upper portion of the Iskut River, upstream of the canyon, has a more limited fish population. Dolly Varden char, bull trout, rainbow trout, mountain whitefish and sculpin were reported from this region of the Iskut River. This is consistent with information provided in the Application and the Forrest Kerr Hydroelectric Project (Forrest Kerr EA Application 2003).

Similar information on wildlife values for the Iskut River are tabled for moose and mountain goats, primarily based on the Galore Creek Environmental Assessment (Scannell 2012).

The information provided is consistent with the historical information reported by Newmont (2024), Skeena Resources Chapters, 12-20 for the regional assessment areas. Project-specific information will be identified for the Tahltan AOI's within these areas.

4.4.3.5 Existing Conditions and Barriers to Tahltan

Existing Conditions and Barriers

The existing conditions and barriers for the AOI are the reported for each AOI in the below sections, they represent the existing conditions and barriers to Tahltan with the information reported in Section 4.4.3.4.

The existing conditions related to the Regional AOI are based on the existing conditions and barriers identified for each AOI and Tahltan Stewardship Plan (TSP) designation:

- Lower Iskut Large River Corridor (Section 4.4.4.5)
- Mid Iskut and Nigunsaw Large River Corridor (Sections 4.4.4.5, 4.4.6.5, 4.4.9.5)
- Oweegee Creek (Section 4.4.6.5)
- Upper Elevation Zippa Mountain, Upper Bell-Irving, and RN Mountain (Section 4.4.8.5)
- Upper Elevation More Creek (Section 4.4.7.5)
- Upper Elevation Consent Area and Project Footprint (Sections 4.4.9.5 and 4.4.10.5)

Tahltan Stewardship Plan Management Directions

The TSP is at this time an internal plan, but a version has been provided to Skeena Resources in early 2025. Additionally, it is expected that a publicly available version is expected to be shared in early to mid 2025. The Tahltan Core Priorities under the TSP are based on the same Tahltan Core Priorities for major projects and are an integral part of the multi-layered approach and application of Tahltan Stewardship Principles and Tahltan worldview under the Tahltan Assessment. Resource development and other land-based activities must ensure that they are meeting or being consistent with the TSP planning priorities.

Within the Regional AOI there are 3 main designations providing management directions for allowable land uses and to be applied with the Tahltan Risk Assessment:

- Large River Corridor (Mid Iskut and Nigunsaw, Lower Stikine and Iskut, Oweegee, and Unuk Rivers)
    - Water is sacred to Tahltan, and rivers speak to the cycle of life, and cycle of renewal. Large rivers tend to be at lower elevations, with broad floodplains, riparian habitats, mosaic of wetlands, lakes, or oxbows, and with critical habitats for many important Tahltan salmon, wildlife, and plant species. Large rivers are also important for animal movements or migrations. Tahltan trails, hunting and fishing places, gathering areas, sacred areas, grave sites, and communities are found in large river valleys.
- Klappan Range and Burrage Management Area (upper elevation areas outside of the Large River Corridors)
    - The focus is on conserving Tahltan values such as wildlife, fisheries, archaeology, community uses, sacred areas, gravesites with some level of other activities being allowed if meeting TSP stewardship principles and land use priorities with Tahltan approval of the activities.

- Edoxtotene Management Area
    - The focus is on conserving Tahltan values such as wildlife, fisheries, archaeology, community uses, sacred areas, gravesites with some level of other activities being allowed if meeting TSP stewardship principles and land use priorities with Tahltan approval of the activities.

4.4.3.6 Potential Effects

The approach to summarize the potential effects are to consider the effects in the following manner using similar considerations as identified in Section 10.5 and the Hybrid AIR (Sections 4.5.3 and 4). For each AOI, the potential effects are identified by:

- The Tahltan Stewardship Plan Management Designation and Priorities (PI) and an initial estimate of if the management directions associated with the designations and priorities are being met with past, existing, or potential future conditions.
- The source of the potential effects being identified as:
    - Indirect Effects where the effects are not tied to the Eskay Creek Mine Project
    - Mixed Effects where the effects are partially contributable to the project
    - Direct Effects where the effects are estimated to be with the project, with the project-specific effects being explored through each AOI.
    - Nil to limited effects are occurring from the project and possibly other land use activities in the AOI

The potential effects related to the Regional AOI are based on the existing conditions and potential effects identified for each AOI and TSP designation:

- Lower Iskut Large River Corridor (Section 4.4.4.6)
- Mid Iskut and Nigunsaw Large River Corridor (Sections 4.4.4.6, 4.4.6.6, 4.4.9.6)
- Oweegee Creek (Section 4.4.6.6)
- Upper Elevation Zippa Mountain, Upper Bell-Irving, and RN Mountain (Section 4.4.8.6)
- Upper Elevation More Creek (Section 4.4.7.6)
- Upper Elevation Consent Area and Project Footprint (Sections 4.4.9.6 and 4.4.10.6)

4.4.3.7 Effects Management and Scales for Significance

The following are the criteria framed to determine the scope and scale of effects, and a potential significance status for each AOI:

- Source – see above
- Magnitude – Framed against Core Priorities (CP), TSP, and Rights
    - Negligible - no detectable change from existing conditions to Tahltan Values or AOI
    - Low -slightly alter or change the value or AOI based on TSP, CI, and Rights without changing the role or function.

  - Moderate - will alter or change the nature, role, or function of the value but will not affect its integrity of the value or AOI based on TSP, CI, and Rights without changing the role or function.
  - High - will substantially alter or change the nature, role, or function value or AOI and may jeopardize the Valued Component's integrity based on TSP, CI, and Rights.
- Extent
  - Site specific
  - Landscape
  - Regional
  - CE scales (can be intermediate or mixed phases depending on value)
- Duration is framed by generations and is framed on current length a barrier or effect has been in place as well as the additive time for the barrier
  - 1 year or less
  - Less than or equal to ¼ of a generation
  - ½ half of a generation
  - 1 generation
  - 1-3 generations
  - 7 or more generations
- Reversibility is framed similar to Duration
- Frequency: if at higher frequencies then generational measures can be considered
  - Once: the effect is confined to one discrete event.
  - Regular: the effect occurs at consistent intervals.
  - Irregular: the effect occurs at sporadic intervals.
  - Continuous: effects occur constantly.
- Confidence in information and contingencies
  - High - there is a good understanding of the cause-effect relationship between the project, AOI, and Tahltan values with both Tahltan Knowledge and western science. There is sufficient information to support the Tahltan Assessment. The selected mitigation measures have been applied elsewhere with the desired outcomes. There is a low degree of uncertainty associated with Tahltan Knowledge, CP and TSP directions, western science data inputs and/or modelling techniques, and variation from the predicted effect is expected to be low.
  - Moderate - - there is a moderate understanding of the cause-effect relationship between the project, AOI, and Tahltan values with both Tahltan Knowledge and western science. The information is limited, has some gaps, and there is some uncertainties to support the Tahltan Assessment. The selected mitigation measures have been applied elsewhere with variable outcomes or have been applied elsewhere but are untested in the project area or AOI. There is a moderate uncertainty associated with Tahltan Knowledge, CP and TSP directions, western science data inputs and/or

modelling techniques, and variation from the predicted effect is has moderate variation or uncertainty of success.

- Low - the cause-effect relationships between the project and between the project, AOI, and Tahltan values with both Tahltan Knowledge and western science are poorly understood. There may be several unknown external variables and/or data for the project area that are incomplete. The effectiveness of the mitigation measures may not yet be proven. Modelling results may vary considerably given the data inputs. There is a high degree of uncertainty in the conclusions of the assessment.

- Risk and uncertainty
  - Low: less than 40 percent chance of effect occurring
  - Medium: 40 to 80 percent chance of effect occurring
  - High: more than 80 percent chance of effect occurring

Consequence can be assessed as minor, moderate or major based on the combination of

The below are the summary of potential effects by AOI with the additional content provided in the Potential Effects Section for each AOI.

Lower Iskut

- Source – primarily indirect, with some direct effects from Snip Mine with ECRP
- Magnitude – moderate to high
- Extent –landscape
- Duration – 1 generation
- Reversibility – reversible 1 to 3 generations
- Frequency - continuous
- Confidence - moderate
- Risk and uncertainty – medium/moderate

Mid-Iskut and Nigunsaw River

- Source - primarily indirect, with some direct effects with the transportation corridor
- Magnitude – moderate
- Extent – landscape
- Duration -1 to 3 generations
- Reversibility - reversible 1 to 3 generations
- Frequency - continuous
- Confidence – moderate to high
- Risk and uncertainty – medium/moderate

Unuk River

- Source – primarily indirect, with direct effects from KSM
- Magnitude – low to moderate
- Extent – site specific to landscape
- Duration – 1 generation
- Reversibility – irreversible to 1 to 3 generations reversible
- Frequency - continuous
- Confidence - moderate
- Risk and uncertainty – medium/moderate

Oweegee Upper and Lower AOI

- Source – Indirect with Highway 37, KSM, mineral exploration, and other resource activities, mixed with transportation from ECRP
- Magnitude – low to moderate
- Extent – landscape
- Duration 1 to 3 generations reversible long-term
- Frequency – continuous
- Confidence moderate to high
- Risk and uncertainty – medium/moderate

Consent and Mountain Pass AOI

- Extent – site specific to landscape
- Magnitude –moderate to high
- Duration –1-3 generations to over 3 generations
- Frequency – continuous
- Reversibility – reversible long term to irreversible
- Risk and uncertainty – moderate to high and moderate to high uncertainty

Based on the above and the information reported for each AOI the below are the estimated effects to the Regional AOI:

- Regional AOI Source – mixed effects
- Magnitude – low to moderate
- Extent – landscape to regional
- Duration 1 to 3 generations reversible long-term

- Frequency – continuous
- Confidence moderate to high
- Risk and uncertainty – medium/moderate

4.4.3.8 Positive Effects

Positive effects from the project have been identified for common Tahltan Values in Sections 4.4.3.6, 4.5, 4.4.9 and 10 for use in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and positive effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.3.9 Assessing Negative Effects

Negative effects have been identified in 4.4.3.6 for use in the Tahltan Risk Assessment.

Negative effects have also been identified for common Tahltan Values in Sections 4.5, and 4.4.9 and 10 for use in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and negative effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.3.10 Cumulative Effects Assessment

The potential cumulative effects related to the Regional AOI are based on the potential cumulative effects identified for each AOI and TSP designation:

- Lower Iskut Large River Corridor (Section 4.4.4.10)
- Mid Iskut and Nigunsaw Large River Corridor (Sections 4.4.4.10, 4.4.6.10, 4.4.9.10)
- Oweegee Creek (Section 4.4.6.10)
- Upper Elevation Zippa Mountain, Upper Bell-Irving, and RN Mountain (Section 4.4.8.10)
- Upper Elevation More Creek (Section 4.4.7.10)
- Upper Elevation Consent Area and Project Footprint (Sections 4.4.9.10 and 4.4.10.10)

4.4.3.11 Monitoring, Mitigations, and Contingencies

Monitoring, mitigations, and contingencies are reported for each AOI within the Regional AOI and follow the relevant sections listed above, and the TSP management directions provided for each AOI identify the range of potential monitoring, mitigations, and contingencies to meet Tahltan land use outcomes.

Project-specific mitigations, such as additional liners, additional monitoring, greater access to the land as potential mitigations and others have been identified for all or some of Tahltan Values in Section 4.4.9 and 10.

4.4.3.12 Follow-up Strategy

Strategies have been identified for common Tahltan Values in Sections 4.5, and 4.4.3, 9 and 10 for use in the Tahltan Risk Assessment.

4.4.4 Tahltan Low Elevation Areas of Interest – Iskut River

4.4.4.1 Description

The Iskut River Valley has its headwaters at Kluachon Lake and flows south through boreal, transitional coastal, and coastal rainforest ecosystems where it meets with the Tūdeẕe chō (Stikine) River just before leaving the Nation and flowing southwest to the ocean. These transitions also have influence on the climate and distribution of flora and fauna with the lower reaches with coastal species until reaching the Forrest Kerr Canyon area where the shift from Coastal Western Hemlock forests to Interior Gatēle (Cedar) Hemlock forests occurs, and finally shifts to a boreal ecosystems and forests in the Burrage Creek area. Kedā (moose), khoh (grizzly bear), sas (black bear), ch'iyōne (wolf), furbearers, dediye (marmot) (groundhogs/ gophers) dih (grouse), and tẕabā'e (trout) are found throughout the area, with dēk'āne (salmon), āseda (steelhead), iẕbā (mountain goat) found more in coastal sections, and debēhe (Stone's sheep), tẕabā'e (rainbow trout), and hodzih (caribou) found in the northern boreal ecosystems of the valleys.

Volcanic activity is widespread throughout the Stikine Volcanic Belt, the most notable areas being the Edīzā'e (Mount Edziza), Spectrum, and Hoodoo mountain complexes. To the south of these areas, and in close proximity to the study area for this project, are the Iskut-Unuk River Cones. A total of 12 flows have been identified, dating between 70,000 and 150 years BP (Stasiuk and Russell 1990; Hauksdottir et al. 1994). Holocene lava flows have dammed Iskut River and Forest Kerr Creek; one was dated to around 7500-8200 cal years BP, and another to around 4000 to 5000 cal years BP (Fisher et al. 1998).

Tom Mackay Creek, adjacent to the Eskay Mine Site, was also dammed (Hauksdottir et al. 1994). Many of these volcanic eruptions have blocked Tūdeẕe chō (Stikine) River tributaries, preventing anadromous fish from reaching their spawning grounds upriver from these blockages (Albright 1984; Friesen 1985). This has occurred at the Forrest Kerr Canyon where several barriers have limited dēk'āne (salmon) and āseda (steelhead) distribution to the lower Iskut River reaches.

4.4.4.2 Tahltan Values

Tahltan values and land uses in the area relate to the seasonal, climatic, and ecological differences in the valleys. Lower Iskut River has village sites, cabins and camps related to dēk'āne (salmon), medicinal, plants, iẕbā (mountain goat), and furbearers. Mid Iskut River has similar features but more focus on accessing ebaldzē (mushrooms), kedā (moose), and furbearers with the different forest habitats and with lower snow depths than coastal sections, and upper sections with villages, cabins, camps across all seasons. All areas included trapping, harvesting, and gathering and with better access to broader plateaus where seasonal gathering of wildlife, dediye (marmot), and subalpine and alpine plants in the mid and upper river areas. Trade and travel along the river valleys is a core value with the river corridor providing access to upper elevation obsidian mining and other sites.

Lower Iskut

The wide braided coastal river valley of the lower Iskut River valley is rich in fur-bearing animals. Tahltan describes trapping nust'ihe (marten), tehjishe (mink) and beaver in the lower Iskut and up the Jekill River. The valley of the Jekill was particularly good tehjishe (mink) country. They had a number of cabins along the Iskut, built in the 1920s and 30s, where they would spend the winter months. The mountain ranges south and east of the Iskut (presumably including the mountains around the Unuk River headwaters as well) were prime iʂbā (mountain goat) country. In addition, khoh (grizzlies) were plentiful in the area.

Middle Iskut and Ningunsaw River

The upper and middle portions of the Iskut River Valley were primary hunting, trapping and fishing grounds for Tahltan in the area. The area around Bob Quinn Lake, near where the access road to the mine site joins Highway 37, was used intensively, partly because it formed a kind of crossroads for a number of important trails. Northwards, the trails followed the Iskut upstream, leading to the numerous fish-bearing lakes of the Iskut headwaters, the obsidian quarries around Edīzā'e (Mount Edziza), the high plateau hunting grounds across the Spectrum Ranges, and eventually the heart of Tahltan country on the Tūdeʂe chō (Stikine). Southwest took one down the Iskut to the trapping grounds on the lower river flats and the summer dēk'āne (salmon) fishery, as well as the trade trails which turned south over the pass to the Unuk River. The trails up Ningunsaw River led to the west branch of the Nass River and the upper Nass country.

Members of Tahltan clans spread across a vast territory, made regular if not frequent journeys to the ancient tribal area at the confluence of the Tūdeʂe chō (Stikine) and Tāłtān (Tahltan) Rivers. Tahltan called this place Titcaxhan ("fish jumping up little water"), a name which emphasizes the importance of the annual dēk'āne (salmon) run up the Tāłtān (Tahltan) River for the life of Tahltan. For Tahltan in the Middle Iskut River area, the trail from the upper Nass country to the Tūdeʂe chō (Stikine) and Tāłtān (Tahltan) confluence was the highway home and as such it was well travelled. The southern portion of this trail, running from the Iskut River to the upper Nass by way of Ningunsaw River (the route eventually followed by Highway 37), an Elder described that it would take him and his father nine days using a dog team to get from Łuwechōn (Iskut) on Kluachon Lake to their trap line on the upper Nass.

The importance of the area around Bob Quinn Lake with the archaeological record suggests that use of this area stretches back thousands of years with knowledge there used to be a village on the lake. More recently, it has been home to a number of trapping cabins. Trapping in the valleys of the Iskut and Ningunsaw rivers is important with cabins and trails that connect from Iskut River to Devil Creek, just upstream from where it flows into the Iskut and from there a trail led over to Bob Quinn Lake, then south to the Ningunsaw River. Trapping for nust'ihe (marten), nasdā (lynx), tʂe'deʂ (fisher), naghā (wolverine) and tehjishe (mink). Kedā (moose), was noted, could only be hunted at Echo Lake in the winter. The snow there was shallow enough for them. Khoh (grizzly bear) and ch'iyōne (wolf) were also plentiful in the valley.

Another example of trails and traplines began at the mouth of the Ningunsaw, where trails and traplines followed the Iskut south to the mouth of Forrest Kerr Creek. The trapline went up the creek, and then over the divide to More Creek, and back finally to the Iskut trapping mostly nust'ihe (marten) and tʂe'deʂ (fisher). This area, from the mouth of Burrage Creek south to Thomas Creek, and around Bob Quinn Lake, was and still is, good berry country. There have been and still are traplines in the country and includes the area where the Eskay Creek Mine road leaves the Iskut River towards the mine site area.

4.4.4.3 Common Tahltan Values Across AOI

Tahltan Values

Tahltan Values identified in Section 4.2.11 are considered for AOI's and in the context described in 4.2.11 while recognizing the confidentiality and sensitivity of Tahltan Knowledge within a public document. Summary information for the AOI(s) identified in the Tahltan Stewardship Plan management directions detailed in Section 4.4.4.5 provide additional indicators for Tahltan Values.

Tahltan Knowledge for each value will be included in each value's section after determining its confidentiality and sensitivity for the public EAC Application. Values are included in the updating process during the Application Review stage, during the period required to develop a Revised Application based on the Notice Regarding Application Review, and during the Tahltan Risk Assessment stage.

Technical information for the AOI(s), unless reported by Skeena Resources, or tied to specific projects are supported by information identified regionally.

4.4.4.4 Ancient or Past Conditions

Lower Iskut

Ancient - Long Term Conditions (7-15 Generations 140 to 300 years or 1955 to 1724)

Similar conditions as reported in Section 4.4.3.4 occurred for the two low elevation areas with additional activities reported occurring on the lower Iskut River where prospectors in the late 1800's identified mineral occurrences in the area; this was followed by more systematic bedrock mapping, geochemical sampling, and geophysical surveying (Baker 2002). During the Klondike Gold Rush a number of prominent mineral outcroppings, including Johnny Mountain were identified by a variety of expeditions including during the international boundary surveys (Martin 1996). The first claims in the Johnny Mountain area were staked by the Iskut Mining Company of Wrangell Alaska in 1907 (Scannell 2012). This was followed my other prospectors, such as the Red Bluff claim group, 5 km northeast of the Johnny Mountain property (which is located outside of the area), was staked in 1909. Cominco staked 42 claims in 1929 in the Iskut River area; these claims were never developed (Scannell 2012).

Past - Short Term Conditions (1-3 generations 20 – 60 years or 2024 to 1965)

1960's to 2024

Since the 1980's there has been 24 mineral claims with the companies associated with Snip, Bronson Slope, and Rock and Roll properties. The companies holding the claims have changed over the years with the current owners and property descriptions detailed in the next section. The BC Minfile[3] information reports 1 anomaly, 44 showings, 2 developed prospects (Bronson Slope and Rock and Roll), 8 prospects, and 1 past producer (Snip Mine). While these features were explored and prospected earlier than 1965, the majority of the work has occurred in the recent past and current times.

[3] https://minfile.gov.bc.ca/

Access has been limited to water and aircraft with trails and mining roads being limited to mineral exploration and on mineral claims. There is an airstrip which is still used to date, it was built to service the Snip Mine and is located on the river floodplain in the mine site area. When Prime Resources/Cominco operated Snip Mine, it used a hovercraft from Wrangell to bring goods and haul concentrate from the mine. The hovercraft was contentious with concerns on the effects created on the coastal rivers, with Department of Fisheries and Oceans reporting direct and indirect effects to salmon redds, juvenile salmon in shallow areas, and stream bank erosion (Brown and Lidster 1995). The hovercraft ceased operations before the mine closed.

The limited road access in this area was developed to support three run-of-river hydroelectric facilities — Forrest Kerr (195 MW), McLymont (66 MW), and Volcano (17 MW) Hydro Projects owned and operated by Coast Mountain Hydro Services. The project was approved in 2003 with an Environmental Assessment Certificate awarded. The project obtained commercial authorization in 2014 to begin selling power to BC Hydro. The majority of the road access is related to resource roads developed in the Mid Iskut River area which is detailed in Section 10.10.2 with 8 km of main road with additional road access to support the project being developed. Currently the road access terminates at this project.

Additional Information on Forrest Kerr from Chapter 10 (Page 10-43) include:

- *Production: a 195 MW run-of-river hydroelectric power project with a transmission line capacity of 287 kilovolt (kV) (Cambria Gordon Ltd. 2009).*
- *Project Lifespan: operations began in late 2014, with an anticipated project life of 60 years.*
- *Footprint: approximately 29 ha of land was cleared for the Forrest Kerr Hydroelectric project. The project infrastructure includes the following: Weir on the Iskut River below Forrest Kerr Creek, intake structure, power tunnel, surge / access tunnel, in-tunnel de-sanding system, underground powerhouse with three turbines, powerhouse access shaft and hoist, and tailrace (tunnel discharge (Cambria Gordon Ltd. 2009).*
- *Access: access to the project is from Highway 37 and the Eskay Creek MAR. A new 8 km gravel road was constructed in 2005 (Cambria Gordon Ltd. 2009) and the airstrip at Bob Quinn Lake will also be used to transport personnel and materials.*
- *Traffic volume: it is assumed that there will be limited traffic along Highway 37 and the Eskay Creek MAR during operations. The primary traffic will comprise employees heading to and from the Forrest Kerr camp at approximately one trip per day.*
- *Water (inputs/outputs): water will be diverted from the Iskut River through a 3.1 km tunnel, resulting in approximately 252 cubic metres per second (m3/s) diversion flow, and returned to the Iskut River at the tailrace (Glassman 2003).*
- *Employment: the hydroelectric power project created 400 jobs during peak construction.*

There are 3 archaeology sites in the AOI, and includes multiple site specific and landscape Tahltan Knowledge features in the AOI.

Middle Iskut and Ningunsaw River

Ancient - Long Term Conditions (7-15 Generations 140 to 300 years or 1955 to 1724)

Similar conditions as reported in Section 4.4.4.3 occurred for the low elevation areas with additional activities reported occurring

Past - Short Term Conditions (1-3 generations 0 – 60 years or 2024 to 1965)

1960's to 2024

The AOI is represents the low elevation valley landscape with mid Iskut River and Nigunsaw River as the Large River Corridor identified in the TSP. It is also the where the main access, transmission line, a focal area for commercial forestry, and access to the Forrest Kerr and Eskay Creek projects are situated.

There are 235 mineral tenures with 23 owners in the AOI, with 9 approved Notice of Work permits, primarily for quarries, and as access control for upper elevation permits (e.g., Galore Creek, Ball Creek, and Iskut Property), or the permit boundaries extend into the AOI with the majority of the permit existing in upper elevation areas outside of the AOI.

Access

Highway 37 access has created significant effects in the Tahltan Nation and the region. Highway 37 initially began from the Alaska Highway where the road was constructed south (1959) to support the Cassiar Asbestos Mine. Over time the highway was constructed to Dease Lake where it connected to the Telegraph Creek Road (Highway 51) by the early 1970's.

Access into the AOI for resource development has been proposed since 1990's where the provincial government proposed a 72 km road from Bob Quinn Lake through to Bronson Creek, Prime Resources constructed the first 40 km to near Volcano Creek before extending the road south to the Eskay Creek Mine Area (Forrest Kerr EA Application 2003). Access corridors in the area for resource development (does not include forestry where generally the roads are considered public) are tied to Special Use Permits or mineral exploration authorizations and are restricted and not public access. This includes access for Tahltan being restricted or limited intermittently over this time for traditional uses.

Section 21.4 provides information on the Eskay Creek Mine Access Road as:

The Eskay Creek MAR: *located near the Bob Quinn Lake Aerodrome, this road is approximately 138 km north of Meziadin Junction. The Eskay Creek MAR is about 59 km long and is a private industrial road that was built by Barrick Gold Corporation in the early 1990s. Some respondents to the Tahltan Survey noted that this road, as well as other access roads, have been both beneficial and problematic for traditional land use, as it opens up access to areas that were previously more difficult to access for both Indigenous and non-Indigenous land users. Land use activities are described in Chapter 22, Non-traditional Land and Resource Use, and Chapter 26, Current and Future Use of Land and Resources for Traditional Purposes Effects Assessment.*

There are 610 km of access in the AOI, with the following breakdown:

- 89 km Highway 37
- 3 km local or recreation
- 520 km resource related roads and trails (includes roads within cutblocks and right of ways)
- Of the 520 km, there is 71 km related to the Eskay Creek Mine Access Road (MAR) and Forest Kerr Project. The MAR continues to south towards the mine site but is outside of the AOI. It will be discussed further in Section 4.4.9 and 10

NTL

The Northwest Transmission Line is situated in the AOI, and includes the transmission line extension to Iskut and Red Chris Mine. The transmission line has a Right of Way (ROW varies from 25 m to 40 m) with associated access roads and clearings adjacent to the ROW (both cutblock and openings to support the transmission line) remaining in permanent early seral stage. The total disturbance is approximately 91 km and 225 ha, and approximately 40 km and 229 ha with the connection to the line from the Forrest Kerr Project.

Forestry

At this time, there are 283 cutblocks, primarily situated in the Bob Quinn and Devils Lake Forest Service Roads area, with harvesting occurring as

- 8 openings - 1980-1990, 472 ha
- 33 openings - 1991-2000, 741 ha
- 24 openings – 2001-2010, 171 ha
- 182 openings - 2011 – 2020, 2,727 ha
- 36 openings -2021-2024, 36 blocks, 756 ha

Given the duration of timber harvesting, the openings are early seral but silviculture has been occurring on blocks to meet provincial standards and obligations. Overall, the seral stage for the AOI, has 6% early, 23% mid-mature, 51% mature, and 18% old forests in the Interior Cedar Hemlock (ICH) ecosystem.

Within the AOI, 56 archaeological sites are situated in the AOI, and includes multiple site specific and landscape Tahltan Knowledge features in the AOI.

4.4.4.5 Existing Conditions and Barriers to Tahltan

Lower Iskut

Currently there are 8 authorized Notice of Works permits for claims in the area, with Snip, Bronson Creek, Rock and Roll, Iskut Project – Bronson Connector, KSP, Hoodoo, and Golden Triangle North. There 120 claims issued or renewed since 2004 with the 10 companies owning the claims. Johnny Mountain is a closed mine site and it is located at higher elevations outside of this area.

Currently the forest clearings are tied to openings for mineral exploration permits, such as drill pads or camps; outside of the land cleared for the Coast Mountain Hydro Services hydroelectric projects and the Snip Mine infrastructure. Outside of existing disturbances related to past mine infrastructure, airstrips, developed prospects, and mineral exploration, there is intact forested river corridor in the area.

However, the Iskut Property (see below description) includes the Bronson Connector, a proposed mineral exploration road from the McLymont hydroelectric project and traversing approximately 20 km to Snip Mine/Craig River area. Access into the area has been proposed since 1990's where the provincial government proposed a 72 km road from Bob Quinn Lake through to Bronson Creek, Prime Resources constructed the first 40 km to near Volcano Creek before extending the road south to the Eskay Creek Mine Area (Forrest Kerr EA Application 2003). Access corridors in the area are tied to Special Use Permits or mineral exploration authorizations and are restricted and not public access. This includes access for Tahltan being restricted or limited over this time fir traditional uses. Water access from the Stikine to the Lower Iskut continues to be accessible by Tahltan and public.

Snip Mine

Snip Mine is an underground mine located in the Craig and Lower Iskut River area, it operated from 1991 to 1999. It produced 32.093 million grams of gold, 12.183 million grams of silver and 249,276 kilograms of copper from about 1.2 million tonnes (BC Minfile). It was operated by Prime Resources Corporation (a venture of companies including Cominco, and Homestake Canada Inc). It was closed in 1999 with an approved reclamation and closure plan. In 2001, Barrick Gold Ltd purchased the property by acquiring Homestake Canada Inc. and was responsible for the closure management of the site. In 2017, Skeena Resources obtained full ownership of the project from Barrick Gold Ltd. Skeena has indicated interest in making the project a satellite operation if the Eskay Creek Revitalization Project is approved, with ore being possibly trucked to the mill at Eskay Creek and processed. This could occur during the later stages of the Eskay Creek Life of Mine[4]. This is not included as a component of the environmental assessment application currently being reviewed.

Highlights about the project provided by Skeena Resources in Chapter 10 (Page 10-39) include the following:

- *Production: from 1991 to 1999, the mine produced 32,093 t of gold, 12,182 t of silver, and 249,276 kg of copper from 1.2 Mt of ore (MEMPR 2007).*
- *Project Lifespan: the Snip Mine lifespan was 8 years (1991 to 1999).*
- *Footprint: the mine infrastructure consisted of an underground mining operation, mill, tailings impoundment, and ancillary facilities.*
- *Access: the mine was a fly-in/fly-out operation accessible by helicopter (Sibbick and MacGillivray 2006). The site could also be accessed by boat (Price 2003), or hovercraft along the Iskut and Stikine rivers.*
- *Traffic volume: the mine relied mostly on air transportation (Wojdak 2010).*
- *Tailings storage: the tailings impoundment was constructed in the saddle of a narrow valley forming the headwaters to both Monsoon and Sky creeks. Dams were constructed at each end to form a tailings*

[4] https://skeenagoldsilver.com/eskay-creek/snip-deposit/

impoundment approximately 150 m wide and 800 m long. Discharge from the impoundment was directed toward Sky Creek (Sibbick and MacGillivray 2006).

- *Water (inputs/outputs): the mine site is drained by the Bronson, Monsoon, and Sky Creek drainages. Both Bronson and Monsoon creeks flow directly into the Iskut River, whereas Sky Creek flows into the Craig River and then into the Iskut River (Sibbick and MacGillivray 2006).*
- *Employment: on average, 122 people were employed by the mine (MEMPR 1993).*

Iskut Property

The Iskut Property is a combination of claims including the Bronson Slope developed prospect, Golden Triangle North, and the Johnny Mountain Mine all held by Snipgold[5] Inc. a subsidiary of Seabridge Gold who also owns KSM mine project south of the Eskay Creek Mine.

Bronson Slope has history of advanced exploration and developed prospect primarily during the 1980's and 1990's through a number of companies. Skyline Gold Corporation became Snipgold Corp was the last company owning the properties prior to Seabridge Gold acquisition in 2016. It is neighbouring the Snip Mine site and in the 1990's and 2000's worked with previous owners on exploration activities. The Bronson Slope property also includes the Bronson Connector which to date, has not been advanced by Snipgold to further the development of the properties; however this is a concern with Tahltan by opening the area to more ground based resource development access in the Lower Iskut River.

Johnny Mountain

Johnny Mountain has history of exploration from the early 1900's with a number of companies involved in exploring the deposit. It was an underground mine that operated from 1988 to 1993. It closed in 1993, with the mine site and property being held over a dozen companies resulting in the lack of a consolidated and focused environmentally sustainable development plan[5]. In 2005, Skyline Gold (later renamed Snipgold) purchased the property with Seabridge Gold obtained the entire Iskut Property including Johnny Mountain mine site in 2016.

Rock and Roll Property

Originally claimed in 1988, it has a history of exploration including drilling, it is currently owned by Etruscus Resources Corporation (2018), with plans to continue drilling and other exploration activities under its current authorization. It is a developed prospect (BC Minfile).

Mid Iskut Nigunsaw

The current conditions and barriers identified in the Past Short Term conditions section are still in place today. The industrial access developed in the past for the Eskay Mine Project and then the Forrest Kerr Hydroelectric Project has restrictions and barriers to Tahltan use of the area.

[5] https://iskutproject.com/

Additional information for the AOI are reported in 4.4.9 and 10, with additional project-specific conditions and barriers identified to the Consent and Project Footprint AOI's.

Tahltan Stewardship Plan Management Directions

The following are the management directions applicable to these lower elevation AOI's:

Lower Iskut River Large River Corridor Management Directions

- Maintain healthy salmon ecosystems and all ground and surface water sources that drain into the Lower Stikine and Iskut Rivers
- Maintain intact and undisturbed rivers and coastal old growth rainforests
- Maintain river corridor valleys and connections to high elevation areas
- Ensure Tahltan trails and cultural heritage is protected for any disturbance
- Reclaim and disturbance from roads or industry impacts on the Lower Stikine and Iskut River
- Maintain and protect Tahltan fish camps and enforce Tahltan quiet enjoyment of the land and seasonality of cultural activities (e.g. helicopter flights paths during fish camps)
- Restrict aerial flight paths and create exclusion and avoidance areas around Tahltan communities, cultural sites and fish camps
- Track fishing going into tributaries and rivers off Lower Stikine and Iskut Rivers e.g. Scud, Chutine, Porcupine
- Increase Tahltan education and youth and elder trips along the rivers and story telling about Tahltan culture
- Protect all groundwater and surface water sources and ensure clean pristine water for all living beings and communities
- No road building or development along the Lower Stikine and Iskut Rivers
- Increase fishery database and studies to go beyond Salmon stocks
- Implement fire protection measures around cultural areas, fish camps and Telegraph Creek and Glenora

Middle Iskut and Nigunsaw River

- Maintain intact landscape from along Iskut River Large River Corridor from Iskut Lakes to Lower Iskut River
- Recovery and restoring surface and groundwater, riparian habitats, valleys and industrial roads
- Maintain healthy aquatic ecosystems and waterways
- Maintain connection to high elevations from low valley bottoms
- Support wildlife and fish habitat reclamation and enhancement
- Protect Tahltan trails and archaeological sites and cultural areas

- Protect Tahltans right to quiet enjoyment of the land and waters in these areas from industrial development

4.4.4.6 Potential Effects

Lower Iskut

The key TSP management directions for the AOI focus on maintaining and reclaiming intact coastal river aquatic and terrestrial ecosystems; restrict ground access; protecting and maintaining salmon and fish values; protecting water sources; protecting and maintaining Tahltan sites, uses, and way of life; maintaining or recovering salmon populations; and reducing cumulative effects to Tahltan and interconnected values.

Currently the AOI, is meeting many of the directions, with mineral exploration and closed mine reclamation/ maintenance being the main resource activities. However the potential for increased resource development with ground access in the near future related to the Iskut Property, Bronson Connector, and Snip Mine can result in not meeting key management directions for the AOI and result in singular effects and cumulative effects to Tahltan values.

The effects will be from primarily other projects/proponents and is not directly tied to the Application. There are indirect/mixed effects contributing with the potential interest in using Snip Mine as a satellite operation to truck ore to the mine site for processing.

Mid Iskut and Nigunsaw

The key TSP management directions for the AOI focus on maintaining intact landscape and healthy aquatic ecosystems and waterways from along Iskut River Large River Corridor from Iskut Lakes to Lower Iskut River; recovery and restoring surface and groundwater, riparian habitats, valleys and industrial roads; Maintain healthy aquatic ecosystems and waterways; support wildlife and fish habitat reclamation and enhancement; protect Tahltan cultural, archaeological sites, traditional practices, and quiet enjoyment of the land and waters in these areas from industrial development

Currently the AOI, is meeting many of the directions, with mine access, forestry development, and hydroelectric being the main resource activities. However the potential for increased resource development, access development, increased traffic volumes directly from resource development in the AOI and adjacent to the AOI, such as Red Chris, Galore Creek, Eskay Creek, the Iskut Property, Bronson Connector, Snip Mine, and forestry can result in not meeting key management directions for the AOI and result in further singular effects and cumulative effects to Tahltan values.

The effects will be from primarily other projects/proponents outside of the effects related access barriers transportation effects directly tied to the Application. There are indirect/mixed effects contributing with other projects, such as the potential interest in using Snip Mine as a satellite operation to truck ore to the mine site for processing, further development of the Galore Creek Mine Project, forestry, and existing access contributing to licensed harvesting and gathering in the AOI. Air traffic could also increase to support increased in mineral exploration, licensed harvesting and gathering, and advancing mineral projects which can result in additional effects on wildlife, way of life, and quiet enjoyment of the land values.

4.4.4.7 Effects Management and Scales for Significance

Lower Iskut

- Source – primarily indirect, with some direct effects from Snip Mine with the ECRP
- Magnitude – moderate to high
- Extent –landscape
- Duration – 1 generation
- Reversibility – reversible 1 to 3 generations
- Frequency - continuous
- Confidence - moderate
- Risk and uncertainty – medium/moderate

Mid-Iskut and Nigunsaw River

- Source - primarily indirect, with some direct effects with the transportation corridor
- Magnitude – moderate
- Extent – landscape
- Duration -1 to 3 generations
- Reversibility - reversible 1 to 3 generations
- Frequency - continuous
- Confidence – moderate to high
- Risk and uncertainty – medium/moderate

4.4.4.8 Assessing Positive Effects

Positive effects from the project have been identified for common Tahltan Values in Sections 4.5, and 4.4.3, 9 and 10 for use in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and positive effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.4.9 Assessing Negative Effects

Negative effects have been identified in 4.4.4.6 for use in the Tahltan Risk Assessment.

Negative effects have also been identified for common Tahltan Values in Sections 4.5, and 4.4.3, 9 and 10 and will be for use in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and negative effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.4.10 Cumulative Effects Assessment

Lower Iskut

The AOI has effects that are predominately indirect, related to past mining projects, projects potentially being developed in the future, and with TSP management directions not being met from other projects. The potential effects are moderate to high, as opening the area to ground access, and developing projects and properties can alter the nature, role, or function value or AOI and not be consistent with the TSP. The landscape will have effects from the identified projects and potentially effect half to a generation in duration. The confidence of the effects are moderate as the effects are known but the potential occurring has some risks and is dependent on external pressures and financial markets. The risk of occurring is low to moderate. This results in moderate significance of effects to Tahltan with the effects assigned to other factors/projects. It does relate partially direct to the effects related to the Eskay Creek Mine Project. Based on the TSP management direction and effects to Tahltan Values, there are estimated moderate effects to the AOI primarily from other sources/projects. Further assessment will occur with Tahltan engagement, with final determination through the Tahltan Risk Assessment.

Mid Iskut and Nigunsaw

The AOI has effects that are predominately indirect, related to past mining projects, forestry, transportation effects from projects potentially being developed in the future, existing projects and with effects related to Eskay Creek Mine Project-related to access barriers/restrictions, wildlife mortalities, transportation effects, CFTLUP, and QEL effects. The potential effects are low to moderate, as the area already has existing ground access, the river corridor does have intact old and mature forest landscapes, and developing projects and properties can slightly alter or alter the nature, role, or function value or AOI but still be consistent with the TSP. The landscape will be effected and potentially effect half to a generation in duration. However, the direct effects from the project are focused on the transportation corridor, with indirect effects effecting the landscape. With mitigations and agreements with Tahltan, the direct effects, while regular, could be reduced. The management directions for the AOI can potentially be met. The confidence of the effects are moderate to high as the effects are known with the risk of occurring is medium. This results in moderate significance of effects to Tahltan with the majority of effects assigned to other factors/projects. It does relate only partially directly to the effects related to the Eskay Creek Mine Project with the transportation corridor and the existing and new barriers to Tahltan priorities. Based on the TSP management direction and effects to Tahltan Values, there are estimated moderate effects to the AOI primarily from other sources/projects. Further assessment will occur with Tahltan engagement, with final determination through the Tahltan Risk Assessment.

4.4.4.11 Monitoring, Mitigations, and Contingencies

The TSP management directions provided for the AOI identify the range of potential monitoring, mitigations, and contingencies to meet Tahltan land use outcomes for the AOI. For the Lower Iskut AOI, maintaining intact coastal forested corridor with limited ground access, maintaining or protecting ground and surface

water sources, and maintaining salmon/fish and wildlife ecosystems can be the basis for co-designing with Tahltan on proposed interests in the AOI. For the Mid-Iskut and Nigunsaw AOI it is more focused on maintaining intact forested river landscape, restoration of disturbed areas and roads.

Project-specific mitigations, such as additional liners, additional monitoring, greater access to the land as potential mitigations and others have been identified for all or some of Tahltan Values in Section 4.4.9 and 10.

4.4.4.12 Follow-up Strategy

This will be further refined based on additional information, mitigations, and/or reduction in uncertainties/risk to Tahltan Values and the adjustments in the Tahltan Risk Assessment.

4.4.5 Tahltan Low Elevation Areas of Interest – Unuk River

4.4.5.1 Description

The Unuk River is situated in the Coast Mountains of the Boundary Ranges Ecoregion with a similar climate and coastal rainforest ecosystems of the lower Iskut River. From its headwaters in a heavily glaciated area in British Columbia, south of the lower Iskut River, the Unuk flows west and south for 129 kilometres, crossing into Alaska and emptying into Burroughs Bay, an inlet of Behm Canal.

Forests of mountain hemlock, amabilis ts'ōsts'iye (fir), yellow gatēle (cedar), and Sitka ts'ū (spruce) dominate the area, with an understory populated by shrubs, including echish (blueberry), false azalea, echish chō (huckleberry) and white-flowered rhododendron. Mosses flourish in these forests. At higher elevations heaths dominated by heather and dwarf conifers are present. Sas (black bear) and khoh (grizzly bear), Roosevelt elk, kuwegānh (deer), and iʂbā (mountain goat) are the most common large mammals in this zone. The forests also provide a home for a variety of dzime (birds), including dechīh yekhidlī (woodpeckers), red-breasted nuthatches, meʂdẕī (owls), golden-crowned kinglets and estoste (chestnut-backed chickadees). At higher elevations, kasbā'e (ptarmigan) and dih chō (blue grouse) are present. Łuwe (fish) present in this area include tʂabā'e (trout) and dēk'āne (salmon) species, and dēk'āne (salmon) runs are recorded on the Unuk River in Alaska; however, closer to the study area it is unclear if lava flows or other obstructions have blocked dēk'āne (salmon) from proceeding up river, as is the case for the Iskut River and Mackay Creek.

As found in Chapter 11.2.1.2, Skeena Resources reports *"Several species of salmonids are known to inhabit the Unuk River, with the majority of spawning and rearing occurring in the lower 39 km of the Alaska section (Mecum and Kissner 1989) and in Border Lake, approximately 2 km upstream of the BC Alaska border. Border Lake, which is known for its recruitment of chinook, sockeye (dēk'āne), pink, coho (tl'ūga), and chum salmon (Tripp 1987; Fisheries and Oceans Canada 1987), discharges into the Unuk River. The canyons located upstream of Border Lake restrict upstream migration of pink and chum salmon, but spawning and rearing of sockeye, chinook, and coho salmon is known to extend as far upstream as Storie Creek, approximately 5 km downstream of the confluence of Ketchum Creek and the Unuk River (Hallam Knight Piesold Ltd. and Homestake Canada Inc. 1993). Dolly Varden trout (tʂabā'e) are also known to inhabit locations upstream of Eskay Creek along the Unuk River, as well as Unuk Lake, located approximately 14 km upstream of the confluence of Ketchum Creek and the Unuk River).*

During multiple sampling events since the 1990s, no fish have been observed or captured in the upper tributaries of the Unuk River in the immediate vicinity of the Project, typically due to the lack of fish access from low elevation fish bearing stream reaches, which contain extensive barriers and cascades."

4.4.5.2 Tahltan Values

The Unuk River is important as an area of Tahltan trade, travel, and harvesting/gathering/trapping for plants, medicinal plants, dēk'āne (salmon), łuwe (fish), furbearers, iṣbā (mountain goat), kedā (moose), bears, and ch'iyōne (wolf). Archaeological sites are found in the area that are dated precontact. The Prout Plateau is a key connection between the Unuk, Lower Iskut, and Ningunsaw/Oweegee Lake areas for Tahltan travel and trading.

There was a winter trade route from the coast that came up the Unuk River and crossed over to the Iskut below the mouth of the lower canyon (passing right through the Eskay Creek mine site area). An Elder's description of the trade goods – muskets, shot, powder and knives – places the use of this route in the post-contact period. The goods were brought by most likely Tlingit, using dog-sleds. Tahltan met them somewhere on the Prout Plateau, and from there they hauled the goods up the frozen Iskut to Devil Creek, near Bob Quinn Lake. At Devil Creek they cached the goods until summer. In the summer, using horses, transported the goods up into the high country of the Tla'bane (Klappan) River and beyond, using the trails that followed the upper Nass. Some of these goods ended up at McDames Creek on the Dease River, to be traded with Kaska.

A Tahltan Elder describes a trail that connected Oweegee with the lower Iskut by way of Treaty Creek and the Unuk River. This trail would have passed over Prout Plateau. The high country around the headwaters of Treaty Creek and the Unuk River provided good habitat for hunting khoh (grizzly bear), in the early fall. Tahltan called Treaty Creek Kas Xoo, which means "grizzly bear creek".

4.4.5.3 Common Tahltan Values Across AOI

Tahltan Values identified in Section 4.2.11 are considered for AOI's and in the context described in 4.2.11 while recognizing the confidentiality and sensitivity of Tahltan Knowledge within a public document. Summary information for the AOI(s) identified in the Tahltan Stewardship Plan management directions detailed in Section 4.4.4.5 provide additional indicators for Tahltan Values.

Tahltan Knowledge for each value will be included in each value's section after determining its confidentiality and sensitivity for the public EAC Application.

Technical information for the AOI(s), unless reported by Skeena Resources, or tied to specific projects are supported by information identified regionally.

4.4.5.4 Ancient or Past Conditions

Ancient - Long Term Conditions (7-15 Generations 140 to 300 years or 1955 to 1724)

Similar conditions as reported in Section 4.4.3.4 and 4.4.5.2 are applicable for ancient conditions.

Past - Short Term Conditions (1-3 generations 20 – 60 years or 2024 to 1965)

1960's to 2024

The information reported for the history of the Eskay Creek Mine Project, KSM Mine Project, and Brucejack Mine Project identified in Sections 21.4.2 and 22.4.2 are applicable to the AOI.

4.4.5.5 Existing Conditions and Barriers to Tahltan

Unuk

The Unuk Large River Corridor is an intact forested AOI without ground access, commercial forestry, or other large human openings/clearings. It is a coastal salmon river ecosystem as reported by Skeena Resources in chapters 14-20,22, 25-27 detailing the relevant water, fish, wildlife, non-traditional, and traditional uses in the AOI.

It is within a landscape of high mineral values overlain with Notice of Work permits covering the length of the AOI, with interests tied to the upper elevation mineral deposits. Within the AOI, there is 1 developed prospect, several prospects, and numerous showings in the coastal forest landscape. Eskay Creek, KSM, and Brucejack Mines and Nugget Trap have drainage into the AOI. There are 60 mineral claims covering the majority of the AOI, with the claims owned by 4 companies with 40 of claims owned by Eskay Mining Corp.

Additional information on non-traditional land uses and tenures are reported in Section 22.4.3 and traditional land uses in Section 25.4.3.

Tahltan Stewardship Plan Management Directions

The following are the management directions applicable to the lower elevation AOI:

Unuk Large River Corridor

- Maintain healthy salmon ecosystems and all ground and surface water sources that drain into the river
- Maintain intact and undisturbed rivers and coastal old growth rainforests
- Maintain river corridor valleys and connections to high elevation areas
- Ensure Tahltan trails and cultural heritage is protected for any disturbance
- Reclaim and disturbance from roads or industry impacts on the Unuk River
- Maintain and protect Tahltan fish camps and enforce Tahltan quiet enjoyment of the land and seasonality of cultural activities (e.g. helicopter flights paths during fish camps)
- Increase Tahltan education and youth and elder trips along the rivers and story telling about Tahltan culture
- Protect all groundwater and surface water sources and ensure clean pristine water for all living beings and communities
- No road building or development along the Unuk Rivers
- Increase fishery database and studies to go beyond Salmon stocks
- Implement fire protection measures around cultural areas, or site specific areas such as fish camps

4.4.5.6 Potential Effects

The potential effects identified for the Unuk River are related to water, fish and fish habitat, traditional land uses, quiet enjoyment of the land tied to the Eskay Creek Mine Project and cumulative effects from KSM Mine Project, Brucejack Mine Project and Nugget Trap Mine Project detailed by both Skeena Resources and Tahltan (chapters 12-20,24-27 with sections 5-7 in each chapter detailing the potential effects and estimated outcomes; Sections 4.4.9 and 10).

4.4.5.7 Effects Management and Scales for Significance

- Source – primarily indirect, with direct effects from KSM
- Magnitude – low to moderate
- Extent – site specific to landscape
- Duration – 1 generation
- Reversibility – irreversible to 1 to 3 generations reversible
- Frequency - continuous
- Confidence - moderate
- Risk and uncertainty – medium/moderate

The criteria identified in Section 4.4.3.7 is included in the Revised Application for use in the Tahltan Risk Assessment.

4.4.5.8 Positive Effects

Positive effects from the project have been identified for common Tahltan Values in Sections 4.5, and 4.4.3, 9 and 10 for use in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and positive effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.5.9 Assessing Negative Effects

Negative effects have been identified in 4.4.5.6 for use in the Tahltan Risk Assessment.

Negative effects have also been identified for common Tahltan Values in Sections 4.5, and 4.4.3, 9 and 10 for use in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and negative effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.5.10 Cumulative Effects Assessment

The potential effects identified for the Unuk River are related to water, fish and fish habitat, traditional land uses, quiet enjoyment of the land tied to the Eskay Creek Mine Project and cumulative effects from KSM Mine Project and Brucejack Mine Project detailed by both Skeena Resources and Tahltan (chapters 12-20,24-27 with sections 5-7 in each chapter detailing the potential effects and estimated outcomes; Sections 4.4.9 and 10).

The AOI has effects that are predominately directly related to the Eskay Creek Mine Project-related to water, fish and fish habitat, traditional land uses, and quiet enjoyment of the land and indirectly related to past mining projects, projects potentially being developed in the future, and with TSP management directions potentially not being met from other resource development and land use activities. The potential effects are low to moderate with the current estimated effects from the project, existing projects, and effects from developing projects and properties can alter the nature, role, or function value or AOI and not be consistent with the TSP. The landscape will have effects from the identified projects and potentially effect half to a generation or longer in duration. The confidence and risk of the effects are moderate as the effects are known but the potential occurring has some risks and is dependent on external pressures and financial markets. The risk of occurring is low to moderate. Based on the TSP management direction and effects to Tahltan values, there are estimated moderate effects to the AOI primarily from other sources/projects. Further assessment will occur with Tahltan engagement, with final determination through the Tahltan Risk Assessment.

4.4.5.11 Monitoring, Mitigations, and Contingencies

The TSP management directions provided for the AOI identify the range of potential monitoring, mitigations, and contingencies to meet Tahltan land use outcomes for the AOI. For the Unuk River AOI, maintaining intact coastal forested corridor with limited ground access, maintaining or protecting ground and surface water sources, and maintaining salmon/fish and wildlife ecosystems can be the basis for co-designing with Tahltan on current and proposed interests in the AOI.

4.4.5.12 Follow-up Strategy

This will be further refined based on additional information, mitigations, and/or reduction in uncertainties/risk to Tahltan Values and the adjustments in the Tahltan Risk Assessment.

4.4.6 Tahltan Low and Upper Elevation Areas of Interest – Oweegee

4.4.6.1 Description

The area is identified as the Ningunsaw River, Upper Nass River, and Bell-Irving River lower forested river valleys situated in the Regional AOI. Oweegee is identified as the name for the area as it is an area (Oweegee Lake and Creek) of importance to Tahltan. The forested ecosystems are similar to the mid-Iskut with westward flowing moist Pacific air can bring heavy precipitation either as rain or deep snow. Cold Arctic air is often stalled, but it can often push westward over these mountains and bring intense cold conditions. Interior Gatēle(Cedar) – Hemlock forests occur in the valley bottoms and Engelmann Ts'ū (Spruce)– Subalpine Ts'ōsts'iye (Fir) forests occur on all the middle slopes and alpine vegetation or bare rock occur on the upper slopes and ridges; small glaciers occur on the upper slopes in the northwest nearest the Boundary Ranges.

4.4.6.2 Tahltan Values

It is an area where Tahltan villages, burials, cabins, and camps are located to access the dēk'āne (salmon), łuwe (fish), wildlife, plants and medicinal plants. It supported trails and travel within the area and to the tribal headquarters at the confluence of the Tūdeʂe chō (Stikine) and Tāłtān (Tahltan) rivers, as well trails and travel to Unuk, Tla'bane (Klappan), Upper Nass, and Iskut River valleys.

An Elder describes life at Oweegee on the Nass (Bell-Irving), approximately 50 km east of Eskay Creek where they worked and dried dēk'āne (salmon). In the spring they would catch small dēk'āne (salmon) or tʂabā'e (trout) to consume and also put up in the fall for the winter. Łuwe (fish) were caught using traps and place marked trees in the water. The traps were covered and łuwe (fish) would jump into them.

Trapping for beaver was important and at times numbers were low due to the demands of the fur trade. Bears were hunted for meat and grease, and specific areas such as Treaty Creek and Ningunsaw River areas were good places for hunting khoh (grizzly bear). In the fall, dediye (marmot/groundhogs/ground squirrel) were snared. To keep the meat, bags were made from dry dēk'āne (salmon) skin, and kept it dry for use in the winter as well fats of animals like bear, moose and goat was stored in the hide or in containers made of birch bark (Edzerza 2005). In early winter, tl'ūga (coho) were caught using gaffs and to store the dried łuwe (fish), Tahltan dug cold storage pits . This storage approach was described in detail by Thorman (n.d.). The depressions left by these storage pits can be seen today throughout Tahltan Territory, mostly on the benches above rivers. According to Thorman, it was the storage pit or ***duwe'ged*** (meaning "a safe place dug") that gave the Tahltan a measure of security in their winter food supplies.

Elders describe hunting and trapping trails that run from Oweegee up the Bell-Irving River to its headwaters, and then over a number of passes into the Tla'bane (Klappan) watershed, or down Konigus Creek (***konigus tua***, meaning "all broken up creek," which refers to the trees and bushes damaged by the flooding waters) to the east branch of the upper Nass. In the fall, they hunted dediye "groundhog" or ground squirrel or marmots in this high country. Other trails connected to the Iskut valley by way of the Ningunsaw River or Treaty Creek and the Unuk River.

4.4.6.3 Common Tahltan Values Across AOI

Tahltan Values identified in Section 4.2.11 are considered for AOI's and in the context described in 4.2.11 while recognizing the confidentiality and sensitivity of Tahltan Knowledge within a public document. Summary information for the AOI(s) identified in the Tahltan Stewardship Plan management directions detailed in Section 4.4.4.5 provide additional indicators for Tahltan Values.

Tahltan Knowledge for each value will be included in each value's section after determining its confidentiality and sensitivity for the public EAC Application. Values were included in the updating process during the Application Review stage, during the period required to develop a Revised Application based on the Notice Regarding Application Review, and will be used during the Tahltan Risk Assessment stage.

Technical information for the AOI(s), unless reported by Skeena Resources, or tied to specific projects are supported by information identified regionally.

4.4.6.4 Ancient or Past Conditions

Ancient - Long Term Conditions (7-15 Generations 140 to 300 years or 1955 to 1724)

Similar conditions as reported in Section 4.4.3.4 and 4.4.6.2 are applicable for ancient conditions.

Past - Short Term Conditions (1-3 generations 20 – 60 years or 2024 to 1965)

1960's to 2024

Large River Corridor

The AOI is represents the low elevation valley landscape with mid Iskut River and Nigunsaw River as the Large River Corridor identified in the TSP. It is also the includes Highway 37 (Transportation Corridor), access, transmission line, and another focal area for commercial forestry.

There are 42 mineral tenures with 4 owners in the AOI, as access control for upper elevation permits (e.g., Pretium Resources, KSM Mining ULC). There are 2 approved Notice of Work permits, one for gravel/ quarries, one for mineral exploration (Arcwest Exploration). The exploration permit is a large area that straddles lower and upper elevations to the east of Highway 37. The gravel permit is entirely within the AOI.

Access

There are 434 km of access in the AOI, with the following breakdown:

- 51 km Highway 37
- 1 km local or recreation
- 382 km resource related roads and trails (includes roads within cutblocks and right of ways)

NTL

The Northwest Transmission Line is situated in the AOI and has a Right of Way (ROW varies from 25 m to 40 m) with associated access roads and clearings adjacent to the ROW (both cutblock and openings to support the transmission line) remaining in permanent early seral stage. The total disturbance is approximately 51 km and 125 ha, and approximately 51 km and 96 ha.

Forestry

At this time, there are 283 cutblocks, primarily situated in the Bob Quinn and Devils Lake Forest Service Roads area, with harvesting occurring as

- 43 openings - 1980-1990, 3,059 ha
- 19 openings - 1991-2000, 888 ha
- 16 openings – 2001-2010, 347 ha
- 82 openings - 2011 – 2020, 1,403 ha
- 86 openings -2021-2024, 549 ha

Given the duration of timber harvesting, the openings are early seral, but silviculture has been occurring on blocks to meet provincial standards and obligations. Overall, the seral stage for the AOI, has 23% early, 6 % mid-mature, 23% mature, and 47% old forests in the ICH ecosystem. However, the old forests are located in the side drainages currently unroaded and where no timber harvesting has occurred. The lower river corridor is predominantly early seral due to the focused lower elevation timber harvesting.

Tahltan values and arc sites

11 archaeological sites are situated in the AOI, and includes multiple Tahltan sites and features

Oweegee Upper Elevation

It is the upper elevation areas located adjacent to the Oweegee Large River Corridor. There are 54 mineral tenures held by 5 companies. There are two approved Notice of Work permit for mineral exploration Santana Resources Oweegee Project and Arcwest Exploration. There is a major mine permit or permitted mine area to west of Highway 37 held by KSM Mining ULC, it also includes a lower elevation area at Treaty Creek. The area has 2 prospects, and a few showings, and no past producers (BC Minfile). It has no roads, and is accessible only by aircraft.

4.4.6.5 Existing Conditions and Barriers to Tahltan

Large River Corridor

The past conditions detailed above are also the current conditions for the AOI.

Oweegee Upper Elevation

It is the upper elevation areas located adjacent to the Oweegee Large River Corridor. There are 54 mineral tenures held by 5 companies. There is one approved Notice of Work permit for mineral exploration (Arcwest Exploration). There is a major mine permit or permitted mine area west of Highway 37 held by KSM Mining ULC, it also includes a lower elevation area at Treaty Creek. The area has 2 prospects, and a few showings, and no past producers (BC Minfile). It has no roads, and is accessible only by aircraft.

Tahltan Stewardship Plan Management Directions

The following are the management directions applicable to the two AOI's:

Middle Iskut and Nigunsaw River

- Maintain intact landscape from along Iskut River Large River Corridor from Iskut Lakes to Lower Iskut River
- Recovery and restoring surface and groundwater, riparian habitats, valleys and industrial roads
- Maintain healthy aquatic ecosystems and waterways
- Maintain connection to high elevations from low valley bottoms
- Support wildlife and fish habitat reclamation and enhancement
- Protect Tahltan trails and archaeological sites and cultural areas
- Protect Tahltans right to quiet enjoyment of the land and waters in these areas from industrial development

Edoxtotene Management Area

- Maintain healthy rivers, lakes and waterways
- Manage the pace and scale of development and ensure all Tahltan values are protected
- Protect Tahltan archaeological sites and cultural resources
- Maintain healthy and intact wildlife habitat ranges
- Ensure pristine and clean groundwater and surface water sources
- Require Tahltan consent before any industrial development activities to move forward
- Implement Tahltan Standards, conditions and objectives for any potential industrial activities proposed
- Ensure Tahltan quiet enjoyment of the land and waters
- Ensure that mining or energy-related project activities achieve the highest standards and conditions and provide economic and social benefit to Tahltans.

As the upper elevation east of Highway 37 is outside of a TSP designation, the TSP priorities/indicators (Section 4.4.2.5) are applied when determining allowable land uses.

4.4.6.6 Potential Effects

Large River Corridor

The key TSP management directions for the AOI focus on maintaining intact landscape and healthy aquatic ecosystems and waterways; recovery and restoring surface and groundwater, riparian habitats, valleys and industrial roads; Maintain healthy aquatic ecosystems and waterways; support wildlife and fish habitat reclamation and enhancement; protect Tahltan cultural, archaeological sites, traditional practices, and quiet enjoyment of the land and waters in these areas from industrial development

Currently the AOI, is meeting many of the directions, with mine access, and forestry development being the main resource activities. However the potential for increased resource development, access development, increased traffic volumes directly from resource development in the AOI and adjacent to the AOI, such as Red Chris, Galore Creek, Eskay Creek, the Iskut Property, Bronson Connector, Snip Mine, and forestry can result in not meeting key management directions for the AOI and result in further negative effects and negative cumulative effects to Tahltan Values.

The effects will be from primarily other projects/proponents outside of the effects related access barriers transportation effects directly tied to the Application. There are indirect/mixed effects contributing with other projects, such as mineral exploration, forestry tenures and harvesting, existing traffic with the Red Chris Mine and potential changes with the Red Chris Mine Project Block Cave Amendment, potential interest in using Snip Mine as a satellite operation to truck ore to the mine site for processing resulting in longer life of mine and traffic transporting concentrate, further development of the Galore Creek Mine Project, and the existing and new access contributing to increased licensed harvesting and gathering in the AOI. Air traffic could also increase to support increased in mineral exploration, licensed harvesting and gathering, and advancing mineral projects which can result in additional effects on wildlife, way of life, and quiet enjoyment of the land values.

Upper Elevation AOI

The potential effects are related to the current potential development of the KSM project. There are also effects related to mineral exploration in and adjacent to the AOI. The effects are indirect from other sources outside of the Eskay Creek Mine Project.

4.4.6.7 Effects Management and Scales for Significance

- Source – Indirect with Highway 37 and other resource activities, mixed with transportation from ECRP
- Magnitude – low to moderate
- Extent – landscape
- Duration 1 to 3 generations reversible long-term
- Frequency – continuous
- Confidence moderate to high
- Risk and uncertainty – medium/moderate

The criteria identified in Section 4.4.3.7 will be included in the Revised Application for use in the Tahltan Risk Assessment.

4.4.6.8 Positive Effects

Positive effects from the project have been identified for common Tahltan Values in Sections 4.5, and 4.4.3, 9 and 10 for use in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and positive effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.6.9 Assessing Negative Effects

Negative effects have been identified in 4.4.6.6 for use in the Tahltan Risk Assessment.

Negative effects have also been identified for common Tahltan Values in Sections 4.5, and 4.4.3, 9 and 10 for use in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and negative effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.6.10 Cumulative Effects Assessment

The AOI has effects that are predominately indirect related to past mining projects, forestry, transportation effects from projects potentially being developed in the future, existing projects and with direct effects

related to Eskay Creek Mine Project-related to access barriers/restrictions, wildlife mortalities, transportation effects, CFTLUP, and QEL effects. The Potential effects are low to moderate, as the area already has ground access, the river corridor does have intact old and mature forest landscapes and developing projects and properties can slightly alter or alter the nature, role, or function value or AOI but still be considered to meet or be consistent with the TSP. The landscape will be effected and potentially effect half to a generation in duration. However, the direct effects from the project are focused on the transportation corridor, with indirect effects effecting the landscape. With mitigations and agreements with Tahltan, the direct effects, while regular, could be reduced, in addition to management directions for the AOI still being met. The confidence of the effects are moderate to high as the effects are known with the risk of occurring being medium. This results in moderate significance of effects to Tahltan with the majority of effects assigned to other factors/projects. It does relate only partially directly to the effects related to the Eskay Creek Mine Project with the transportation corridor and the existing and new barriers to Tahltan priorities. Based on the TSP management direction and effects to Tahltan Values, there are estimated moderate effects to the AOI primarily from other sources/projects. Further assessment will occur with Tahltan engagement, with final determination through the Tahltan Risk Assessment.

The criteria identified in Section 4.4.3.7 will be applied for this AOI for use in the Tahltan Risk Assessment..

4.4.6.11 Monitoring, Mitigations, and Contingencies

This will be further refined based on additional information, mitigations, and/or reduction in uncertainties/risk to Tahltan Values and the adjustments in the Tahltan Risk Assessment.

4.4.6.12 Follow-up Strategy

This will be further refined based on additional information, mitigations, and/or reduction in uncertainties/risk to Tahltan Values and the adjustments in the Tahltan Risk Assessment.

4.4.7 Tahltan Upper Elevation Areas of Interest – More Creek

4.4.7.1 Description

The area is identified as the More Creek situated in the Regional AOI. More Creek is a tributary of the Iskut River with the headwaters located in the Arctic Lake and Hankin Peak upper elevation area to the west of the river. The forested ecosystems are similar to the mid-Iskut with westward flowing moist Pacific air can bring heavy precipitation either as rain or deep snow. Cold Arctic air is often stalled, but it can often push westward over these mountains bring intense cold conditions. Interior Gatēle (Cedar) – Hemlock forests occur in the valley bottoms and Engelmann Ts'ū (Spruce)– Subalpine Ts'ōsts'iye (Fir) forests occur on all the middle slopes and alpine vegetation or bare rock occur on the upper slopes and ridges; small glaciers occur on the upper slopes in the northwest nearest the Boundary Ranges.

4.4.7.2 Tahltan Values

The More Creek area is important as an area of Tahltan trade, travel, and harvesting/gathering/trapping for plants, medicinal plants, łuwe (fish), furbearers, iʂbā (mountain goat), kedā (moose), sas and khoh (bears), and ch'iyōne (wolf). Archaeological sites are found in the area that are dated precontact. It is an area identified from past Tahltan Land Use and Occupancy Studies as including highly sensitive areas and with extremely sensitive travel corridors within the area. Specific values include traplines, hunting/gathering

during snow free periods, camps, cabins, obsidian sites, and travel routes through the area as a mountain pass to Lower Iskut, Oweegee area, Tāɬtān (Tahltan) / Tūdeʂe chō (Stikine) River confluence, and other routes. It has high number of archaeology sites identifying Tahltan use precontact in the area.

4.4.7.3 Common Tahltan Values Across AOI

Tahltan Values identified in Section 4.2.11 are considered for AOI's and in the context described in 4.2.11 while recognizing the confidentiality and sensitivity of Tahltan Knowledge within a public document. Summary information for the AOI(s) identified in the Tahltan Stewardship Plan management directions detailed in Section 4.4.4.5 provide additional indicators for Tahltan Values.

Tahltan Knowledge for each value will be included in each value's section after determining its confidentiality and sensitivity for the public EAC Application. Values were included in the updating process during the Application Review stage, during the period required to develop a Revised Application based on the Notice Regarding Application Review, and will be used during the Tahltan Risk Assessment stage.

Technical information for the AOI(s), unless reported by Skeena Resources, or tied to specific projects are supported by information identified regionally.

4.4.7.4 Ancient or Past Conditions

Ancient - Long Term Conditions (7-15 Generations 140 to 300 years or 1955 to 1724)

Similar conditions as reported in Section 4.4.3.4 and 4.4.6.2 are applicable for ancient conditions.

Past - Short Term Conditions (1-3 generations 20 – 60 years or 2024 to 1965)

1960's to 2024

More Creek area is the main access corridor for the Galore Creek Mine Project, and contains key infrastructure components for the revised project. The area has been explored since 1950's. when mineralization was discovered at Galore Creek by geologists exploring in the region. From the 1950's through to the 90's extensive exploration work was carried out by a number of exploration and major mining companies. In 2003 NovaGold acquired the property from Stikine Copper, completed a Feasibility Study, and received an Environmental Assessment Certificate in 2007. Construction was initiated on the road and tunnel at several headings prior to the Project being put on care and maintenance in late 2007[6].

Galore Creek Mine Project is proposed as an open pit copper, gold and silver mine with an anticipated production capacity of approximately 60,000 tonnes per day of ore over the anticipated 25-year lifespan of the mine. It would include open pits, a processing plant, a tailings storage facility, and an access road that is approximately 140 kilometres long.

Skeena Resources summarizes the project in Section 10.10.3 including project highlights. The current approved design of the project has most of the project situated outside of the AOI, including the open pit, tailings impoundment, and other facilities in the Galore Creek Valley with drainage primarily to the Lower Stikine River. An EAC amendment was issued in December 2024 which included adjusting camp

[6] https://www.gcmc.ca/galore-creek-project/#history

occupancy flexibility to cycle up to the maximum 1640 workers allowed across any of the approved camp locations under the project, realigning the South West More Bypass road to avoid the Upper More Creek Crossing and improve road safety within the AOI, other aspects of the approved amendment are outside of the AOI[7]. All of which can have effects on the environmental and on the social economic conditions to Tahltan Values.

Within the AOI, there are 25 km of resource road with approximately 17 km at lower elevation along More Creek. In addition, 6 approved Notice of Work authorizations are partially situated in the AOI, held by 6 companies, with the existing access captured in the Galore Creek authorizations and tenures.

4.4.7.5 Existing Conditions and Barriers to Tahltan

As reported in Section 10.10.3 and by Galore Creek Mining Corporation (GCMC) there is an access corridor and some project components located in the AOI. The access is under Special Use Permits and other associated permits that restrict access to the area through means such as gated structures. Section 4.4.7.2 identifies the scope of Tahltan Values, traditional practices, sites and landscape features for the area.

Mineral exploration is occurring in the area, predominantly through aircraft based support, with multiple additional permits adjacent to the AOI. Potential disturbance from mineral exploration to wildlife is a concern.

The area has high fish, wildlife, traditional land uses, and quiet enjoyment of the land values to Tahltan which currently are affected with the project. Tahltan, BCEAO, and GCMC identified through the recent EAC amendment additional conditions to mitigate effects and uncertainties related to:

- Condition 9: Access Development Environmental Management Plan;
- Condition 10: Terrestrial Ecosystems and Wildlife Management Plan;
- Condition 11: Fish and Fish Habitat Management Plan;
- Condition 12: Archaeological and Heritage Resources Management Plan;
- Condition 13: Wetlands Management Plan;
- Condition 14: Socio-economic Effects Management Plan
- Condition 16: Indigenous Monitor;
- Condition 17: No Hunting, Fishing or Trapping; and,
- Condition 18: Peaceful Enjoyment Management Plan.

[7] https://www.projects.eao.gov.bc.ca/p/588510c6aaecd9001b8157d0/project-details

Tahltan Stewardship Plan Management Directions

The following are the management directions applicable to the two AOI's:

Middle Iskut and Nigunsaw River

- Maintain intact landscape from along Iskut River Large River Corridor from Iskut Lakes to Lower Iskut River
- Recovery and restoring surface and groundwater, riparian habitats, valleys and industrial roads
- Maintain healthy aquatic ecosystems and waterways
- Maintain connection to high elevations from low valley bottoms
- Support wildlife and fish habitat reclamation and enhancement
- Protect Tahltan trails and archaeological sites and cultural areas
- Protect Tahltans right to quiet enjoyment of the land and waters in these areas from industrial development

Edoxtotene Management Area

- Maintain healthy rivers, lakes and waterways
- Manage the pace and scale of development and ensure all Tahltan values are protected
- Protect Tahltan archaeological sites and cultural resources
- Maintain healthy and intact wildlife habitat ranges
- Ensure pristine and clean groundwater and surface water sources
- Require Tahltan consent before any industrial development activities to move forward
- Implement Tahltan Standards, conditions and objectives for any potential industrial activities proposed
- Ensure Tahltan quiet enjoyment of the land and waters
- Ensure that mining or energy-related project activities achieve the highest standards and conditions and provide economic and social benefit to Tahltans.

4.4.7.6 Potential Effects

The potential effects are related to the development of the GCMC project, including the proposed activities with the recent EAC amendment. There are also effects related to mineral exploration in and adjacent to the AOI. The effects are indirect from other sources outside of the Eskay Creek Mine Project.

4.4.7.7 Effects Management and Scales for Significance

- Source – Indirect
- Magnitude – moderate to high
- Extent – site specific to landscape

- Duration – 1 to 3 generations
- Reversibility – long-term or far-future
- Frequency – continuous
- Confidence – moderate to high
- Risk and uncertainty – low to moderate

The criteria identified in Section 4.4.3.7 will be applied for this AOI as the revised information is reviewed with Tahltan information for use in the Tahltan Risk Assessment.

4.4.7.8 Positive Effects

GCMC and Tahltan have a Participation Agreement since 2006 which is still in place today. GCMC has committed to providing lasting benefits to communities and have invested in education and training for Tahltan students, and cultural and language programs for youth[8]. With the recent EAC amendment and ongoing prefeasibility activities to further define the project, existing agreements and benefits are under review and discussion which can result in positive effects.

Positive effects have been identified in 4.4.7.6 for use in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and positive effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.7.9 Assessing Negative Effects

Negative effects have been identified in 4.4.7.6 for use in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and negative effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.7.10 Cumulative Effects Assessment

The AOI has effects that are predominately indirect related to other current, and potential mining projects, air and ground access, project infrastructure, mineral exploration, and other land use activities. The potential effects are moderate to high, as the areas already has established ground access, and developing projects and properties can alter the nature, role, or function value or AOI but still be considered to meet or be consistent with the TSP. The landscape will be effected and potentially several generations in duration. However, the indirect effects are focused on the access corridor in the AOI, with potential effects on the landscape. With mitigations and agreements with Tahltan, the effects, while regular, could be reduced in addition to the management directions for the AOI still being met. The confidence of the effects are

[8] https://www.gcmc.ca/communities/

moderate to high as the effects are known with the risk of occurring being medium. This results in low to moderate significance of effects to Tahltan with the majority of effects assigned to other factors/projects.

Based on the TSP management direction and effects to Tahltan Values, there are estimated low to moderate effects to the AOI primarily from other sources/projects. Further assessment will occur with Tahltan engagement, with final determination through the Tahltan Risk Assessment.

4.4.7.11 Monitoring, Mitigations, and Contingencies

There exists current requirements for the area with the GCMC authorizations, management plans, and agreements with Tahltan. The 2024 EAC amendment includes additional monitoring and mitigations for the area.

4.4.7.12 Follow-up Strategy

Strategies have been identified in have been identified for common Tahltan Values in Sections 4.5, and 4.4.3, 9 and 10 for use in the Tahltan Risk Assessment.

4.4.8 Tahltan Upper Elevation Areas of Interest – Zippa Mountain, Upper Bell-Irving River, RN Mountain

4.4.8.1 Description

These are subalpine and alpine areas in the Lower Iskut River (Zippa Mountain), and Middle Iskut River (Upper Bell-Irving River and RN Mountain) identified by Tahltan as important for travel routes, iʂbā (mountain goat), dediye (marmot), or access to wildlife, and plants in snow free periods for harvesting and gathering. Boreal mountains and plateaus bring multiple big game species together on these features, plateaus, and mountain passes.

4.4.8.2 Tahltan Values

Zippa Mountain

Zippa Mountain area is the southwest mountain block of the Craig and Iskut Rivers. It is an area identified as important area for iʂbā (mountain goat) and Tahltan. It is an area where Tahltan could access iʂbā (mountain goat) even during winter, due to the use of lower elevation slopes by the iʂbā (mountain goat).

Upper Bell-Irving River

It is the subalpine and alpine areas of the headwaters of the river, and is a travel route to Tumeka Lake and the Tla’bane (Klappan) River valley to north east and east. It also provides access to upper elevation or high country to dediye (marmot), khoh (grizzly bear), kedā (moose), debēhe (Stone’s sheep), iʂbā (mountain goat), and plant and medicinal plant communities.

RN Mountain

It is the subalpine and alpine areas provides access to upper elevation or high country to dediye (marmot), khoh (grizzly bear), kedā(moose), debēhe (Stone’s sheep), iʂbā (mountain goat), and plant and medicinal

plant communities. It is the mountain block to the east of Devil's Lake and includes a number of Tahltan sites. It is part of the travel, trapping, harvesting, and land uses in the Middle Iskut River area including camps, cabins, and sites.

4.4.8.3 Common Tahltan Values Across AOI

Tahltan Values identified in Section 4.2.11 are considered for AOI's and in the context described in 4.2.11 while recognizing the confidentiality and sensitivity of Tahltan Knowledge within a public document. Summary information for the AOI(s) identified in the Tahltan Stewardship Plan management directions detailed in Section 4.4.4.5 provide additional indicators for Tahltan Values.

Tahltan Knowledge for each value will be included in each value's section after determining its confidentiality and sensitivity for the public EAC Application. Values were included in the updating process during the Application Review stage, during the period required to develop a Revised Application based on the Notice Regarding Application Review, and will be used during the Tahltan Risk Assessment stage.

Technical information for the AOI(s), unless reported by Skeena Resources, or tied to specific projects are supported by information identified regionally.

4.4.8.4 Ancient or Past Conditions

Ancient - Long Term Conditions (7-15 Generations 140 to 300 years or 1955 to 1724)

Similar conditions as reported in Section 4.4.3.4 and 4.4.7.2 are applicable for ancient conditions.

Past - Short Term Conditions (1-3 generations 20 – 60 years or 2024 to 1965)

1960's to 2024

Upper Bell-Irving

The AOI is located withing the Klappan Range and Burrage Management Area designation of the TSP. It is unroaded, intact old growth high elevation forests, and intact headwaters of the Bell-Irving River. There are no mineral tenures or authorizations/leases, commercial forestry, or existing ground access.

There are consumptive activities that can occur in the area from guide outfitting, trapping, and licensed harvesting. Compulsory Inspection harvest data is available for the area, but the public information is grouped by Wildlife Management Unit which are large areas (e.g., AOI is situated in WMU 6-17 10,372 km^2) but the location information with the harvests are not spatial, so determining the harvest rates for each specific AOI is challenging. In addition, the hunting is a combination of general open season, limited entry hunting season, and quotas, with various reporting requirements which make specific AOI harvesting limited. Commercial trapping has decreased over time, with limited reporting occurring due to the low prices for fur.

RN Mountain

The AOI is located withing the Klappan Range and Burrage Management Area designation of the TSP. It is unroaded, intact old growth high elevation forests, and intact headwaters of the Bell-Irving River. There are no mineral tenures or authorizations/leases, commercial forestry, or existing ground access.

Effects from other projects are also limiting given the remote location and lack of authorizations/tenures in the AOI. There are consumptive activities that can occur in the area from guide outfitting, trapping, and licensed hunting. Compulsory Inspection harvest data is available for the area, but the public information is grouped by Wildlife Management Unit which are large areas (e.g., AOI is situated in WMU 6-17 10,372 km^2) but the location information with the harvests are not spatial, so determining the harvest rates for each specific AOI is challenging. In addition, the hunting is a combination of general open season, limited entry hunting season, and quotas, with various reporting requirements which make specific AOI harvesting limited. Commercial trapping has decreased over time, with limited reporting occurring due to the low prices for fur.

Tahltan use of the area, the current activities, gathering, and harvesting have used this area since ancient times and is ongoing, but due to the confidential nature of the information is not included in the reporting.

Finally, the AOI is situated in the Klappan Range and Burrage Management Area designation of the TSP, and at this time the management directions are being met with limited barriers and effects to Tahltan.

Zippa Creek

Zippa Creek is located adjacent to the Lower Iskut Large River Corridor and has the Edoxtotene Management Area designation. The area has 1 developed prospect, over 10 showings, and no past or current mines/producers (BC Minfile). It has no roads, and is accessible by aircraft. There are 10 mineral tenures, owned by 3 companies. There are no approved Notice of Work permits so current levels of mineral exploration are low. There are historical mineral claims and has been an area of periods of mineral exploration.

Mountain goats and other coastal ecosystem wildlife and plant communities, important to Tahltan, are found in the AOI, with population information limited to past environmental assessments, such as Galore Creek; however the results are dated may not reflect current trends (Scannell 2012). The landscape appears to be intact upper elevation coastal mountain block with no ground access.

4.4.8.5 Existing Conditions and Barriers to Tahltan

The information reported in the above section represent the existing conditions for the AOI's.

Tahltan Stewardship Plan Management Directions

The following are the management directions applicable to the upper elevation AOI's:

Edoxtotene Management Area

- Maintain healthy rivers, lakes and waterways
- Manage the pace and scale of development and ensure all Tahltan values are protected
- Protect Tahltan archaeological sites and cultural resources
- Maintain healthy and intact wildlife habitat ranges
- Ensure pristine and clean groundwater and surface water sources
- Require Tahltan consent before any industrial development activities to move forward
- Implement Tahltan Standards, conditions and objectives for any potential industrial activities proposed

- Ensure Tahltan quiet enjoyment of the land and waters
- Ensure that mining or energy-related project activities achieve the highest standards and conditions and provide economic and social benefit to Tahltans.

Klappan Range and Burrage Management Area

- Maintain intactness of forests and watersheds by limiting new road development
- Community desire to create a buffer management area around the Klappan Sacred Headwaters
- Community food security and traditional gathering activities should be protected
- Implement measures to protect Tahltan quiet enjoyment of the land and waters
- Maintain healthy wildlife ecosystems and ranges
- Focus on cultural practices and Tahltan harvesting and land use
- Protect groundwater and surface water sources
- Limit industrial activities managing pace and scale in this area

4.4.8.6 Potential Effects

Upper Bell-Irving

At this time the potential effects are very limited to nil from the project as the AOI has primarily intact landscapes without ground access. The upper elevation forests are old growth and are captured as part of the provincial old growth strategy as a priority deferral area[9]. In addition, the area currently does not have existing mineral authorizations, commercial forestry, existing ground access, and no mineral tenures. Without notice of work authorizations or mineral tenures in the AOI results in limited ground disturbance or barriers occurring to Tahltan and Tahltan values.

Effects from other projects are also limiting given the remote location and lack of authorizations/tenures in the AOI.

Tahltan use of the area, the current activities, gathering, and harvesting have used this area since ancient times and is ongoing, but due to the confidential nature of the information is not included in the reporting.

Finally, the AOI is situated in the Klappan Range and Burrage Management Area designation of the TSP, and at this time the management directions are being met with the limited to nil barriers and effects to Tahltan.

RN Mountain

At this time the potential effects are very limited to nil from the project as the AOI has primarily intact landscapes without ground access. The upper elevation forests are old growth and are captured as part of the provincial old growth strategy as a priority deferral area[10]. In addition the area currently does not have existing mineral authorizations, commercial forestry, existing ground access, and no mineral tenures.

[9] https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/old-growth-forests

[10] https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/old-growth-forests

Without notice of work authorizations or mineral tenures in the AOI results in limited ground disturbance or barriers occurring to Tahltan and Tahltan values.

Effects from other projects are also limiting given the remote location and lack of authorizations/tenures in the AOI. There are consumptive activities that can occur in the area from guide outfitting, trapping, and licensed hunting. Compulsory Inspection harvest data is available for the area, but the public information is grouped by Wildlife Management Unit which are large areas (e.g., AOI is situated in WMU 6-17 10,372 km^2) but the location information with the harvests are not spatial, so determining the harvest rates for each specific AOI is challenging. In addition, the hunting is a combination of general open season, limited entry hunting season, and quotas, with various reporting requirements which make specific AOI harvesting limited. Commercial trapping has decreased over time, with limited reporting occurring due to the low prices for fur.

Tahltan use of the area, the current activities, gathering, and harvesting have used this area since ancient times and is ongoing, but due to the confidential nature of the information is not included in the reporting.

Finally, the AOI is situated in the Klappan Range and Burrage Management Area designation of the TSP, and at this time the management directions are being met with limited barriers and effects to Tahltan.

Zippa Creek

Zippa Creek is located adjacent to the Lower Iskut Large River Corridor and has the Edoxtotene Management Area designation.

At this time the potential effects are very limited to nil from the project as the AOI has primarily intact landscapes without ground access. Effects from other projects are also limiting given the remote location and lack of authorizations/tenures in the AOI. There are consumptive activities that can occur in the area from guide outfitting, trapping, and licensed hunting.

The AOI is located in the Golden Triangle, close proximity to Snip Mine, and Iskut Property where mineral exploration activities are occurring under current authorizations. It is expected if ground access were to occur, further development of the Iskut Property, and Snip Mine becomes a satellite operation to Eskay Creek Mine, can result in not meeting the management directions for the AOI, and can result in effects and cumulative effects to the AOI from other projects.

4.4.8.7 Effects Management and Scales for Significance

- Source – indirect
- Magnitude – nil to low
- Extent – landscape
- Duration – nil to low
- Frequency – nil to low
- Confidence - high
- Risk and uncertainty - low

The criteria identified in Section 4.4.3.7 will be for use in the Tahltan Risk Assessment.

4.4.8.8 Positive Effects

Positive effects have been identified in 4.4.8.6 and will be for use in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and positive effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.8.9 Assessing Negative Effects

Negative effects have been identified in 4.4.8.6 and will be for use in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and negative effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.8.10 Cumulative Effects Assessment

Based on the rationales reported in Section 4.4.8.6 and 4.4.8.7 there are low to nil estimated cumulative effects for these AOI's based on existing conditions and potential effects.

4.4.8.11 Monitoring, Mitigations, and Contingencies

Based on the potential and cumulative effects reported there are limited monitoring, mitigations, and contingencies to be implemented.

4.4.8.12 Follow-up Strategy

There is no follow-up strategy required for the AOI's.

4.4.9 Tahltan Upper Elevation Areas of Interest – Consent Area and Mountain Pass-Prout Plateau

4.4.9.1 Description

The Consent Area AOI is the legally defined area where Tahltan consent applies under the Declaration Act Agreement, it is an area defined on approximately 10km distance on either side from the project footprint which includes the MAR, to where it meets Highway 37, and the existing mine footprint to the closest height of land and/or Tahltan Nation border. It includes the Forrest Kerr Hydroelectric Project including right of ways, and access. Biophysical information includes similar climatic and ecological information for the Lower and Middle Iskut River AOI, and includes the Prout Plateau where the mine footprint sits. The Prout Plateau is a mountain pass from the Unuk River to the Iskut River. It is a rolling subalpine upland on the eastern flank of the Boundary Ranges of the Coast Mountains, between the Unuk River to the south and Iskut River to the north. Mountain Hemlock and Engelmann Ts'ū (Spruce)– Subalpine Ts'ōsts'iye (Fir) are the forested ecosystems which includes mountain slopes that are heavily forested, while other areas of the plateau terrain reflects sparser forest cover and parkland forest type. It has numerous lakes interspersed among the rolling

meadows and narrow ridges of this highland area drained by tributaries of the Unuk and Iskut Rivers. Creeks flowing through the mine property – Tom MacKay, Ketchum and Eskay – all drain into the Unuk. The 54.5 km access road to the mine begins at Highway 37 just south of Bob Quinn Lake, and follows the Iskut River Valley south for most of its length, before turning east and ascending a valley to the plateau. The high country of the upper Unuk River lies along the southernmost boundary of Tahltan Territory, which stretches from the confluence of the Iskut and Tūdeẕe chō (Stikine) Rivers 80 km to the west, across the Unuk River, and east to "Groundhog Country" around the upper Nass, Tūdeẕe chō (Stikine) and Skeena Rivers.

4.4.9.2 Tahltan Values

Iskut River

Tahltan values and land uses in the area relate to the seasonal, climatic, and ecological differences in the valleys. Lower Iskut River has village sites, cabins and camps related to dēk'āne (salmon), medicinal, plants, iṣbā (mountain goat), and furbearers. Mid Iskut River has similar features but more focus on accessing ebaldzē (mushrooms), kedā (moose), and furbearers with the different forest habitats and with lower snow depths than coastal river reaches, and upper river reaches with villages, cabins, camps across all seasons for trapping, harvesting, and gathering. The Upper Iskut River provides access to broader plateaus for seasonal gathering of wildlife, dediye (marmot), and subalpine/alpine plants.

Trade and travel along the river valleys are a core value with the river corridor providing access to upper elevation obsidian mining and other sites. The lava flats area and Bob Quinn/Ningunsaw area is known for ebaldzē (mushrooms), kedā (moose), khoh (grizzly bear), ch'iyōne (wolf) and good trapping for furbearers.

Prout Plateau

It is a mountain pass that provides for access in snow free periods to subalpine and alpine animals such as iṣbā (mountain goat), kedā (moose), dediye (marmot), khoh (grizzly bear), dih (grouse) and kasbā'e (ptarmigan), plants, and medicinal plants.

The Prout Plateau is important as an area of Tahltan trade, travel, and harvesting/gathering/trapping for plants, medicinal plants, furbearers, iṣbā (mountain goat), kedā (moose), dzime (birds), and sas and khoh (bears). Archaeological sites are found in the area that are dated precontact. The Prout Plateau is a key connection between the Unuk, Lower Iskut, and Ningunsaw/Oweegee Lake areas for travel and trading. It is an area identified as having high archaeological potential and Tahltan uses.

There was a winter trade route from the coast that came up the Unuk River and crossed over to the Iskut below the mouth of the lower canyon (passing right through the Eskay Creek mine site area). An Elder's description of the trade goods – muskets, shot, powder and knives – places the use of this route in the post-contact period. The goods were brought by most likely Tlingit, using dog-sleds. Tahltan met them somewhere on the Prout Plateau, and from there they hauled the goods up the frozen Iskut to Devil Creek, near Bob Quinn Lake. At Devil Creek they cached the goods until summer. In the summer, using horses, they transported the goods up into the high country of the Tla'bane (Klappan) River and beyond, using the trails that followed the upper Nass. Some of these goods ended up at McDames Creek on the Dease River, to be traded with Kaska.

Another Elder describes trails that connected Oweegee with the lower Iskut by way of Treaty Creek and the Unuk River. The trails would have passed over Prout Plateau. The high country around the headwaters

of Treaty Creek and the Unuk River provided good habitat for hunting khoh (grizzly bear), in the early fall. Tahltan called Treaty Creek Kas Xoo, which means “grizzly bear creek”.

4.4.9.3 Common Tahltan Values Across AOI

Tahltan Values identified in Section 4.2.11 are considered for AOI’s and in the context described in 4.2.11 while recognizing the confidentiality and sensitivity of Tahltan Knowledge within a public document. Summary information for the AOI(s) identified in the Tahltan Stewardship Plan management directions detailed in Section 4.4.4.5 provide additional indicators for Tahltan Values.

Generally the Regional Assessment Areas and Local Assessment Areas identified by Skeena Resources in chapters 10,12-20,22, 25-27 align with the AOI. The information reported for these values are applicable for this AOI.

Additional Tahltan values and information has been added through the development of the Revised Application in 2025.

4.4.9.4 Ancient or Past Conditions

Ancient - Long Term Conditions (7-15 Generations 140 to 300 years or 1955 to 1724)

Similar conditions as reported in Section 4.4.3.4 and 4.4.9.2 are applicable for ancient conditions.

Past - Short Term Conditions (1-3 generations 20 – 60 years or 2024 to 1965)

1960’s to 2024

The history of the project reported in Sections 1.1.4 and 5, and Section 21.4.2, provide information on the past conditions related to the AOI for the project and access components. It includes the mineral exploration history and the development history for the mine site. It also includes the MAR developed in the 1990’s and further advanced to the west with the Forrest Kerr Hydroelectric Project. In addition, Section 22.4.2 provides additional historical and regional information for the AOI.

4.4.9.5 Existing Conditions and Barriers to Tahltan

The information reported in Section 22.4.3 for Non-traditional Land and Resource Use represents the current information and summaries for resource exploration and development; provincial land use plans; provincial land designations, fee simple lands, and tenures; licenced harvesting (guide outfitting, trapping, fishing, vegetation, and hunting) ; forestry; transportation and linear features; and recreation and tourism.

The information provided is applicable for this AOI and Section 4.4.3.5 (Regional AOI) for existing conditions.

Tahltan Stewardship Plan Management Directions

The following are the management directions applicable to the AOI :

Middle Iskut and Nigunsaw River Large River Corridor (Low Elevation AOI)

- Maintain intact landscape from along Iskut River Large River Corridor from Iskut Lakes to Lower Iskut River
- Recovery and restoring surface and groundwater, riparian habitats, valleys and industrial roads
- Maintain healthy aquatic ecosystems and waterways
- Maintain connection to high elevations from low valley bottoms
- Support wildlife and fish habitat reclamation and enhancement
- Protect Tahltan trails and archaeological sites and cultural areas
- Protect Tahltans right to quiet enjoyment of the land and waters in these areas from industrial development

Edoxtotene Management Area

- Maintain healthy rivers, lakes and waterways
- Manage the pace and scale of development and ensure all Tahltan values are protected
- Protect Tahltan archaeological sites and cultural resources
- Maintain healthy and intact wildlife habitat ranges
- Ensure pristine and clean groundwater and surface water sources
- Require Tahltan consent before any industrial development activities to move forward
- Implement Tahltan Standards, conditions and objectives for any potential industrial activities proposed
- Ensure Tahltan quiet enjoyment of the land and waters
- Ensure that mining or energy-related project activities achieve the highest standards and conditions and provide economic and social benefit to Tahltans.

4.4.9.6 Potential Effects

The potential effects are reported in chapters 12-27 with sections 5-7 in each chapter detailing the potential effects and estimated outcomes.

The main summaries or conclusions are reported for each Tahltan value below, with additional chapter specifics identified, as applicable, with Tahltan rationales or additional context being considered for the Tahltan Risk Assessment. After each summary of potential effects identified in the Application, Tahltan points of review, potential risk or uncertainties, or additional Tahltan estimated effects are listed.

Chapter 10 Valued Component Effects Assessment Methods has detailed information on the methods used to identify and report potential effects by Valued Component, and it is recommended to review this chapter for additional information. Section 10.5 identifies the following for considering effects in this assessment:

This section presents the methods used to assess the potential positive and negative direct and indirect effects of the Project on the identified VCs, including any interaction between effects (to one or multiple

VCs). The EAO's "Effects Assessment Policy" (EAO 2020a) defines a direct effect and indirect effect as follows:

- *Direct effect: "a result[s] of a cause-and-effect relationship between the project and a component of the biophysical or human environment" (EAO 2020a, 6); and*
- *Indirect effect: "a result from a change that a project may cause that is often one step removed (secondary) from a project's activities due to complex relationships among components" (EAO 2020a, 7).*

This section also discusses the nature and implementation of mitigation measures to avoid, minimize, compensate for, restore onsite, offset, or otherwise mitigate potential effects on VCs.

Section 10.6 has information on how residual effects are characterized and categorized across scales. It identifies the residual effects identified by the Project phase using a standard set of descriptors. The are included below to aid in understanding the descriptions of the potential effects reported for each value:

- ***Magnitude*** *is the expected scale or severity of the residual effect and is categorized as:*
  - *Low: differing from the average value for existing conditions to a small degree, but within the range of natural variation and well below a guideline or threshold value;*
  - *Moderate: differing from the average value for existing conditions and approaching the limits of natural variation, but below or equal to a guideline or threshold value; or*
  - *High: differing from the existing conditions and exceeding guideline or threshold values so that there will be a detectable change beyond the range of natural variation.*
- ***Geographic extent*** *is the spatial scale over which the residual effect is expected to occur, and—for environmental VCs—is categorized as:*
  - *Local: an effect is limited to the Project Footprint or Assessment Footprint for VCs where the latter assessment area is used;*
  - *Landscape: an effect extends beyond the Project Footprint or Assessment Footprint to a broader area within the LAA;*
  - *Regional: an effect extends across the RAA; and*
  - *Beyond regional: an effect that possibly extends across or beyond the province of BC.*
- *The corresponding geographic extent categories for social, economic, cultural, and health VCs are:*
  - *Individual/household: an effect limited to individuals, families, or households;*
  - *Community: an effect extending to the community level;*
  - *Regional / Indigenous Peoples: an effect extending across the broader regional community or economy, or an effect extending to one or more Indigenous groups; or*
  - *Beyond regional: an effect that possibly extends across or beyond the province of BC.*
- ***Duration*** *is the length of time the effect lasts, and is categorized as:*
  - *Short-term: an effect that lasts approximately 1 to 5 years, or much less than a single generation;*
  - *Medium-term: an effect that lasts between 6 and 25 years, or less than one generation;*

- *Long-term: an effect that lasts between 26 and 50 years, or over one generation; or*
- *Far-future: an effect that lasts more than 50 years, or several generations.*

Skeena Resources acknowledges that Tahltan are using a generational interval of 20 years in the Tahltan Risk Assessment, and although the difference is not expected to meaningfully change the effects assessment results, there may be differences in the characterization of residual effects for duration and magnitude.

- ***Frequency** is how often the effect occurs, and is categorized as:*
  - *Once: an effect that occurs once during any phase of the Project (such as a footprint disturbance effect);*
  - *Sporadic: an effect that occurs at occasional or intermittent periods during any phase of the Project;*
  - *Regular: an effect that occurs regularly during any phase of the Project; or*
  - *Continuous: an effect that occurs constantly during any phase of the Project.*
- ***Reversibility** is the degree to which the VC may be returned to its initial condition, and is categorized as:*
  - *Reversible short-term: an effect that can be reversed relatively quickly;*
  - *Reversible long-term: an effect that can be reversed after many years; or*
  - *Irreversible: an effect cannot be reversed (i.e., is permanent) and therefore is considered irreparable according to Tahltan Risk Assessment Factors.*
- ***Resilience** is the capacity of a VC to resist or recover from major changes in structure and function following disturbances, without undergoing a shift to a vastly different regime that is very difficult to reverse, and is categorized as:*
  - *Low: the component is considered to be of low resiliency following disturbances;*
  - *Moderate: the component is considered to be moderately resilient following disturbances; or*
  - *High: the component is considered to be highly resilient following disturbances.*
- ***Ecological, social, and/or cultural context** refers to the current condition of the VC and its sensitivity to change, and is categorized as:*
  - *Low: the component is considered to have few to no sensitive attributes, including known high sensitivity areas or environmentally sensitive areas, or disclosed sacred areas within Tahltan Territory;*
  - *Neutral: the component is considered to have some sensitive attributes, including known high sensitivity areas or environmentally sensitive areas, or disclosed sacred areas within Tahltan Territory; or*
  - *High: the component is considered to be sensitive, including known high sensitivity areas or environmentally sensitive areas, or disclosed sacred areas within Tahltan Territory.*

- ***Importance*** *refers to whether the effect on the VC or underlying issue has previously been identified as an interest and/or priority, and is categorized as:*
    - *Low: the effect on the VC has previously been identified by some individuals, but not by Indigenous Nations, community members, or government agencies;*
    - *Moderate: the effect on the VC has previously been identified as an interest by Indigenous Nations, community members, the public, and local governments and/or government agencies, but not stated as a top interest; or*
    - *High: the effect on the VC has been identified repeatedly as a top interest by Indigenous Nations, community members, the public, local governments, and/or government agencies.*
- ***Probability*** *is the likelihood that an adverse residual effect will occur, and is categorized as:*
    - *Low: an effect that is unlikely, but could occur;*
    - *Medium: an effect that is likely, but may not occur; or*
    - *High: an effect that is highly likely to occur.*

As part of the revisions to the Application, Section 10.6.1 Confidence and Risk was updated to include a risk rating.

Confidence in the predictions presented was also evaluated. Confidence, which can also be understood as the degree of scientific certainty, is a measure of how well residual effects are understood. Confidence includes consideration of the acceptability of the data inputs and analytical methods used to predict and assess Project effects and the effectiveness of mitigation measures. It depends on the degree of certainty of the predicted outcome, and it enables the decision-maker to evaluate risk associated with the Project. Confidence levels are defined as:

- ***Low (less than 50 percent [%] confidence):*** *the cause-and-effect relationship between the Project and its interactions with the environment are poorly understood, datasets (including existing conditions data) for the area of the Project are incomplete or inconsistent, scientific analyses are incomplete or inconclusive, or there is a combination of these factors, which leads to a high degree of uncertainty;*
- ***Medium (50% to 80% confidence):*** *the cause-and-effect relationship between the Project and its interactions with the environment is not fully understood, datasets (including existing conditions data) for the area of the Project are nearly complete, scientific analyses are unverified, or there is a combination of those factors, which leads to a moderate degree of uncertainty; or*
- ***High (greater than 80% confidence):*** *the cause-and-effect relationship between the Project and its interactions with the environment are well understood, datasets (including existing conditions data) for the area of the Project are complete, and scientific analyses are complete and verified, which leads to a low degree of uncertainty.*

Risk is identified as the probability (likelihood) of an event and its consequences. As defined in Section 10.6, Characterization of Residual Effects, the probability that an uncertain adverse effect will occur is categorized as low, medium, or high.

As defined in section 3.6.3.2, Risk and Uncertainty, of the BC EAO's "Effects Assessment Policy" (EAO 2020a), the consequence is determined based on the characterization of the magnitude and geographic extent of the residual effect. Consequence is considered either minor, moderate, or major, as shown in Table 10.6-2.

The information is shown here to aid in the understandings of the below summaries by Skeena for relevant Values.

Tahltan Effects Management and significance factors are identified in 4.4.9.7 for the project direct, mixed, and indirect effects.

The effects reported by Skeena Resources for the AOI (Section A.5) and where applicable, from the specific chapters, include the following:

Air Quality (Chapter 12)

The Project has the potential to result in changes in the emission of criteria air contaminants into the atmosphere through drilling and blasting, material movement, windblown dust, crushing, open burning smoke , haul truck movements, as well as traffic on public and mine site roads. Adverse effects on air quality are expected mostly during the Construction and Operations phases as a result of the combustion of fuel, material handling, and entrainment of particulate matter through road use.

After the implementation of mitigation measures, one residual effect is predicted: a change in ambient criteria air contaminant concentrations during the Construction and Operations phases. The magnitude of the effect on the Project site and Eskay Creek Mine Access Road ranges from ***Negligible to High*** *depending on the criteria air contaminant, with total suspended particulates, PM_{10} and $PM_{2.5}$, nitrogen dioxide (1-hour), and carbon monoxide (1-hour) at High magnitude. The magnitude of the effect on Highway 37 and the District of Stewart ranges from* ***Negligible to Moderate*** *depending on the criteria air contaminant, with total suspended particulates (24-hour), PM_{10}, and nitrogen dioxide (1-hour) at Moderate magnitude. In consideration of the mitigation and monitoring measures proposed, no additional follow-up strategies are proposed for air quality.*

The cumulative effects assessment considers the potential for Project-related effects on air quality to combine with the effects of other projects and activities. A residual cumulative effect is predicted resulting from the interaction between 24-hour PM_{10} and 24-hour total suspended particulates from the Project with similar criteria air contaminants and averaging period from the Kerr-Sulphurets-Mitchell Project. The magnitude of this effect is rated ***High*** *based on the exceedances of total suspended particulates and PM_{10}.*

The following are tables and information from Chapter 12 related to the potential effects and cumulative effects related to Air Quality.

Table 4.4-1: Summary of Residual Effects on the Air Quality Valued Component

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Project Site and Eskay Creek MAR—Construction Project Site and Eskay Creek MAR—Operations	Change in ambient concentrations of CACs	**Magnitude:** Negligible to High **Geographic Extent:** Landscape **Duration:** Far-future **Frequency:** Continuous **Reversibility:** Reversible Short-term **Resiliency:** High **Context:** Low **Importance:** High	**Confidence:** High **Probability:** High **Consequence:** Minor to Major **Risk:** Medium to High
Highway 37—Construction and Operations District of Stewart —Construction and Operations	Change in ambient concentrations of CACs	**Magnitude:** Negligible to Moderate **Geographic Extent:** Landscape **Duration:** Medium-term **Frequency:** Continuous **Reversibility:** Reversible Short-term **Resiliency:** High **Context:** Low **Importance:** High	**Confidence:** High **Probability:** High **Consequence:** Minor to Moderate **Risk:** Low to Medium

Notes:
CAC = Criteria Air Contaminants; Eskay Creek MAR = Eskay Creek Mine Access Road

Table 4.4-2: Summary of Residual Cumulative Effects on the Air Quality Valued Component

Project Phase	Residual Effect	Residual Effect Characterization	Confidence
Project Site and Eskay Creek MAR— Construction, Project Site and MAR—Operations, Highway 37, District of Stewart	Change in ambient concentrations of CACs	**Magnitude:** high **Geographical extent:** landscape **Duration:** medium-term **Frequency:** continuous **Reversibility:** reversible short-term **Resiliency:** high **Context:** low **Importance:** high **Probability:** medium	Medium

Notes:
CAC = Criteria Air Contaminants; Eskay Creek MAR = Eskay Creek Mine Access Road.

TCG and THREAT conducted a technical review of the *Air Quality* chapter submitted by Skeena Resources, with feedback provided through the Issues Tracking Table (ITT) and participation in the Technical Advisory Committee (TAC). The review included evaluation of both project-specific and cumulative effects, with the following points on uncertainties, risk, and technical considerations relevant to the Tahltan Assessment:

- As identified, the potential effects, estimated by Skeena Resources, are focused on the landscape in and around the project (Consent and Mountain Pass/Project Footprint AOIs):
    - Extent: Landscape scale
    - Duration: Far-future
    - Magnitude: Full range (nil to high)
    - Frequency: Continuous
    - Resilience to Disturbance: Low
    - Probability of Occurrence: High
    - Confidence in Information: High
    - Reversibility: Short-term
    - Importance to Tahltan: High

- The potential effects on Air Quality related to Highway 37 corridor in the Nation are estimated as :
  - Extent: Landscape scale
  - Duration: Medium-term
  - Magnitude: Negligible to moderate
  - Frequency: Continuous
  - Resilience to Disturbance: High
  - Probability of Occurrence: High
  - Confidence in Information: High
  - Reversibility: Short-term
  - Importance to Tahltan: High
- The cumulative effects estimated applies to the Consent and Mountain Pass/Project Footprint AOIs and Highway 37 corridor in the Nation.
  - Extent: Landscape scale
  - Duration: Medium-term
  - Magnitude: High
  - Frequency: Continuous
  - Resilience to Disturbance: High
  - Probability of Occurrence: Medium
  - Confidence in Information: Medium
  - Reversibility: Short-term
  - Importance to Tahltan: High
- The reported potential effects are interconnected with the TSP, Tahltan Core Priorities and are considered along with interconnected effects to wildlife, plants, fish, and water (as detailed in Chapters 26 & 27).
- Technical concerns were raised about air modelling and emission rate assumptions. Notably:
  - Land classifications for surface roughness and other variables do not align with modelling guidelines or do not appropriately reflect seasonal land conditions.
  - Uncertainties exist around pit retention and its development over time, affecting the accuracy of model outputs.
  - Estimated model outputs may vary significantly or be inconsistent with provincial guidelines.
- Chapters 15 (Surface Water) and 20 (Human Health Risk) included air quality considerations but only focused on PM_{10} or larger particles. Other pollutants should have been assessed, particularly given that air quality modelling predicted exceedances.
- Assessment relied on levels exceeding BC/Canada Air Quality Objective (AQO) Values. However, sensitive individuals can perceive changes in air quality at 25% of the AQO. Therefore, information at 50% of the predicted AQO should have been assessed.
- Only Construction and Operations phases were modelled in the Air Quality Management System (AQMS). While emissions during Reclamation and Closure are expected to be lower, additional modelling and mitigations are recommended due to continued impacts during these phases. With the extremely high TSP and PM_{10} concentrations reported for the Construction and Operations phases, additional modelling, management plans, or mitigations for emissions during the Reclamation and Closure phase are recommended, even though emission estimates are expected to be much lower, they are still estimated to be an effect during this period .
- Modelling results at sensitive receptors should have been consolidated within the Air Quality Chapter but currently are found in numerous chapters. These receptor locations should also have been shown in isopleth figures.

- The full set of recent meteorological data should be used for this assessment and future permitting to improve accuracy.

Tahltan communities and members have raised the following questions and concerns on the potential effects of Air Quality:

- Air quality, noise, and vibration effects on human and animal health being on the land and being employed at Eskay Creek.
- Misalignment between residual effects assessments and baseline data, and potential health effects from air and metal pollutants.
- Questions on the estimated singular and cumulative effects (positive and negative) to Tahltan values within the existing barriers to Tahltan and the additive potential effects to Tahltan values.
- Concerns about residual effects from dust deposition, its impacts on soil quality and for improved dust and particulate deposition assessment.
- Potential effects to wildlife, plants, fish, and habitat related to bioaccumulation from contaminants.

Tahltan Assessment potential effects are tied to the TSP management directions, the Core Priorities, and the interconnection of air quality with the land, water, animals, and Tahltan. These interdependencies heighten the potential air quality effects on the Tahltan way of life, traditional practices, and ecological integrity.

Based on the above information and as a component of the overall effects management for the AOIs the following is an estimate to be considered for the Effects Management for these AOIs (Section 4.4.9.7) with the Tahltan Risk Assessment:

- Extent: landscape
- Magnitude: low to moderate with the dispersion effects seasonally during Construction and Operations and low during Reclamation and Closure
- Duration and Reversibility: 1 generation and reversible
- Frequency: continuous during Construction and Operations and irregular during Reclamation and Closure
- Confidence: high
- Risk and Uncertainties: high risk with low uncertainties

This summary will be used to inform the ongoing Tahltan Assessment and development of conditions or mitigations that align with Tahltan values and stewardship objectives.

Noise and Vibration (Chapter 13)

The potential for noise disturbance is assessed by comparing predicted Project noise levels against various criteria, including annoyance, sleep disturbance and speech interference assessed at locations regularly used by people, such as residences and recreation sites, or sites of cultural importance. After the implementation of Skeena Resources Limited's proposed mitigation measures and best management practices, noise levels at the assessed locations are still predicted to increase slightly with the Project. For residential receptors, the impacts are mainly as a result of the expected increased traffic volume on public

*roads. It is expected that the Project will result in noise-related residual effects of **Low to Moderate** magnitude and **High probability**. In consideration of the mitigation measures proposed, no additional follow-up strategies are proposed for noise and vibration.*

*The cumulative effects assessment considers the potential for Project-related noise to combine with the effects of other projects and activities. Those projects and activities that may also increase traffic volumes on the public roads used for the Project during the Operations phase are considered. However, the increase in traffic volumes is not expected to be substantial, and the noise receptors adjacent to the road corridor are already exposed to road traffic. Therefore, the magnitude of this residual cumulative effect is considered to be **Low**, with **Medium** probability.*

Table 4.4-3: Summary of the Residual Effects on the Noise and Vibration Valued Component

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Construction	Sleep disturbance	**Magnitude:** Low/Moderate **Geographic Extent:** Regional **Duration:** Short-term **Frequency:** Regular/Continuous **Reversibility:** Short-term **Resilience:** Moderate **Context:** Neutral **Importance:** Moderate	**Confidence:** High (Town of Stewart) **Confidence:** Low (SR_006; SR_010; SR_041) **Probability:** High **Consequence:** Minor to Moderate **Risk:** Medium
	Speech interference	**Magnitude:** Low **Geographic Extent:** Regional **Duration:** Short-term **Frequency:** Continuous **Reversibility:** Short-term **Resilience:** Moderate **Context:** Neutral **Importance:** Moderate	**Confidence:** High (Town of Stewart) **Probability:** High **Consequence:** Minor **Risk:** Medium
Operations	Annoyance/ Complaints	**Magnitude:** Low **Geographic Extent:** Landscape **Duration:** Short-term **Frequency:** Continuous **Reversibility:** Short-term **Resilience:** Moderate **Context:** Neutral **Importance:** Moderate	**Confidence:** Moderate (SR_041) **Probability:** High **Consequence:** Minor **Risk:** Medium
	Sleep disturbance	**Magnitude:** Low/Moderate **Geographic Extent:** Regional **Duration:** Short-term **Frequency:** Regular/Continuous **Reversibility:** Short-term **Resilience:** Moderate **Context:** Neutral **Importance:** Moderate	**Confidence:** High (Town of Stewart) **Confidence:** Low (SR_006; SR_009; SR_010; SR_041; SR_048) **Probability:** High **Consequence:** Minor to Moderate **Risk:** Medium

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
	Speech interference	**Magnitude:** Low/Moderate **Geographic Extent:** Landscape/Regional **Duration:** Short-term **Frequency:** Regular/Continuous **Reversibility:** Short-term **Resilience:** Moderate **Context:** Neutral **Importance:** Moderate	**Confidence:** High (Town of Stewart) **Confidence:** Moderate (SR_041) **Probability:** High **Consequence:** Minor to Moderate **Risk:** Medium

Table 4.4-4: Summary of Residual Cumulative Effects on the Noise and Vibration Valued Component

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Operations (TCAA)	Sleep disturbance Speech interference	**Magnitude:** Low **Geographic Extent:** Regional **Duration:** Continuous **Frequency:** Regular **Reversibility:** Short-term **Resilience:** Moderate **Context:** Neutral **Importance**: Moderate	**Confidence:** Medium **Probability:** Medium **Consequence:** Minor **Risk:** Low

Notes:
TCAA = Transportation Corridor Assessment Area

TCG and THREAT conducted a technical review of the *Noise and Vibration* chapter submitted by Skeena Resources, with feedback provided through the ITT and participation in the TAC. The review included evaluation of both project-specific and cumulative effects, with the following points on uncertainties, risk, and technical considerations relevant to the Tahltan Assessment:

- The items raised by other regulatory agencies related to the potential disturbance to wildlife related to blasting, and other noise and vibration activities related to Construction and Operation stages are supported and are technical concerns being considered with the Tahltan Assessment.
- While the noise and vibration assessment included representative cultural locations, there is a need for broader evaluation of potential impacts to culturally significant areas across a wider region. Further analysis is warranted to determine if additional mitigation measures or conditions (e.g., through permitting) are necessary to protect these areas.
- Limited discussion is provided in Chapter 13 on potential residual effects from air overpressure and vibration. Though both are assessed against established thresholds, further elaboration is required.
- The estimated effects on the human variables reported for this chapter will be a basis for considerations on the effects to Tahltan working at the project, being on the land, and effects on the land and water.
- Baseline noise data used in the Environmental Assessment was not filtered to exclude anomalies caused by bad weather or ongoing mining exploration. As a result, the data may not accurately reflect a true project-free baseline.

Tahltan communities and members have raised the following questions and concerns on the potential effects of Noise and Vibration:

- Concern about the effects of noise, vibration, and air quality on human and animal health—especially during traditional land uses and for individuals working at the Eskay Creek site.

Noise and vibration potential effects are tied to the TSP management directions, the Core Priorities, and the interconnected health of land and water.

Based on the above information and as a component of the overall effects management for the AOIs the following is an estimate to be considered for the Effects Management for these AOIs (Section 4.4.9.7) with the Tahltan Risk Assessment:

- Extent: landscape
- Magnitude: low to moderate, with seasonal dispersion effects during Construction and Operations; low during Reclamation and Closure.
- Duration and Reversibility: effects expected to last one generation and considered reversible.
- Frequency: continuous during Construction and Operations; irregular during Reclamation and Closure.
- Confidence: high
- Risk and Uncertainties: high risk, but low uncertainty

This summary will be used to inform the ongoing Tahltan Assessment and development of conditions or mitigations that align with Tahltan values and stewardship objectives.

Groundwater (Chapter 14)

As reported by Skeena Resources in Section A.5, the Project has the potential to affect groundwater by altering groundwater levels, flow directions, the rate of groundwater discharge to surface water bodies and groundwater quality. These changes indirectly influence surface water and human health, which are connected to fish and aquatic resources, vegetation and ecosystems, wildlife and wildlife habitat, culture, and Indigenous interests. Indigenous Knowledge shared with Skeena Resources Limited highlights the cultural significance of water and its interconnectedness with the natural and human environment.

Information on existing groundwater condition has been developed through field data collection programs that involved monitoring groundwater levels, collection of groundwater samples for chemical and isotope and testing hydraulic properties of the rocks and sediments. The groundwater effects assessment examines potential changes to groundwater levels, depth of the water table, base flow of creeks, water supply to groundwater users, and groundwater quality.

The evaluation concludes that the Project's effects upon the Groundwater Valued Component are limited to small areas and that those effects are of little importance to human users and ecological systems.

After implementation of Skeena Resources Limited's mitigation measures, the assessment predicts the following five residual effects:

- *Lowering groundwater levels around the North Pit is characterized as a **High** magnitude residual effect, but will not affect groundwater resources as long as no groundwater supply wells are developed within cone of depression that will develop around the North Pit.*
- *Rising groundwater levels around the expanded Tom MacKay Storage Facility is predicted to be a **High** magnitude residual effect due to the permanent rise in groundwater levels resulting in flooding around the facility.*
- *The Project will reduce baseflow by up to 29% in Tom MacKay and Ketchum Creeks, with the residual effect magnitude ranging from Low to Moderate. The reduction in baseflow in the upper reaches of Tom MacKay Creek is driven by water management activities and interception of seepage from the Tom MacKay Storage Facility at the North Dam. In Ketchum Creek, the reduction in baseflow is mostly driven by dewatering activities at the North Pit, with minor influence from Tom MacKay Storage Facility water management activities.*
- *The Project will notably reduce base flow in the uppermost reach of Tom MacKay Creek – this is characterized as a **High** magnitude residual effect.*
- *Groundwater quality residual effects downgradient of groundwater source terms (the Tom MacKay Storage Facility) range from **Moderate to High** magnitude – the highest effect is predicted due to potential acid generating seepage to the upper reaches of Tom MacKay Creek, Little Tom MacKay Creek and Coulter Creek.*

Follow-up programs include a Long-term Groundwater Monitoring Plan to support the long-term monitoring of groundwater quality downgradient of the Groundwater Source Terms, with a particular focus on Tom MacKay Storage Facility – this program will allow verification of the model predictions regarding water quality.

Table 4.4-5: Characterization of Residual Effects on the Groundwater Valued Component

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Operation/ Reclamation/ Post-closure	Lowering groundwater levels around the pits	**Magnitude:** High **Geographic Extent:** Local **Duration:** Far-future **Frequency:** Continuous **Reversibility:** Irreversible **Resiliency:** Moderate **Context:** Neutral **Importance:** Moderate	**Confidence:** High **Probability:** High **Consequence:** Moderate **Risk:** Medium

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Operation/ Reclamation/ Post-closure	Lowering groundwater levels around the pits	**Magnitude:** High **Geographic Extent:** Local **Duration:** Far-future **Frequency:** Continuous **Reversibility:** Irreversible **Resiliency:** Moderate **Context:** Neutral **Importance:** Moderate	**Confidence:** High **Probability:** High **Consequence:** Moderate **Risk:** Medium
Operation/ Reclamation/ Post-closure	Rising groundwater levels around the expanded TMSF	**Magnitude:** High **Geographic Extent:** Local **Duration:** Far-future **Frequency:** Continuous **Reversibility:** Irreversible **Resiliency:** Moderate **Context:** Neutral **Importance:** Moderate	**Confidence:** High **Probability:** High **Consequence:** Moderate **Risk:** Medium
Operation/ Reclamation/ Post-closure	Reducing baseflow in Tom MacKay, Ketchum and Eskay creeks around the pits	**Magnitude:** Low to Moderate Geographic Extent: Landscape **Duration:** Far-future **Frequency:** Continuous **Reversibility:** Irreversible **Resiliency:** Moderate **Context:** Neutral **Importance:** Moderate	**Confidence:** High **Probability:** High **Consequence:** Moderate **Risk:** Medium
Operation/ Reclamation/ Post-closure	Reducing baseflow in the uppermost reach of Tom MacKay Creek	**Magnitude:** High **Geographic Extent:** Local **Duration:** Far-future **Frequency:** Continuous **Reversibility:** Irreversible **Resiliency:** Moderate **Context:** Neutral **Importance:** Moderate	**Confidence:** High **Probability:** High **Consequence:** Moderate **Risk:** Medium
Construction/ Operation/ Reclamation/ Post-closure	Groundwater quality effects downgradient of the groundwater source terms	**Magnitude:** Moderate to High **Geographic Extent:** Landscape **Duration:** Far-future **Frequency:** Continuous **Reversibility:** Irreversible **Resiliency:** Moderate **Context:** Neutral **Importance:** Moderate	**Confidence:** Medium **Probability:** High **Consequence:** Moderate to Major **Risk:** Medium to High

Note:

TMSF = Tom MacKay Storage Facility

The cumulative effects assessment considers the potential for Project-related effects on groundwater combine with the effects of other projects and activities. As the Project's effects on groundwater are limited geographically to small areas and already consider the effects from the Eskay Creek Mine (historic) and Eskay Creek Mine (Technical Sample), no cumulative effects are identified.

TCG and THREAT conducted a technical review of the *Groundwater* chapter submitted by Skeena Resources, with feedback provided through the ITT and participation in the TAC. The review included evaluation of both project-specific and cumulative effects, with the following points on uncertainties, risk, and technical considerations relevant to the Tahltan Assessment:

- The current estimated potential effects have identified irreversible effects to groundwater for watersheds draining into the Unuk River within the Consent and Project Footprint AOIs. Water treatment will be required in perpetuity and the main seepage control being ongoing Seepage Interception Systems composed of pumping wells supplying treatment plants for the TMSF, MRSA, and Open Pits. The potential effects are estimated as continuous, far-future in duration, moderate to high magnitude, moderate resilience to disturbance, high probability of occurrence, high confidence with the information, high risk, medium to high consequence, and moderate importance to Tahltan.
- The proponent reports no estimated cumulative effects, citing the limited area of irreversible effects. However, there are additional uncertainties related to seepage quality and pathways with the project and with broader concerns about seepage impacts across the Nation with current and potential mine projects increases the potential cumulative effects with groundwater.
- The seepage to groundwater has the potential to create a long-term source of Acid Rock Drainage (ARD) to the watersheds that will require monitoring, containment, pumping and treatment for a long time. As groundwater moves much slower than surface water, once it becomes contaminated water quality impacts can persist for many years as the contamination slowly flushes through the system.
- Seepage into groundwater poses a long-term ARD risk. Contamination may persist for decades due to slow groundwater movement, requiring ongoing monitoring, containment, and treatment.
- Hydraulic containment of ARD sources depends entirely on perpetual pumping and treatment. Fluctuations in groundwater levels could result in the North Pit becoming a contamination source during low-flow conditions in the post-closure phase.
- Review of the Application demonstrates that hydraulic containment around the North Dam and South Dam is poor, the geology around the facility, especially the walls, is not well understood and inclusion of a liner in the dams, is of critical importance to maintain the water cover over the PAG waste stored within the TMSF. The TMSF, based on available information, such as the particle tracking predictions in the groundwater numerical model, shows potential seepage vertical and lateral pathways over time. The current program focuses on the dams to collect existing and new site monitoring for seepage. TCG has concerns as the TMSF is expanded and the water levels rise there is significant potential for shallow and deep seepage from the west and east walls of the facility.
- The current project design depends upon the mapping and monitoring of preferential groundwater flow paths from the TMSF and MRSA which will each produce seepage to groundwater or can directly connect them to downstream creeks and rivers. However, these flow paths have not been identified in the design and will instead be identified over time on an as-needed basis. This strategy relies upon good monitoring in the actual flow paths which requires identification of the flow paths.

- There are uncertainties and information gaps related to the connection between groundwater and local creeks and wetlands is not sufficiently understood to predict the flow paths and travel times from ARD sources to surface water receptors. The groundwater travel times are not well-understood due to uncertainty in the locations of preferential flow paths (PFPs) and field estimates of hydraulic properties (K, S, n). This leads to poorer calibration, oversimplification of the groundwater model, and not considering all major PFPs in the model. There is uncertainty in assessing the interaction between surface water and groundwater flow models with the current modelling of surface recharge and its spatial distribution in the groundwater model, along with the uncertainties between surface recharge rates in the groundwater and surface flow models.
- The increased water level elevation in the TMSF (elevated lake) and MRSA (mounding) is estimated to lead to increased groundwater flow along deeper flow paths that discharge at lower elevations along Harrymel, Coulter, Eskay and Ketchum creeks and the Unuk River. For the Unuk River, the surface topography and presence of a highly fractured zone (pull-apart basin) between TMSF and Unuk River increase the likelihood of connections through deeper PFPs and aquifers.

Tahltan communities and members have raised the following questions and concerns on the potential effects of Groundwater:

- Water is sacred to Tahltan and the health of the water is a key component of the Tahltan Assessment. Tahltan communities and members at every meeting or opportunity expressed concerns on seepage, water quality, and health of the land and water in the project area and downstream.
- Potential Eskay Creek's effects and influence on both surface and groundwater values in Tahltan Territory.
- Seepage and water retention and treatment of water from the MRSA and TMSF.

Groundwater potential effects are tied to the TSP management directions, the Core Priorities, and the interconnected health of land and water.

Based on the above information and as a component of the overall effects management for the AOIs the following is an estimate to be considered for the Effects Management for these AOIs (Section 4.4.9.7) with the Tahltan Risk Assessment:

- Extent: site specific to landscape
- Magnitude: moderate to high
- Duration and Reversibility: 3 or more generations and irreversible.
- Frequency: continuous
- Confidence: high
- Risk and Uncertainties: high risk, moderate to high uncertainty

This summary will be used to inform the ongoing Tahltan Assessment and development of conditions or mitigations that align with Tahltan values and stewardship objectives.

Surface Water (Chapter 15)

Surface water quantity (i.e., streamflow rates) and quality (i.e., water chemistry and physical properties, such as temperature) are affected by mining activities such as the creation, operation and extension of open pits, tailings storage facilities and waste rock dumps. These Project activities can ultimately affect both groundwater and surface waters that are interconnected on the mine site and the receiving environment. Tahltan has emphasized the cultural significance of water and its interconnectedness with the natural and human environment.

The understanding of existing conditions of surface water quantity is derived from historical data collected between 1990 and 2013, and current data collected from the site from 2020 to 2022, which involved field studies, long-term monitoring programs and long-term hydrological characterization that is inclusive of a climate change scenario. For surface water quality, the existing conditions dataset extends from 1990 through June 2024, including monitoring programs conducted during and following the historic Eskay Mine Operations that included historic effluent and receiving environment sampling. Monitoring data collected 2016 onwards were considered representative of baseline conditions for the Revitalization Project.

Water quantity evaluated changes in streamflow, which includes annual runoff, seasonal distribution of flows, the timing and magnitude of peak and low flow events and groundwater -surface water interactions as a result of the Project through predictive modelling using a water balance model and numerical groundwater flow model.

*Residual effects are predicted to occur after the implementation of mitigation measures. The magnitude of effects to streamflow is **High** in Tom MacKay Creek, **Moderate** in Ketchum Creek, **Low to Moderate** in Eskay Creek, and **Low** in Coulter Creek, while residual effects in Harrymel Creek and the Unuk River are not expected.*

Water quality evaluated changes in the concentration of water quality parameters through predictive modelling. The output of the model is then screened against a "No Project" model case (representative of a future condition in with the Project does not occur) to identify parameters influenced by the Project, and British Columbia Water Quality Guidelines for aquatic life and wildlife, and a suite of effect-based drinking water quality thresholds that considered British Columbia Drinking Water Quality Guidelines, Health Canada standards, and Contaminated Site Regulations standards. This screening provides the basis for determining residual effects and the results of guideline screening determine the magnitude of the residual effects following the implementation of mitigation measures.

*Overall, the assessment of residual effects on surface water quality identified **High** magnitude changes to concentrations of select parameters at a local to landscape level. This determination is based on the predicted concentrations of the select parameters in the Assessment Area relative to the No Project Case and relative to applicable guidelines and standards for aquatic life, wildlife, and drinking water, which are predicted to have a high probability of occurring at the predicted levels.*

*Although predicted concentrations of these parameters in surface water quality vary over time, with respect to reversibility, duration and frequency, the overall residual effect on water quality is characterized as irreversible, far future and continuous, driven by select parameters. Resiliency, context, and importance are ranked as **High**, **Neutral**, and **High**, respectively. Beyond the local to landscape geographic extent, the number of parameters identified as representing a **High** or **Moderate** magnitude effect (as a key determinant of the severity of the residual effect) declines substantially.*

Although selenium was not identified as a residual effect in the Unuk River, this parameter was carried forward for characterization as a cumulative effect due to its regional importance. A potential cumulative effect has been identified for selenium when the discharge from the proposed KSM Mine is considered to occur concurrently. If this occurred, there is a potential that selenium would exceed the long-term guideline at the station in the Unuk River below the confluence with the Sulphurets River by a small margin (predicted monthly values up to 2.3 µg/L, above the BC long-term water quality guideline for aquatic life of 2.0 µg/L). No transboundary effects are anticipated for selenium, as the predicted concentrations with cumulative effects remain below the long-term guideline at the model at the BC-Alaska/BC border.

The potential residual effects to surface water quantity with respect to changes to streamflow are (1)\ changes in annual runoff, (2) changes in seasonal distribution of flows, (3) changes in the timing and magnitude of peak and low-flow events, and (4) changes in groundwater-surface water interactions. These residual effects were assessed for each watercourse.

The potential residual effects to surface water quantity are summarized in Table 15.5-23 (see Table 4.4-6). *Criteria for Duration, Frequency, Probability, Reversibility, Ecological Context and Importance do not vary among watercourses. More specifically, residual effects in all watercourses are expected to persist into the far- future, to be regular in frequency, have a high probability of occurring, are irreversible and are of high importance. The ecological context of these effects are neutral.*

Additional information on the residual effects for each stream is reported in Section 14.4.3.

Table 4.4-6: Summary of Residual Effects to Surface Water Quantity

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
All Phases	Alterations on streamflows at Tom MacKay (TC-6.32, TC- 3.85 and TC-0.99)	**Magnitude:** High **Geographic extent:** Local **Duration:** Far-future **Frequency:** Regular **Reversibility:** Irreversible **Resilience:** Moderate **Context:** Neutral **Importance:** High	**Confidence:** High **Probability:** High **Consequence:** Moderate **Risk:** Medium
Operations, Reclamation and Closure and Post-closure	Alterations on streamflows at Ketchum Creek (nodes KC3.05, KC-2.00, and KC-0.01)	**Magnitude:** Moderate **Geographic extent:** Landscape **Duration:** Far-future **Frequency:** Regular **Reversibility:** Irreversible **Resilience:** Moderate **Context:** Neutral **Importance:** High	**Confidence:** High **Probability:** High **Consequence:** Moderate **Risk:** Medium

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Operations Reclamation and Closure and Post-closure	Alterations on streamflows at Eskay Creek (nodes EC4.97 and EC-0.03)	**Magnitude:** Low-moderate **Geographic extent:** Local **Duration:** Far-future **Frequency:** Regular **Reversibility:** Irreversible **Resilience:** Low **Context:** Neutral **Importance:** High	**Confidence:** High **Probability:** High **Consequence:** Moderate **Risk:** Medium
Operations Reclamation and Closure Post-closure	Alterations on streamflows at Coulter Creek (model node CC-6.38)	**Magnitude:** Low **Geographic extent:** Landscape **Duration:** Far-future **Frequency:** Regular **Reversibility:** Irreversible **Resilience:** Low **Context:** Neutral **Importance:** High	**Confidence:** High **Probability:** High **Consequence:** Minor **Risk:** Medium
All Phases	Harrymel Creek (HC-15.4, HC-12.3 and HC-0.00) Unuk River (UR-78.6, UR-76.8, UR-69.7, UR-67.0, UR61.4, UR-55.3, UR-43.9, UR 37.1)	No Residual Effects	

Table 4.4-7: Summary of Cumulative Residual Effects on the Surface Water Quantity Sub-valued Component

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Reclamation and Closure and Post-closure	Alterations on Streamflow in Unuk River (Assessment Node UR-61.4)	**Magnitude:** Low **Geographic extent:** Regional **Duration:** Far-future **Frequency:** Sporadic **Reversibility:** Irreversible **Resilience:** High **Context:** High **Importance:** High	**Confidence:** High **Probability:** Low **Consequence:** Minor **Risk:** Low

*Section 15.5.4 Water Quality reports the overall assessment of residual effects to surface water quality identifies a **high risk** of **high magnitude** changes to concentrations of select parameters at a **local** to **landscape** level. This evaluation is inferred by the predicted concentrations of the select parameters in Ketchum Creek, Tom MacKay Creek, Eskay Creek, Coulter Creek, Harrymel Creek, and the Unuk River relative to the No Project Case and relative to applicable guidelines and standards for aquatic life, wildlife, and drinking water, that are predicted to have a **high probability** of occurring at the predicted levels. Although predicted concentrations of these parameters in surface water quality vary over time with respect to reversibility, duration and frequency, the overall residual effect to water quality is characterized as*

***irreversible**, **far-future** and **continuous**, driven by select parameters. Resiliency, context, and importance are ranked as **high**, **neutral**, and **high**, respectively.*

Tom MacKay Creek and Ketchum Creek water quality residual effects (Table 15.5-50) are reported to have moderate to high magnitude, local to landscape extent, short-term to far-future duration, sporadic to continuous frequency, with some reversibility in the short-term but irreversible in the long-term, with low to high risk, medium to high probability and high importance to Tahltan.

Eskay Creek, Coulter Creek, and Harrymel Creek water quality residual effects (Table 15.5-50) are reported to have moderate to high magnitude, landscape extent, sporadic to far-future duration, regular frequency, irreversible, with low to high risk medium to high probability and high importance to Tahltan.

Unuk River water quality residual effects (Table 15.5-50) are reported to have moderate to high magnitude, regional extent, far-future duration, regular frequency, irreversible, with medium to high risk, high probability and high importance to Tahltan.

A summary for the characterization of residual cumulative effects for the Surface Water Quality Sub-VC is provided in Table 15.5-56 (see Table 4.4-8)*. The characterization criteria used for the effect descriptions are described in Section 10.6, Characterization of Residual Effects, in Chapter 10, Valued Component Effects Assessment Methodology.*

Table 4.4-8: Characterization of Residual Surface Water Quality Cumulative Effects

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Construction, Operations, Closure and Post-closure	*Increase in selenium concentration in the Unuk River*	***Magnitude:** Moderate* ***Geographic Extent:** Regional* ***Duration:** Far-future* ***Frequency:** Regular* ***Reversibility:** Irreversible* ***Resilience:** High* ***Context:** Neutral* ***Importance:** High*	***Confidence:** Medium* ***Probability:** High* ***Consequence:** Moderate* ***Risk:** High*

Confidence that the WQM results are accurate is considered medium. The confidence rating definition considers the degree of scientific certainty and the degree to which the model components have been verified. The inputs to the model are based on high quality scientific studies, and aspects of the model, such as source term derivation, modelled treatment efficiency, groundwater flow, and water balance, rely to some extent on professional judgment and experience. Since the Project is a new mine, the accuracy of model results cannot be verified or evaluated at this time, which results in an overall confidence rating of moderate.

Overall, the cumulative water quality residual effects of the increase in selenium concentration in the Unuk River (Table 15.5-56) are reported to have moderate magnitude, regional extent, far-future duration, regular frequency, irreversible, with high risk, high probability, medium confidence, moderate consequence and high importance to Tahltan.

TCG and THREAT conducted a technical review of the *Surface Water* chapter submitted by Skeena Resources, with feedback provided through the ITT and participation in the TAC. The review included

evaluation of both project-specific and cumulative effects, with the following points on uncertainties, risk, and technical considerations relevant to the Tahltan Assessment:

- Irreversible potential effects to surface water are expected for watersheds draining into the Unuk River within the Consent and Project Footprint AOIs. Water treatment will be required in perpetuity. These effects are categorized as irreversible, far-future, continuous, with high resiliency, neutral context, and high importance to Tahltan.
- Development of the North Pit will expose the highwall, resulting in potential ARD and metal leaching. The pit lake needs to be actively managed to maintain a hydraulic sink, ensuring groundwater flows inward. Chemical loading to the lake requires treatment before discharge.
- The Open Pits will require perpetual pumping and treatment to maintain a sufficiently low water level (758 msl) to achieve hydraulic containment. Due to groundwater level fluctuations, there is a possibility that the North Pit may act as a source during the low-flow season in the post-closure period.
- Mitigations are required for ore stockpiles to address the deteriorating seepage water is captured effectively and that no residual loading of flushed oxidation products remains in the underlying material once the ore has been processed. Oxidation of the ore during the mine life may result in the ore becoming unsuitable for processing in the flotation circuit, in which case the ore would need to be relocated to the North pit, without leaving residual material.
- The predictive models indicate there are potential effects to surface water on water quality with exceedances in Tom Mackay and Ketchum Creek, the requirement for a water treatment plant in perpetuity, and with the documented seepage pathways reported to Harrymel, Coulter, Eskay, and Ketchum over time. It is acknowledged there are uncertainties with interpretations of the information as reported in the Application. It is where the importance of field verification as key steps to verify or correct these models is critical.
- Uncertainties persist regarding the influence of PAG, waste rock, and ore stockpiles on seepage and water quality. These can be mitigated through hydraulic containment and source controls.
- Geochemical loading from the MRSA and South Pit currently requires treatment for neutral metal leaching. Alternatives to reduce or eliminate treatment requirements should be explored and quantitatively assessed.
- Currently the surface water quality model does not include a sensitivity scenario where all solubility constraints are removed from source terms. A sensitivity scenario will provide a check on the influence solubility constraints have on the predicted water qualities. The results of this sensitivity be compared to the base case model scenario for parameters of concern and any additional parameters flagged by this sensitivity that are shown to exceed guidelines. The results should be shown for all facility nodes as well as surface water nodes up to and including the Unuk River. In addition, a monitoring program to support and confirm the attenuation mechanisms assumed to provide solubility constraints for specific parameter is recommended.
- Open pitting leaves a lot of pit slope open for potential MLARD generation. It also increases the need for in perpetuity water treatment. Either the pit needs backfilling or other mitigations so that long term MLARD generation can be curbed by flooding the mine workings and backfilling anything above the water line. This aspect should be included in the evaluation as the current assessment categories.

- Mitigations are required for ore stockpiles to address the deteriorating seepage water is captured effectively and that no residual loading of flushed oxidation products remains in the underlying material once the ore has been processed. Oxidation of the ore during the mine life may result in the ore becoming unsuitable for processing in the flotation circuit, in which case the ore would need to be relocated to the North pit, without leaving residual material.
- The watersheds in the Project Footprint and assessed with this EA drain into the Unuk River, and are considered non-fish bearing above the barriers of the 200 m stretch of lower Ketchum Creek. There are uncertainties related to aquatic ecosystems and fish habitat which are discussed in the Fish and Fish Habitat section further below in the chapter.
- Site-wide water balance models contain uncertainties that require additional monitoring and field verification to adjust for the biases or corrections to resolve the uncertainties.
- Protection of the receiving environment aquatic habitat and water quality depends on comprehensive and effective perpetual water treatment for at least eight key parameters of concern. With the successful operation of the water treatment plant (WTP), seepage from the TMSF and the MRSA in addition to the WTP discharge itself, potential effects remain moderate, with low effects extending 4 km downstream on Ketchum Creek to the Unuk River.
- Management of sludge during operations has been acknowledged; however, Technical memo 119 demonstrates that water treatment will be required in perpetuity and long-term sludge disposal location (management plan) are still being defined.
- The EHDS system requires multiple unit operations to be fully functional at all times to protect the receiving environment from the wide variety of neutral pH ML and ARD-derived COCs. The likelihood of continuous adequate performance in perpetuity is very low and hence the risk associated with this mitigation strategy has uncertainties.
- There are concerns with the potential for the rapid onset of ARD, there is too high a reliance on Geotubes treatment. Prioritizing EHDS system implementation could reduce this risk.
- The WT Design has uncertainties with the confidence in achieving the expected effluent quality (e.g., 20% removal of Selenium), and the expected frequency and likelihood of equipment and/or process failures resulting in exceedances of permit limits. Process start-up following scheduled and unscheduled maintenance, rapidly changing influent quality and quantity during rapid snowmelt or storm conditions, and other processes upset from equipment malfunction/failures, all have the potential to reduce the treatment systems ability to meet the permit limits. A HAZOP risk assessment is strongly recommended to identify potential weaknesses in reliability and opportunities to minimize downtime. In parallel, the effects on aquatic life of these exceedances (given the anticipated frequency and magnitude of permit exceedances) should be assessed.
- Snow management strategies are broadly outlined, with specifics deferred to future permitting. This is a concern, given historical challenges in similar environments. Past data from Barrick show significant snow accumulation, posing operational risks.
- Snow management strategies are broadly outlined, with specifics deferred to future permitting. This is a concern, given historical challenges in similar environments. Past data from Barrick show significant snow accumulation, posing operational risks, including delaying construction or effecting operations by not accounting for the operational constraints with handling these volumes of snow. As snow depth information from Barrick closure reporting identified average winter monthly snow depths from 1994 to

2014 with over 2 m and multiple spikes in the 3 to 5 m range. Cumulative daily snow depths (Oct to April) for the same period reported an average ~ 10 m with ranges of 6 m to 16 m (20141008 Tom MacKay Lake DSI report).

Tahltan communities and members have raised the following items on the potential effects of Surface Water:

- Water is sacred to Tahltan and the health of the water is a key component of the Tahltan Assessment. Tahltan communities and members at every meeting or opportunity expressed concerns on seepage, water quality, and health of the land and water in the project footprint area and downstream with this project.
- Potential Eskay Creek's effects and influence on both surface and groundwater values in Tahltan Territory.
- Seepage and water retention and treatment of water from the MRSA and TMSF.
- Snow and snowpack in the area, its influence on contact water management, and the challenges with snow management for mines in these ecosystems in the Territory.

Surface Water potential effects are tied to the TSP management directions, the Core Priorities, and the interconnected health of land and water.

Based on the above information and as a component of the overall effects management for the AOIs the following is an estimate to be considered for the Effects Management for these AOIs (Section 4.4.9.7) with the Tahltan Risk Assessment:

Extent: site specific to landscape

- Magnitude: high
- Duration and Reversibility: 3 or more generations and irreversible.
- Frequency: continuous
- Confidence: high
- Risk and Uncertainties: high risk, high uncertainty

This summary will be used to inform the ongoing Tahltan Assessment and development of conditions or mitigations that align with Tahltan values and stewardship objectives.

Fish and Fish Habitat (Aquatic Resources) (Chapter 16)

The Project has the potential to affect fish and aquatic resources through changes to surface water quality, which can lead to a direct effect on aquatic resources and fish, as well as an indirect effect via increased accumulation in aquatic food chains. The Project also has the potential to affect fish and aquatic resources through changes to surface water quantity, which can lead to the loss of habitat available to fish and aquatic resources, as well as the alteration of habitat in terms of contributions of water, nutrients and food for fish.

Existing conditions in the Project watershed for fish and fish habitat are well understood. Existing conditions studies have identified barriers to fish movement on Coulter, Eskay, and Ketchum Creeks. The barrier on Ketchum Creek is located 200 metres upstream of its confluence with the Unuk River. As a result, fish are

absent in most watercourses within the Project's Local Assessment Area and are entirely absent in the Assessment Footprint. Reports regarding the non-fish-bearing status were shared with Tahltan and government agencies, and no concerns were identified. There are Dolly Varden below these barriers (and in watercourses such as Harrymel Creek and the Unuk River, which do not have physical barriers to migration); Coho salmon and cutthroat trout are also confirmed to be present in the Unuk River within the Local Assessment Area. Fish habitat in the Local Assessment Area varies but is generally not considered high quality. Genetic studies confirmed the absence of bull trout or Dolly Varden-bull trout hybrids in the Local Assessment Area.

To evaluate the potential effects, the assessment relied on the existing conditions data, informed by historical and recent field programs, as well as predictions from the water quality model and bioaccumulation calculations for fish used in the Human Health Risk Assessment. After the implementation of mitigation measures, there are several residual effects predicted for fish and fish habitat.

Changes in water concentrations of copper, nickel and zinc , have the potential to cause residual effects on aquatic resources during parts of the year. The residual effects associated with copper, nickel and zinc and major ions (sulphate and hardness) are predicted to have a ***Moderate*** *magnitude. These residual effects will be limited to periphyton (algae) and benthic invertebrate communities (small animals living at the bottom of water bodies) in Tom MacKay Creek. There is a high degree of confidence that residual effects from direct water exposure would not extend to the Unuk River or harm fish populations.*

Changes in water quality are not expected to cause residual effects in terms of sediment accumulation of mine-influenced COPCs contaminants of potential concern in any of the waterbodies. The magnitude of this residual effect is considered ***Low****.*

Changes in water quality are not expected to lead to bioaccumulation of mercury in aquatic food chains and the magnitude of this residual effect is considered ***Low.*** *Selenium levels in Tom Mackay and Ketchum Creeks are expected to exceed water quality guidelines. This could lead to selenium concentrations in benthic invertebrates exceeding the protective threshold. Natural conditions also contribute to high selenium levels in these benthic invertebrates, which become food for fish living downstream. The magnitude of this residual effect is predicted to be* ***Moderate****, which is a conservative prediction that considers the uncertainty in the available information. There are no fish in Tom MacKay or Ketchum Creeks in the locations where selenium bioaccumulation is most likely to occur. Skeena Resources Limited commits to further follow-up monitoring and adaptive management to ensure that hazards are low to fish populations.*

Changes in water quantity would have a ***Moderate*** *magnitude residual effect on fish and aquatic habitat in the Assessment Footprint. The assessment predicted a moderate magnitude direct loss of some aquatic habitat in streams and lakes as a result of the Project, and there are additional low probability effects outside of the Assessment Footprint due to changes in water quantity. The loss of these segments of streams and area of waterbodies does not involve unique or critical habitat. Although headwater areas of streams are often important areas of nutrient and organic matter collection and processing which provides resources for downstream areas, the segments lost are generally low-order streams in their watershed or are draining to the Tom MacKay Storage Facility. This residual effect includes a* ***Low*** *magnitude effect to fish habitat in lower Ketchum Creek.*

Changes in water flows are expected to produce a residual effect. There will be habitat loss for non-fish-bearing streams as a result of Project construction, and modelling indicates that water flow may be

marginally less than the flow thresholds for non-fish-bearing streams. Water flows in the last 200 m of Ketchum Creek (which is presumed fish-bearing) are not expected to meet the minimum flow requirements for a fish-bearing water course based on the available historical data, even though future flows are not substantially different than current conditions. The overall magnitude of the residual effect associated with habitat loss and changes in water flow is considered ***Moderate****.*

Table 4.4-9: Characterization of Residual Effects

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Construction, Operations, Closure and Post-closure	Changes in Water Quality on Periphyton, Benthic Macroinvertebrate, and Fish	**Magnitude:** Low to Moderate **Geographic Extent:** Landscape **Duration:** Far-future **Frequency:** Regular **Reversibility:** Irreversible **Resilience:** Moderate **Context:** Neutral **Importance:** High	**Confidence:** Moderate **Probability:** High **Consequence:** Minor to Moderate **Risk:** Medium
Construction, Operations, Closure and Post-closure	Changes in Water Quality on Sediment Accumulation of Contaminants of Potential Concern	**Magnitude:** Low **Geographic Extent:** Regional **Duration:** Long-Term **Frequency:** Regular **Reversibility:** Irreversible **Resilience:** High **Context:** Low **Importance:** Low	**Confidence:** Low **Probability:** Low **Consequence:** Minor **Risk:** Low
Construction, Operations, Closure and Post-closure	Change in Water Quality on Bioaccumulation of Metals in Periphyton, Benthic Macroinvertebrates, and Fish	**Magnitude:** Moderate **Geographic Extent:** Regional **Duration:** Medium-term **Frequency:** Regular **Reversibility:** Reversible **Resilience:** Low **Context:** Neutral **Importance:** High	**Confidence:** Low **Probability:** Low **Consequence:** Moderate **Risk:** Low
Construction, Operations, Closure and Post-closure	Changes in Water Quantity and Flow on Aquatic and Fish Habitat	**Magnitude:** Moderate **Geographic Extent:** Landscape **Duration:** Far-Future **Frequency:** Regular **Reversibility:** Irreversible **Resilience:** Low **Context:** Low **Importance:** Moderate	**Confidence:** High **Probability:** High **Consequence:** Moderate **Risk:** Medium

The cumulative effects assessment considers the potential for Project-related effects on fish and fish habitat to combine with the effects of other projects and activities. The residual effects associated with the Project that required consideration of cumulative effects were aquatic habitat loss due to Project construction, and the presence of elevated selenium and its potential effects on fish populations in the River. The magnitude

*of the residual cumulative effect related to habitat loss is characterized as **Low**. Other projects in the area are known to contribute additional selenium to the Unuk River, and therefore, the magnitude of this residual cumulative effect is characterized as **Moderate**, which is intentionally conservative in the absence of a site-specific trophic transfer factor model.*

TCG and THREAT conducted a technical review of the *Fish and Fish Habitat* chapter submitted by Skeena Resources, with feedback provided through the ITT and participation in the TAC. The review included evaluation of both project-specific and cumulative effects, with the following points on uncertainties, risk, and technical considerations relevant to the Tahltan Assessment:

- The proponent's estimated effects are based on instream flow thresholds calculated from modeled hydrological data. Flows are expected to fall below thresholds for fishless streams in lower Tom MacKay and Ketchum creeks and will be lower than the threshold for potential fish-bearing waters in the last 200 m of lower Ketchum Creek. This results in effects to watersheds draining into the Unuk River within the Consent and Project Footprint AOIs. Overall, the effects are characterized as landscape level, irreversible, far-future, and regular, with low resiliency and low contextual sensitivity, but moderate importance to Tahltan. Probability of occurrence is high, with high confidence regarding habitat loss but low confidence regarding water flow effects, resulting in potentially low risk.
- Protection of fish and aquatic resources is reliant on perpetual water treatment, leading to a moderate magnitude of residual effects in Little Tom MacKay and Tom MacKay creeks (Tech Memo 108, Section 16.7.6.1). THREAT has raised concerns about elevated metal concentrations, particularly Nickel, and their impact on benthic macroinvertebrate EPT taxa in the KC-0.1 reach. These taxa are critical food sources for salmonids, and significant changes could affect local fish populations. Salmonids benefit greatly from feeding on EPT taxa and if these benthic community structures change significantly because of project activities it could have carry-through impacts on the local fish populations that use this habitat.
- Seepage, both expected and unpredictable, present pathways of effect that can have significant effects on aquatic habitat and fish community health. This represents an uncertainty given the lack of background information surrounding potential faults and seepage pathways both north towards Tom MacKay Creek and south towards Harrymel and Coulter Creeks.
- There are uncertainties with the potential increases in streamflow, especially significant increases, represent potential pathways of risk for erosion within Tom MacKay Creek, and increases sediment mobility leading to accelerated rates of POPC loading in the Unuk River for metalloids that bind with sediment such as Aluminum. This is related on how the mine operations may affect the hydrology of the greater Ketchum Creek subwatershed, including Tom MacKay Creek during Construction and Operations with estimated increases in flows in Tom MacKay Creek in early spring is indicated.
- The trophic transfer modelling that has been completed is not considered predictive, and model validations will need to be completed for those data and results to provide substantive enough value for the risk assessment of this project.
- There are uncertainties in relation to the application of Hazard Quotient ratings, It is unclear the justification as to why Acute HQ>1, and especially Acute HQ>2 or 3 should not be rated as a High Magnitude. The exposure time is expected to be much longer than 48-96 h (i.e., on the order of months). The safety factor applied to the HC5 value was only 2 - thus 5% of the Daphnia can be expected to die off.

- Ketchum, Tom MacKay, and Eskay Creek watersheds are reported as non-fish-bearing due to eDNA results and natural barriers. No fish are present within the Assessment Footprint.
- Iskut River watersheds only includes transportation and utility corridors for the project but the valley has potential cumulative effects to fish from other projects and human uses.
- The Unuk River watershed, which includes the Project Footprint and Assessment Area, will receive downstream effects from the project and other upstream activities.
- Both the Unuk and Iskut River valleys are designated as large river corridors in the Tahltan Stewardship Plan.

Tahltan communities and members have raised the following items on the potential effects of Fish and Fish Habitat:

- Water is sacred to Tahltan and the health of the water is a key component of the Tahltan Assessment. Tahltan communities and members at every meeting or opportunity expressed concerns on seepage, water quality, and health of the land and water in the project footprint area and downstream with this project.
- Eskay Creek's potential effects and influence on both surface and groundwater values in Tahltan Territory.
- Potential effects from seepage and water retention and treatment of water from the MRSA and TMSF.
- Potential effects of the Eskay Creek Mine on salmon and other aquatic resources that could be impacted by the project in surrounding rivers and waterways.

Fish and Fish Habitat potential effects are tied to the TSP management directions, the Core Priorities, and the interconnected health of land and water.

Based on the above information and as a component of the overall effects management for the AOIs the following is an estimate to be considered for the Effects Management for these AOIs (Section 4.4.9.7) with the Tahltan Risk Assessment:

- Extent: site specific to landscape
- Magnitude: low to moderate
- Duration and Reversibility: 3 or more generations and irreversible.
- Frequency: continuous
- Confidence: high
- Risk and Uncertainties: moderate to high risk with moderate uncertainties

Terrain and Soils (Chapter 17)

Effects on terrain stability, soil quantity, and soil quality are expected during the Construction, Operations, and Reclamation and Closure phases of the Project. This includes effects resulting from Project activities such as the use of infrastructure, land clearing, earthworks, mining the North and South Pit, and recontouring landforms. Further activities such as stripping and blasting, stockpiling, dam development, mine water treatment and discharge, and progressive reclamation may potentially affect soil quantity and quality.

Existing conditions of terrain and soils were characterized using surficial materials, geohazards, terrain stability, and soil erosion potential. Much of the Assessment Footprint consists of geomorphically active, moderately steep, and steep terrain. The majority of the area planned to be disturbed by Project infrastructure has a low to moderate soil erosion potential. Eight contaminants of potential concern were found with higher than accepted thresholds in the Assessment Footprint. Depending on the area, 0 to 50% of the existing soil can be recovered for future reclamation.

Potential effects were assessed using quantifiable parameters (i.e., direct loss of soil quantity) where possible, and using qualitative analysis such as using scientific literature, Indigenous Knowledge, verified environmental assessment predictions from similar projects, and professional judgment for parameters that could not be quantified (i.e., loss due to soil erosion).

Following the implementation of mitigation measures, no residual effects on soil volume are predicted during the Construction and Operations phases, and baseline soil quality concentrations will be equal to Reclamation and Closure phase concentrations. In consideration of the moderate to high effectiveness of the mitigation and monitoring measures proposed, no additional follow-up strategies are proposed for terrain and soils. No cumulative effects are identified for the Terrain and Soils Valued Component.

TCG and THREAT conducted a technical review of the *Terrain and Soils* chapter submitted by Skeena Resources, with feedback provided through the ITT and participation in the TAC. The review included evaluation of both project-specific and cumulative effects, with the following points on uncertainties, risk, and technical considerations relevant to the Tahltan Assessment:

- Concerns about potential effects from dust deposition and its impacts on soil quality.
- Increased potential effects from underestimating the area requiring clearing and the availability of topsoil locations.
- Potential effects from the potential ARD from ore stockpiles overextended residence times.
- Impacts to archaeological sites should be considered as a potential effect when considering alterations to terrain and soil.
- Uncertainties were identified with changes in terrain stability and morphology, all mitigation measures are listed as moderate and no residual effect has been identified. However, a conservative assessment should be given so that this can be carried forward into the cumulative effects assessment. Similarly, mitigation measures for changes to physical and chemical properties of soil were listed as moderate to high, and no residual effect was identified.

Terrain and Soils potential effects are tied to the TSP management directions, the Core Priorities, and the interconnected health of land and water. As noted in the technical concerns, the nature and magnitude of effects described here are consistent with those identified in the Heritage Resources and Wildlife and Wildlife Habitat chapters. The concerns raised regarding terrain and soils are reflected across these related sections, emphasizing the cumulative importance of this value to the Tahltan Nation.

Vegetation and Ecosystems (Chapter 18)

The assessment of vegetation and ecosystems includes effects on ecosystems, plant communities of interest, plant species of interest and vegetation quality, including plants of cultural value to Engaged Indigenous Nations. Project activities during Construction, Operations, and Reclamation and Closure have

the potential to affect vegetation and ecosystems through changes in groundwater, edge effects, fragmentation, invasive plants, changes in water quantity, water quality, dust deposition, and air emissions.

Existing ecosystems are characterized as alpine and parkland, consisting of mountainous areas that are represented by rocks, glaciers or sparsely vegetated areas with short trees (krummholz), and herb and shrub communities. The rest of the existing ecosystem consists of forested areas. Floodplain areas account for less than 1% of the total ecosystems and wetlands account for 1% of the Assessment Footprint. No Species at Risk Act-listed species, or red- or blue-listed species, were observed.

Project effects were assessed using field surveys, ecosystem mapping, desktop studies, review of environmental assessments of other projects in the area and through the integration of Indigenous Knowledge.

*Two residual effects are expected after the implementation of mitigation measures: changes to ecosystems and culturally valued plants. The loss or alteration of ecosystem extent or function is considered to be of **Moderate** magnitude and **High** probability. Overall, the Project's Assessment Footprint is conservatively predicted to result in a loss of 1,727.3 ha of alpine and parkland ecosystems; however, the current proposed Project Footprint would result in a loss of 178.1 ha. The Project will result in the loss of up to 7.1 ha of riparian ecosystems, 107.9 ha of old growth forests, and 23.0 ha of wetlands. Some of these ecosystems are expected to be re-established after reclamation. The loss or alteration of culturally valued plant species, is considered to be of **Low** magnitude and **High** probability. The Project will result in the loss of up to 660.3 ha of culturally valued plant species site groups.*

In consideration of the mitigation and monitoring measures proposed, no additional follow-up strategies are proposed for vegetation and ecosystems.

Table 4.4-10: Summary of Residual Effects on the Vegetation and Ecosystems Valued Component

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Construction and Operations	Loss or Alteration of Ecosystem Extent or Function	**Magnitude:** Moderate **Geographic Extent:** Local **Duration:** Far-future **Frequency:** Continuous **Reversibility:** Reversible Long-term **Resiliency:** Low **Context:** Neutral **Importance:** Moderate	**Confidence:** High **Probability:** High **Consequence:** Minor **Risk:** Medium
Construction and Operations	Loss or Alteration of Culturally Valued Plant Species	**Magnitude:** Low **Geographic Extent:** Local **Duration:** Far-future **Frequency:** Continuous **Reversibility:** Reversible long-term **Resiliency:** Low **Context:** Neutral **Importance**: Moderate	**Confidence:** High **Probability:** High **Consequence:** Minor **Risk:** Medium

The cumulative effects assessment considers the potential for Project-related effects on vegetation and ecosystems to combine with the effects of other projects and activities. The residual cumulative effects of

*the loss or alteration of ecosystems' extent or function and the loss or alteration of culturally valued plants are both expected to be of **Low** magnitude because the area loss of ecosystems and culturally valued plant species habitat is small compared to the total available vegetation and ecosystems.*

Table 4.4-11: Characterization of Residual Vegetation and Ecosystems Cumulative Effects

Residual Effect	Characterization Criteria				
Loss or Alteration of Ecosystem Extent or Function	**Magnitude**	**Geographic Extent**	**Duration**	**Frequency**	**Probability**
	Low	Regional	Far-Future	Once	Low
	Reversibility	**Resilience**	**Context**	**Importance**	
	Reversible long-term	Low	Neutral	Moderate	
Loss or Alteration of Culturally Valued Plant Species	**Magnitude**	**Geographic Extent**	**Duration**	**Frequency**	**Probability**
	Low	Regional	Far-future	Once	Low
	Reversibility	**Resilience**	**Context**	**Importance**	
	Reversible long-term	Low	Neutral	Moderate	

TCG and THREAT conducted a technical review of the *Terrain and Soils* chapter submitted by Skeena Resources, with feedback provided through the ITT and participation in the TAC. The review included evaluation of both project-specific and cumulative effects, with the following points on uncertainties, risk, and technical considerations relevant to the Tahltan Assessment:

- Skeena Resources project-specific effects on the loss of ecosystems and culturally important plant species within the Consent and Project Footprint AOIs are characterized as having:
  - Local extent, moderate magnitude, and far-future duration;
  - Continuous effect, low resiliency, and long-term reversibility;
  - Moderate importance to Tahltan;
  - High confidence in available information, high probability of occurrence, and medium risk with minor consequences.
- Skeena Resources cumulative effects on these values are assessed similarly, but with low magnitude, while maintaining:
  - Local extent, far-future duration, and continuous effects;
  - Low resiliency, long-term reversibility, and moderate importance to Tahltan;
  - High confidence, high probability, and medium risk with minor consequences.
- Concerns and additional potential effects identified for the Tahltan Assessment include:
  - The need for more data on impacts to pine mushroom harvesting areas and the loss of old growth forests.
  - The mitigation strategies for listed plant species and ecological communities not achieving fully successful outcomes.
  - The need for improved assessment of dust and particulate deposition on plants and ecosystems.

- The uncertainties surrounding reclamation success in restoring culturally important plants and mature/old growth ecosystems in high elevation mountain pass environments, which parallels concerns noted in the Wildlife and Wildlife Habitat chapter with the limited history of successfully restoring these vegetation types, and the time required to achieve success.

Vegetation and Ecosystem potential effects are tied to the TSP management directions, the Core Priorities, and the interconnected health of land and water. As noted in the technical concerns, the nature and magnitude of effects described here are consistent with those identified in the Heritage Resources and Wildlife and Wildlife Habitat chapters. The concerns raised regarding vegetation and ecosystems are reflected across these related sections, emphasizing the cumulative importance of this value to the Tahltan Nation.

Wildlife and Wildlife Habitat (Chapter 19)

Wildlife has historically been, and continues to be, key to Indigenous peoples' sustenance and culture in the region. There are 44 species of conservation concern with the potential to occur in the Regional Assessment Area: 35 birds, 8 mammals, and 1 amphibian. The Project has the potential to affect wildlife and wildlife habitat, which in turn could result in effects on Tahltan Values, including culture, human health, and land and resource use.

Project activities during the Construction, Operations, Reclamation and Closure, and Post-closure phases have the potential to affect wildlife and wildlife habitat, including causing a loss or alteration of wildlife habitat; altering large-scale wildlife movement patterns or movement corridors; increasing mortality risk; and, affecting wildlife health, through the exposure to contaminants

Following the implementation of mitigation measures, ***High*** *probability* ***Low to Moderate*** *magnitude residual effects are predicted relating to change in habitat for all representative species, with* ***Moderate*** *magnitude effects for mountain goat (growing season), grizzly bear (fall), wolverine (growing season), and hoary marmot (growing season). The Project will result in the direct and indirect loss or alteration of up to 2,123.7 ha of wildlife habitat, a 10% decrease from the existing condition within the Local Assessment Area and 1% within the Regional Assessment Area. Construction of the Project is not anticipated to result in a disproportionate amount of habitat loss or alteration for species of conservation concern known or assumed to occur within the Local Assessment Area.*

The Project is predicted to have a ***Low*** *magnitude,* ***Low*** *probability residual effect relating to mortality risk and movement for all representative species, except for the mortality risk on western toads which is predicted to be* ***Moderate*** *magnitude.*

The Project is predicted to result in a ***Low*** *magnitude residual effect on the mortality risk resulting from vehicle-wildlife collisions with Project transportation, resulting from the increase in annual daily traffic volumes. The probability associated with this residual effect is* ***Low.***

The Project will not result in the construction of infrastructure that could create physical barriers to wildlife movement and there are no documented wildlife corridors or large-scale movement patterns/events near the Project, but follow-up activities are being undertaken to reduce uncertainty.

The Project is predicted to have negligible potential to affect wildlife health following the application of standard mitigation measures and the implementation of Project-specific mitigation measures used to eliminate or reduce the potential for deleterious substances to enter the environment.

Table 4.4-12: Summary of Residual Effects on the Wildlife and Wildlife Habitat Valued Component

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Construction	Change in Habitat: Direct loss or alteration of wildlife habitat through land clearing	**Magnitude:** Low to Moderate **Geographic Extent:** Local **Duration:** Far-future **Frequency:** Continuous **Reversibility:** Irreversible **Resiliency:** Moderate **Context:** High **Importance:** High	**Confidence:** High **Probability:** High **Consequence:** Minor **Risk:** Medium
Construction and Operations	Change in Habitat: Indirect loss or alteration of wildlife habitat through sensory disturbance and edge effects	**Magnitude:** Low **Geographic Extent:** Landscape to Regional **Duration:** Medium-term **Frequency:** Continuous **Reversibility:** Reversible Long-term **Resiliency:** Moderate **Context:** High **Importance:** High	**Confidence:** High **Probability:** High **Consequence:** Minor **Risk:** Medium
Construction and Operations	Change in Movement: Alteration of large-scale wildlife movement patterns or movement corridors	**Magnitude:** Low **Geographic Extent:** Landscape **Duration:** Medium-term **Frequency:** Continuous **Reversibility:** Reversible Long-term **Resiliency:** Moderate **Context:** High **Importance:** High	**Confidence:** Moderate **Probability:** High **Consequence:** Minor **Risk:** Medium
Construction and Operations	Change in Mortality Risk: Direct increase in mortality risk through vehicle-wildlife collisions	**Magnitude:** Low **Geographic Extent:** Landscape **Duration:** Medium-term **Frequency:** Continuous **Reversibility:** Reversible Long-term **Resiliency:** Moderate **Context:** High **Importance:** High	**Confidence:** High **Probability:** Low **Consequence:** Minor **Risk:** Low

*A Wildlife Management Plan will be implemented to address uncertainty, including an adaptive management framework, and monitoring activities to evaluate if mitigation measures are being implemented and are operating as proposed, to measure predicted effects on wildlife and wildlife habitat, and to detect any unforeseen effects on wildlife populations. This will include monitoring in accordance with permit requirements. The cumulative effects assessment considers the potential for Project-related effects on wildlife and wildlife habitat to combine with the effects of other projects and activities. The residual cumulative effect of habitat loss and alteration is expected to be of **Low** magnitude and **Low** probability. No known projects within the reasonably foreseeable future whose scale or scope could be considered a substantive development and interact cumulatively with the Project to threaten the sustainability of wildlife or wildlife habitats in the Regional Assessment Area were identified. The only reasonably foreseeable future*

*project with the potential to contribute traffic along the Eskay Creek Mine Access Road is the Kerr-Sulphurets-Mitchell Mine project via the Coulter Creek Access Road, and the predicted residual cumulative effects is anticipated to be of **Low** magnitude and **Low** probability. The Project's contribution to a residual cumulative effect relating to transportation on wildlife mortality risk resulting from vehicle-wildlife collisions along Highway 37 and 37A is also predicted to be of **Low** magnitude and **Low** probability.*

TCG and THREAT conducted a technical review of the *Wildlife and Wildlife Habitat* chapter submitted by Skeena Resources, with feedback provided through the ITT and participation in the TAC. The review included evaluation of both project-specific and cumulative effects, with the following points on uncertainties, risk, and technical considerations relevant to the Tahltan Assessment:

- Direct habitat loss during Construction is characterized as having:
  - Local extent, low to moderate magnitude, far-future duration, and a continuous effect;
  - Moderate resiliency to disturbance, irreversible, and of high importance to Tahltan;
  - High confidence in information, high probability of occurring, and medium risk with minor consequences.
- Indirect habitat loss during Construction and Operations is assessed with:
  - Landscape to regional extent, low magnitude, medium-term duration, and continuous effect;
  - Moderate resiliency, long-term reversibility, and high importance to Tahltan;
  - Medium confidence, high probability, and medium risk with minor consequences.
- Wildlife movement effects during Construction and Operations include:
  - Landscape extent, low magnitude, medium-term duration, and continuous effect;
  - Moderate resiliency, long-term reversibility, and high importance to Tahltan;
  - Medium confidence, medium probability, and medium risk with moderate consequences.
- Wildlife mortality risks during Construction and Operations are evaluated as:
  - Landscape extent, low magnitude, medium-term duration, and continuous effect;
  - Moderate resiliency, long-term reversibility, and high importance to Tahltan;
  - High confidence, low probability, and low risk with minor consequences.
- TCG supports the technical concerns raised by other regulatory agencies regarding potential disturbances to wildlife and wildlife habitat.
- Potential effects with dust and increased traffic degrading habitat quality, impacting plant communities and wildlife use around the Project Footprint, Transportation Corridor, and Local Assessment Area (LAA).
- Increased traffic volumes along the MAR and Highway 37 contributing to higher wildlife mortality rates. Guardian monitoring has shown significantly higher moose mortalities than previously reported along other Highway 37 sections. TCG recommends the use of a correction factor or adjustment as a mitigation strategy and the collection of additional highway mortality data to inform management plans.
- During the snow free periods wildlife habitat values of the Prout Plateau may be greater than estimated in the AOI.

- The potential effects to wildlife from direct and indirect interactions can be greater than currently estimated.
- Coastal river valley wildlife habitats, old growth ecosystems, wetlands, and mountain pass wildlife habitats and ecosystems will take at least 50-80 years to recover from disturbance and will be challenging to restore. There is limited evidence of successful reclamation for these mountain pass ecosystems which increases the risks and uncertainties to wildlife and Tahltan.
- Uncertainties remain regarding the full extent of habitat loss, particularly for culturally important plant communities. This is exacerbated by potential increases in land clearing due to the water optimization redesign and the need to manage greater snowpack volumes.
- Reclamation will be challenging and will take years to determine if successful, so recovery of wildlife habitats and ecosystems is a risk.
- Both cumulative and project-specific effects to wildlife and habitats are closely tied to Tahltan land use, way of life, and Tahltan values.
- There are existing barriers from the project's footprint, access, and resource development in the area effecting wildlife use, movements, and habitat quality. The proposed project activities and disturbance are additive to existing barriers and potential effects to wildlife, habitats, and Tahltan traditional practices.

Tahltan communities and members have raised the following items on the potential effects of Wildlife and Wildlife Habitat:

- Concerns about the overall effects of the project on wildlife and wildlife habitat.
- Potential effects of land disturbance on traditional food sources, food security, wildlife health, and the ability to successfully harvest traditional foods.
- Concerns about mitigation measures for water-dependent wildlife exposed to selenium and other contaminants.
- Concerns on cumulative effects and recovery strategies for key species like grizzly bears, mountain goats, and amphibians.
- The need for effective recovery strategies in response to cumulative effects, particularly for sensitive species such as grizzly bears, mountain goats, and amphibians.
- Questions on the potential effects to wildlife and Tahltan related to access, habitat loss, reclamation success, traffic, wildlife mortalities, and additional information related to bioaccumulation.
- The importance of aligning water management plans with wildlife health and ecosystem protection objectives.

Wildlife and Wildlife Habitat potential effects are tied to the TSP management directions, the Core Priorities, and the interconnected health of land and water.

Based on the above information and as a component of the overall effects management for the AOIs the following is an estimate to be considered for the Effects Management for these AOIs (Section 4.4.9.7) with the Tahltan Risk Assessment:

- Extent: landscape

- Magnitude: moderate to high
- Duration and Reversibility: 1 to 3 generations and reversible.
- Frequency: continuous
- Confidence: moderate to high
- Risk and Uncertainties: moderate to high risk with moderate uncertainties

Human Health (Chapter 20)

*Following the implementation of mitigation measures, the Project is predicted to have several residual effects on human health. The Project would result in a **Low** magnitude (and **Low** probability) residual effect on community cohesion, due to demographic changes from population moving relatively rapidly, primarily into Smithers and Terrace, for jobs during the Operations phase. A **Low** magnitude, **Medium** probability, residual effect on community/family well-being due to the use of two-week on/off work rotations could occur during the Construction and Operations phases. The Project would result in a **High** probability, **Low** magnitude residual effect on the mental health of Indigenous people due to landscape/environmental changes. The Project would result in a **Low** magnitude (and Low probability) residual effect on the incidence of infectious disease. While the mitigation measures to prevent the spread of infectious diseases in the Camp are very effective, infectious diseases can be challenging to prevent, particularly in the case of new viruses, and some residual risk of infectious disease likely remains. The Project would result in a **Low** to **Medium** probability, **Low** magnitude residual effect on the quality of nutrition, due to increases in the cost of living or, for Indigenous people, a reduction in the consumption of subsistence foods due to contamination concerns.*

*The Project may result in **High** magnitude residual effects on the incidence of chronic disease due to emissions of contaminants in air or water, specifically due to criteria air contaminants at or near the Project Assessment Footprint or metal exposure within the Human Health Risk Assessment Study Area for residents (i.e., a full-time resident receptor) and land users (i.e., a traditional land user receptor). The residual effects for criteria air contaminants at or near the Project Assessment Footprint is predicted to have **High** magnitude, **Low** probability residual effect, as the effects are limited in geographic extent and in remote areas where people do not live full-time or that may be difficult to access. The residual effects for metal exposure are based on individuals with high consumption rates of subsistence foods (the 95th percentile) and the risk estimates would vary somewhat by contaminant (i.e., antimony, aluminum, iron, mercury, selenium, and arsenic; there are no residual effects due to other metals). The assessment determined that these residual effects have a **Low** probability of occurrence due to the relatively low level of Project-related incremental change for some parameters (i.e., aluminum, iron, and arsenic), as well as the high conservativism used in the modelling and risk assessment approach (for example, if average subsistence foods consumption rates were used then antimony, aluminum, and iron would not have residual effects). The Project is also predicted to have a **High** magnitude, High probability residual effect on off-duty workers residing at the Permanent Camp, due to 24-hour exposure to PM10; residual effects would be lower at the KM58 Camp.*

Monitoring of selected socio-economic and health indicators will be part of the Health and Medical Services Plan, and used to adaptively manage actions in response to data and trends. A Human Health Monitoring Program will be used to provide information and recommendations to users of subsistence foods that are harvested or collected within the study area, so that risks can be identified and subsistence food consumers can make informed choices about what to eat and from where.

Table 4.4-13: Summary of Residual Effects on Health Sub-valued Components

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Operations	Changes in community cohesion and/or sense of safety due to in-migration	**Magnitude:** Low **Geographic Extent:** Household (Terrace) to Community (Smithers) **Duration:** Medium-term **Frequency:** Continuous **Resiliency:** Moderate **Context:** Low to Neutral **Importance:** Low	**Confidence:** Medium **Probability:** Low **Consequence:** Minor **Risk:** Low
Construction and Operations	Changes in community cohesion and/or sense of safety due to FIFO Rotation Work Schedules	**Magnitude:** Low **Geographic Extent:** Household (RAA); Community (LAA) **Duration:** Medium-term **Frequency:** Continuous **Resiliency:** Moderate (RAA); High (LAA) **Context:** Low To Neutral (RAA); High (LAA) **Importance:** Moderate (RAA); High (LAA)	**Confidence:** Medium **Probability:** Medium **Consequence:** Minor **Risk:** Low
Construction, Operations, and Reclamation and Closure	Indigenous people: changes in mental health and/or quality of life due to landscape/ environmental changes	**Magnitude:** Low **Geographic Extent:** Regional/ Indigenous Peoples **Duration:** Long-term **Frequency:** Continuous **Resiliency:** Low **Context:** High **Importance:** High	**Confidence:** Medium **Probability:** High **Consequence:** Minor **Risk:** Medium
Construction and Operations	Changes in Incidence of Infectious Respiratory/Diarrheal Disease	**Magnitude:** Low **Geographic Extent:** Household **Duration:** Medium-term **Frequency:** Sporadic **Resiliency:** Moderate **Context:** Low **Importance:** Low	**Confidence:** Medium **Probability:** Low **Consequence:** Minor **Risk:** Low
Construction, Operations, Reclamation and Closure, and Post--closure	Changes in incidence of chronic disease from exposure to metal POCs	**Magnitude:** High **Geographic Extent:** Individual/ Household **Duration:** Far-future **Frequency:** Sporadic **Resiliency:** High **Context:** Low **Importance:** High	**Confidence:** Medium **Probability:** Low **Consequence:** Moderate **Risk:** Low

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Construction and Operations	Changes in incidence of chronic disease from exposure to CACs at the MPOI	**Magnitude:** High **Geographic Extent:** Individual/ Household **Duration:** Medium-term **Frequency:** Sporadic **Resiliency:** Moderate **Context:** Low **Importance:** High	**Confidence:** Medium **Probability:** Low **Consequence:** Moderate **Risk:** Low
Construction and Operations	Changes in incidence of chronic disease from PM10 for Off-duty Workers at the worker accommodation camps (KM58 Camp and Permanent Camp)	**Magnitude:** High **Geographic Extent:** Community **Duration:** Medium-term **Frequency:** Regular **Resiliency:** Moderate **Context:** Neutral **Importance: High**	**Confidence:** Medium **Probability:** High **Consequence:** Major **Risk:** High
Construction and Operations	Changes in quality of nutrition due to increased food costs	**Magnitude:** Low **Geographic Extent:** Regional **Duration:** Medium-term **Frequency:** Continuous **Resiliency:** Moderate **Context:** Low to Neutral **Importance:** Moderate	**Confidence:** Medium **Probability:** Medium **Consequence:** Minor **Risk:** Low
Construction, Operations, Reclamation and Closure, and Post-closure	Indigenous people: Changes in quality of nutrition due to reduced quality and/or quantity of subsistence foods	**Magnitude:** Low **Geographic Extent:** Household **Duration:** Far-future **Frequency:** Sporadic **Resiliency:** High **Context:** Low **Importance:** High	**Confidence:** Medium **Probability:** Low **Consequence:** Minor **Risk:** Low

Notes:

CAC = criteria air contaminant; FIFO = fly-in/fly-out; HHRA = Human Health Risk Assessment; LAA = Local Assessment Area; MPOI = maximum point of impingement; POC = parameter of concern; RAA = Regional Assessment Area

KM = kilometre marker

The cumulative effects assessment considered the potential for Project-related effects on human health to combine with the effects of other projects and activities. The magnitudes of the residual cumulative effects on human health are predicted to be the same as the Project-related residual effects described above.

Table 4.4-14: Summary of Cumulative Residual Effects on Health Valued Component

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Operations	Changes in community cohesion and/or sense of safety due to in-migration	**Magnitude:** Low **Geographical Extent:** Household **Duration:** Medium-term **Frequency:** Continuous **Resiliency:** Moderate **Context:** Low to Neutral **Importance:** Low	**Confidence:** Low **Probability:** Low **Consequence:** Minor **Risk:** Low
Construction and Operations	Changes in community cohesion and/or sense of safety due to FIFO rotation work schedules	**Magnitude:** Low **Geographical Extent:** Household **Duration:** Medium-Term **Frequency:** Continuous **Resiliency:** Moderate **Context:** Low To Neutral **Importance:** Moderate	**Confidence:** Low **Probability:** Medium **Consequence:** Minor **Risk:** Low
All phases	Indigenous people: Changes in mental health and/or quality of life due to landscape/ environmental changes	**Magnitude:** Low **Geographical Extent:** Regional/ Indigenous Peoples **Duration:** Long **Frequency:** Continuous **Resiliency:** Low **Context:** High **Importance:** High	**Confidence:** Medium **Probability:** High **Consequence:** Minor **Risk:** Medium
Construction and Operations	Changes in incidence of infectious respiratory/diarrheal disease	**Magnitude:** Low **Geographical Extent:** Community **Duration:** Medium-term **Frequency:** Sporadic **Resiliency:** Moderate **Context:** Low **Importance:** Low	**Confidence:** Medium **Probability:** Low **Consequence:** Minor **Risk:** Low
Construction, Operations, Reclamation and Closure, and Post--closure	Changes in incidence of chronic disease from exposure to metal POCs	**Magnitude:** High **Geographical Extent:** Individual/Household **Duration:** Far-future **Frequency:** Sporadic **Resiliency:** Moderate **Context:** Low **Importance:** High	**Confidence:** Medium **Probability:** Low **Consequence:** Moderate **Risk:** Low

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Construction and Operations	Changes in incidence of chronic disease from exposure to CACs at the MPOI	**Magnitude:** High **Geographical Extent:** Individual/Household **Duration:** Medium-term **Frequency:** Sporadic **Resiliency:** Moderate **Context:** Low **Importance:** High	**Confidence:** Medium **Probability:** Low **Consequence:** Moderate **Risk:** Low
Construction and Operations	Changes in incidence of chronic disease from PM_{10} for Off-duty Workers at the KM58 Camp and Permanent Camp	**Magnitude:** High **Geographical Extent:** Community **Duration:** Medium-term **Frequency:** Regular **Resiliency:** Low **Context:** Neutral **Importance:** High	**Confidence:** Medium **Probability:** High **Consequence:** Major **Risk:** High
Construction and Operations	Changes in quality of nutrition due to increased cost of market foods	**Magnitude:** Low **Geographical Extent:** Regional/ Indigenous Peoples **Duration:** Medium-term **Frequency:** Continuous **Resiliency:** Moderate **Context:** Low to Neutral **Importance:** Low	**Confidence:** Low **Probability:** Medium **Consequence:** Minor **Risk:** Low
Construction, Operations, Reclamation and Closure, and Post-closure	Indigenous People: Changes in quality of nutrition due to reduced quality and/or quantity of subsistence foods	**Magnitude:** Low **Geographical Extent:** Individual/ Household **Duration:** Far-future **Frequency:** Sporadic **Resiliency:** Low **Context:** High **Importance:** High	**Confidence:** Medium **Probability:** Low **Consequence:** Minor **Risk:** Low

Notes:

CAC = criteria air contaminant; FIFO = fly-in/fly-out; LAA = Local Assessment Area; MPOI = maximum point of impingement; RAA = Regional Assessment Area

KM = kilometre marker

TCG and THREAT conducted a technical review of the *Human Health* chapter submitted by Skeena Resources, with feedback provided through the ITT and participation in the TAC. The review included evaluation of both project-specific and cumulative effects, with the following points on uncertainties, risk, and technical considerations relevant to the Tahltan Assessment:

- The current estimated effects on the changes in community cohesion due to migration during Operations identify a household to community extent, low magnitude, medium-term duration and continuous effect, moderate resiliency to disturbance, and low importance to Tahltan. The effects have a medium confidence of information, low probability of occurring, with low risk and minor consequences.

- The current estimated effects on the changes in community cohesion due rotation work schedule during Construction and Operations identify a local to regional extent, low magnitude, medium-term duration and continuous effect, moderate to high resiliency to disturbance, and moderate to high importance to Tahltan. The effects have a medium confidence of information, medium probability of occurring, with low risk and minor consequences.
- The current estimated effects on the changes in Indigenous people mental health or quality of life due to landscape/environmental changes during Construction and Operations identify a regional extent, low magnitude, long-term duration and continuous effect, low resiliency to disturbance, and high importance to Tahltan. The effects have a medium confidence of information, high probability of occurring, with medium risk and minor consequences.
- The current estimated effects on the changes in the incidence of diseases during Construction and Operations identify a household extent, low magnitude, medium-term duration and sporadic effect, moderate resiliency to disturbance, and low importance to Tahltan. The effects have a medium confidence of information, low probability of occurring, with low risk and minor consequences.
- The current estimated effects on the changes in the incidence of chronic diseases from exposure of metal POCs during Construction and Operations identify a household extent, high magnitude, far-future duration and sporadic effect, high resiliency to disturbance, and high importance to Tahltan. The effects have a medium confidence of information, low probability of occurring, with low risk and moderate consequences.
- The current estimated effects on the changes in the incidence of chronic diseases from exposure of CACs during Construction and Operations identify a household extent, high magnitude, medium-term duration and sporadic effect, moderate resiliency to disturbance, and high importance to Tahltan. The effects have a medium confidence of information, low probability of occurring, with low risk and moderate consequences.
- The current estimated effects on the changes in the incidence of chronic diseases from exposure of PM_{10} for off-duty workers during Construction and Operations identify a regional extent, low magnitude, medium-term duration and continuous effect, moderate resiliency to disturbance, and moderate importance to Tahltan. The effects have a medium confidence of information, medium probability of occurring, with low risk and minor consequences.
- The current estimated effects on the changes in nutrition due to increased food costs during Construction and Operations identify a regional extent, low magnitude, medium-term duration and continuous effect, moderate resiliency to disturbance, and moderate importance to Tahltan. The effects have a medium confidence of information, low probability of occurring, with low risk and minor consequences.
- The current estimated effects on the changes in nutrition to Indigenous peoples due to reduced quality/quantity of subsistence foods during Construction, Operations, Reclamation and Closure, and Post-closure identify a local/household extent, low magnitude, far-future duration and sporadic effect, high resiliency to disturbance, and high importance to Tahltan. The effects have a medium confidence of information, low probability of occurring, with low risk and minor consequences.
- Uncertainties associated with the assessment include:
    - Estimates and indicators developed regarding how many people may relocate to the RAA (territory and regional scale).

- Estimates and assumptions with future projects having a cause-and-effect relationship where the interactions cannot be fully understood. This leads to uncertainties with mental health effects associated with in-migration and local people with rotational work schedules.
- Use of aggregate data may mask health issues at a local/community level resulting in uncertainties on how well the aggregated information represents individuals and communities.
- Uncertainty with regional health data could potentially mask health issues at a local community level.
- Exposure profiles and receptor characteristics including consumption rates and harvesting locations were assumed based on available information, which may over or underestimate potential exposures.
- The updated water model inputs have not been incorporated into the human health model and the modelled existing conditions for water quality are predicted to undergo some changes due to the activities proposed as part of the Bulk Technical Sample.
- A detection limit issue was identified with selenium in geochemical source terms for dust source materials compared to those in baseline dust sampling. This also resulted in predicted increases in selenium concentrations in soil and vegetation that may not occur.
- Uptake of antimony from water into large mammals was the exposure pathway driving the Project-related incremental changes in tissue concentrations. Antimony concentrations in surface water increase by 4x through the project phases, and antimony exceeds drinking water quality guidelines in all application cases. The risks associated with antimony exposure were determined to be acceptable in the HHRA as the hazard quotient for antimony did not exceed 1.0.
- The outputs of the air quality model and the receptor locations at the maximum concentration point along the Assessment Boundary may overrepresent potential inhalation exposures.
- The bioavailability of the metals in food and water was assumed to be 100% of the ingested dose which may overestimate the actual dose.
- Use of tissue calibration factors and tissue transfer factors in the exposure model to “correct” differences between measured and modelled concentrations of metals in game tissues and fish may either over or underestimate the potential exposures depending on the analyte.
- Consideration of consumption of both market foods and harvested foods in the diet may have resulted in an overestimation of exposure to metals.

- With the above uncertainties, there are no significant deficiencies with the Human Health Risk Assessment (HHRA) with the main exposure pathways are through air and water emissions. Potential effects related to air quality and water (groundwater and surface water) can increase the uncertainties with estimated effects to human health and the interconnection to Tahltan values.
- Mitigations related to air quality, fugitive dust emissions, and contact/non-contact water management can reduce potential effects.

Tahltan communities and members have raised the following items on the potential effects of Human Health:

- Concerns over increased stress on existing health, social and community services in Tahltan Territory;
- Concerns and questions related to impacts associated with mine work life and shift work schedules on Tahltan families;

- Concerns about alignment of residual effects assessments with baseline data and potential health impacts from air and metal pollutants;
- Requests for additional details on health risks from cumulative exposures and the interplay of socio-economic factors.

Human Health potential effects are tied to the TSP management directions, the Core Priorities, and the interconnected health of land and water.

Based on the above information and as a component of the overall effects management for the AOIs the following is an estimate to be considered for the Effects Management for these AOIs (Section 4.4.9.7) with the Tahltan Risk Assessment:

- Extent: landscape to regional
- Magnitude: low to moderate
- Duration and Reversibility: 1 to 3 generations and reversible.
- Frequency: continuous
- Confidence: moderate to high
- Risk and Uncertainties: moderate to high risk with moderate uncertainties

Infrastructure and Services (Chapter 21)

The Project has the potential to put pressure on infrastructure and services in the communities of the Local and Regional Assessment Areas. This could result in effects on Tahltan Values, including human health. Potential effects on these values have been identified through engagement with Engaged Indigenous Nations, government agencies, and other stakeholders, as well as through technical expertise/professional judgment.

Although the Project is in a relatively remote setting, as a result of the movement of people, equipment, and other goods, there is potential for interaction between the Project and infrastructure and services of the Local and Regional Assessment Areas. Project employment and associated in-migration of employees and their families to communities in the region is the main pathway for potential effects on infrastructure and services.

In consideration of existing requirements and standard mitigation, the Project has negligible to minor potential to put pressure on utilities (i.e., waste management), education and daycare services, transportation infrastructure, and emergency and law enforcement services. The Project is predicted to have adverse residual effects (i.e., increase pressure) on healthcare infrastructure and services, and housing affordability and availability. The magnitude of these residual effects is ***Moderate****, in consideration of existing capacity challenges and the existing shortage of housing options and high rental costs in the region. To mitigate pressure on local healthcare infrastructure, the Project will continue to provide onsite professional medical staff who will treat for minor injuries and, non-occupational health needs and provide basic first-line prescription medications where appropriate. The adverse residual effects on healthcare infrastructure and services have a* ***Medium*** *probability. A Socio-economic Monitoring Plan is proposed as a follow-up strategy. The Socio-economic Monitoring Plan will specify a set of indicators that will allow Skeena Resources Limited to understand population changes and the implications to infrastructure and services, and adaptively manage any effects that have not been anticipated or may be more adverse than anticipated, including in the case of disproportionate effects to diverse subgroups.*

Table 4.4-15: Summary of Residual Effects on Infrastructure and Services Valued Component

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Operations	Pressure on health care services and facilities	**Magnitude:** Moderate **Geographical Extent:** Regional/ Indigenous Peoples **Duration:** Medium-term **Frequency:** Continuous **Reversibility:** Reversible Long-term **Resiliency:** Low **Context:** Neutral **Importance:** High	**Confidence:** Medium **Probability:** Medium **Consequence:** Moderate **Risk:** Medium
Operations	Pressure on affordability and availability of housing	**Magnitude:** Moderate **Geographical Extent:** Community **Duration:** Medium-term **Frequency:** Continuous **Reversibility:** Reversible Long-term **Resiliency:** Low **Context:** Low **Importance:** High	**Confidence:** Medium **Probability:** Medium **Consequence:** Moderate **Risk:** Medium

*The cumulative effects assessment considered the potential for Project-related residual effects on infrastructure and services to combine with the effects of other projects and activities. The predicted residual cumulative effects on health care infrastructure and services and housing affordability and availability are expected to be of **Medium** probability of **High** magnitude.*

TCG and THREAT conducted a technical review of the *Infrastructure and Services* chapter submitted by Skeena Resources, with feedback provided through the ITT and participation in the TAC. The review included evaluation of both project-specific and cumulative effects, with the following points on uncertainties, risk, and technical considerations relevant to the Tahltan Assessment:

- The projected effects on health care services and facilities during Operations indicate a regional/ Indigenous Peoples extent, with moderate magnitude, medium-term duration, and continuous effect. These impacts are expected to have low resiliency to disturbance, are reversible in the long term, and are of high importance to the Tahltan. The assessment carries a medium level of confidence, with a medium probability of occurrence, resulting in a medium risk and moderate consequences.
- The projected effects on housing affordability and availability during Operations are identified at the community level. These effects are of moderate magnitude and medium-term duration, continuous in nature, and characterized by low resiliency to disturbance. They are considered reversible over the long term and are highly important to the Tahltan. The confidence level in the data is medium, the probability of occurrence is medium, and the overall risk and consequences are moderate.
- Cumulative effects on health care services and facilities during Operations are considered more substantial. These effects span a regional/Indigenous Peoples extent, are of high magnitude, medium-term duration, and continuous. They exhibit low resiliency to disturbance and are deemed reversible in

the long term. The assessment has medium confidence, a medium likelihood of occurring, and represents a high risk with major consequences.

- Cumulative effects on housing affordability and availability during Operations are also assessed as high magnitude at the community level. These impacts are continuous, medium-term, and marked by low resiliency to disturbance. They are reversible in the long term and of high significance to the Tahltan. The confidence in this information is medium, as is the probability of occurrence, while the associated risk is high with major consequences.
- Potential positive outcomes during Construction and Operations phases include improvements in employment, income, contracting, partnerships, business opportunities, and tax revenue for the Tahltan. However, it is important to note that these opportunities may not be equally accessible to Indigenous women and workers.
- Potential negative effects during Reclamation and Closure include reductions in employment, income, contracting, partnerships, business opportunities, and tax revenue for the Tahltan.
- There are concerns about negative effects on Tahltan way of life and traditional practices due to ongoing access barriers to the project area throughout all mining stages. These effects may particularly affect members who rely on the Eskay Creek area for harvesting resources and households that use harvesting to supplement their income. These disruptions could disproportionately affect lower-income families that face food insecurity and depend more heavily on traditional subsistence activities.
- Potential changes to the cost of living due to an increased demand for housing, local goods, and pressure on local wages.
- Uncertainties with the assessment relate to the following:
    - portions of the data used in baseline characterization may be outdated and/or less relevant due to changes in current conditions due to COVID-19.
    - Proposed mitigations are identified as moderate to high effectiveness but the evidence has limitations of application.
    - A clear commitment for applying an adaptive and responsive effects can be challenging with the short life of mine timeframe.
    - Additional potential effects can be related to loss of Tahltan socio-cultural time on traditional practices while employed at the project, and this additional consideration of potential negative effects during periods of positive benefits can better balance the social and economic benefits and risks to Tahltan.

Tahltan communities and members have raised the following items on the potential effects of Infrastructure and Services:

- Concerns over increased stress on existing health, social and community services in Tahltan Territory;
- Concerns on mining revenues, benefits, services, infrastructure, housing, and employment have been leaving Tahltan Territory with communities shrinking over time. It is important to ensure communities are growing with the benefits, services, housing, and employment being available to meet specific community needs;

- Community infrastructure and housing declines or decreased availability are factors with people leaving the territory, poor health conditions, and attracting/holding skilled workers in the communities. This is linked to declining or poor medical/mental health/emergency services.
- Questions on the positive and negative estimated effects to Tahltan employment, infrastructure, and services;
- Recommendations for positive legacy contributions (Benefits to Tahltan): Community housing, in-territory treatment facilities, elders care homes, youth recreational facilities.

Infrastructure and Services potential effects are tied to the TSP management directions, the Core Priorities, and the interconnected health of land and water.

Based on the above information and as a component of the overall effects management for the AOIs the following is an estimate to be considered for the Effects Management for these AOIs (Section 4.4.9.7) with the Tahltan Risk Assessment:

- Extent: site specific to territory/regional
- Magnitude: moderate to high
- Duration and Reversibility: 1 to 3 generations and reversible short to long term
- Frequency: continuous during Construction and Operations and irregular during Reclamation and Closure
- Confidence: high
- Risk and Uncertainties: moderate to high risk with low uncertainties

Employment and Economy (Chapter 24)

*The Project is expected to result in a number of positive and adverse residual effects. Through Construction and Operations, the Project is predicted to have a **Low** magnitude positive residual effect on tax revenues and a **Moderate** magnitude positive residual effect on employment and income, as well as Project expenditures, business opportunities, and gross domestic product. During the transition to the Reclamation and Closure Phase, there is predicted to be **Low** magnitude adverse residual effects on tax revenues, employment and income, Project expenditures, business opportunities, and gross domestic product. The positive residual effects during Construction and Operations are expected to increase the cost of living during those phases. This is assessed to be a **Low** magnitude residual effect.*

A follow-up strategy is the Socio-economic Monitoring Plan, which will monitor the Project's effects on socio-economic indicators specific to potential effects on community infrastructure and services.

*The cumulative effects assessment considered the potential for Project-related effects on employment and economy to combine with the effects of other projects and activities. The predicted positive residual cumulative effects to employment and economy are expected to be of **High** magnitude, while the adverse residual cumulative effects are predicted to be **Low to Moderate** magnitude.*

TCG and THREAT conducted a technical review of the *Employment and Economy* chapter submitted by Skeena Resources, with feedback provided through the ITT and participation in the TAC. The review

included evaluation of both project-specific and cumulative effects, with the following points on uncertainties, risk, and technical considerations relevant to the Tahltan Assessment:

- The current estimated effects on pressures on health care services and facilities during Operations identify a regional/Indigenous Peoples extent, moderate magnitude, medium-term duration, continuous effect, low resiliency to disturbance, reversible in the long-term, and high importance to Tahltan. These effects have medium confidence, medium probability of occurring, with medium risk and moderate consequences.
- The current estimated effects on pressures on affordability and availability of housing during Operations identify a community extent, moderate magnitude, medium-term duration, continuous effect, low resiliency to disturbance, reversible in the long-term, and high importance to Tahltan. These effects have medium confidence, medium probability of occurring, with medium risk and moderate consequences.
- The current estimated effects on the changes in project expenditures, business opportunities, and GDP benefits has positive effects reported with increases during Construction and Operations with a regional/Indigenous Peoples extent, moderate magnitude, short-term duration and sporadic effect, moderate resiliency to disturbance, reversible in the short-term, and high importance to Tahltan. The effects have a medium confidence, medium probability of occurring, with high positive risk and major consequences.
- The estimated effects related in tax revenue during Construction and Operations are similar as the above positive effects.
- The current estimated effects on the pressures on employment and economy has negative effects reported with decreases during Reclamation and Closure with a regional/Indigenous Peoples extent, moderate magnitude, medium-term duration and continuous effect, moderate resiliency to disturbance, reversible in the short-term, and high importance to Tahltan. The effects have a medium confidence, high probability of occurring, with high risk and major consequences.
- The current estimated effects on the changes in project expenditures, business opportunities, and GDP benefits has negative effects reported with decreases during Reclamation and Closure with a regional/Indigenous Peoples extent, moderate magnitude, short-term duration and sporadic effect, moderate resiliency to disturbance, reversible in the short-term, and high importance to Tahltan. The effects have a medium confidence, medium probability of occurring, with high positive risk and major consequences.
- The estimated effects related in tax revenue during Reclamation and Closure are similar as the above negative effects.
- The current estimated cumulative effects on health care services and facilities during Operations identify a regional/Indigenous Peoples extent, high magnitude, medium-term duration, continuous effect, low resiliency to disturbance, reversible in the long-term, and high importance to Tahltan. These effects have medium confidence, medium probability of occurring, with high risk and major consequences.
- The current estimated cumulative effects on pressures on affordability and availability of housing during Operations identify a community extent, high magnitude, medium-term duration, continuous effect, low resiliency to disturbance, reversible in the long-term, and high importance to Tahltan. These effects have medium confidence, medium probability of occurring, with high risk and major consequences.
- Interest has been expressed in business, contracting, training, employment, and educational opportunities.

- The estimate of local workers (including Tahltan members) is 25% of total workers, which is lower than other similar projects in the area. Skeena Resources reports the number of available jobs to Tahltan members in mining has increased faster than the available Tahltan workforce, but will aim to have a higher percentage where possible.
- Uncertainties with the assessment relate to the following:
    - portions of the data used in baseline characterization may be outdated and/or less relevant due to changes in current conditions due to COVID-19.
    - Proposed mitigations are identified as moderate to high effectiveness but the evidence has limitations of application.
    - A clear commitment for applying an adaptive and responsive effects can be challenging with the short life of mine timeframe.
    - Additional potential effects can be related to loss of Tahltan socio-cultural time on traditional practices while employed at the project, and this additional consideration of potential negative effects during periods of positive benefits can better balance the social and economic benefits and risks to Tahltan.
- Concerns about potential safety risks for Tahltan communities, particularly Indigenous women and girls, due to an influx of workers, have been raised. While partially addressed through commitments in the Health and Medical Services Plan and the Socio-economic Monitoring Plan, the effectiveness of these mitigations remains uncertain.

Tahltan communities and members have raised the following items on the potential effects of Employment and Economy:

- Concerns over increased stress on existing health, social and community services in Tahltan Territory.
- Concerns on mining revenues, benefits, services, infrastructure, housing, and employment have been leaving Tahltan Territory with communities shrinking over time. It is important to ensure communities are growing with the benefits, services, housing, and employment being available to meet specific community needs.
- Community infrastructure and housing declines or decreased availability are factors with people leaving the territory, poor health conditions, and attracting/holding skilled workers in the communities. This is linked to declining or poor medical/mental health/emergency services.
- Questions on the positive and negative estimated effects to Tahltan employment, infrastructure, and services.
- Recommendations for positive legacy contributions (Benefits to Tahltan): Community housing, in-territory treatment facilities, elders care homes, youth recreational facilities.
- Concerns around the proposed life of mine timeline and short operational duration for an open pit mine.
- Questions on the opportunities for partnerships with communities to support community growth and economic development.
- Questions and interest were raised around employment and business opportunities for Tahltan members.

- Questions about the short duration of operations and potential missed opportunities for long-term employment for Tahltan workers.
- Questions about discrepancies between workforce estimates and project commitments to local employment.

Employment and Economy potential effects are tied to the TSP management directions, the Core Priorities, and the interconnected health of land and water.

Based on the above information and as a component of the overall effects management for the AOIs the following is an estimate to be considered for the Effects Management for these AOIs (Section 4.4.9.7) with the Tahltan Risk Assessment:

- Extent: site specific to territory/regional
- Magnitude: moderate to high
- Duration and Reversibility: 1 to 3 generations and reversible short to long term
- Frequency: continuous during Construction and Operations and irregular during Reclamation and Closure
- Confidence: high
- Risk and Uncertainties: moderate to high risk with low uncertainties

Heritage Resources (Chapter 25)

*With the application of site-specific mitigation required by provincial regulators, the Project effects on palaeontological sites are considered mitigated and **no negative residual effects are expected**.*

*Where impacts to archaeological, historic, and traditional use sites cannot be feasibly avoided, impacts to sites will be mitigated through systematic data recovery. However, even with systematic data recovery, there will be a **Moderate** magnitude residual effect on archaeological, historic, and traditional use sites. The impacted sites are primarily lithic scatters and culturally modified trees, both of which are common in the area; however, it is recognized that the disturbance and destruction of a site would result in its unavailability for future research or cultural use by Engaged Indigenous Nations.*

In consideration of the mitigation and monitoring measures proposed, no additional follow-up strategies are proposed for heritage resources.

Table 4.4-16: Summary of Residual Effects on Heritage Resources Valued Component

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Construction, Operations, and Closure phases	Disturbance of archaeological sites	**Magnitude**: Moderate **Geographical E**xtent: Local **Duration**: Far-future **Frequency**: Once **Reversibility**: Irreversible **Resilience**: Low **Context**: Neutral **Importance**: High	**Confidence:** High **Probability**: Low **Consequence:** Minor **Risk:** Low

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Construction, Operations, and Closure phases	Disturbance of historic and traditional use sites	**Magnitude**: Moderate **Geographical Extent**: Local **Duration**: Far-future **Frequency**: Once **Reversibility**: Irreversible **Resilience**: Low **Context**: Neutral **Importance**: High	**Confidence:** High **Probability**: Low **Consequence:** Minor **Risk:** Low

The cumulative effects assessment considered the potential for Project-related effects to heritage resources to combine with the effects of other projects and activities. The Project's residual effect on archaeological, historic, and traditional use sites is anticipated to be highly localized and therefore is not expected to result in residual cumulative effects.

TCG and THREAT conducted a technical review of the *Heritage Resources* chapter submitted by Skeena Resources, with feedback provided through the ITT and participation in the TAC. The review included evaluation of both project-specific and cumulative effects, with the following points on uncertainties, risk, and technical considerations relevant to the Tahltan Assessment:

- The current estimated effects on the disturbance of archaeological area during Construction Operations, and Closure identify a local extent, moderate magnitude, far-future duration and singular frequency, low resiliency to disturbance, irreversible, and high importance to Tahltan. The effects have a high confidence of information, low probability of occurring, with minor risk and minor consequences.
- The current estimated effects disturbance of archaeological area during Construction, Operations, and Closure identify local extent, moderate magnitude, far-future duration singular frequency, low resiliency to disturbance, irreversible, and high importance to Tahltan. The effects have a high confidence of information, low probability of occurring, with low risk and minor consequences.
- Additional Tahltan Heritage mitigation measures are required for when an archaeological site is inadvertently impacted.
- Including mitigations and directions that clearly indicate at the outset that Tahltan Standards supersede provincial regulations heritage values and archaeological sites.
- Uncertainties and risk with narrow interpretations of cumulative effects, for example, the Iskut River Valley constitutes a "traditional use site," to take just one example, and is now subject to roads and traffic from Eskay Creek, three hydroelectric projects, a past and potentially revived Snip Mine, another potential mine at Galore Creek, plus all associated exploration activity, the Northwest Transmission Line, and forestry there are cumulative effects on traditional use sites.

Tahltan communities and members have raised the following items on the potential effects of Heritage Resources:

- Questions and concerns about the amount of Tahltan archaeological and cultural sites that could be influenced or impacted by Eskay Creek

- Concerns and questions raised around ensuring the protection of Tahltan cultural heritage sites relating to Eskay Creek Project Area and with the access along the Eskay Creek MAR.

Heritage Resources potential effects are tied to the TSP management directions, the Core Priorities, and the interconnected health of land and water.

Based on the above information and as a component of the overall effects management for the AOIs the following is an estimate to be considered for the Effects Management for these AOIs (Section 4.4.9.7) with the Tahltan Risk Assessment:

- Extent: site specific to landscape
- Magnitude: moderate
- Duration and Reversibility: 3 generations or more and irreversible
- Frequency: sporadic
- Confidence: high
- Risk and Uncertainties: moderate risk with low uncertainties

Current and Future Use of Land and Resources for Traditional Purposes (Chapter 26)

The Project has the potential to result in effects on the Current and Future Use of Land and Resources for Traditional Purposes Valued Component. Direct effects can arise due to employment at the Project resulting in reduced time to undertake traditional use practices. Direct effects may also arise due to the loss or alteration of access to land and resources, for example due to clearing of vegetation including culturally valued species, or changes in access along the Eskay Cree Mine Access Road.

The Project is expected to have several residual effects on current land and resource use for traditional purposes. Reduced opportunities to take part in traditional practices are anticipated due to employment generated by the Project; this residual effect is of ***Low*** *magnitude and is anticipated to be experienced mostly during the Construction and Operations phases. It is recognized that employment at the Project is a positive effect, and employment income may enable the purchase of materials or supplies necessary for current and future land uses. A* ***Low*** *magnitude residual effect to access traditional use areas is anticipated, due to the potential avoidance of areas within the Local and Regional Assessment Areas. This effect may persist into Post-closure due to the presence of current and Project-related industrial activities. A* ***Low*** *magnitude residual effect is anticipated due to the reduced quality and abundance of country foods, particularly for wildlife or plant species that may be harvested from within the Regional Assessment Area, in the area overlapping and close to the Assessment Footprint. Skeena Resources Limited will continue to engage with Engaged Indigenous Nations; no additional follow-up strategies are proposed for current land and resource use for traditional purposes.*

The cumulative effects assessment considered the potential for Project-related effects on the Current and Future Use of Land and Resources for Traditional Purposes Valued Component to combine with the effects of other projects and activities. Overall, the residual cumulative effects to current land and resource use for traditional purposes are expected to be of ***Moderate*** *magnitude.*

Table 4.4-17: Summary of Residual Effects on the Current and Future Use of Land and Resources for Traditional Purposes Valued Component

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Construction, Operations	Changes in Opportunities to Take Part in Traditional Practices	**Magnitude:** Low **Geographical extent:** Regional/ Indigenous peoples **Duration:** Medium-term **Frequency:** Continuous **Reversibility:** Short-term **Resiliency:** Moderate **Context:** High **Importance:** High	**Confidence:** Medium **Probability:** High **Consequence:** Minor **Risk:** Medium
Construction, Operations, Reclamation and Closure, and Post-closure	Changes to Access Hunting, Trapping, Fishing, Gathering and Other Important Areas	**Magnitude:** Low **Geographical extent:** Regional/ Indigenous peopless **Duration:** Long-term **Frequency:** Continuous **Reversibility:** Long-term **Resiliency:** Moderate **Context:** High **Importance:** High	**Confidence:** Medium **Probability:** High **Consequence:** Minor **Risk:** Medium
Construction, Operations	Changes in Quality and Abundance of Country Foods	**Magnitude:** Low **Geographical extent:** Regional/ Indigenous peoples **Duration:** Medium-term **Frequency:** Continuous **Reversibility:** Long-Term **Resiliency:** High **Context:** High **Importance**: High	**Confidence:** Medium **Probability:** High **Consequence:** Minor **Risk:** Medium

Table 4.4-18: Summary of Residual Effects on the Current and Future Use of Land and Resources for Traditional Purposes Valued Component

Project Phases	Residual Effect	Residual Effect Characterization	Confidence and Risk
Construction, Operations, Reclamation and Closure, and Post-closure	Changes to Opportunities to Take Part in Traditional Practices	**Magnitude:** Low **Geographical extent:** Regional/ Indigenous peoples **Duration:** Long-term **Frequency:** Continuous **Reversibility:** Long-term **Resiliency:** Moderate **Context:** High **Importance:** High	**Confidence:** Low **Probability:** High **Consequence:** Minor **Risk:** Medium

Project Phases	Residual Effect	Residual Effect Characterization	Confidence and Risk
Construction, Operations, Reclamation and Closure, and Post-closure	Changes to Access Hunting, Trapping, Fishing, Gathering and Other Important Areas	**Magnitude:** Moderate **Geographical extent:** Regional/ Indigenous peoples **Duration:** Long-term **Frequency:** Continuous **Reversibility:** Long-term **Resiliency:** Moderate **Context:** High **Importance:** High	**Confidence:** Moderate **Probability:** High **Consequence:** Moderate **Risk:** Medium
Construction, Operations, Reclamation and Closure, and Post-closure	Changes in Quality and Abundance of Country Foods	**Magnitude:** Moderate **Geographical extent:** Regional/ Indigenous peoples **Duration:** Long-term **Frequency:** Continuous **Reversibility:** Long-term **Resiliency:** High **Context:** High **Importance:** High	**Confidence:** Low **Probability:** High **Consequence**: Moderate **Risk:** Medium

TCG and THREAT conducted a technical review of the *Current and Future Use of Land and Resources for Traditional Purposes* chapter submitted by Skeena Resources, with feedback provided through the ITT and participation in the TAC. The review included evaluation of both project-specific and cumulative effects, with the following points on uncertainties, risk, and technical considerations relevant to the Tahltan Assessment:

- The current estimated effects on opportunities for traditional practices during Construction and Operations are identified as regional/nation extent, low magnitude, medium-term duration, and continuous frequency, with moderate resiliency to disturbance, short-term reversibility, and high importance to Tahltan. These effects have medium confidence, a high probability of occurrence, medium risk, and minor consequences.
- The current estimated effects on access, hunting, trapping, fishing, gathering, and other important areas during Construction, Operations, Reclamation and Closure, and Post-closure are regional/nation in extent, low magnitude, long-term duration, and continuous frequency, with moderate resiliency, long-term reversibility, and high importance to Tahltan. These effects have medium confidence, high probability, medium risk, and minor consequences.
- The current estimated effects on the quality and abundance of resources during Construction and Operations are regional/nation extent, low magnitude, medium-term duration, continuous frequency, high resiliency, long-term reversibility, and high importance to Tahltan. These effects have medium confidence, high probability, medium risk, and minor consequences.
- The current estimated cumulative effects on access, hunting, trapping, fishing, gathering, and other important areas during all project phases are regional/nation extent, moderate magnitude, long-term duration, continuous frequency, moderate resiliency, long-term reversibility, and high importance to Tahltan. These effects have moderate confidence, high probability, medium risk, and moderate consequences.
- Existing barriers from previous human footprints and resource development have effected Tahltan CFLUTP for two generations.

- The project may add further barriers or add to existing, resulting in additive effects that could increase both singular and cumulative impacts beyond current estimates.
- Restricted access to the area currently limits Tahltan ability to practice traditional ways, effects Tahltan way of life, and relationship to the land. Skeena has proposed an improved access management plan to provide improved CFLUTP
- Potential effects to water, fish, and wildlife can affect CFLUTP and Tahltan interconnection to the land.
- There are uncertainties and challenges with maintaining current Tahltan values and Tahltan access to the area; long term recovery of these ecosystems and the relationship with Tahltan way of life; maintaining the health of the land with potential effects from contaminants to water, dust, plant and animal pathways.
- Estimated potential effects to fish, plants, and wildlife as traditional food is reported but is based primarily on literature or projects elsewhere in northern Canada.
- To reduce uncertainties, enhanced monitoring of contaminant levels in fish, plants, and wildlife is recommended, using DNA and other emerging techniques that allow for respecting animal populations.
- Higher potential effects to eating fish, plants, and wildlife is estimated during closure and post-closure but that is primarily due to the assumption Tahltan are not using the area during construction and operations in the Project Footprint or LAA.

Tahltan communities and members have raised the following items on the potential effects of Current and Future Use of Land and Resources for Traditional Purposes:

- Concerns and questions raised around ensuring the protection of Tahltan cultural activities relating to access along the Eskay Creek MAR and Project Area.
- Questions on the estimated singular and cumulative effects to Tahltan values within the existing barriers to Tahltan and the additive potential effects to Tahltan values.
- Questions on the reclamation and closure strategies with the potential effects to Tahltan values.
- Questions and concerns raised around Tahltan spirituality, connection to the land and waters and potential access barriers on Tahltan way of life.
- Concerns about the need for defined thresholds and consequences for cumulative residual effects to trigger remedial action or mitigation if thresholds are exceeded.
- Request for enhanced incorporation of historical impacts and alignment with the Tahltan Areas of Interest for cumulative effects.
- Questions on adjustments to the estimated effects to Valued Components and the interconnection to Tahltan values.

Current and Future Use of Land and Resources for Traditional Purposes potential effects are tied to the TSP management directions, the Core Priorities, and the interconnected health of land and water.

Based on the above information and as a component of the overall effects management for the AOIs the following is an estimate to be considered for the Effects Management for these AOIs (Section 4.4.9.7) with the Tahltan Risk Assessment:

- Extent: landscape to nation/region
- Magnitude: moderate to high
- Duration and Reversibility: 3 generations or more and reversible long-term
- Frequency: continuous
- Confidence: high
- Risk and Uncertainties: moderate risk with moderate uncertainties

Quiet Enjoyment of Land (Chapter 27)

Quiet enjoyment of land was identified as a Valued Component by the Tahltan Central Government. While there is no universally accepted definition of this concept, it can be explained as feeling welcome, at home and safe while using the land. Quiet enjoyment of land is assessed by considering a combination of three interlinked dimensions: the physical setting and its qualities, the activities that take place there, and the meanings and connections ascribed to that particular place. While the majority of this assessment is in relation to Tahltan Values, other Engaged Indigenous Nations are considered where possible.

Following the implementation of mitigation measures, the Project is predicted to result in ***Moderate*** *magnitude residual effects on both the change to physical characteristics of the land during the Construction and Operation phases as well as on the change to intangible experiential qualities of the land during the Construction phase.*

Mitigation measures will reduce the effects to quiet enjoyment of land. The principal monitoring and follow-up measure will be through the proposed Community Effects Monitoring and Management Plan, which will include direct involvement of the Tahltan Nation (via a to-be-established Tahltan Community Liaison Committee), active monitoring of change, rapid communication and dissemination of effects, and mechanisms for review. Additional monitoring and follow-up measures for other Valued Components (e.g., Human Health Monitoring Program, Air Quality and Fugitive Dust Monitoring Plan) will also reduce the potential for effects on quiet enjoyment of land.

Table 4.4-19: Summary of Residual Effects on Quiet Enjoyment of Land

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Construction and Operations	Change to physical characteristics of land	**Magnitude:** Moderate **Geographical Extent:** Indigenous Peoples **Duration:** Far-Future **Frequency:** Continuous **Reversibility:** Irreversible **Resilience:** Moderate **Context:** Low **Importance:** High	**Confidence:** Medium **Probability:** Medium **Consequence:** Moderate **Risk:** Medium

Project Phase	Residual Effect	Residual Effect Characterization	Confidence and Risk
Construction and Operations	Change to intangible experiential qualities of land	**Magnitude:** Moderate **Geographical Extent:** Indigenous Peoples **Duration:** Far-Future **Frequency:** Continuous **Reversibility:** Irreversible **Resilience:** Moderate **Context:** Neutral **Importance:** High	**Confidence:** Medium **Probability:** Medium **Consequence:** Moderate **Risk:** Medium

The cumulative effects assessment considered the potential for Project-related effects to quiet enjoyment of land to combine with the effects of other projects and activities. It is not precisely known how other Projects have or are expected to interact with the quiet enjoyment of land Valued Component. It is expected that the primary cumulative interactions would be due to other project's land clearing and operations, as well as through the use of the road and the presence of workers. Cumulative interactions are expected to be restricted to the use of highway segments. Residual cumulative effects are predicted to be of ***Moderate*** *magnitude on both changes to the physical characteristics of the land and changes to experiential qualities of land during Construction and Operations.*

Table 4.4-20: Summary of Cumulative Residual Effects on Dimensions of Quiet Enjoyment of Land

Residual Cumulative Effect	Cumulative Residual Effect Characterization	Confidence and Risk
Change to physical characteristics of the land, Construction and Operations	**Magnitude:** Moderate **Geographical Extent:** Regional/Indigenous Peoples **Duration:** Far-Future **Frequency:** Continuous **Reversibility:** Irreversible **Resiliency:** Moderate **Context:** Neutral **Importance:** High	**Confidence:** Medium **Probability:** Medium **Consequence:** Moderate **Risk:** Medium
Change to experiential qualities of land, Construction and Operations	**Magnitude:** Moderate **Geographical Extent:** Regional/Indigenous Peoples **Duration:** Far-Future **Frequency:** Continuous **Reversibility:** Irreversible **Resiliency:** Moderate **Context:** Neutral **Importance:** High	**Confidence:** Medium **Probability:** Medium **Consequence:** Moderate **Risk:** Medium

TCG, and Tahltan Heritage Resources Environmental Assessment (THREAT) conducted technical review of the Quiet Enjoyment of Land Chapter, and provided technical comments to Skeena Resources through the ITT and as a member of the TAC (specific comments are identified in the (ITT) and as identified in the Revised Application). The potential effects and cumulative effects reported by Skeena Resources in the

Application were included in the review with the following points of uncertainties, risk, or areas of technical perspective on the estimation of effects to be considered for the Tahltan Assessment:

- The estimated potential effects on the physical characteristics of the land during Construction and Operations are identified as having a regional to national extent, moderate magnitude, far-future duration, and continuous frequency. The land has moderate resiliency to disturbance, and the effects are considered irreversible with high importance to Tahltan. Confidence in the information is medium, with a medium probability of occurrence, leading to medium risk and moderate consequences.
- The estimated effects on the intangible experiential qualities of the land during Construction and Operations also show a regional to national extent, moderate magnitude, far-future duration, and continuous frequency. These impacts are irreversible, have moderate resiliency, and hold high importance to Tahltan. The assessment carries medium confidence, medium probability, medium risk, and moderate consequences.
- Cumulative effects on physical land characteristics during Construction and Operations are similarly rated as regional to national in extent, moderate in magnitude, far-future in duration, and continuous in frequency. The land has moderate resiliency, and the impacts are irreversible and of high importance to Tahltan. These effects are supported by medium information confidence and a medium probability, with medium risk and moderate consequences.
- Cumulative effects on the intangible experiential qualities of the land reflect the same criteria: regional to national extent, moderate magnitude, far-future duration, continuous frequency, moderate resiliency, irreversible outcomes, and high importance to Tahltan. Confidence is medium, as is probability, risk, and consequence.
- QEL can be sensory or visual disturbances effecting being on the land; way of life; spiritual places; relationships with all beings; and sharing knowledge and experiences across generations.
- QEL is also informed by legal precedents recognizing that industrial and human land use can significantly affect Indigenous ways of life, land access, and traditional food sources and practices.
- Existing development has already introduced barriers that continue to effect Tahltan QEL. These legacy impacts are significant and ongoing.
- The proposed project would introduce additional barriers, compounding current ones and contributing to both singular and cumulative effects that may be greater than currently estimated.
- There are uncertainties about whether the project can meet Tahltan priorities related to maintaining the health of the land, traditional uses, and reclaiming/restoring the land.
- Effects to Tahltan Core Priorities, CFTLUP, and QEL from inconsistent access to MAR and other industrial restricted roads in the Consent, Mountain Pass, and transportation corridor AOIs.
- If the MAR and other industrial roads are not decommissioned due to future development interests, these roads will create long-term and potentially permanent barriers, causing direct and indirect effects to land, water, wildlife, plants, and Tahltan.
- Restricted access to the area currently limits Tahltan ability to practice traditional ways and effects Tahltan way of life and relationship to the land. Skeena has proposed an improved access management plan to provide improved QEL.

- With the uncertainties on the success of the proposed reclamation and closure strategies with water, plants, wildlife habitat, and access increase the potential effects to Tahltan values and the interconnection to traditional practices and QEL. The overall effects and uncertainties associated with interconnected values for land, water, and all beings in the AOIs can result in higher than estimated effects to QEL
- There are uncertainties with the ability to meet the Tahltan priorities on maintaining the health of the land, traditional uses, and reclaiming/restoring the land for aspects of the project which are additive to QEL effects.
- QEL effects can be project focused effects or cumulative effects to an area.
- QEL effects are higher than estimated due to the assumptions the existing access, mine project, and human development in the area has been there for an extended time, so the effects have occurred or are limited. The current situation has created existing barriers which are additive to effects when considering the extended use of the area.
- Tahltan Stewardship Plan has identified management directions and designations, such as the Iskut and Unuk River valleys as large river corridors which are focused on maintaining or recovering intact landscapes and QEL requirements. The management directions for each AOI are identified in the chapter.

Tahltan communities and members have raised the following items on the potential effects of Heritage Resources:

- Questions on the estimated singular and cumulative effects (positive and negative) to Tahltan values within the existing barriers to Tahltan and the additive potential effects to Tahltan values; and
- Questions on the reclamation and closure strategies with the potential effects to Tahltan values;

Quiet Enjoyment of Land potential effects are tied to the TSP management directions, the Core Priorities, and the interconnected health of land and water.

Based on the above information and as a component of the overall effects management for the AOIs the following is an estimate to be considered for the Effects Management for these AOIs (Section 4.4.9.7) with the Tahltan Risk Assessment:

- Extent: landscape to nation/region
- Magnitude: moderate to high
- Duration and Reversibility: 3 generations or more and reversible long-term to irreversible
- Frequency: continuous
- Confidence: high
- Risk and Uncertainties: moderate risk with moderate uncertainties

Consent and Mountain Pass AOIs

Once the Revised Application is accepted by both TCG and BCEAO, the Effects Assessment stage commences with Tahltan undertaking the Tahltan Risk Assessment as detailed in the Declaration Act Agreement. This chapter has been updated as part of the Revised Application and will support the Tahltan Risk Assessment. It is expected the effects, significance of effects, and cumulative effects will be finalized

as part of the Tahltan Risk Assessment and this will require further internal Tahltan engagement to finalize the effects.

Based on the potential effects identified for the values above, (see also Section 4.4.9.8- positive, Section 4.4.9.9 – negative) against the proposed mitigations by Skeena Resources and Tahltan (Section 4.4.9.10) support the following estimated effects related directly to the ECRP:

- Effects are measured at the Consent and Mountain Pass AOI's
- Positive effects with employment and economy jobs, business, contracts, and partnerships with Tahltan; community focused social, cultural, economic and environmental legacies
- Positive effects with use of existing access and project footprint, limited new access infrastructure required
- Negative effects associated with increased transportation volumes, increased safety concerns, increased wildlife mortalities, air quality, noise, and Tahltan land uses
    - Inconsistent access for several generations to lands, traditional uses and sites, and QEL connections
    - Potential for MAR and other industrial roads in area not being reclaimed due to existing or future resource development interests
    - Potential for MAR and other industrial roads in area not being reclaimed for several generations due to long term reclamation and closure requirements
- Negative effects with irreversible effects related to groundwater, surface water, fish for only the watersheds with the project footprint and draining into the Unuk River with:
    - water quality and treatment into perpetuity
    - uncertainties with hydraulic containment for TMSF, MRSA, open pits, ore stockpiles and other mine components
    - uncertainties with potential seepage and surface water escaping from water containment areas
    - water quality exceedances for extended stretches of creeks and waterways
    - potential downstream fish habitat on Ketchum creek and Unuk River with potential effects to stream flows, stability, and water quality
    - uncertainties with assumptions on geology and landscape formations containing seepage and surface water flows
    - uncertainties with the potential effects from the open pit exposed walls with MLARD, maintaining a consistent pit lake; underground mine workings and open pits
    - linkage of effects to Tahltan Core Priorities, wildlife, CFTLUP, QEL, plants, human health
    - concerns on snow creating additional water management issues due to coastal winter influences and past experiences
- Negative effects with air quality for the project area and surrounding area, links to human health, wildlife, plants, CFTLUP, and QEL
- Negative effects with wildlife related to loss of habitats, reclamation uncertainties, and mortalities from traffic linked to CFTLUP, and QEL values

- Uncertainties with the reclamation and closure for the project with the water treatment requirements, financial resources to support closure requirements, long term requirements to restore the land and water for future generations, and potential for access and other components not being reclaimed due to technical, financial, and environmental constraints with resource development interests in the area.
- Negative effects to CFTLUP and QEL with restricted access to land in and around the project area and inconsistent access to the MAR area
- Aspects of the project are not consistent with several sustainability requirements for these AOIs
- Barriers related to restricted and inconsistent access to Tahltan lands and waters; community effects from resource development
- Mitigations are focused on
    - co-designing/managing access for Tahltan to access lands and waters;
    - co-designing wildlife, air quality, fugitive dust, access and other management plans to reduce uncertainties and risks;
    - establishing conditions to field verify fish, groundwater and surface water, wildlife, reclamation, and mine component design assumptions with Tahltan triggers if assumptions are not valid;
    - reclamation and closure requirements, including design changes/adjustments for mine components to reduce uncertainties and reduce risk for future generations
    - Financial bonding to support post-closure requirements for land and water
    - Co-designing reclamation and closure monitoring plans and research
    - Co-designed human health, wildlife, plants, and water bioaccumulation monitoring;
    - Tahltan focused on human health and socio-cultural mitigations and management plans;
    - Social, cultural, environmental, and economic positive legacies; and
    - Improvements to Highway 37 to reduce wildlife and safety risks with increased traffic volumes from projects and other resource development interests
- Extent – Site specific to Landscape
- Magnitude –moderate to high
- Duration –1-3 generations to over 3 generations
- Frequency – Continuous
- Reversibility – reversible long term to irreversible
- Risk and uncertainty – moderate to high and moderate to high uncertainty

4.4.9.7 Effects Management and Scales for Significance

Based on the information provided in Sections 4.4.9.6, 4.4.9.8 – 4.4.9.11 the below are the effects assessment for the Consent, Mountain Pass, and Transportation Corridor.

- Extent – Site specific to Landscape
- Magnitude –moderate to high

- Duration –1-3 generations to over 3 generations
- Frequency – Continuous
- Reversibility – reversible long term to irreversible
- Risk and uncertainty – moderate to high and moderate to high uncertainty

The criteria identified in Section 4.4.3.7 will for use in the Tahltan Risk Assessment.

4.4.9.8 Positive Effects

Positive effects are associated with the project through a variety of ways with this assessment. The proposed project is a redesign of an existing closed mine in the Tahltan Nation. The access is based on an existing industrial road, and the project footprint is within a predominately disturbed area. That is not to say there are not negative effects with the project, but the potential effects from an environmental assessment for an open pit mine project, tailings storage facility, water treatment, and access road(s) in a pristine watershed have a much greater potential for negative effects and potential to not be consistent with Tahltan Stewardship Plan management directions, the Core Priorities, and Sustainability Requirements across scales.

There are potential positive effects related to Tahltan employment, careers, education, business, and contracting opportunities with the proposed project at the Nation and territory scale. There are potential positive effects related to social, cultural, economic, and environmental legacies that can come through agreements with Skeena Resources and governments. It is important the legacies reflect the socio-cultural items raised through members feedback on the concerns the communities are shrinking, jobs and services leaving, families moving away, and the positive effects are not staying in the territory. In addition, feedback related to supporting increased community infrastructure, services, addiction and mental health in-territory services, and other items are important when considering positive legacies associated with the project.

There can be positive effects with the application of mitigations, conditions, and management plans that address the existing barriers to Tahltan being able to manage the access of land under industrial control. These barriers have been in place for several decades with various approaches to allowing access with mixed results. It has resulted in generational loss to consistent, easy access for traditional purposes, way of life, and quiet enjoyment of land requirements. The full scope of potential positive effects will depend on the commitments for co-designing and co-managing the access for Tahltan to be on the land while still maintaining safety requirements for the pro.

As Skeena Resources has identified, the project has had positive effects to Tahltan historically, currently, and in the future through employment, training, careers, social, economic, cultural, and environmental components and mitigations of the project through time and detailed in the Application.

Infrastructure and Services and Employment and Economy chapters identify where positive socio-economic effects may occur, including mitigation and monitoring strategies to address deficiencies during the life of the mine. The Human Health chapter identifies additional mitigations and strategies that can support positive effects with the project. The proposed commitments to co-design monitoring, research, and design changes related to reclamation and closure, wildlife and wildlife habitat, and Chapters 26 and 27 can have potentially positive effects. The recognition and assessment of Tahltan Values throughout the assessment has led to potential positive effects for future environmental assessments in the Nation.

Skeena Resources has indicated positive effects in Chapter 21(Section 21.5.2) related to *infrastructure and services in and for LAA and RAA communities are anticipated as a result of tax revenues from the Project and workers' spending resulting from Project-related income. Workers' spending will, in turn, lead to additional tax revenues.*

In Chapter 24,(Table 24.5-2), reports positive effects with the procurement of employment and labour, services goods, and use of infrastructure in the region during Construction and Operations. In addition, Section *24.5.2.1 Changes in Employment and Income* estimate positive effects to Tahltan will come from direct, indirect, and induced Project contributions to employment and labour income during Construction, Operations, and even with a decline in positive effects during Reclamation and Closure, positive effects are still expected.

Similar positive effects are estimated with changes in project expenditures, business opportunities and gross domestic product benefits to Tahltan from direct, indirect, and induced business contracting opportunities during Construction, Operations, and even with a decline in positive effects during Reclamation and Closure, positive effects are still expected (Section 24.5.2.2). A similar rationale is presented in Section 24.5.2.3, with the potential positive effects related to the increase change in tax revenues from the proposed project.

Skeena Resources has reported moderate potential positive effects where by the disturbance and ground activities during the life of the mine, could result in the additional archaeological, palaeontological, and traditional sites being found that would not be found if the site was not further developed (Sections 25.5.2.1, 25.5.2.2, and 25.5.2.3). It is unclear if this is a positive effect or more of a by product of resource development and the Tahltan requirements for advanced mitigations and standards for heritage values. Similarly, the proponent is inferring a potential positive effect by the requirement to conduct Archaeological Impact Assessments as a mitigation, may result in additional sites being recovered, adding to Tahltan Knowledge of the area and add to known artifacts from the Consent and Project Footprint AOIs (Section 25.5.3.1).

In Chapter 27, Quiet Enjoyment of Land, Skeena Resources identifies potential positive effects related in the reclamation and possible restoration of Tahltan land and water (Section 27.6.2.1). As identified by Skeena, these are estimates of potential positive effects and with the uncertainties in the ability to restore the land or the time required to achieve restoration, may result in continued negative effects during this period (Section 27.6.2.1). This rationale also is applicable for the estimate positive effects related to the intangible or spiritual connection to the land, where at a future point in time, potential positive effects may occur but there is estimated negative effects until is may be achieved (Section 27.6.2.2).During Construction and Operations, it was identified there may be some positive effects for Tahltan working on the project who were familiar with the underground mine, or have family members who worked in the past, creating a connection to the area with Quiet Enjoyment of Land. The potential for further positive effects has been linked with mitigations that remove existing and potential barriers to Tahltan for both Chapters 26 and 27, but the co-design of these mitigations are in the future to be completed.

The positive effects have been identified in 4.4.9.6, and in this section will be further evaluated as the Revised Application is reviewed for Adequacy and if accepted, then as part of the Tahltan Risk Assessment.

The effects criteria have been described for the potential estimated positive effects by Skeena Resources in 4.4.9.6 and in the chapters identified above. Tahltan effects management criteria have been identified for potential positive effects on Tahltan Values that are different than reported by Skeena in Section 4.4.9.7 and may include the positive effects related to the Tahltan Mitigations reported in 4.4.9.6 and 4.4.9.11.

The information identified as mitigations resulting in positive effects for Tahltan Values for the Application and AOIs, approaches and commitments to reduce uncertainties and risk, and positive effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOIs.

Final effects management criteria and significance will be reported in the Tahltan Risk Assessment.

4.4.9.9 Negative Effects

The negative effects have primarily been identified in Section 4.4.9.6, and in this section will be further evaluated as the Revised Application is reviewed for Adequacy and if accepted, then as part of the Tahltan Risk Assessment.

The effects criteria have been described for the potential estimated negative effects by Skeena Resources in Section 4.4.9.6. Tahltan effects management criteria have been identified for potential positive effects on Tahltan Values that are different than reported by Skeena in Section 4.4.9.7 and may include the negative effects related to the Tahltan Mitigations reported in Sections 4.4.9.6 and 4.4.9.11.

The information identified as mitigations resulting in negative effects for Tahltan Values for the Application and AOIs, approaches and commitments to reduce uncertainties and risk, and positive effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOIs.

Final effects management criteria and significance will be reported in the Tahltan Risk Assessment.

Consider summary statements here for relevant subject matters identified in 9.6 speak to the technical component, Tahltan component and how it is being considered

4.4.9.10 Cumulative Effects Assessment

Cumulative effects have been identified for all or some of Tahltan Values for this AOI, with the primary effects associated with the ECRP potential effects. There are additional cumulative effects reported for the Mid-Iskut and Nigunsaw AOI reported in 4.4.4.10 with indirect effects related to past mining projects, projects potentially being developed in the future, and with TSP management directions not being met from other projects. The potential effects related to this AOI are moderate to high, as opening the area to ground access, and developing projects and properties can alter the nature, role, or function value or AOI and not be consistent with the TSP. The landscape will have effects from the identified projects and potentially effect half to a generation in duration.

When evaluating the potential cumulative effects of the ECRP on the Consent and Mountain Pass AOIs, in conjunction with the Mid Iskut and Nigunsaw AOIs, the anticipated effects are landscape in extent and of moderate to high magnitude. The ECRP and resource development activities has the potential to significantly alter the nature, role, and functional value of the AOIs. These changes may not align with the values or objectives set out in the TSP.

The duration of these effects is expected to span from one to three generations, with some impacts likely to persist beyond three generations. These effects are anticipated to occur in a continuous manner. While certain effects may be reversible in the long term, others are estimated to be irreversible.

The level of confidence in the assessment of these effects is considered moderate to high, as the nature of the impacts is generally understood. However, the likelihood of their occurrence is influenced by external pressures and financial market conditions, introducing a degree of risk and uncertainty. The overall risk of occurrence is assessed as moderate, with moderate levels of uncertainty.

Cumulative effects will be further refined based on additional information, mitigations, and/or reduction in uncertainties/risk to Tahltan Values and the adjustments in the Tahltan Risk Assessment.

4.4.9.11 Monitoring, Mitigations, and Contingencies

In chapters 12-27 Skeena Resources identifies potential mitigations (Mitigation Measures and Effectiveness in each chapter, also summary tables are found in the section) to reduce the potential effects to Tahltan Values and/or Valued Component, with the following summary or list of proposed mitigations:

- Chapter 12 Air Quality
    - Section 12.5.3 and Table 12.5-7: - focus on dust management through management plans or a trigger-action-response plan will be used to implement some mitigation measures listed in Table 12.5-7
- Chapter 13 Noise and Vibration
    - Section 13.5.3 and Table 13.5-10: -mitigations to minimize or avoidance strategies to reduce effects
- Chapter 14 Groundwater
    - Section 14.5.5,Table 14.5-11, and Appendix A-1C, Mine Site Water Management Plan for the Eskay Creek Revitalization Project:- the mitigations have changed to a degree with the water optimization but not to extent that the potential negative effects to groundwater have been resolved. The mitigations focus on the following (Page 14-78):
        - *When expanding the TMSF, a liner will be placed on the upstream face of each dam.*
        - *An underdrain system beneath the TMSF dams will intercept shallow groundwater seepage that bypasses the liner and convey intercepted seepage flows to the seepage collection sumps for recycle to the TMSF.*
        - *The TMSF will permanently store tailings, PAG waste rock from open pit mining, and PAG waste rock and overburden from Project construction activities.*
        - *The MRSA will be designed and constructed to permanently store NPAG waste rock and to temporarily store PAG waste rock. The MRSA design will incorporate contact and non-contact water management features.*
        - *During winter months, snow either will be removed from active working areas and hauled to the Snow Management Area or will be stockpiled in inactive working areas or left in place and melt water managed as contact water in the MRSA collection pond or managed by the pit dewatering systems. Approximately 75% of the snow depth that accumulates on the MRSA and ROM Pad will be cleared and pushed/hauled to the Snow Management Area. Within the North Pit, approximately 25% of the surface will be subject to active snow management, in which approximately 75% will be cleared and hauled to the Snow Management Area. Snow management is assumed to only occur during Construction and Operations phases.*

- *Erosion and sediment control measures will be implemented during construction and throughout operations of the MRSA.*
- *Treat contact water during the Construction phase from the initial development of the MRSA using the Stage 1 Mine Water Treatment Plant.*
- *Expand the Mine Water Treatment Plant through Stage 2, Operations, and Stage 3, Reclamation and Closure and Post-Closure Treatment Phase 1 to remove metal and metalloids from contact water.*
- *Deposition of all PAG waste and tailings in the TMSF for long-term subaqueous storage. PAG materials will be stored a minimum of 1 m below the water table in the TMSF from the end of Operations.*
- *Placement of PAG waste rock material for a distance of 200 m upstream of the TMSF South Dam and maintaining deposition of tailings a minimum distance of 200 m from the TMSF South Dam.*
- *Construct a temporary surface PAG Storage area including contact and non-contact water management facilities.*
- *Construct and operate water treatment plants to manage wastewater and sewage from onsite facilities (with offsite sludge disposal).*
- *Implement various water management systems (e.g., ditches, pipes, pumps, etc.) to manage both contact and non-contact water across the Project as detailed in Appendix A-1C, Mine Site Water Management Plan including lining the MRSA Collection Pond and collection channels to reduce infiltration of contact water as described in Chapter 1, Project Overview.*
- *During Reclamation and Closure, reclaim the MRSA slopes using a growth media cover to support the growth of vegetation to achieve the desired post-closure ecosystem. Water that infiltrates the MRSA closure cover will follow the natural drainage pathway (present topography)under the MRSA to the MRSA Collection Pond, where it will be routed to the North Pit and treated at the MWTP, as required.*
- *Allow the North Pit to passively flood (i.e., act as a groundwater sink) following the cessation of mining, and maintain the North Pit in a flooded state permanently.*
- *Various other closure measures (e.g., decommissioning of wells, reclamation of disturbed areas including non-essential ponds, roads and other infrastructure, etc.) as described in Appendix A-1C, Mine Site Water Management Plan and Appendix 1-9, Reclamation and Closure Plan.*

- Chapter 15 Surface Water
  - Section 15.5.2., and Table 15.5-7:- mitigations related to changes to suspended sediment concentrations; changes to DO and/or temperature; and changes to pH, major ion, nutrient, and/or metal concentrations. The mitigations have changed with the water optimization and technical information included in the Revised Application.
  - The proposed mitigations identified in Table 15.5-7 will be implemented through management plans associated with the application or will be developed during permitting. Such plans establish best practices and protocols to mitigate potential effects to water quality through all Project phases. These plans are summarized in Appendix A-1 (Summary of Management Plans and Mitigation Measures).

- However, as with groundwater, the mitigations have changed to a degree with the water optimization but not to extent that the potential negative effects to surface water have been resolved.

- Chapter 16 Fish and Fish Habitat
  - Section 16.6.3 and Table 16.6-3:-mitigations related relating to direct effects from changes in water quality, indirect effects from changes in water quality via bioaccumulation, and direct effects from changes in water quantity. The mitigations are focused on the above criteria with the Revised Application. However, the status of the lower Ketchum Creek as fish habitat, may result in additional mitigations needed as conditions or permitting. The status will not be addressed until the summer of 2025. Until then the mitigations will be considered within the context of the Revised Application and Tahtlan Assessment of fish values.
- Chapter 17 Terrain and Soils
  - Section 17.5.3 and Table 17.5-5:mitigations related to terrain stability, soil quantity and quality, and changes in soil physical and chemistry components.
- Chapter 18 Vegetation and Ecosystems
  - Section 18.5.3 and Table 18.5-5: mitigations relate to the loss or alteration of vegetation extent or function and loss or alteration of culturally valued plants and invasive plant species through adaptation and adjustments of the existing Vegetation Management Plan.
- Chapter 19 Wildlife and Wildlife Habitat
  - Section 19.5.3 and Table 19.5-4:mitigations relate to change in habitat, movements, or mortalities to wildlife and culturally important wildlife.
  - Additional mitigations are based on provincial and federal recovery strategies, action plans, management plan, and other relevant guidelines to address:
    - *Avoidance of land clearing within the mountain goat UWRs (e.g., UWR U-6-002), which is below the threshold for habitat loss of effective mountain goat habitat, is in alignment with the provincial management plan for mountain goat (MOE 2010).*
    - *Avoidance of land clearing during mountain goat sensitive periods and near important wildlife features (e.g., mineral licks) and the implementation of recommended helicopter flight mitigations align with provincial mountain goat guidelines (MFLNRO 2014) and the provincial management plan for mountain goat (MOE 2010).*
    - *Avoidance of land clearing during bat sensitive periods and near maternal roosts, day roosts, and hibernacula, aligns with the provincial bat best management guidelines (Holroyd and Craig 2016) and the federal recovery strategy for little brown myotis and northern myotis (ECCC 2015).*
    - *Avoidance of land clearing during the raptor breeding period and near raptor nests is in accordance with provincial raptor best management guidelines (BC MOE 2013).*
    - *Avoidance of migration habitat for waterbirds aligns with the federal management plan for red-necked phalarope (ECCC 2023d).*
    - *Avoidance of land clearing during the upland bird breeding period and near nests or residences, along with the negligible loss of species of conservation concern or unique habitats for upland breeding birds, aligns with the objectives to maintain stable distributions and populations in the*

federal recovery strategies for common nighthawk (ECCC 2016a) and olive-sided flycatcher (ECCC 2016b).

- *Avoidance of land clearing during amphibian sensitive periods and near identified breeding ponds, along with the implementation of migration deterrents during western toad breeding and seasonal movement periods, aligns with the provincial amphibian best management practices (MOE 2014) and the federal and provincial management plan for western toad (ECCC 2020; Provincial Western Toad Working Group 2014). Amphibian salvages, if required, will follow provincial best management practices (MFLNRO 2016).*

- Chapter 20 Human Health
  - Section 20.5.3 and Table 20.5-5: mitigations relate to changes in mental health and well-being, infectious disease, chronic disease, and quality of nutrition. The Revised Application makes adjustments and clarifications to the mitigations based on TCG reviews, with the overall approach consistent with the previous mitigations tabled in the Application.
- Chapter 25 Heritage Resources
  - Section 25.5.3 and Table 25.5-3: mitigations related to avoiding or minimizing disturbance archaeological, traditional use sites, and palaeontological sites. In addition, a change was identified for the RA, where *Tahltan Archaeological Standards* (THREAT 2022) requirements exceed provincial requirements for mitigation measures, the standards will be followed in consultation with TCG and the Archaeology Branch.
- Chapter 26 Current and Future Use of Land and Resources for Traditional Purposes
  - Section 26.5.3 and Table 26.5-10: mitigations related to changes to opportunities to take part in traditional practices, changes to access to hunting, trapping, fishing, gathering, and other important areas, and changes to quality and abundance of country foods. The Revised Application identifies adjustments and clarifications to the Mine Traffic Control Management Plan and Community Effects Monitoring and Management Plan based on TCG ITT comments.
- Chapter 27 Quiet Enjoyment of Land
  - Section 27.6.4 and Table 27.6-4: mitigations related changes to physical characteristics of the land and to intangible experiential qualities of the land. The Revised Application identifies adjustments and clarifications to the Mine Traffic Control Management Plan, Schedule of Project Activities, and Community Effects Monitoring and Management Plan based on TCG ITT comments.

The following mitigations and strategies have been developed based on guidance from THREAT and direction from Tahltan members to address the potential effects identified by Skeena Resources, as well as additional effects in this chapter. These measures, along with further mitigations identified through condition reviews with Skeena Resources and the EAO, and the potential Tahltan Conditions outlined in the ITT, will be considered collectively.

The final set of mitigations, strategies, and conditions will be confirmed through the Tahltan Risk Assessment process to ensure they reflect Tahltan values, priorities, and the long-term sustainability of Tahltan Territory.

Water and Water Quality

Proposed mitigations and strategies to reduce the uncertainties and address Tahltan member concerns with water management include:

- Co-designing additional surface and groundwater monitoring sites for 2025 and future field programs and establishing commitments to continue this throughout Construction and Operations to address concerns related to hydraulic containment of water.
- Implementing additional hydraulic containment mitigations such as grouting, lining, monitoring and water treatment measures to address lateral and vertical water containment across critical mine facilities (Tailings Management Facility, MRSA and Open Pit).
- Commitments to co-design closure cover methods and engineering designs to minimize open pit high wall source term influence during operations and closure stages of the Eskay Creek Mine.
- Establishing conditions to require review of Best Available Technology 3-5 years before the Water Treatment Plant requires replacement to ensure opportunities are being explored to not require active treatment in perpetuity. The review should be completed to the satisfaction of Tahltan before replacement can occur if BAT is not applicable at that time.
- Establishing mitigations or conditions for co-design of water management research for movement from active water treatment to passive water treatment with hydraulic containment of mine components.
- Establish mitigations, conditions, or strategies to field verify water management items (e.g., seepage pathways, water quality, hydraulic containment, water treatment in perpetuity) against conservative model assumptions in timely sequenced stages to maximize outcomes during the Construction and Operations stages. Field verification requires timely and sufficient field data and eliminates a delay between Trigger-Action-Response- Plan (TARP) activated mitigation and actual implementation of the mitigation.
- For the TMSF, additional mitigations proposed include:
    - Develop a tailings management plan that allows for selective placement of fine-grained tailings in high risk leakage areas.
    - Include a partial liner upstream of the dam shell (below the toe and along valley sides) to minimize seepage losses.
    - Include a grout curtain in the bedrock below the dam and especially in the creek channel and fault zones to minimize the impact of PFPs.
    - Utilize a secure landfill double-liner system (with leak detection/leachate collection between liner layers), for the upstream dam face. This will facilitate performance monitoring and reliability of the liner system and the effectiveness of mitigations when required.
    - Reduce the current uncertainty in the location of PFPs by completing additional site investigation programs that target gaps in hydraulic conductivity and uniformity of rock quality.
    - Increase the number of seepage recovery/interception wells around the facility.
    - Identify ways to improve the understanding of long-term behaviour of the seepage from the TMSF.
    - Evaluate amendments such as lime addition to waste rock to improve porewater and seepage chemistry.

- Reduce the dam heights by disposing of less material in the impoundment.

- For the MRSA, additional mitigations proposed include:
  - Improve hydraulic containment with adjacent waterways and address seepage concerns with the MRSA (can include liners or other mitigations).
  - Investigate potential fracture flows and effects related to hydrogeology of the MRSA.
  - Consider a grout cut-off between the MRSA and Tom McKay Creek.
  - Improve hydraulic containment towards Eskay/Ketchum/Unuk Rivers/streams.
  - Grouting and other mitigations to the South Pit after mining.
  - Improve seepage quality by improving PAG waste segregation; lining and/or covering the ore stockpiles (especially long life piles Low Grade and Medium Grade (LGO/MGO)). Assuming the LGO and MGO do not get milled due to long-term oxidation and are placed in the open pits, long-term.
  - Reconfigure or reduce the MRSA footprint to reduce seepage and water management concerns.
- For the Open Pits additional mitigations proposed include:
  - Segregate the waste properly and place NAG non-ML material as a cover over the North Pit highwall.
  - Place ML rock in North pit or TMSF to minimize contaminant loading to groundwater.
  - Improve hydraulic containment such that the pit lake level can be maintained at a higher elevation and a larger proportion of the exposed pit wall PAG material remains under lake level, than would occur with the lower elevation water level. This may be done by placing plugs in underground workings that reduce seepage losses from the pit; reduce blast fracturing in bench development resulting in less degradation of wall rock during mining.
  - Where possible and feasible, blast out PAG remnants from the high wall and permanently store the blasted material in the base of the pit and below the lowest final water cover elevation.
  - Consider a closure cover alternative that reduces the influence of the ML/ARD from the wall rock including neutralizing or infiltration-reducing/oxygen-limiting materials:
  - Reduce the loading to the water treatment plant by including in-pit treatment and developing methods to prevent the eventual loss of stratification in the pit:
- For Source Terms additional mitigations proposed include:
  - The surface water quality model includes a sensitivity scenario where all solubility constraints are removed from source terms. This sensitivity scenario will provide a check on the influence solubility constraints have on the predicted water qualities.
  - A monitoring program to support and confirm the attenuation mechanisms assumed to provide solubility constraints for specific parameter.
  - Manage ore stockpiles to limit stockpiles which can include liners or other strategies.
- For Water Quality additional mitigations proposed include:
  - Reduce uncertainty around treatment efficacy for As, Ni, Tl, Se and TSS.

- Reduce hydraulic loading to the WTP by identifying sources that could potentially bypass treatment, if managed appropriately; ongoing research program to improve treatment efficacy in the WTP; and identify in-pit treatment options in the North Pit and the TMSF.
- Water Quality Model - water quality models project exceedances and increases in POPCs throughout Tom MacKay Creek and the lower reach of Ketchum Creek. There are land use concerns and interconnection to Tahltan values. Source terms, exceedance rates, regional water balance model, site wide surface and ground water modelling being corrected and advanced are important matters given its near term and long term outcomes to the project

Reclamation and Closure

Proposed mitigations and strategies to reduce the uncertainties and address Tahltan member concerns with reclamation and closure include:

- Ensuring the projects bond is sufficient for restoring the land and waters to a healthy state to support current and future generations use and connection to the land and waters.
- Address access barriers to continue to support Tahltan long-term access and connection to the land and waters.
- Establishment reclamation research requirements and co-design strategies to reduce uncertainties with the mountain pass habitat reclamation success for important wildlife and vegetation habitat values for Tahltan.
- Cover the MRSA at closure to reduce contact water/infiltration for treatment and seepage losses.
- Complete an assessment of the potential water reduction and change in contaminant loading as a result of a closure cover
- Consider greater opportunities for progressive reclamation and implement potential changes to mine components during operations so they are not left to final stages when financial resources are lower.
- The current closure design requires long-term management and closure alternatives which should be driven by design and Tahltan future land uses. A review of existing mitigations to consider additional requirements to address reclamation and closure project changes earlier in the timeline of the project is recommended to achieve the outcomes.
- A fully costed closure estimate being provided as part of the EA process to support the Tahltan decision. This cost estimate includes water treatment capital and operating costs and sludge management costs for 7-generations or 200-years, post-closure.
- Consider reclamation and closure mitigation options that are more consistent with
  - Allowing the land and water to be returned to a level of environmental health to support future land use by Tahltan.
  - Reducing or eliminating the need for mitigations, treatment or monitoring beyond closure.
- Consider alternatives for the TMSF cover systems including:
  - Eliminating the hybrid cover system.
  - A water cover with seepage control.

  - Water shedding anoxic dry cover.
  - Creating cells in the TMSF to allow progressive reclamation with a dry cover that creates suboxia.
- Explore reclamation and closure mitigations and adjustments to address long-term water management including options such as diverting Tom McKay Creek through the pit; approaches to reduce pit high wall oxidation; use it to flush the pit lake back into the waterways if water quality is acceptable.
- Post-closure, dispose of water treatment sludges in the TMSF and determine when off-site sludge disposal will be required, and include the cost for off-site disposal as part of the closure bonding.

Wildlife and Wildlife Habitat

Proposed mitigations and strategies to reduce the uncertainties and address Tahltan member concerns with wildlife and wildlife habitat include:

- Establish programs and co-design access management plans to remove and reduce barriers for Tahltan members to enable easy access to the land for harvest of wildlife.
- Implement tracking and transportation management measures that focus on reducing wildlife mortalities from increased traffic on Highway 37 and the Eskay Creek MAR.
- Establish and implement health monitoring programs in collaboration with the TCG for wildlife and plant communities in the project area.
- Establish fences and deterrents for wildlife and birds near the Tailings Facility to prevent access.

Human Health and Socioeconomics

Proposed mitigations and strategies to reduce the uncertainties and Tahltan member concerns with human health and socioeconomics include:

- Establish mitigations to reduce or restrict the existing out-migration of people, families, and services from the Tahltan Nation Territory, both with the ECRP and cumulatively, to maintain Tahltan and attract workers, services, and infrastructure to the Nation.
- Establish monitoring plans and support programs to track changes in mental health and community well-being of Tahltan members and Tahltan communities.
- Monitor effects and changes to traditional food availability through lower nutritional quality and access effects to Traditional Tahltan foods.
- Establish co-designed fugitive dust emission monitoring and management plans to monitoring exposure of emission sources for Tahltan Values.
- Implement co-designed water management strategies and mine designs, including water treatment and closure methods to reduce potential HHRA exposure pathways through air and water discharges or emissions.
- Establish mitigations to address:
  - Concerns over increased stress on existing health, social and community services in Tahltan Territory.

- Concerns and questions related to impacts associated with mine work life and shift work schedules on Tahltan families.
- Concerns about alignment of residual effects assessments with baseline data and potential health impacts from air and metal pollutants.
- Requests for additional details on health risks from cumulative exposures and the interplay of socio-economic factors.

Infrastructure and Employment

- Establish mitigations and legacies to address concerns on mining revenues, benefits, services, infrastructure, housing, and employment leaving Tahltan Territory with communities shrinking over time. It is important to ensure communities are growing with the benefits, services, housing, and employment being available to meet specific community needs;
- Establish mitigations and legacies to address community infrastructure and housing declines or decreased availability are factors with people leaving the territory, poor health conditions, and attracting/holding skilled workers in the communities. This is linked to declining or poor medical/mental health/emergency services.
- Recommendations for positive legacy contributions (Benefits to Tahltan): Community housing, in-territory treatment facilities, elders care homes, youth recreational facilities.
- Mitigations, strategies, and legacies for partnerships with communities to support growth and economic development with the proposed life of mine timeline and short operational duration for an open pit mine.
- Mitigations, strategies, and legacies for employment and business opportunities for Tahltan members.

Tahltan Cultural, Heritage, Way of Life

Proposed mitigations and strategies to reduce the uncertainties and Tahltan member concerns with culture, heritage and way of life include:

- Co-design access management plans and establish commitments to ensure Tahltan access and connection to the project area and surrounding lands and waters are maintained during and after mine operations.
- Implement Tahltan Archaeological Standards and Tahltan Archaeological Monitors during construction, operations and closure of the mine.
- Establishment commitments to install Tahltan cultural signage, acknowledgement of being on Tahltan Territory, and creation of dedicated Tahltan cultural spaces at the mine.
- Develop and establishment commitments to deliver Tahltan Cultural Sensitivity Training education for all Eskay Creek Mine workers.
- Establishment commitments to require Tahltan counselors and Elders on the mine site each month to support Tahltan members.
- Co-develop and implement workplace cultural and bereavement policies at Eskay Creek Mine to ensure Tahltan cultural activities and duties are respected and accommodated.

- Offer Tahltan traditional food and meal options at the Eskay Creek Mine site.
- Promote respectful and safe workplace culture by requiring the co-development of Tahltan cultural policies.

Fish and Fish Habitat

- All the items raised with seepage, seepage pathways, water quality, geochemical source terms, water treatment in perpetuity have relation to the health of aquatic ecosystems and fish habitats for these AOIs.
- Apply mitigations that address stream hydrology in the mine construction, operation and closure phases to maintain stream hydrology that will not cause significant erosion or changes in hydrogeological pathways,
- Mitigations related to the uncertainties with the trophic pathway models and quantify risk to fish health. It can be a useful tool in understanding the potential cumulative effects of the mine on fish health.
- Skeena has requested a Request For Review (RFR) of lower Ketchum Creek and provided lidar for the lower creek. It is based on a reduction in flow during operations by 7-9% in the lower ~200 m of Ketchum Creek during the critical months of Jan-March. Additional mitigations and authorizations may be required based on the outcome of the RFR.

Mitigations, such as additional liners, additional monitoring, greater access to the land as potential mitigations and others have been identified for all or some of Tahltan Values for this AOI, and were further refined based on additional information, mitigations, and/or reduction in uncertainties/risk to Tahltan Values and the adjustments in the Revised Application.

4.4.9.12 Follow-up Strategy

Strategies have been identified in have been identified for common Tahltan Values in Sections 4.5, and 4.4.3, 9 and 10 and will be for use in the Tahltan Risk Assessment.

4.4.10 Tahltan Upper Elevation Areas of Interest – Project Footprint

4.4.10.1 Description

As the Project Footprint is situated on the Prout Plateau and the Consent Area, the biophysical description applies to this area as well. The following is Skeena Resources description (Chapter 11) of the project area:

> *The Project is at an elevation of approximately 800 m in the Tom MacKay Creek watershed. Mountain slopes are heavily forested, while the subalpine terrain around the Project reflects sparser forest cover and parkland forest type. The varying elevations contain numerous different ecosystem and terrain characteristics, including bedrock-controlled terrain, bedrock outcrops, and a variety of Holocene deposited sediments. The bedrock-controlled terrain dominates the landscape and, although bedrock outcrops are extensive throughout the area, a variety of surficial materials are present. Soil formation is limited by the cold regional climate, with long winters that result in slow decomposition and high organic content in many soils.*
>
> *Seasonal peak groundwater levels occur in late spring and early summer following freshet, and mid- to late fall during the typical high precipitation season. Groundwater elevation tends be lowest during*

the dry months in late summer and in winter before the spring melt. Groundwater in the Project area receives recharge from precipitation and infiltration of surface runoff, as well as groundwater flow from upper slopes. Groundwater discharges through evapotranspiration and into creeks.

Annual precipitation at the Project's location mostly falls as snow between September and May. The total annual precipitation (as rainfall-equivalent) measured was 1,930 millimetres (mm) in 2022 and 2,128 mm in 2023. The annual average air temperature measured by the Eskay KM meteorological station from November 2020 to October 2022 was 0.7 degrees Celsius (°C), and the monthly mean air temperature ranged from -12.5 °C in December 2021 to 12.6 °C in August 2022. Wind speeds are generally higher in the winter and lower in the summer and tend to blow to the northeast in the fall and winter and to the southwest in the spring and summer.

As elsewhere in northwestern British Columbia (BC) (outside of populated communities), air quality in the area of the Project reflects the location's remoteness and lack of anthropogenic air emission sources. Development activities have historically occurred or continue to occur in the broader region around the Project, such as mining exploration and production (including the Eskay Creek Mine), hydroelectric power generation, forestry, and road construction and use.

The most prevalent culturally valued plants were subalpine fir (ts'ōstsiye), Alaskan blueberry (echishchō), and oval-leaved blueberry (echishchō).

Large wildlife species recorded near the Iskut and Unuk rivers include black bear (sas), moose (kedā), and mountain goat (iṣbā). Small mammals recorded include American marten (nust'ihe), wolverine (naghā), vole, and hoary marmot (dediye). Fur-bearing mammals with suitable habitat in the area include grizzly bear (khoh), wolf (ch'iyōne), lynx (nasdā), ermine, mink (tehjishe), fisher (tṣe'deṣ), least weasel, and snowshoe hare (Hallam Knight Piesold Ltd. and Homestake Canada Inc. 1993). Mid and lower elevation areas provide habitat for porcupine (dech'uwe), northern flying squirrel and red squirrel (deṣtṣedẓe). Plovers, Canada goose (ghanje), harlequin duck (tūdi), and numerous passerine species have been recorded in the area. Raptors recorded in the area include bald eagle, sharp-shinned hawk (ūzē), and owls (meṣdzī). Upland breeding birds (migratory birds) include varied thrush, pine siskin, fox sparrow, hermit thrush, Wilson's warbler (kābalū), dark-eyed junco, Townsend's warbler (kābalū), yellow-rumped warbler (kābalū), ruby-crowned kinglet, sooty grouse (dih), golden-crowned sparrow, and Pacific wren.

Biophysical inventory mapping identified the Project area as potentially suitable for woodland caribou (hodzih) and moose (kedā; Ministry of Environment 1982). While there have been incidental observations of caribou in the region, there are no known herds in the region, as caribou do not use ICH and ESSF Biogeoclimatic Ecosystem Classification zones for habitat. The mine site is not overlapped by any caribou herd ranges shown on provincial range mapping (Government of BC 2019).

4.4.10.2 Tahltan Values

Similar to 4.5.8, Tahltan values are known in the area for Tahltan land uses, seasonal snow free access to harvest iṣbā (mountain goat), khoh (grizzly bear), kedā (moose), dzime (birds), and dediye (marmot). Gather important plants such as ts'ōsts'iye (fir) and jije (berries), and medicinal plants, as well harvest ebaldzē (mushrooms) at lower elevations in the project area.

Similarly at lower elevations, past and current land uses include camps, cabins, trails and harvesting/trapping in the area. The Project Area is identified as having high archaeological potential. The plateau and the importance for travel, trade, and land uses in the past and currently indicates the sensitivity of the area.

4.4.10.3 Common Tahltan Values Across AOI

Tahltan Values identified in Section 4.2.11 are considered for AOI's and in the context described in Section 4.2.11 while recognizing the confidentiality and sensitivity of Tahltan Knowledge within a public document. Summary information for the AOI(s) identified in the Tahltan Stewardship Plan management directions detailed in Section 4.4.4.5 provide additional indicators for Tahltan Values.

Generally the Area Assessment and Project Footprint Areas identified by Skeena Resources in chapters 10, 15-20, 22, 24-27 align with the AOI. The information reported for these values are applicable for this AOI.

4.4.10.4 Ancient or Past Conditions

Ancient - Long Term Conditions (7-15 Generations 140 to 300 years or 1955 to 1724)

Similar conditions as reported in Section 4.4.3.4 and 4.4.10.2 are applicable for ancient conditions.

Past - Short Term Conditions (1-3 generations 20 – 60 years or 2024 to 1965)

1960's to 2024

The information in Section 4.4.9.4 is applicable for the AOI, and includes the project components and aspects of the transportation corridor located in the AOI. The history of the project and the non-traditional land uses reported in Sections 21.4.2, and 22.4.2 and 3 are relevant to the Project Footprint AOI.

4.4.10.5 Existing Conditions and Barriers to Tahltan

The information reported in Section 22.4.3 for Non-traditional Land and Resource Use represents the current information and summaries for resource exploration and development; provincial land use plans; provincial land designations, fee simple lands, and tenures; licenced harvesting (guide outfitting, trapping, fishing, vegetation, and hunting); forestry; transportation and linear features; and recreation and tourism.

The information provided is applicable for this AOI and Section 4.4.3.5 (Regional AOI) for existing conditions.

Tahltan Stewardship Plan Management Directions

Middle Iskut and Nigunsaw River

- Maintain intact landscape from along Iskut River Large River Corridor from Iskut Lakes to Lower Iskut River
- Recovery and restoring surface and groundwater, riparian habitats, valleys and industrial roads
- Maintain healthy aquatic ecosystems and waterways
- Maintain connection to high elevations from low valley bottoms
- Support wildlife and fish habitat reclamation and enhancement

- Protect Tahltan trails and archaeological sites and cultural areas
- Protect Tahltans right to quiet enjoyment of the land and waters in these areas from industrial development

Edoxtotene Management Area

- Maintain healthy rivers, lakes and waterways
- Manage the pace and scale of development and ensure all Tahltan values are protected
- Protect Tahltan archaeological sites and cultural resources
- Maintain healthy and intact wildlife habitat ranges
- Ensure pristine and clean groundwater and surface water sources
- Require Tahltan consent before any industrial development activities to move forward
- Implement Tahltan Standards, conditions and objectives for any potential industrial activities proposed
- Ensure Tahltan quiet enjoyment of the land and waters
- Ensure that mining or energy-related project activities achieve the highest standards and conditions and provide economic and social benefit to Tahltans.

4.4.10.6 Potential Effects

The potential effects reported in this section are those that fall within the project footprint scope or AOI, the effects reported in 4.4.9.6 can be applicable for this AOI. The similar constraints and application

The effects reported by Skeena Resources for the AOI (Section A.5) include the following:

- Air Quality

The information on potential effects reported for Air Quality in Section 4.4.9.6 is applicable for this AOI.

- Noise and Vibration

The information on potential effects reported for Noise and Vibration in Section 4.4.9.6 is applicable for this AOI.

- Groundwater

The information on potential effects reported for Groundwater in Section 4.4.9.6 is applicable for this AOI.

- Surface Water

The information on potential effects reported for Surface Water in Section 4.4.9.6 is applicable for this AOI.

- Fish and Fish Habitat (Aquatic Resources)

The information on potential effects reported for Fish and Fish Habitat (Aquatic Resources) in Section 4.4.9.6 is applicable for this AOI.

- Terrain and Soils

The information on potential effects reported for Terrain and Soils in Section 4.4.9.6 is applicable for this AOI.

- Vegetation and Ecosystems

The information on potential effects reported for Vegetation and Ecosystems in Section 4.4.9.6 is applicable for this AOI.

- Wildlife and Wildlife Habitat

The information on potential effects reported for Wildlife and Wildlife Habitat in Section 4.4.9.6 is applicable for this AOI.

- Human Health

The information on potential effects reported for Human Health in Section 4.4.9.6 is applicable for this AOI.

- Employment and Economy

The information on potential effects reported for Employment and Economy in Section 4.4.9.6 is applicable for this AOI.

- Heritage Resources

The information on potential effects reported for Heritage Resources in Section 4.4.9.6 is applicable for this AOI.

- Current and Future Use of Land and Resources for Traditional Purposes

The information on potential effects reported for Current and Future Use of Land and Resources for Traditional Purposes in Section 4.4.9.6 is applicable for this AOI.

- Quiet Enjoyment of the Land

The information on potential effects reported for Quiet Enjoyment of the Land in Section 4.4.9.6 is applicable for this AOI.

Skeena Resources has undertaken further technical assessments related water and the interconnected values which is still being shared, reviewed and potentially adjusted by all parties during the proponent time to prepare the Revised Application. This has resulted in changes to the potential effects.

It is acknowledged the effects tabled above are part of the Revised Application. Once the Revised Application is accepted by both TCG and BCEAO, the Effects Assessment stage commences with Tahltan undertaking the Tahltan Risk Assessment as detailed in the Declaration Act Agreement. This chapter will be a basis to support the Tahltan Risk Assessment. It is expected the effects, significance of effects, and cumulative effects will be applied during the risk assessment and this will require further internal Tahltan engagement to finalize the assessment.

4.4.10.7 Effects Management and Scales for Significance

The effects management criteria identified in Section 4.4.9.7 are applicable here and the effects management criteria identified for the common values in 4.4.9.6, 4.4.9.8, and 4.4.9.10 are applicable for this AOI as it is nested within the Consent AOI.

4.4.10.8 Positive Effects

The project has had positive effects to Tahltan historically, currently, and in the future through employment, training, careers, social, economic, cultural, and environmental components and mitigations of the project through time and detailed in the Application.

Positive effects have been identified in 4.4.9.6 and referenced in 4.4.10.6.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and positive effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.10.9 Assessing Negative Effects

Overall, the project has documented negative effects to Tahltan historically, currently, and in the future detailed in the Application.

Negative effects have been identified in in 4.4.9.6 and referenced in 4.4.10.6. Final effects will be assessed and finalized in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and positive effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.10.10 Cumulative Effects Assessment

Cumulative effects have been identified for all or some of Tahltan Values in Section 4.4.9.6, and the effects identified in Section 4.4.9.10 are applicable for this AOI.

Cumulative effects will be for use in the Tahltan Risk Assessment.

4.4.10.11 Monitoring, Mitigations, and Contingencies

The information reported in Section 4.4.9.11 on mitigations are applicable for the AOI.

Mitigations, such as hydraulic containment, additional monitoring, potential Tahltan Conditions, greater access to the land as potential mitigations and others have been identified for all or some of Tahltan Values for this AOI, and will be further refined based on additional information, mitigations, and/or reduction in uncertainties/risk to Tahltan Values and the adjustments. All will be finalized in the Tahltan Risk Assessment.

4.4.10.12 Follow-up Strategy

Strategies have been identified in have been identified for common Tahltan Values in Sections 4.5, and 4.4.3, 9 and 10. Final effects will be included for use in the Tahltan Risk Assessment.

4.4.11 Tahltan Areas of Interest – Cumulative Effects

4.4.11.1 Description

The Tahltan Cumulative Effects AOI is situated within the Boundary Ranges, Skeena Mountains, Yukon-Stikine Highlands, and Boreal Mountains and Plateaus Ecoregions (Map 2 & Map 5). The Boundary Ranges area is a rugged, largely ice-capped, granitic and metamorphic-based mountain range that rises abruptly from the coast. It has a large alpine area (Boreal Altai Fescue Alpine) mainly of large icefields, glaciers and barren rock dominating the region with the coastal forested valley bottoms being found at constrained lower elevations. Forested vegetation consists of the subalpine or Mountain Hemlock zone on the lower valley slopes; and Coastal Western Hemlock zone on the valley bottoms where Sitka ts'ū (spruce) mixes with western hemlock as the dominant tree species. The Boundary Range is a coastal rainforest ecosystem and is heavily affected by moist Pacific air lying in the Gulf of Alaska and by cold Arctic air that passes over these mountains and river valleys from the northeast.

The Skeena Mountains Ecoregion is an area of high rugged mountains and a moist, coast/interior transition climate. They are composed of folded sedimentary rocks with complex folds and recumbent outlines. Typically, the valleys and saddles are characterized by tight complex folding, whereas the broader massifs are commonly gently contorted or even flat lying. The peaks and ridges present a serrate and jagged profile that has developed under intense glaciation. Glaciation was heavy with much ice originating here then flowing northward or southward to coalesce with other moving ice. Many glaciers persist in the regional area. Interior Gatēle (Cedar) – Hemlock forests occur in the lower western slopes and valleys; while Sub-Boreal Ts'ū (Spruce) forests occur in some of the northeastern valleys. Engelmann Ts'ū (Spruce)– Subalpine Ts'ōsts'iye (Fir) forests occur on all the middle slopes and alpine vegetation or bare rock occur on the upper slopes and ridges; small glaciers occur on the upper slopes in the northwest nearest the Boundary Range. The area is a transitional ecosystem from the coastal rainforest to the northern boreal ecosystems to the east and north. Westward flowing moist Pacific air can bring heavy cloud cover and precipitation either as rain in the summer or deep snow in the winter. Cold Arctic air is often stalled outside this ecosection, but it can often push westward and bring intense cold conditions.

The Yukon-Stikine Highlands Ecoregion is an area of transitioning from the rugged Coastal Mountains in the west to the subdued plateaus to the east. This area was heavily glaciated by glaciers moving off the Boundary Ranges onto the plateaus and lowlands of the northern interior of BC. Boreal Altai Fescue Alpine occurs on the summits and is very extensive in the ecoregion with the subalpine mainly dominated by the Ts'ū (Spruce) – K'aye (Willow) – k'ī' (Birch) with Engelmann Ts'ū (Spruce)– Subalpine Ts'ōsts'iye (Fir) present in the western area of the ecoregion. Sub-Boreal Ts'ū (Spruce) occur in the lower valleys. It is an ecoregion comprised of extensive volcanic deposits with deep erosion in the Mess Creek and Tūdeẕe chō (Stikine) River valley as it enters the Coast Mountains. Glaciation was heavy in the ecoregion from west to east as they entered into the northern interior plateaus, resulting in rounded summits and ridges and cirque erosion of the higher summits. The area is drained by the Tūdeẕe chō (Stikine) River and its tributaries the Tāłtān (Tahltan) River and by Mess Creek flowing into the Tūdeẕe chō (Stikine) River.

The climate is influenced from rain shadows as some of the north-facing valleys are protected from moist Pacific air moving over the Coast Mountains in the west by the surrounding uplands and mountains. However, moist Pacific air does travel up the Tūdeẓe chō (Stikine) valley bringing considerable moisture to the interior of the ecoregion. In the winter and early spring, dense, cold Arctic air can invade this area from the north and can cause extremely cold temperatures and heavy cloud cover for extended periods.

The Boreal Mountains and Plateaus Ecoregion is largely an area of mountains, intervening lowlands, and rolling, high plateaus that are strongly influenced by arctic air. It has a cold, dry boreal mountain climate. The Boreal White and Black ts'ū (spruce) zone occurs in the lower, wider valleys and lowlands; while the Ts'ū (Spruce) – K'aye (Willow) – K'ī' (Birch) zone occupies most of this area on the mid-slopes, with Boreal Altai Fescue Alpine on the summits and is very extensive in the ecoregion. The ecosection is influenced by uneven intensity from glaciation. Drainage of this area radiates outward in all directions; through the coastal mountains by the Tūdeẓe chō (Stikine) and Iskut rivers; northwest across the Yukon and Alaska by from the headwaters of the Yukon river; and northeast to the Mackenzie River via the Dease and Liard Rivers. The only Tahltan community situated within this AOI is Łuwechōn (Iskut) on Highway 37.

4.4.11.2 Tahltan Values

Netce'nsta or Earth-Mother

> *The Earth-Mother lives under the earth, and holds it up. The earth is like a crust or blanket spread out flat, and she is like a post that holds it up. Sometimes she gets tired and shifts her position; or sometimes the earth sags in some place where the weight is on it, and then she moves her arm to put it up. Then we have an earthquake. Earth-Mother is becoming older and weaker all the time, and by and by she will not be able to hold up the earth any longer.*
>
> *Then it will fall into the water which is below the earth, and disappear. Once Earth-Mother told the people, "When you feel an earthquake, you must not be alarmed. It is only because I am a little tired, and am shifting my position. It is no sign that I am going to fall down, and that the earth will come to an end." Therefore people are not afraid of earthquakes.*

Our ancestors respected the land and passed it down to their children in much the same condition as they had found it. We must continue to protect and conserve the interconnected whole that is Keyeh. This means caring for the land as a whole and all of its interdependent parts, respecting the relationships that exist between different features of the land and the animals, plants, and spirits that inhabit it (ecosystems), including ourselves. It is thinking of the land in terms of cycles, shorter seasonal cycles and longer ecological cycles, and Tahltan have always understood that we need to live within those cycles by making our activities align with them as much as possible. On the other hand, we accept that we will never fully understand the land—the larger community of which Tahltan are only a small part. This means that we need to be humble and careful and never forget that there is always have more to learn. This can happen, for instance, by focusing too much on one part of the land, forgetting that we need to view the land as a whole of interdependent parts that are in dynamic and constantly shifting relationships with one another. By disrupting the relationships between parts, in ways that we do not understand, we can upset the land's balance and bring about unanticipated consequences.

Climate change adds another dimension to existing cycles with reduced winter snowpack will lower water levels in our salmon-bearing rivers while raising water temperatures, with impacts on fish populations.

Changes in precipitation patterns, along with warmer winters, mean that our forests are now subject to multiple stressors, including drought, pests, disease and wildfires, all of which reduce forest resilience. The gradual loss of glaciers will also mean less available water in summer months. It is unclear exactly how these changes will fully effect fish and wildlife populations but climate change is included when considering the health of the land and Tahltan Values in a cumulative and holistic manner.

The importance of this mountainous southwestern corner of the territory has, in part, to do with the resources provided by the rivers and forests: nust'ihe (marten), tsa' (beaver), tehjishe (mink), naghā (wolverine), sas and khoh (bear), iʂbā (mountain goat), ch'iyōne (wolf), tʂe'deʂ (fisher), tʂabā'e (trout) and dēk'āne (salmon). It was also the trade that travelled up the rivers and trails (coast-interior trade network which stretched from the Pacific coast to the boreal forests east of the Rocky Mountains).

Tahltan land uses and practices includes villages, obsidian mining, trapping, gathering, harvesting, fishing, travel, placenames, and trails throughout the region. Infrastructure includes bridges, stream and river trails, villages, cabins, campsites, and hunting/fishing/trapping/gathering camp sites.

Tahltan frequently travelled back and forth between their villages on the Iskut and upper Nass and the tribal headquarters at the confluence of the Tūdeʂe chō (Stikine) and Tāłtān (Tahltan) rivers, using ancient trails that followed the course of rivers, including Treaty Creek, Ningunsaw River, Unuk River and the Iskut.

The information provided for this AOI is in addition to the Tahltan Values being updated as reported in the above sections, will add context for the area overall, and provide additional information to the areas north and west of the Regional AOI (Map 2).

Tahltan use and occupation in and around northern areas of this AOI, include Tahltan place names, trails, hunting areas, trapping areas, fishing locations, camps, villages, trading sites and knowledge of river courses. Existing archaeological sites in the region reveal a preponderance of obsidian. Obsidian from Edīzā'e (Mount Edziza) has been mined by Tahltan since ancient times. The volcanic glass was critical in the manufacturing of sharp tools and weapons, and was traded widely throughout the north. The study area is bordered to the west and east by two major trade and transportation corridors.

Tahltan use and occupancy of the Edīzā'e (Mount Edziza), Klastline Plateau, Todagin Plateau, and Łuwechōn community area going back to ancient times, is well-documented, and continues to be shared by Tahltan today. There are year-round village sites in the region, outside of Łuwechōn area that continued to be occupied in the early twentieth century. There are records with dozens of villages, traditional cabins, and campsites in the valleys and alongside creeks, and Tahltan trails crisscrossing the entire region. Most of the rivers, creeks, lakes and mountains in the area have Tahltan names. Archaeological sites recorded in the course of investigations carried out over the years, confirm the ancient use and occupancy of this area by Tahltan.

4.4.11.3 Common Tahltan Values Across AOI

Tahltan Values identified in Section 4.2.11 are considered for AOI's and in the context described in Section 4.2.11 while recognizing the confidentiality and sensitivity of Tahltan Knowledge within a public document. Summary information for the AOI(s) identified in the Tahltan Stewardship Plan management directions detailed in Section 4.4.4.5 provide additional indicators for Tahltan Values.

Tahltan Knowledge for each value will be included in each value's section after determining its confidentiality and sensitivity for the public EAC Application. Values are included in the updating process during the Application Review stage, during the period required to develop a Revised Application based on the Notice Regarding Application Review, and during the Tahltan Risk Assessment stage.

Technical information for the AOI(s), unless reported by Skeena Resources, or tied to specific projects are supported by information identified regionally.

4.4.11.4 Ancient or Past Conditions

Similar conditions as reported in Section 4.4.3.4 and 4.4.11.2 are applicable for ancient conditions.

Past - Short Term Conditions (1-3 generations 20 – 60 years or 2024 to 1965)

1960's to 2024

Chapter 21 and 22 provides information on the infrastructure and services and non-traditional land uses and tenures (Sections 21.4.2 and 3; 22.4.2 and 3) for the AOI. In addition, recent information compiled for the *Red Chris Block Cave Project - Production Phase Application for an Amendment to Environmental Assessment Certificate #M05-02* (Newmont 2024) provides additional current information on the historical conditions.

Guide outfitting concessions, range tenures, and trapping concessions are the largest area based tenures in the AOI, but they are predominantly site specific activities occurring infrequently across the tenure (Table 4-7; Newmont 2024). They are predominantly consumptive based on wildlife or are focused on supporting horses for guide outfitting as range tenures. The predominant tenures and activities are tied to forestry and associated road, cutting, and other related permits and tenures; mineral exploration tenures and permits; and major mine permits (Section 22.4.3 and Newmont 2024). Associated with these activities are 2,671 km of roads with highway (235 km) and industrial roads (1,813 km) in place. Additional historical information relevant to the AOI is reported in Section 22.4.2.1.

4.4.11.5 Existing Conditions and Barriers to Tahltan

There are 3,372 active mineral tenures with 79 owners in the AOI, with 37 approved Notice of Work permits, for exploration and major projects (such as Eskay Creek, Galore Creek, Ball Creek, Snip Mine, and Iskut Property). There are 5 Permitted Mine Areas with KSM, Brucejack, Premier, Red Chris, and Eskay Creek situated within the AOI.

Access

Highway 37 access has created significant effects in the Tahltan Nation and the region. Highway 37 initially began from the Alaska Highway where the road was constructed south (1959) to support the Cassiar Asbestos Mine. Over time the highway was constructed to Dease Lake where it connected to the Telegraph Creek Road (Highway 51) by the early 1970's.

There are 2,671 km of access in the AOI, with the following breakdown:

- 235 km Highway 37
- 4 km local or recreation

- 1,813 km resource related roads and trails (includes roads within cutblocks and right of ways)
- Of the 1,813 km, there is 71 km related to the Eskay Creek MAR and Forest Kerr Project. The MAR continues to south towards the mine site but is outside of the AOI. It will be discussed further in Sections 4.4.9 and 10

NTL

The Northwest Transmission Line is situated in the AOI, and includes the transmission line extension to Iskut and Red Chris Mine. The transmission line has a Right of Way (ROW varies from 25 m to 40 m) with associated access roads and clearings adjacent to the ROW (both cutblock and openings to support the transmission line) remaining in permanent early seral stage. The total disturbance is approximately 311 km and 388 ha.

Forestry

At this time, there are 1,146 blocks, situated in Skeena Stikine Natural Resource District with the district operated from the Smithers office and the Coast Mountains Natural Resource District (office based in Terrace), the with harvesting occurring as:

- 157 openings - 1980-1990, 9,673 ha
- 236 openings - 1991-2000, 6,310 ha
- 84 openings – 2001-2010, 1,44 ha
- 332 openings - 2011 – 2020, 4,996 ha
- 337 openings -2021-2024, 36 blocks, 2,365 ha

Given the duration of timber harvesting, the openings are early seral but silviculture has been occurring on blocks to meet provincial standards and obligations.

Within the AOI, 384 archaeological sites are situated in the Tahltan Nation with additional sites located outside of the Nation in the AOI, and includes multiple site specific and landscape Tahltan Knowledge features in the AOI.

The information reported in Section 22.4.3 for Non-traditional Land and Resource Use represents the current information and summaries for resource exploration and development; provincial land use plans; provincial land designations, fee simple lands, and tenures; licenced harvesting (guide outfitting, trapping, fishing, vegetation, and hunting) ; forestry; transportation and linear features; and recreation and tourism.

The information provided is applicable for this AOI and Section 4.4.3.5 (Regional AOI) for existing conditions.

As identified through this section, a number of past, current, and near future projects can have effects to Tahltan and determining how effects can occur that are occurring from projects or activities not including the Eskay Creek Mine Project; indirect effects or mixed effects being contributed from the Eskay Creek Mine Project; and effects contributing directly from the Eskay Creek Mine Project.

The Cumulative Effects AOI and effects assessment is being based on the following specific projects:

- Brucejack Mine (Section 10.10.2 Present Projects for details)
- KSM Mine (Section 10.10.3 Reasonably Foreseeable Future Projects)
- Snip Mine (Section 10.10.1 Past Projects)
- Johnny Mountain (Newmont 2024)
- Galore Creek Mine (Section 10.10.3 Reasonably Foreseeable Future Projects)
- Red Chris Mine (Section 10.10.2 Present Projects)
- Forrest Kerr Hydroelectric Project (including McLymont and Volcano Creek) (Section 10.10.2 Present Projects)
- Forestry
- Northwest Transmission Line (Section 10.10.2 Present Projects)
- Advanced Exploration Projects
    - Iskut Property and Bronson Connector
    - Schaft Creek
    - There are also over 30 currently authorized exploration projects

Other activities such as guide outfitting, trapping, and licensed hunting is considered as components of the AOI's where they are indicated as possible effects or barriers (Section 10.10.4; Newmont 2024).

Tahltan Stewardship Plan Management Directions

Of all the existing and potential threats Tahltan face today, probably the greatest is the cumulative effects of the many pressures on the land and people. At present, there are three operational mines in Tahltan Territory. Mineral exploration is territory-wide, and is expected to continue increasing for the near future with a number of potential mines in different stages of planning and permitting. The commercial salmon fishery in Alaska continues to effect salmon stocks and potential effects on game populations with increasing access are cumulative effect concerns.

Climate change adds another dimension to existing threats. Reduced winter snowpack will lower water levels in our salmon-bearing rivers while raising water temperatures, with impacts on fish populations. Changes in precipitation patterns, along with warmer winters, mean that our forests are now subject to multiple stressors, including drought, pests, disease and wildfires, all of which reduce forest resilience. The gradual loss of glaciers is expected with less available water in summer months. It is unclear exactly how these changes will impact fish and game populations, but it seems safe to assume they will add to the pressures on these populations already occurring from human disturbance and resource activities.

4.4.11.6 Potential Effects

The potential effects related to the Cumulative Effects AOI are based on the potential effects identified for each AOI and TSP designation:

- Regional AOI (Section 4.4.4.6)
- Lower Iskut Large River Corridor (Section 4.4.4.6)
- Mid Iskut and Nigunsaw Large River Corridor (Sections 4.4.4.6, 4.4.6.6, 4.4.9.6)
- Oweegee Creek (Section 4.4.6.6)
- Upper Elevation Zippa Mountain, Upper Bell-Irving, and RN Mountain (Section 4.4.8.6)
- Upper Elevation More Creek (Section 4.4.7.6)
- Upper Elevation Consent Area and Project Footprint (Sections 4.4.9.6 and 4.4.10.6)

The summary of potential effects cumulatively, regionally, and by AOI are captured and presented. The significance and final effects will be determined through the Tahltan Risk Assessment.

4.4.11.7 Effects Management and Scales for Significance

Lower Iskut

The AOI has effects that are predominately indirect, related to past mining projects, projects potentially being developed in the future, and with TSP management directions not being met from other projects. The potential effects are moderate to high, as opening the area to ground access, and developing projects and properties can alter the nature, role, or function value or AOI and not be consistent with the TSP. The landscape will have effects from the identified projects and potentially effect half to a generation in duration. The confidence of the effects are moderate as the effects are known but the potential occurring has some risks and is dependent on external pressures and financial markets. The risk of occurring is low to moderate. This results in moderate significance of effects to Tahltan with the effects assigned to other factors/projects. It does relate partially direct to the effects related to the Eskay Creek Mine Project. Based on the TSP management direction and effects to Tahltan Values, there are estimated moderate effects to the AOI primarily from other sources/projects. Further assessment will occur with Tahltan engagement, with final determination through the Tahltan Risk Assessment.

Mid Iskut and Nigunsaw

The AOI has effects that are predominately indirect, related to past mining projects, forestry, transportation effects from projects potentially being developed in the future, existing projects and with effects related to Eskay Creek Mine Project-related to access barriers/restrictions, wildlife mortalities, transportation effects, CFTLUP, and QEL effects. The potential effects are low to moderate, as the area already has existing ground access, the river corridor does have intact old and mature forest landscapes, and developing projects and properties can slightly alter or alter the nature, role, or function value or AOI but still be consistent with the TSP. The landscape will be effected and potentially effect half to a generation in duration. However, the direct effects from the project are focused on the transportation corridor, with indirect effects effecting the landscape. With mitigations and agreements with Tahltan, the direct effects, while regular, could be reduced. The management directions for the AOI can potentially be met. The confidence of the

effects are moderate to high as the effects are known with the risk of occurring is medium. This results in moderate significance of effects to Tahltan with the majority of effects assigned to other factors/projects. It does relate only partially directly to the effects related to the Eskay Creek Mine Project with the transportation corridor and the existing and new barriers to Tahltan priorities. Based on the TSP management direction and effects to Tahltan Values, there are estimated moderate effects to the AOI primarily from other sources/projects. Further assessment will occur with Tahltan engagement, with final determination through the Tahltan Risk Assessment.

The potential effects identified for the Unuk River are related to water, fish and fish habitat, traditional land uses, quiet enjoyment of the land tied to the Eskay Creek Mine Project and cumulative effects from KSM Mine Project and Brucejack Mine Project detailed by both Skeena Resources and Tahltan (chapters 12-20, 24-27 with sections 5-7 in each chapter detailing the potential effects and estimated outcomes; Sections 4.4.9 and 10).

Unuk River

The AOI has effects that are predominately directly related to the Eskay Creek Mine Project-related to water, fish and fish habitat, traditional land uses, and quiet enjoyment of the land and indirectly related to past mining projects, projects potentially being developed in the future, and with TSP management directions potentially not being met from other resource development and land use activities. The potential effects are low to moderate with the current estimated effects from the project, existing projects, and effects from developing projects and properties can alter the nature, role, or function value or AOI and not be consistent with the TSP. The landscape will have effects from the identified projects and potentially effect half to a generation or longer in duration. The confidence and risk of the effects are moderate as the effects are known but the potential occurring has some risks and is dependent on external pressures and financial markets. The risk of occurring is low to moderate. Based on the TSP management direction and effects to Tahltan values, there are estimated moderate effects to the AOI primarily from other sources/projects. Further assessment will occur with Tahltan engagement, with final determination through the Tahltan Risk Assessment.

Oweegee Upper and Lower AOIs

The AOI has effects that are predominately indirect related to past mining projects, forestry, transportation effects from projects potentially being developed in the future, existing projects and with direct effects related to Eskay Creek Mine Project-related to access barriers/restrictions, wildlife mortalities, transportation effects, CFTLUP, and QEL effects. The Potential effects are low to moderate, as the area already has ground access, the river corridor does have intact old and mature forest landscapes and developing projects and properties can slightly alter or alter the nature, role, or function value or AOI but still be considered to meet or be consistent with the TSP. The landscape will be effected and potentially effect half to a generation in duration. However, the direct effects from the project are focused on the transportation corridor, with indirect effects effecting the landscape. With mitigations and agreements with Tahltan, the direct effects, while regular, could be reduced, in addition to management directions for the AOI still being met. The confidence of the effects are moderate to high as the effects are known with the risk of occurring being medium. This results in moderate significance of effects to Tahltan with the majority of effects assigned to other factors/projects. It does relate only partially directly to the effects related to the Eskay Creek Mine Project with the transportation corridor and the existing and new barriers to Tahltan priorities. Based on the TSP management direction and effects to Tahltan Values, there are estimated

moderate effects to the AOI primarily from other sources/projects. Further assessment will occur with Tahltan engagement, with final determination through the Tahltan Risk Assessment.

More Creek

The AOI has effects that are predominately indirect related to other current, and potential mining projects, air and ground access, project infrastructure, mineral exploration, and other land use activities. The potential effects are moderate to high, as the areas already has established ground access, and developing projects and properties can alter the nature, role, or function value or AOI but still be considered to meet or be consistent with the TSP. The landscape will be effected and potentially several generations in duration. However, the indirect effects are focused on the access corridor in the AOI, with potential effects on the landscape. With mitigations and agreements with Tahltan, the effects, while regular, could be reduced in addition to the management directions for the AOI still being met. The confidence of the effects are moderate to high as the effects are known with the risk of occurring being medium. This results in low to moderate significance of effects to Tahltan with the majority of effects assigned to other factors/projects.

Based on the TSP management direction and effects to Tahltan Values, there are estimated low to moderate effects to the AOI primarily from other sources/projects. Further assessment will occur with Tahltan engagement, with final determination through the Tahltan Risk Assessment.

Zippa Mountain, RN Mountain, and Upper Bell-Irving River

Based on the rationales reported in Section 4.4.8.6 and 4.4.8.7 there are low to nil estimated cumulative effects for these AOI’s based on existing conditions and potential effects.

Consent, Mountain Pass, and Transportation Corridor

Cumulative effects have been identified for all or some of Tahltan Values for this AOI, with the primary effects associated with the ECRP potential effects. There are additional cumulative effects reported for the Mid-Iskut and Nigunsaw AOI reported in 4.4.4.10 with indirect effects related to past mining projects, projects potentially being developed in the future, and with TSP management directions not being met from other projects. The potential effects related to this AOI are moderate to high, as opening the area to ground access, and developing projects and properties can alter the nature, role, or function value or AOI and not be consistent with the TSP. The landscape will have effects from the identified projects and potentially effect half to a generation in duration.

When evaluating the potential cumulative effects of the ECRP on the Consent and Mountain Pass AOIs, in conjunction with the Mid Iskut and Nigunsaw AOIs, the anticipated effects are landscape in extent and of moderate to high magnitude. The ECRP and resource development activities has the potential to significantly alter the nature, role, and functional value of the AOIs. These changes may not align with the values or objectives set out in the TSP (Territorial Stewardship Plan).

The duration of these effects is expected to span from one to three generations, with some impacts likely to persist beyond three generations. These effects are anticipated to occur in a continuous manner. While certain effects may be reversible in the long term, others are estimated to be irreversible.

The level of confidence in the assessment of these effects is considered moderate to high, as the nature of the impacts is generally understood. However, the likelihood of their occurrence is influenced by external pressures and financial market conditions, introducing a degree of risk and uncertainty. The overall risk of occurrence is assessed as moderate, with moderate levels of uncertainty.

Lower Iskut

- Source – primarily indirect, with some direct effects from Snip Mine with ECRP
- Magnitude – moderate to high
- Extent –landscape
- Duration – 1 generation
- Reversibility – reversible 1 to 3 generations
- Frequency - continuous
- Confidence - moderate
- Risk and uncertainty – medium/moderate

Mid-Iskut and Nigunsaw River

- Source - primarily indirect, with some direct effects with the transportation corridor
- Magnitude – moderate
- Extent – landscape
- Duration -1 to 3 generations
- Reversibility - reversible 1 to 3 generations
- Frequency - continuous
- Confidence – moderate to high
- Risk and uncertainty – medium/moderate

Unuk River

- Source – primarily indirect, with direct effects from KSM
- Magnitude – low to moderate
- Extent – site specific to landscape
- Duration – 1 generation
- Reversibility – irreversible to 1 to 3 generations reversible
- Frequency - continuous
- Confidence - moderate
- Risk and uncertainty – medium/moderate

Oweegee Upper and Lower AOI

- Source – indirect with Highway 37 and other resource activities, mixed with transportation from ECRP
- Magnitude – low to moderate
- Extent – landscape
- Duration 1 to 3 generations reversible long-term
- Frequency – continuous
- Confidence moderate to high
- Risk and uncertainty – medium/moderate

Consent and Mountain Pass AOI

- Extent – site specific to landscape
- Magnitude –moderate to high
- Duration –1-3 generations to over 3 generations
- Frequency – continuous
- Reversibility – reversible long term to irreversible
- Risk and uncertainty – moderate to high and moderate to high uncertainty

Based on the above effects management and cumulative effects management information the following is currently estimated for the ECRP.

- Extent – site specific to landscape
- Magnitude –moderate to high
- Duration –1-3 generations to over 3 generations
- Frequency – continuous
- Reversibility – reversible long term to irreversible
- Risk and uncertainty – moderate to high and moderate to high uncertainty

Cumulative effects will be reviewed and finalized in the Tahltan Risk Assessment.

4.4.11.8 Positive Effects

Specific positive effects have been identified for common Tahltan Values in Sections 4.5, and 4.4.3, 9 and 10 and will be for use in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and positive effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.11.9 Assessing Negative Effects

Overall, the project has documented negative effects to Tahltan historically, currently, and in the future detailed in the Application.

Negative effects have been identified in have been identified for common Tahltan Values in Sections 4.5, and 4.4.3, 9 and 10 and will be for use in the Tahltan Risk Assessment.

The information identified as mitigations for Tahltan Values for the Application and AOI, approaches and commitments to reduce uncertainties and risk, and positive effects related to employment, social, cultural, environmental, and economic components of the Revised Application will be applied with the Tahltan Risk Assessment for the AOI.

4.4.11.10 Cumulative Effects Assessment

The information presented in Section 4.4.11.7 is applicable for this section.

4.4.11.11 Monitoring, Mitigations, and Contingencies

Monitoring, mitigations, and contingencies been identified in have been identified for common Tahltan Values in Sections 4.5, and 4.4.3, 9 and 10 and will be for use in the Tahltan Risk Assessment.

Mitigations, such as additional liners, additional monitoring, greater access to the land as potential mitigations and others have been identified for all or some of Tahltan Values for this AOI, and will be further refined based on additional information, mitigations, and/or reduction in uncertainties/risk to Tahltan Values and the adjustments in the Tahltan Risk Assessment.

4.4.11.12 Follow-up Strategy

Strategies have been identified in have been identified for common Tahltan Values in Sections 4.5, and 4.4.3, 9 and 10 and will be for use in the Tahltan Risk Assessment.

4.5 Summary of Effects on Current and Future Generations

Skeena Resources provided summaries of the effects by Tahltan Common Values and in additional relevant chapters in the Application. For chapters 12-27, a dedicated section for each chapter provides the summary of the potential effects, including positive, negative, and cumulative effects to support the Application Review stage and the Tahltan Assessment. The following are partial summaries of the common values reported by Skeena Resources[11]:

Chapter 12 Air Quality -Section 12.8

As outlined previously in this chapter in relation to the Air Quality VC, the Project is anticipated to result in increases in concentrations of CACs during all phases of the Project. The largest magnitude for effects will occur in the Operations phase. There are predicted exceedances of SOGs for TSP, PM_{10}, $PM_{2.5}$, NO_2, and CO outside the Assessment Footprint and increases in deposition of dust and metals. With the application of

[11] CEA= Cumulative Effects Assessment

mitigation, the scientific magnitude of the associated residual effects has been assessed as negligible to high. That said, while considered negligible to high in a Western science context, understanding the past, current, and future barriers that the Project's residual effects to air quality may represent for Tahltan is important.

Residual effects to air quality will occur during the Project's Construction and Operations phases, declining in the Reclamation, Closure, and Post-closure phases of the Project, and are reversible within one generation.

However, the location and nature of the Project, which involves revitalization of a previously developed mine, situates development activities in an area that has already been subject to disturbance, instead of affecting new places that may currently support Tahltan use based on their unaltered character. While air quality changes will be landscape in scale, they are more prevalent in close proximity to the Project.

Chapter 13 Noise and Vibration -Section 13.8

As outlined above in relation to the Noise and Vibration VC, blasting associated with the Project is not expected to exceed vibration thresholds at the identified sensitive receptors, and there are no anticipated residual effects from Project-related sources of vibration. However, exceedances of noise thresholds due to Project activities are predicted for some sensitive receptors on the Eskay Creek MAR, along Highway 37 and at the town of Stewart, creating potential annoyance/complaints, sleep disturbance and speech interference. The scientific magnitude of these residual effects has been assessed as low to moderate. That said, while considered low to moderate in a western science context, understanding the past, current, and future barriers that Project noise may represent for Tahltan is important.

The geographic extent of residual effects from Project noise ranges from landscape to regional. Reversibility of these effects is short term, but they will extend through Construction and Operation, declining in the Reclamation and Closure and Post-closure phases of the Project. On this basis, their duration has been rated as medium term (6 to 25 years, or one generation or less). Importance of noise-related residual effects is considered moderate, based on feedback from community engagements, engagement with Indigenous Nations, and discussions with regulators.

Potential for cumulative interaction with other anthropogenic noise sources was only identified at sensitive receptors along the Eskay Creek MAR and Highway 37/37A, specifically related to sleep disturbance and speech interference. The scientific magnitude of these effects has been assessed as low, and they will again extend through Construction and Operation, declining in the Reclamation and Closure and Post-closure phases of the Project. Their importance remains moderate due to mentions of noise in discussions with local communities, Indigenous Nations and regulators.

Noise is identified in this chapter as having particular implications for Tahltan and other Indigenous users of the landscape, due to its potential to influence the sensory and experiential elements of land-based activities, as well as wildlife behaviour and habitat.

Chapter 14 Groundwater -Section 14.8

As outlined above, residual effects form the Project were identified in relation to groundwater quantity and quality. The importance of all residual effects for both groundwater quantity and quality are identified as moderate because groundwater quality and surface water and groundwater interactions have been identified as an interest by Tahltan.

For the Groundwater VC, the following residual effects were identified: lowering groundwater levels around the pits; rising groundwater levels around the expanded TMSF; reducing baseflow in Tom MacKay, Ketchum, and Eskay creeks around the pits; reducing/eliminating baseflow in the uppermost reach of Tom MacKay Creek; and affecting quality of groundwater downgradient of the GSTs.

Most residual effects are expected to be of high magnitude, except for reducing baseflow in Tom MacKay, Ketchum, and Eskay creeks around the pits (rated low to moderate) and affecting groundwater quality downgradient of the GSTs (rated moderate to high). All residual effects are characterized as far- future in duration, and irreversible. Lower and raising of groundwater levels as well as a reduction in baseflow within the upper reach of Tom MacKay Creek are expected to occur at the local geographic extent. Reducing baseflow in Tom MacKay, Ketchum, and Eskay creeks around the pits is anticipated to occur at a landscape extent, although still within the LAA. Similarly, effects to groundwater quality downgradient of GSTs is expected to occur at the landscape extent. All residual effects are rated as having neutral ecological context, groundwater quantity residual effects have moderate resilience, and the groundwater quality residual effect has low resilience. Since the Project's effects on groundwater are not expected to extend to areas where groundwater effects from other projects occur, no cumulative effects are expected.

The high magnitude and irreversible characterizations of most residual effects primarily reflect the need for specific activities (e.g., dewatering) to ensure for safe operation of the Project. The existing mitigation measures in place for the Eskay Creek Mine (historic) are interpreted as highly effective as no substantive impacts to surface water and groundwater quantity and quantity have been detected up to date (Appendix 14-1, 2023 Groundwater Baseline Report). Mitigation measures in design are the most effective means of minimizing effects by diverting non-contact water away from Project components and managing and treating contact water. While existing mitigations are effective at reducing or minimizing potential effects, effects upon groundwater quantity and quality do occur; such effects are unavoidable, and dewatering is required for the safe operation of the Project and management of contact water at the EOO and through Post--closure. Residual effects are expected to be irreversible. Groundwater quantity will be affected through Post--closure as a result of the modifications to the topography, and water management required for the TMSF and North Pit.

The location and nature of the Project, which involves revitalization of a previously developed mine, is helpful in regard to mitigation of effects to Tahltan land use, as it comprises development activities in an area that already has been subject to disturbance and restriction of access, instead of introducing disturbances to new places that may currently support Tahltan use based on their unaltered environmental character.

Chapter 4, Tahltan Application Information, makes note of a number of areas for particular consideration in addition to the assessment presented by Skeena Resources in Sections 14.5 to 14.7. These include concerns relating to seepage from the TMSF, MRSA, and PAG storage areas to cause potential impacts on both groundwater and surface water. The Project is located in a fractured rock environment that is vulnerable to contamination, with little soil or overburden. Geosynthetic liners and/or clay barriers were discussed for their potential to reduce seepage. Additional mapping of preferential pathways for seepage from these facilities to the receiving environment, and monitoring of groundwater and surface water (including in upper and lower Harrymel and Coulter creeks) to provide early detection, are both recommended. It is also recommended that Skeena Resource commit to further study (and develop plans to plug) historic boreholes that are in an artesian condition that are affecting water quality and have not been fully studied in water quality model source terms. TCG also notes the need for greater understanding

about the approach to extended water treatment (into post-closure), and recommends identifying mitigation designs and contingencies for the TMSF and other mine site component where water treatment is not required or is reduced during Closure and Post-closure.

As noted in Section 4.4.9.6, TCG's assessment is that the potential effects to groundwater from direct and indirect interactions with the Project have greater uncertainties than those estimated by Skeena Resources. Uncertainties with the hydraulic containment of the TMSF, the potential seepage pathways along the lateral walls and dams of the TMSF, potential seepage pathways from the MRSA, and effects from fractures and open pits are identified. The pathways may extend beyond the estimated water management system and to surrounding creeks and the Unuk River. TCG has identified potential groundwater effects, over time, downstream to fish-bearing habitats of the lower Ketchum Creek and Unuk.

The Project supports Tahltan social and economic legacies as they relate to local growth of and opportunities for business and employment without requiring development activity in extensive pristine environmental areas. While permanent effects to groundwater quantity are anticipated, these are considered needed for safe completion of the Project. As well, the proposed reclamation and closure process and Post-closure measures are designed to support the return of the mine site to the healthy environmental condition specified in the Tahltan Sustainability Requirements.

Chapter 15 Surface Water -Section 15.7

As outlined above, residual effects from the Project were identified in relation to surface water quantity and quality. The importance of all residual and cumulative effects for both surface water quantity and quality are identified as high, in part because of concerns on the part of Tahltan regarding the implications of these effects for overall ecosystem health, including health of wildlife, fish, and aquatic resources, and other linked Tahltan values, as well as Tahltan land uses.

Residual effects to water quantity are expected to be moderate in scientific magnitude for Ketchum Creek and Eskay Creek, and high magnitude for Tom MacKay Creek. These effects are expected to be limited to the Assessment Footprint (in the case of Tom MacKay Creek, and the upstream reaches of Ketchum Creek and Eskay Creek) or the LAA (for the lower reaches of Ketchum Creek and Eskay Creek). The duration and reversibility for water quantity effects are predicted to be far-future (>50 years, or multigenerational) and irreversible, respectively.

Residual effects to water quality range between moderate and high scientific magnitudes, depending on the water quality parameters and the creek. Residual effects to wildlife parameters (such as total molybdenum) and drinking water parameters (such as antimony and manganese), range in duration from short-term (less than one generation) to far-future (multigenerational). Residual effects to aquatic life parameters (such as anions and nutrients and total metals) are also mostly predicted to be limited to the Assessment Footprint and Ketchum Creek, with the exception of aluminum, antimony, arsenic, cadmium, copper, nickel, phosphorus, thallium, and zinc, which are predicted to occur at a landscape or regional level. Only antimony, thallium, and copper are predicted to occur at the landscape or regional (thallium only) level in the Project Case at concentrations defined as high magnitude for surface water quality (i.e., more than 2x the applicable guideline). With respect to thallium, it is noted the guideline used for the purpose of screening is considered a working guideline that carries a higher degree of uncertainty (ENV 2024b, ANZECC 2000). One residual cumulative effect to water quality was identified: an increase in selenium concentration in the Unuk River. The magnitude of this effect was predicted to be moderate.

As the Project has potential to affect current and future Tahltan land use, several mitigation and management measures have been proposed to help minimize these residual effects. The location and nature of the Project, which involves revitalization of a previously developed mine, is helpful in this regard, as it involves development activities in an area that already has been subject to disturbance and effects to surface water, instead of introducing disturbances to new places that may currently support Tahltan use based on their unaltered environmental character.

Further information about mitigation measures relevant to water quality during reclamation and closure is available in Appendix 1-9, Reclamation and Closure Plan. It is a plan dqeveloped with an initial set of goals based on the current Project design. The closure objectives identified in the plan are specific goals which the Tahltan have identified that indicate successful closure of the Project. The closure objectives that relate to water quality include:

- Active water treatment will not continue in perpetuity.
- Contaminants cannot be released from the site at concentrations harmful to the Land.
- Create and re-establish landforms that are in physical equilibrium with the Land.
- Create and re-establish landforms that are compliant with provincial, federal, and Tahltan regulatory requirements.

Section 11.0, Tahltan Sustainability Requirements, of Appendix 1-9, Reclamation and Closure Plan, acknowledges the potential for in perpetuity treatment of water for the Project and discusses Skeena Resources' efforts to minimize water treatment from Construction to Reclamation and Closure, and its proposed actions to further support effective water management and to address long-term management of the TMSF and North Pit in Post-closure.

Chapter 4, Tahltan Application Information, makes note of a number of areas for particular consideration in addition to the assessment presented by Skeena Resources in Sections 15.4 and 15.5. The first set of considerations relate to Tahltan Central Government's assessment of the Groundwater Tahltan Value (with its acknowledged linkages to Surface Water). These include concerns relating to seepage from the TMSF, MRSA, and PAG storage areas to cause potential impacts on both groundwater and surface water. The Project is located in a fractured rock environment with little soil or overburden, making it vulnerable to contamination. Geosynthetic liners and/or clay barriers were discussed for their potential to reduce seepage. Additional mapping of preferential pathways for seepage from these facilities to the receiving environment, and monitoring of groundwater and surface water (including in upper and lower Harrymel and Coulter creeks) to provide early detection, are both recommended. It is also recommended that Skeena Resource commit to further study (and develop plans to plug) historic boreholes that are in an artesian condition that are affecting water quality and have not been fully studied in water quality model source terms. TCG also makes note of the need for greater understanding about the approach to extended water treatment (into post-closure), and recommends identifying mitigation designs and contingencies for the TMSF and other mine site component where water treatment is not required or is reduced during closure and post-closure.

In addition to these items, Tahltan Central Government notes that Skeena Resources' assessment for Surface Water speaks broadly to snow management strategies, but that the specifics will be addressed as part of future permitting and management plans. Many projects in the Tahltan Territory have had serious

unexpected water management issues, including some that delayed construction or affected operations when the operational constraints of handling these large volumes of snow were not properly accounted for. It is expected the approaches detailed to date may have similar effects on the proposed Project.

The Project supports Tahltan social and economic legacies as they relate to local growth of and opportunities for business and employment without requiring development activity in extensive pristine environmental areas. The proposed reclamation and closure process and Post-closure measures are designed to support the return of the mine site to the healthy environmental condition specified in the Tahltan Sustainability Requirements.

Chapter 16 Fish and Fish Habitat -Section 16.9

For the Fish and Fish Habitat VC, the following residual effects were identified: effects of change in water quality on direct effects on periphyton, BMIs, and fish; effects of change in water quality on sediment accumulation of COPCs; effects of change in water quality on bioaccumulation of metals in periphyton, BMIs, and fish; and effects of changes in water flow.

The magnitude of the four residual effects evaluated for Fish and Fish Habitat are expected to range between low and moderate magnitude. Effects of change in water quality on direct effects on periphyton, BMI in Tom MacKay Creek and Ketchum Creek are rated as having a moderate magnitude that is far- future in duration. Effects of changes in water quality on direct effects on periphyton, BMIs, and fish in the Unuk River are rated to have a low magnitude. Effects of changes in water quality on sediment accumulation of COPCs are expected to be of low magnitude and long-term in duration in all waterbodies. Effects of change in water quality on bioaccumulation of selenium in periphyton, BMIs, and fish are expected to be of moderate magnitude and medium-term in duration. Effects of habitat loss of non-fish-bearing streams in the Assessment Footprint are rated as moderate in magnitude and far-future in duration. Effects of changes in waterflow on fish in the Unuk River are rated as low in magnitude.

Most residual effects are expected to be irreversible and occur at a landscape geographic extent, except for effects of change in water quality on bioaccumulation of selenium in periphyton, BMIs, and fish, which is anticipated to be reversible in the short-term and regional in geographic extent. These characterizations reflect that residual effects are generally not expected to occur beyond the confluence of Tom MacKay and Ketchum creeks with the Unuk River, except for the potential for selenium bioaccumulation in periphyton, BMIs, and fish extending from Tom MacKay and Ketchum creeks out to the Unuk River. However, this effect is predicted to be reversible, as selenium loading to water are expected to decrease in the at the conclusion of the Operations period which is expected to reduce the bioaccumulation in benthic invertebrates and periphyton back to a level consistent with baseline concentrations. The irreversible effects on water quality and water quantity are unavoidable because they are connected to the permanent post-closure mine configuration (e.g., the TMSF and pit lake).

Selenium was also evaluated as part of the CEA because conditions in the Unuk River reflect the combined inputs from several existing or likely future projects in the watershed. Selenium concentrations in water are expected to exceed guideline values but this is not expected to be a widespread or continuous issue that would translate into substantial increases in fish tissue concentrations. A moderate rating for the cumulative magnitude of effect was retained as an intentionally conservative rating that acknowledges the uncertainty in the existing data and the applicability of generic, interim guidelines. The cumulative effect associated

with habitat loss of non-fish-bearing streams in the Assessment Footprint was also assessed, and the magnitude of the cumulative effects was found to be low.

While the Project has potential to affect current and future Tahltan land use, mitigation and management of its residual effects have been proposed to minimize these effects. The location and nature of the Project, which involves revitalization of a previously developed mine, is also helpful in this regard, as it involves development activities in an area that already has been subject to disturbance and restriction of access, instead of introducing disturbances to new places that may currently support Tahltan use based on their unaltered environmental character.

Chapter 4, Tahltan Application Information, makes note of a number of areas for particular consideration in addition to the assessment presented by Skeena Resources in Sections 16.6 to 16.8. Firstly, uncertainties relating to groundwater pathways, water quality modelling, and potential downstream effects are identified. Secondly, the Project is noted to contribute to existing cumulative effects to selenium loading in the Unuk River watershed. Thirdly, the potential for decreased surface water or groundwater quality to affect fish and aquatic resources directly, with an indirect effect via accumulation in aquatic food chains, is also discussed. Finally, the potential for decreased surface water quantity, leading to loss or alteration of fish and aquatic habitat, is identified.

As noted in Section 4.4.9.6, TCG's assessment is that the potential effects to Fish and Fish Habitat from direct and indirect interactions with the Project are greater than those estimated by Skeena Resources. Singular and cumulative effects are expected to occur at the regional, landscape, and site scales, the effects are anticipated to be experienced during all phases of the Project. This includes the possible effects to aquatic ecosystems, downstream fish populations, abundance and health of Tahltan traditional foods, water quality, and access to hunting, trapping, fishing, gathering, Tahltan way of life, Tahltan communities, and other important areas with the duration to extend past Closure and Post-closure stages. The health of the water is tied to the health of the land which can have additional effects (singular and cumulative) on Tahltan Values.

The Project supports Tahltan social and economic legacies as they relate to local growth of and opportunities for business and employment without requiring development activity in extensive pristine environmental areas. While some permanent effects on Fish and Fish Habitat are anticipated, these are largely results of effects to water quality and quantity required to ensure safe completion of the Project. The proposed reclamation and closure process and Post-closure measures are designed to support the return of the mine site to the healthy environmental condition specified in the Tahltan Sustainability Requirements.

Chapter 17 Terrain and Soils -Section 17.8

It is Skeena Resources' view, as outlined previously in this chapter in relation to the Terrain and Soils VC, that the Project is anticipated to have no residual effects to terrain stability and morphology and soil quality, i.e., the physical and chemical properties of soils following the implementation of the mitigation measures proposed. As the Project is predicted to have no residual effect, cumulative effects have not been identified. To gain further understanding of the potential effects to Tahltan, information contained in this chapter and associated appendices have been shared with Tahltan prior to this EAC Application's submission, and Tahltan are providing their understandings in other sections of the EAC Application and in the Tahltan Risk Assessment Report.

Chapter 4, Tahltan Application Information, concludes that there are no predicted negative residual effects attributed to the Project to the Terrain and Soils Tahltan Value in the Tahltan Areas of Interests other than the Project Footprint and Tahltan Consent Area. The chapter largely aligns with the conclusions of this effects assessment on the potential for Project-related residual effects and cumulative effects within the Project Footprint and Tahltan Consent Area AOIs. To gain further understanding of the potential effects to Tahltan, information contained in this chapter and associated appendices have been shared with Tahltan prior to this EAC Application's submission, and Tahltan are providing their understandings in other sections of the EAC Application and in the Tahltan Risk Assessment Report.

… Changes to terrain and soils are found by this assessment to be to potentially reversible in the long term, reflecting the soils being restored, which will take an extended to time to support mature forest ecosystems. Tahltan environmental legacies should be restored through proposed reclamation and closure processes and Post-closure measures designed to return the mine site to a healthier environmental condition to be consistent with the Tahltan Sustainability Requirements. Ongoing measures or treatments to sustain it in this state are anticipated to be necessary; as such, the land may be returned to a more self-sustaining natural condition suitable for use by future generations.

The updated section in the Revised Application indicates there are not estimated effects reported in Chapter 4, which is not correct. As identified in the Section 4.2.1, the extended continued extension of the review of Application materials past the Application Review stage and the time required for TCG to be able to fully review Application materials with the requirements identified in the Joint Notice Regarding Application Review, the updated Chapter 4 was finalized later. There are estimated effects related to Terrain and Soils which were identified during the review which are documented in 4.4.9.6 and summarized below. In addition, it was indicated to Skeena that when considering wildlife and vegetation/plant values with the health of the land meant soils so comments provided on these topics also relate to this VC.

Chapter 18 Vegetation and Ecosystems -Section 18.9

No residual or cumulative effects to the Change in Concentrations of COPCs for Vegetation Quality VC. For loss or alteration of ecosystem extent or function, the scientific magnitude of the Project's residual effect is anticipated to be moderate, while for culturally valued plants, the magnitude is expected to be low. However, while considered low to moderate in a Western science context, understanding the past, current, and future barriers that changes to vegetation may represent for Tahltan is important.

These residual effects are predicted to be local in extent for both loss or alteration of ecosystems and loss of culturally valued plants, and it is expected that their duration will be far-future (>50 years, or multigenerational), extending through the Project's Construction, Operations, Reclamation and Closure, and Post-closure phases. However, these effects will be reversible in the long-term, reflecting that, while vegetation removed for the Project will require many years to re-grow, progressive reclamation and revegetation of disturbed areas, and decommissioning and removal of infrastructure in the Project's final phases will support its regeneration. Minimization of effects to vegetation and ecosystems will also be supported through strategic identification, planning and placement of cleared areas, and management of their edges to prevent issues like windthrows or other damages to intact vegetation communities.

CEA of the Project in relation to other past, present, or reasonably foreseeable future projects or activities identified low magnitude cumulative residual effects for loss or alteration of ecosystems and loss of

culturally valued plants. These effects are expected to be regional in extent, reflecting the distribution of the projects and activities considered, as well as far-future in duration, although reversible in the long term.

The Project therefore has potential to result in residual and cumulative effects on vegetation and ecosystems for Tahltan land users, although the planned mitigation is designed to manage and minimize these effects. The location and nature of the Project, which involves revitalization of a previously developed mine, is also helpful in this regard, as it situates development activities in an area that has already been subject to disturbance, instead of introducing disturbances to new places that may currently support Tahltan use based on their unaltered environmental character. For example, the existing Eskay Creek MAR will be re-used for the current Project, eliminating the need to clear new access.

Chapter 4, Tahltan Application Information, does identify existing and additive effects and barriers to Tahltan within the Tahltan Areas of Interests. The effects associated with the Project Footprint, Tahltan Consent Area, and Transportation Corridor can be attributed to the Project. Tahltan Central Government makes note of the importance of pine mushrooms within the Eskay Creek MAR corridor to Tahltan and of the uses of areas (and current and future barriers to access for cultural uses) within these AOI's. In addition, the uncertainties and challenges associated with the long-term of ecosystems and the relationship with Tahltan way of life are acknowledged. Chapter 4, Tahltan Application Information, also identifies the importance of Vegetation and Ecosystems as it is tied to Tahltan way of life, maintaining intact landscapes, and the health of the land and water. As the chapter is finalized, additional effects and mitigations may be documented.

The Project can support Tahltan social, cultural, environmental, and economic legacies as they relate to protection and management of the natural environment and its experiential qualities, by concentrating development activities in a previously developed and disturbed area, rather than introducing development activities to previously unaltered areas. The Project also supports Tahltan social and economic legacies as they relate to local growth of and opportunities for business and employment (see Chapter 24, Employment and Economy Effects Assessment), again without requiring development of extensive pristine environmental areas. Changes to vegetation and ecosystems are found by this assessment to potentially reversible in the long term, reflecting the sensitive old ecosystems being restored, which will take an extended to time to become mature forest ecosystems. Tahltan environmental legacies should be restored through proposed reclamation and closure processes and Post-closure measures designed to return the mine site to a healthier environmental condition to be consistent with the Tahltan Sustainability Requirements. Ongoing measures or treatments to sustain it in this state are anticipated to be necessary; as such, the land may be returned to a more self-sustaining natural condition suitable for use by future generations.

Chapter 19 Wildlife and Wildlife Habitat -Section 19.8

As outlined above in relation to the Wildlife and Wildlife Habitat VC, potential effects from the Project were identified in relation wildlife habitat, movement, mortality risk and health; however, adverse effects are not expected for wildlife health. For wildlife habitat, movement and mortality risk; however, residual effects are expected, even with the application of mitigation. These residual effects are expected to be low to moderate in scientific magnitude for wildlife habitat and mortality risk, and low in scientific magnitude for wildlife movement. However, while considered low to moderate in a western science context, understanding the past, current, and future barriers to wildlife and Tahltan is important. These residual effects are predicted to be landscape to regional, local and landscape in extent for habitat, movement and mortality risk, respectively. It is anticipated that they will extend through the Project's Construction and Operations

phases. However, duration and reversibility for wildlife habitat are predicted to be far-future (>50 years, or multigenerational) and irreversible, respectively. For wildlife movement and mortality risk, duration and reversibility are predicted to be medium-term (6 to 25 years, or one generation or less) and reversible in the long-term, respectively. Importance of these residual effects is identified as high for wildlife habitat, movement and mortality risk, in part because of concerns on the part of Indigenous groups regarding their implications for wildlife. This perspective is reflective of understandings on the relationship of wildlife and wildlife habitat with Indigenous Peoples. Because of this relationship, there can be higher or greater potential effects if key wildlife values are lost even at a Project or local scale. The relative importance of the value with affected people is critical, not just whether there is evidence of suitable habitats at broader scales.

These ratings, particularly regarding habitat, reflect the creation and maintenance of some cleared areas that were previously mature forest; these will take time to fully regenerate. At the same time, the generally low magnitude of these residual effects reflects the limited percentage of habitat area that will be cleared and the highly limited extent to which new linear features, specifically roads, will be required. Minimization of these residual effects is further supported by application of well-understood mitigation measures geared toward supporting and protecting wildlife species as needed (e.g., timing of clearing to avoid summer roosting season for bats and nesting season for waterbirds).

Similarly, the CEA presented in this chapter identifies low-magnitude cumulative effects for wildlife habitat, movement and mortality risk. Duration and reversibility for wildlife habitat are predicted to be far-future (>50 years, or multigenerational) and irreversible; for wildlife movement and mortality risk, duration and reversibility are predicted to be medium-term (6 to 25 years, or one generation or less) and reversible long-term, respectively. These time frames, particularly the longer ones for wildlife habitat, reflect the period needed for mature forest to become re-established in some cleared areas. Geographic extent is predicted to be regional for habitat and landscape for movement and mortality risk. Again, importance for wildlife habitat, movement and mortality risk is high, in part because all three are of concern to Tahltan. TCG has communicated that, in the context of the Tahltan Continuum with its broader and longer perspective of change compared to the Western science approach utilized in this chapter, TCG assesses the residual cumulative effects to Tahltan to be greater and more severe overall (e.g., in relation to the magnitude ratings assigned).

While the Project has potential to affect current and future Tahltan land use, mitigation and management of its residual effects have been proposed to minimize these effects. The location and nature of the Project, which involves revitalization of a previously developed mine, is also helpful in this regard, as it involves development activities in an area that already has been subject to disturbance and restriction of access, instead of introducing disturbances to new places that may currently support Tahltan use based on their unaltered environmental character.

As noted in Section 4.4.9.6, TCG's assessment is that the potential effects to wildlife from direct and indirect interactions with the Project are greater than those estimated by Skeena Resources. One source for this concern is the increase in traffic volumes along the Eskay Creek MAR and Highway 37 and the resulting increased potential for wildlife mortalities. Another consideration relates to the potential for underestimation of effects from several of the Project's land-clearing activities. There are uncertainties relating to the restoration of coastal ecosystems wildlife habitats, old growth ecosystems, wetlands, and mountain pass wildlife habitats and ecosystems restoration, as there are limited case studies elsewhere showing success in restoring old growth ecosystems, it will take at least 50-80 years to recover from disturbance and will be challenging to restore to meet Tahltan core indicators. TCG also makes note of some uncertainties regarding

the amount of habitat loss, including culturally important plant communities. Another consideration relates to the uncertainties and current estimated outcomes of the water management system, Project design components, and duration of effects extending into the far future (over seven to fifteen generations) and effects on the health of the land and wildlife over time.

Both assessments document cumulative effects for wildlife habitat, movement and mortality risk. The Western science approach identifies duration and reversibility for wildlife habitat are predicted to be far- future (>50 years, or multigenerational) and irreversible; for wildlife movement and mortality risk, duration and reversibility are predicted to be medium-term (6 to 25 years, or one generation or less) and reversible long-term, respectively. These time frames, particularly the longer ones for wildlife habitat, reflect the period needed for mature forest to become re-established in some cleared areas. Geographic extent is predicted to be regional for habitat and landscape for movement and mortality risk. Again, importance for wildlife habitat, movement and mortality risk is high, in part because all three are of concern to Tahltan.

In Section 4.4.9.6, TCG makes note of the Project's potential to cumulatively add to barriers to Tahltan caused by existing resource development and disturbances by affecting wildlife movement, habitat quality and use. The health of the water is tied to the health of the land and wildlife which can have additional effects (singular and cumulative) on Tahltan Values.

The Project supports Tahltan social and economic legacies as they relate to local growth of and opportunities for business and employment without requiring development activity in extensive pristine environmental areas. The proposed reclamation and closure process and Post-closure measures are designed to support the return of the mine site to the healthy environmental condition specified in the Tahltan Sustainability Requirements.

Chapter 20 Human Health -Section 20.8

As outlined above in relation to the Human Health VC, the Project's potential effects were reviewed in relation to changes in mental health and well-being, incidence of infectious diseases, incidence of chronic diseases from environmental contaminants, incidence of accidents or injuries, and quality of diet and nutrition. Those pertaining to incidence of accidents or injuries were determined to be negligible. However, even with application of mitigation, a variety of low-magnitude adverse residual effects on mental health are anticipated, with unique and/or disproportionate effects for Tahltan and other Indigenous people, as well as subgroups within Tahltan and other Indigenous people (such as women and gender-diverse individuals, etc.). However, while considered low magnitude in a western science context, understanding the past, current, and future barriers to human health as it pertains to Tahltan is important. Indigenous people (including Tahltan) and other diverse population subgroups are expected to generally have lower resiliency and higher importance in the context of residual and cumulative effects. These different effects characterizations are particularly relevant for population subgroups with higher sensitivity to metal toxicity (including toddlers, children, individuals who are pregnant, and individuals of childbearing age) and population subgroups with existing additional challenges to mental health (e.g., gender-diverse individuals, youth, etc.). A variety of effects with relevance to Indigenous people's health and well-being are expected to be of high importance as a reflection available Indigenous Knowledge, concerns communicated through Project engagement, and data reflecting existing disproportionately poor mental well-being and some physical health indicators for Indigenous populations relative to non-Indigenous populations (Section 20.4.4.3, Regional and Historical Overview, Tahltan-specific data was not available). Similarly, a cumulative

effects analysis of the Project in relation to other past, present, or reasonably foreseeable future projects or activities aligns with all characterizations made for residual effects to human health.

In light of these predicted effects, a variety of existing and new measures are proposed for their minimization and management (Section 20.5.3, Mitigation Measures and Effectiveness). Focused community engagement and implementation of a community feedback mechanism will provide Tahltan representatives and members with opportunities to discuss challenges around mental health, infectious diseases, chronic diseases, and health services. This measure will allow the Project flexibility and responsiveness in addressing Tahltan concerns related to health and well-being as they arise, as well as a means to adapt to TCG and Band Council priorities. Skeena Resources' Community Investment Policy also establishes guidelines for financial or in-kind donations, which may support the building of "social, cultural, environmental and economic legacies for Tahltan" (EAO 2023b, 31). These donations may contribute to Tahltan-led initiatives and projects that directly support health, well-being, and connection to land. Understanding the importance of connection to land for Indigenous health and wellness, additional mitigations that directly address the condition of the landscape and the environment, as well as the practice of traditional land-based activities will also help to address the predicted effect to mental health and well-being related to landscape changes (see Chapter 19, Wildlife and Wildlife Habitat Effects Assessment, and Chapter 26, Current and Future Use of Land and Resources for Traditional Purposes Effects Assessment, for examples).

Although there are adverse cumulative and residual effects predicted to the Tahltan Value of Human Health, positive effects of the Project are also expected for this VC and will support Tahltan economic and social legacies, as outlined in the Tahltan Sustainability Requirements. Positive effects will include new job opportunities, increased wages, and skill building opportunities. Income and employment can drive better health outcomes, facilitate access to health services, improve nutrition, and improve mental health. Mitigation and enhancement measures outlined in Chapter 24, Employment and Economy Effects Assessment, include prioritization of local and Indigenous hiring, as well as implementation of cultural sensitivity and diversity inclusion measures to promote and protect cultural safety in the workplace. By providing employment and associated income for Tahltan members, the Project will support associated benefits to health and well-being. Enhancement measures that build Tahltan workers' skills and capabilities are predicted to improve these individuals' ability to find well-paying employment beyond their time working at the Project, extending these health and wellness benefits beyond the timeline of Project employment.

As noted in Section 4.4.9.6, TCG's assessment is that the potential effects to Human Health from direct and indirect interactions with the Project may be greater than those estimated by Skeena Resources. Singular and cumulative effects are expected to occur during all phases of the Project. The health of the water is tied to the health of the land, which can have additional effects (singular and cumulative) on Tahltan values. This includes possible effects to fish and wildlife populations, plant communities, abundance and health of Tahltan traditional foods, water quality, and access to hunting, trapping, fishing, gathering, Tahltan way of life, Tahltan communities, and other important areas with the duration to extend past the Closure and Post-closure phases.

As noted previously, Tahltan Central Government found the HHRA to be a comprehensive assessment that followed appropriate guidance and incorporated exposure to all potential pathways. Skeena Resources' air quality model outputs and the approach to estimating of the bioavailability of metals in food and water and exposure to metals via consumption of market and harvested foods were found to be conservative (i.e., to have resulted in overrepresentation or overestimation of exposure).

Skeena Resources recognizes that well-being can be very personal and individualized, and experiences or circumstances that enhance one individual's well-being may not have an effect for someone else or have an adverse effect for them. Skeena Resources remains committed to engaging with TCG and Tahltan members throughout the Project lifecycle to continue learning how adverse residual and cumulative effects on the Human Health VC may be minimized and positive effects may be enhanced.

Chapter 21 Infrastructure and Services

The Western science assessment concludes that the Project is anticipated to have residual effects of moderate scientific magnitude after mitigation on health care services and facilities and availability and affordability of housing. Effects on housing are expected at the community level, while those on health care are expected to be regional in extent. Duration of effects will be medium-term (6 to 25 years, or one generation or less), extending through Operations when Project-related in-migration will take place. While the increase in pressure on health care and housing will be continuous during these phases, it will be reversible long-term (more than one generation), as population associated with the Project disperses following closure.

The importance of residual effects to health care services and facilities and housing has been rated as high, partly in recognition of the particular challenges that health care and housing pressures pose for Tahltan. Current housing shortages render Tahltan communities highly sensitive to increased housing pressures (see Section 21.6.1, Pressure on Availability and Affordability of Housing). Issues around health care are reflected in the selection of Human Health as both a VC and a Tahltan Value for this Project (EAO 2023b; see also Chapter 4, Tahltan Application Information Requirements, and Chapter 20, Human Health Effects Assessment).

Cumulative residual effects for pressure on health care services and facilities and pressure on housing availability and affordability are also expected, and they are anticipated to be of high scientific magnitude, and medium-term in duration (26 to 50 years, or more than one generation). However, these cumulative residual effects again will be reversible long-term (more than one generation), as people brought to the region by the Project disperses, and/or realization of current initiatives in the region, like investments and projects related to health care and housing, help to relieve any ongoing pressures.

While the Project has potential to result in residual and cumulative effects on health care and housing for Tahltan, mitigation and management of these residual effects have been proposed to minimize these socio-economic effects. Measures include recruitment efforts aimed at the LAA and RAA to reduce the inflow of population, as well as the development and implementation of Project-specific health, safety, and medical emergency plans. To gain further understanding of the potential effects to Tahltan, information contained in this chapter and associated appendices have been shared with Tahltan prior to this EAC Application's submission, and the Tahltan are providing their understandings in other sections of the EAC Application and in the Tahltan Risk Assessment Report.

While not specifically assessing this topic, Chapter 4, Tahltan Application Information, has identified the importance of infrastructure and services through the socio-cultural assessments, as it is tied to Tahltan health, community stability, and infrastructure/services with the economic benefits and the health of the land and water primarily through employment, social, cultural, and environmental legacies. As this chapter is finalized, additional effects and mitigations may be documented. Skeena Resources' view of the information is that this largely aligns with the conclusions of the VC effects assessment on the potential for Project-related residual effects and cumulative effects within the Project Footprint and Tahltan Consent Area AOIs.

It is Skeena Resources' perspective that the Project supports Tahltan legacies as they relate to protection, management, and use of the natural environment, as it concentrates development activities in a previously developed and disturbed area. Additionally, while the Project has the potential to introduce adverse effects associated with health care and housing, these pressures can be reversible over several generations, and the Project also will have positive socio-economic effects that support Tahltan objectives as they relate to local growth of and opportunities for business and employment (see Chapter 24, Employment and Economy Effects Assessment).

Chapter 24 Employment and Economy-Section 24.8 –

As outlined previously in this chapter in relation to the Employment and Economy VC, the Project is not expected to have potential to affect the economic significance of agriculture, recreation and tourism, outfitting, or forestry and logging; the potential for the Project to affect the economic significance of activities associated with natural resource use, including traditional harvesting, is anticipated to be negligible to minor.

Project residual effects are anticipated for:

- Changes in employment and income;
- Changes in Project expenditures, business opportunities, and GDP benefits;
- Changes in tax revenues; and
- Changes in cost of living.

For the first three of these, residual effects are expected to extend from the Construction and Operation phases, through the Reclamation and Closure phases. Specifically, it is anticipated that they will show positive effects during Construction and Operation, as the Project generates and supports employment opportunities, local business, and tax revenues. However, with the transition to Reclamation and Closure, these benefits will be lost, creating adverse effects until and unless workers and businesses in the area are able to connect with new economic opportunities and prospects. The scientific magnitude of these effects has been evaluated as ranging from low to moderate, and the geographic extent ranges from regional and affecting the Engaged Indigenous Nations to beyond regional. Reversibility is short-term, and, while the importance of tax revenues to local, provincial, and federal governments is evaluated as moderate, the importance of employment and income and of business opportunities is assessed as high, partly due to the specific value of the Project's economic contribution to local and Indigenous communities in the LAA and RAA.

According to the Western science assessment, an adverse residual effect of low magnitude is also anticipated for cost of living, starting in Construction and Operations. Its geographic extent is also expected to be regional and affecting Engaged Indigenous Nations, and, while its reversibility is evaluated as long-term, there is a chance that it may be fully or in part irreversible, extending through Reclamation and Closure to the Post-closure phase. Its importance has been assessed as moderate, as increased cost of living will have implications for day-to-day decision-making by Indigenous and non-Indigenous people living in the LAA and RAA.

A CEA of the Project's employment and economy effects in relation to other current and future developments in the region produces similar results, highlighting the same pattern of increased employment and business opportunities, while projects are in their active phases, with attendant increases in cost of living. However, this assessment also highlights that adverse effects to local business and employment as

these projects wind down may be accentuated if several of these developments' closure and post-closure phases coincide. As such, the CEA evaluates effects to local business and employment as positive and of high scientific magnitude during the Project's Construction and Operations phases, and negative and of moderate scientific magnitude during its Reclamation and Closure phases.

The Project is currently affecting traditional uses due to the existing mine footprint and will create additional effects from the current barriers to traditional practices and the related Tahltan values. The chapters of this EAC Application are identifying residual and cumulative effects in both Western science and Tahltan Assessments related to water, socio-cultural/human health, wildlife, plants, traditional land practices, and Quiet Enjoyment of Land during all phases, which will require additional mitigations to address or reduce potential effects. However, there are also existing positive effects with the Project both historically and into the future with employment and economy components. In addition, recent community meetings have identified the importance creating social, cultural, and environmental positive legacies for each community along with the economic benefits that can come with the Project.

Tahltan environmental legacies will be part of the proposed Reclamation and Closure processes and Post-closure measures designed to return, where possible, the mine site to the healthy environmental condition specified in the Tahltan Sustainability Requirements. Ongoing measures or treatments to sustain it in this state, with the Project proposed to date, will be necessary due to some of the uncertainties tied to the strategies and management to return the land and water to its current state three to seven generations in the future; as such, the land should be returned to a future natural condition suitable for a range of uses by future generations. To gain further understanding of the potential effects to Tahltan, information contained in this chapter and associated appendices have been shared with Tahltan prior to this EAC Application's submission, and Tahltan are providing their understandings in other sections of the EAC Application and in the Tahltan Risk Assessment Report.

Chapter 4, Tahltan Application Information, currently identifies the predicted negative residual effects on Employment and Economy attributed to the Project, which are linked to other chapters with this subject matter, and are tied with potential legacies identified with Employment and Economy. A number of positive effects of the historic Eskay Creek Mine are noted, and positive effects from the Project are anticipated, including effects relating to employment, training, and career and economic opportunities.

Chapter 4, Tahltan Application Information, also identifies the importance of employment and economy as it is tied to Tahltan economic benefits and the health of the land and water primarily through employment, social, cultural, and environmental legacies, as the chapter is finalized additional effects and mitigations may be documented.

It is Skeena Resources view that, in addition to supporting Tahltan environmental and economic legacies as they relate to traditional use of healthy landscapes, the Project will also support Tahltan social and economic objectives associated with local growth of and opportunities for business and employment, again without requiring development of extensive pristine environmental areas. These opportunities are of finite term, which introduces the potential for negative effects when the Project moves into its Reclamation, Closure and Post-closure phases. However, its mitigation measures have a strong focus on diverse and inclusive hiring, training of employees, provision of professional development, programs to support and retain Indigenous employees, and use of Indigenous-owned subcontractors and businesses; these, in turn, will support the development of skills and experience on the part of Tahltan employees and businesses that will maximize future opportunities with other proponents of mining or related industries.

Chapter 25 Heritage Resources-Section 25.8 –

As outlined above in relation to the Heritage Resources VC, the Project is anticipated to have negative residual effects of moderate scientific magnitude on historic and traditional use sites and on archaeological sites and areas with potential for archaeological sites. However, while considered moderate in a Western science context, understanding the past, current, and future barriers that changes to any of these types of heritage sites may represent for Tahltan, is important. The scientific residual effects on heritage resources are predicted to be local in geographic extent, and, in the event that an archaeological, historic, or traditional use site is disturbed, the effect will be irreversible (more than 50 years, or affecting multiple future generations). However, residual effects on such sites have both positive and negative outcomes. Identification and documentation of previously unknown heritage sites has the potential to allow increased knowledge of and connection to the past; however, site disturbance through accidental discovery creates permanent physical loss to the site, diminishing its intactness and affecting the overall inventory of heritage sites, which is finite and non-renewable.

It is Skeena Resources' view, based on the mitigative approaches for heritage resources, including completion of an AIA prior to development and creation of a Project Archaeological and Cultural Heritage Protection Plan to manage Project activities, that no cumulative effects are anticipated. However, this may not reflect the effects assessment for Tahltan.

While the Project has the potential to result in negative residual effects on heritage resources, these measures have worked to and will continue to minimize these effects. The location and nature of the Project, which involves the revitalization of a previously developed mine, is also helpful in this regard, as it involves development activities in an area that has already been subject to disturbance instead of introducing disturbances to new places that may integrate intact heritage sites.

To gain further understanding of the potential effects on Tahltan, information contained in this chapter and associated appendices have been shared with Tahltan prior to this EAC Application's submission, and Tahltan are providing their understandings in other sections of the EAC Application and in the Tahltan Risk Assessment Report.

In Section 4.4.9.6, Potential Effects, of Chapter 4, Tahltan Application Information, the Tahltan Central Government notes the uncertainties and risks associated with narrow interpretations of cumulative effects: for example, that the Iskut River Valley can be considered a traditional use site, and is subject to the combined effects from roads and traffic from Eskay Creek, multiple hydroelectric projects, forestry, the Northwest Transmission Line, as well as other past and proposed mines and associated mineral exploration activity. The TCG emphasizes that additional Tahltan Heritage mitigation measures are required when an archaeological site is inadvertently impacted, and that mitigation plans and directives should clearly indicate that Tahltan Standards supersede provincial regulations relating to heritage values and archaeological sites.

Chapter 4, Tahltan Application Information, does identify effects with existing and additive effects and barriers to Tahltan within the Tahltan Areas of Interest. The effects associated with the Project Footprint, Tahltan Consent Area, and Transportation Corridor can be attributed to the Project. The chapter identifies the importance of Heritage Resources as it is tied to Tahltan way of life, Rights and Title, sociocultural values, and the health of the land and water. As the chapter is finalized, additional effects and mitigations may be documented.

The Project can support Tahltan social, cultural, environmental, and economic legacies as they relate to protection and management of the natural environment and its experiential qualities, by concentrating development activities in a previously developed and disturbed area, rather than introducing development activities to previously unaltered areas. The Project also supports Tahltan social and economic legacies as they relate to local growth of and opportunities for business and employment (see Chapter 24, Employment and Economy Effects Assessment), again without requiring development of extensive pristine environmental areas. Changes to heritage resources are found by this assessment to be potentially permanent. Tahltan environmental legacies should be restored through proposed reclamation and closure processes and Post-closure measures designed to return the mine site to a healthier environmental condition to be consistent with the Tahltan Sustainability Requirements. Ongoing measures or treatments to sustain it in this state are anticipated to be necessary; as such, the land may be returned to a more self-sustaining natural condition suitable for use by future generations.

Chapter 26 Current and Future Use of Land and Resources for Traditional Purposes-Section 26.8 –

As outlined above in relation to the CFULRTP VC, the Project has potential to result in changes to three indicators of traditional use, namely: opportunities to take part in traditional practices; access to hunting, trapping, fishing, gathering and other important areas; and quality and abundance of country foods. Following the consideration of mitigations, adverse residual effects are identified for all three indicators, with all effects predicted to be of low scientific magnitude. The characterization of effects reflects several broader contextual factors in addition to Project activities. For example, in regard to potential effects to opportunities to take part in traditional practices, the assessment notes that the Engaged Indigenous Nations, including Tahltan, have experience with rotational work, and Tahltan members seeking employment with the Project would understand the trade-off of reduced time during shifts but increased financial means in relation to opportunities for land use. In regard to potential effects to access, the assessment notes that there are already access restrictions and potential avoidance of the area associated with the historic Eskay Creek Mine. The assessment finds that while all residual effects for CFULRTP VC are ranked as low in magnitude, the extent of all three residual effects is broad, inclusive of Indigenous people and the importance is rated as high. TCG has communicated that, in the context of the Tahltan Continuum with its broader and longer perspective of change compared to the Western science approach utilized in this chapter, in general, TCG assesses residual effects to Tahltan to be greater and more severe (e.g., magnitude ratings assigned).

The assessment finds that there is potential for disproportionate adverse effects for Indigenous women, caregivers, youth, and Elders as identified through the GBA Plus analytical process. The residual effect for opportunities to take part in traditional practices is anticipated to be disproportionately experienced for women and caregivers, recognizing they may not benefit equally from employment at the Project and carry a heavier burden of responsibilities at the household level, including traditional land use activities. For residual effects to access hunting, trapping, fishing, gathering, and other important areas, a disproportionate effect is anticipated for youth and Elders is expected, recognizing the barriers that exist for transportation to land use areas, and may be further extended due to the Project. From a GBA Plus analytical process, the social context and importance are rated as high for all residual effects. No disproportionate adverse residual effect is expected in relation to any changes to the quality or abundance of country foods.

Residual adverse effects are all expected at a geographical extent of regional/Indigenous people. With respect to duration, residual adverse effects to opportunities to take part in traditional practices and to quality and abundance of country foods, the effects are anticipated to be experienced during the Construction and Operations phases of the Project, and reversible in the short-term and long-term, respectively. For adverse effects to access to hunting, trapping, fishing, gathering, and other important areas, the duration of the effect is expected to extend through the Reclamation and Closure and Post-closure phases, particularly considering the potential for avoidance of traditional land use areas throughout all phases of the Project. The duration of residual effects largely reflects the time it will take for Reclamation and Closure activities to facilitate a return of environmental conditions to the healthy environmental condition specified in the Tahltan Sustainability Requirements, as well as the time to ensure that areas restricted for Project activities are safe following the completion of activities.

The CEA identifies a low magnitude, long-term cumulative effect for changes in opportunities to take part in traditional practices. This cumulative adverse effect is anticipated to be reversible in the long-term, as wage employment in the region will continue to shape how individuals and households balance time available and financial means to take part in traditional land use while not on rotation or working shifts. The magnitude of this cumulative residual effect is rated as moderate for women and caregivers, given the additional burden that may occur if household members are and continue to be employed with other projects. TCG has communicated that, in the context of the Tahltan Continuum with its broader and longer perspective of change compared to the Western science approach utilized in this chapter, in general, TCG assesses cumulative residual effects to Tahltan to be greater and more severe (e.g., magnitude ratings assigned).

Changes in access to land use areas, as well as changes to the quality and abundance of country foods, due to cumulative effects, are rated as moderate in magnitude through a Western science lens. The cumulative adverse effect for changes to access to traditional land use areas is expected to be far-future in duration and reversible in the long-term, as there could be avoidance of areas near to or affected by multiple projects throughout individual and overlapping lifecycles. For changes to access to traditional land use areas, the GBA Plus analytical process considered that for youth and Elders, the cumulative residual effect would have a high magnitude, would occur into the far-future, and would be reversible in the long-term. These characterizations considered the importance of traditional land use which was raised repeatedly by Tahltan members during engagement about this Project.

One way in which effects of the Project to the CFULRTP VC are minimized is through the revitalization of a previously developed mine. By developing an area that already has been subject to land use disturbance and restriction of access, the Project minimizes the introduction of disturbances to new places that may support current or future Tahltan land and resources use. In addition to siting the Project within an area previously disturbed by mining, mitigation measures have been proposed to minimize adverse effects to current and future land uses.

Chapter 4, Tahltan Application Information, makes note of a number of areas for particular consideration in addition to the assessment presented by Skeena Resources in Sections 26.5 to 26.7. Firstly, Tahltan Central Government has identified greater potential for the Project to contribute to current barriers to Tahltan relating to the existing human footprint (including resource development). Restricted access to the area currently limits Tahltan ability to practice traditional ways and affects Tahltan way of life. Skeena Resources' has proposed improved access management measures (i.e., the Traffic Management Plan) in order to mitigate these potential effects. Secondly, Project's potential effects to fish, and wildlife may affect

CFLUP and Tahltan interconnection to the land; the estimated potential effects to fish, plants, and wildlife as traditional food is reported in Skeena Resources' assessment but is based primarily on literature or projects elsewhere in northern Canada. There are uncertainties and challenges with maintaining current Tahltan values and Tahltan access to the area; long term recovery of these ecosystems and the relationship with Tahltan way of life; maintaining the health of the land with potential effects from contaminants from water, dust, plant and animal pathways. More monitoring of contaminant levels on fish, plants, and wildlife—using DNA and other new techniques to sample with limited harvesting, to respect the animals—would reduce these uncertainties.

As noted in Section 4.4.9.6, TCG's assessment is that the potential effects to current and future land uses from direct and indirect interactions with the Project are greater than those estimated by Skeena Resources. The health of the water is tied to the health of the land and traditional land uses which can have additional effects (singular and cumulative) on Tahltan Values. Singular and cumulative effects are expected to occur at the regional, landscape, and site scales during all phases of the Project. This includes the possible effects to fish and wildlife populations, plant communities, abundance and health of Tahltan traditional foods, water quality, and access to hunting, trapping, fishing, gathering, Tahltan way of life, Tahltan communities, and other important areas with the duration to extend past the Closure and Post-closure phases.

The Project supports Tahltan social and economic legacies as they relate to local growth of and opportunities for business and employment without requiring development activity in extensive pristine environmental areas. The proposed reclamation and closure process and Post--closure measures are designed to support return of the mine site to the healthy environmental condition specified in the Tahltan Sustainability Requirements. As such, the land may be returned to a more self-sustaining natural condition suitable for use by future generations.

Chapter 27 Quiet Enjoyment of Land-Section 27.10

As outlined above in relation to the Quiet Enjoyment of Land VC, Skeena Resources' assessment is that the Project is anticipated to have moderate magnitude residual effects on physical characteristics and intangible experiential qualities of land. It is anticipated that these effects will extend through the Project's Construction and Operations phases, dissipating thereafter, but to some extent to be irreversible. In consideration of the perspectives shared by TCG, the probability of these effects is assessed as moderate. Similarly, the importance of these residual effects is identified as high, primarily because of concerns expressed by TCG about potential barriers to Tahltan way of life. This perspective is reflective of the understanding of the relationship between Indigenous Peoples and the land. These ratings reflect mitigation measures geared toward enhancing the positive effects of the Project for Tahltan and minimizing adverse effects through access management planning and support of relevant Tahltan initiatives, as part of Skeena Resources' ongoing collaboration with the Tahltan Nation. TCG has communicated that, in the context of the Tahltan Continuum with its broader and longer perspective of change compared to the Western science approach utilized in this chapter, TCG assesses some aspects of residual effects to Tahltan to be greater and more severe (i.e., in relation to the magnitude, resilience, and context ratings assigned).

Similarly, in the CEA presented in this chapter, Skeena Resources' identifies moderate magnitude residual effects on physical characteristics and intangible experiential qualities of land. This is in recognition that the Project and its effects should be understood in the context of other developments that may simultaneously or additively exacerbate these effects. It is anticipated that these cumulative effects will extend into the far future, and to some extent be irreversible; this recognizes the temporal overlap and extending of barriers

in combination with other developments in the region. The probability of these effects is assessed as moderate in consideration of the perspectives shared by TCG, including reviewer comments on limitations in the way potential cumulative interactions with other projects were identified (i.e., based on physical proximity). TCG has communicated that, in the context of the Tahltan Continuum with its broader and longer perspective of change compared to the Western science approach utilized in this chapter, TCG assesses some aspects of residual cumulative effects to Tahltan to be greater and more severe (i.e., in relation to the magnitude, resilience, and context ratings assigned).

While the Project has potential to affect current and future Tahltan land use, mitigation and management of its residual effects have been proposed to minimize these effects and enhance potential positive effects. The location and nature of the Project, which involves revitalization of a previously developed mine, is also helpful in this regard, as it involves development activities in an area that already has been subject to disturbance and access restrictions, instead of introducing disturbances to new places that may currently support Tahltan use based on their unaltered environmental character. To gain further understanding of the potential effects to Tahltan, information contained in this chapter and associated appendices have been shared with Tahltan prior to this EAC Application's submission, and Tahltan are providing their understandings in other sections of the EAC Application and in the Tahltan Risk Assessment Report.

Chapter 4, Tahltan Application Information, makes note of a number of areas for particular consideration in addition to the assessment presented by Skeena Resources in Sections 27.6 to 27.9. Firstly, Tahltan Central Government has identified greater potential for the Project to contribute to current barriers to Tahltan relating to the existing human footprint (including resource development), as well as the greater importance of that potential effect. Restricted access to the area currently limits Tahltan ability to practice traditional ways and affects Tahltan way of life. Skeena Resources' has proposed improved access management measures (i.e., the Traffic Management Plan) in order to mitigate these potential effects. Secondly ,Tahltan Central Government has noted the need for greater detail regarding the programs and implementation of the Tahltan Community Liaison Committee, and suggested a number of potential offsetting programs. There are also uncertainties relating to the effectiveness of mitigations and reclamation and closure plans (with potential consequential underestimation of residual effects) and relating to the Project's ability to meet Tahltan priorities on maintaining the health of the land, traditional uses, and reclamation/restoration.

Additional considerations noted by TCG include concerns pertaining to water treatment in perpetuity and its effectiveness, the future water quality of the north pit lake, groundwater and seepage, connection of water quality and air emissions (dust) on vegetation, wildlife, and Tahltan health, and connections between the land and water with Tahltan. TCG has also made note of the potential for the Project to be inconsistent with Tahltan Sustainability Requirements relating to long-term water treatment.

The preceding paragraphs presented Skeena Resources' perspectives on the ability of the Project to meet Tahltan Sustainability Requirements, core indicators, and Tahltan Risk Assessment Factors. The following are information and perspectives from the Tahltan Assessment related to Quiet Enjoyment of Land.

As noted in Section 4.4.9.6, TCG's assessment is that the potential effects to Quiet Enjoyment of Land from direct and indirect interactions with the Project are greater than those estimated by Skeena Resources. Singular and cumulative effects are expected to occur at the regional, landscape, and site scales, the effects are anticipated to be experienced during all phases of the Project. The health of the water is tied to the health of the land and traditional land uses which can have additional effects (singular and cumulative) on Tahltan Values. This includes the possible effects to fish and wildlife populations, plant communities,

abundance and health of Tahltan traditional foods, water quality, and access to hunting, trapping, fishing, gathering, Tahltan way of life, Tahltan communities, and other important areas, with the duration to extend past the Closure and Post-closure phases.

THREAT has provided technical review input for the above Tahltan Values and identified items where additional information, monitoring, mitigations, and/or adjustments to the estimation of the potential effects related to Eskay Creek (Section 4.4.9 and 4.4.10) and the potential effects related to Tahltan AOI's.

The sections identified above provide indications of the steps Skeena Resources applied to indicate how Tahltan input and directions related to effects on current and future generations was delivered and how the Application may have changed as a result. Sections 4.4.9.11 and 4.4.10.11 identify additional mitigations, strategies and potential Tahltan Conditions being identified by TCG and THREAT for consideration in the Tahltan Risk Assessment. There are commitments by Skeena Resources to co-design and implement adaptive management monitoring, research, and mitigations with Tahltan to reduce potential effects. Implementation of the commitments and scope of additional items raised by TCG will be determined as bilaterial commitments, permitting, and as part of the Tahltan Risk Assessment and final draft conditions recommendations.

The positive effects and potential positive legacies have been identified in this chapter which includes Tahltan input and feedback. The information provided are to focus on Tahltan communities, address the shrinking of services, benefits, people, infrastructure and socio-cultural factors. The final nature and scope of positive effects, benefits, and legacies will be finalized through bilateral agreements with Skeena Resources and as part of the Tahltan Risk Assessment and final draft conditions recommendations.

In addition, TCG has provided specifically for the ECRP, feedback and direction on potential effects that may be addressed through bilateral commitments, and co-design of mitigations, strategies, conditions, and management plans for current and future generations. These will also be used in recommending conditions through the Tahltan Risk Assessment.

As well, TCG and THREAT identified additional technical uncertainties related to project components and design effects related to water, wildlife (plants, soils, and ecosystems), heritage, CFLUTP and QEL. The linkage of aquatic and terrestrial effects linkages to CFLUTP and QEL which can result in greater effects than reported when the interconnection of effects are considered.

Finally it was identified where, as the project is currently proposed, irreversible and far-future reversible effects are reported that are not consistent with several of the Tahltan Sustainability Requirements. Groundwater and surface water components have reported irreversible effects and water treatment in perpetuity. Reclamation and closure strategies with terrestrial ecosystems and wildlife have higher uncertainties which may create longer-term effects than estimated, which can effect Tahltan access to lands, way of life, and the ability to restore the health of the land and water. With water treatment required in perpetuity, long-term reclamation requirements, and the potential for existing ground access not being reclaimed in perpetuity, all result in increase effects to Tahltan and can be inconsistent with several sustainability requirements.

The final assessment on the scope and overall assessment of the projects ability to meet Tahltan Sustainability Requirements will be finalized through the Tahltan Risk Assessment and final draft conditions recommendations.

Skeena Resources has undertaken further technical assessments related to water and the interconnected values captured in the Revised Application. In addition, Tahltan shared strategic and technical input and directions which was reported how it was used to adjust the project, potential effects (positive, negative, and cumulative), and the overall summary of effects to Tahltan. Finally both Tahltan and Skeena Resources have identified through this chapter and the ITT of the Revised Application which project components and effects are not consistent with Tahltan Sustainability Requirements.

4.6 Summary of the Eskay Creek's Ability to Meet Tahltan Sustainability Requirements

Skeena Resources had undertaken further technical assessments related to water and the interconnected values to prepare the Revised Application. In addition, Tahltan shared strategic and technical input and directions which was available for to adjust the project, potential effects (positive, negative, and cumulative), and the overall summary of effects to Tahltan. Tahltan will continue to work with Skeena Resources, EAO through the Tahltan Risk Assessment. This can include additional bilaterial commitments, permitting conditions, and the Tahltan Risk Assessment and final draft conditions recommendations.

It is important to recognize the information provided in Sections A.7, 12.8, 13.8, 14.8, 15.7, 16.9, 17.8, 18.9, 19.8, 20.8, 21.8, 23.8, 24.8, 25.8, 26.8, and 27.10 (and partially summarized in Section 4.6) provide the interpretations and perspectives of Skeena Resources of the potential effects of the project-related to Tahltan Risk Assessment Factors and Sustainability Requirements. TCG and THREAT worked with Skeena Resources on the application of public domain Tahltan Knowledge and technical reviews of environmental assessment materials for the Application and Revised Application. In many areas, there is alignment with the perspectives shared, and others, different perspectives and interpretations of the potential effects from the Project to Tahltan Sustainability exist.

Primarily the ECRP has direct potential effects on Tahltan Sustainability Requirements within the Consent, Mountain Pass, and Transportation Corridor AOIs related to the project components and MAR. The potential effects with the Transportation Corridor are tied to the Low Elevation Mid-Iskut and Nigunsaw, and Oweegee AOIs with direct effects with the increased traffic volumes and mixed effects given the cumulative effect nature of the main access corridor in the Nation. The Low Elevation Lower Iskut AOI has mixed effects with the project tied with cumulative effects given Skeena Resources interest in potentially re-opening the mine and transporting ore to the ECRP mill for processing in the future. The remaining AOI's contribute in varying levels to cumulative effects considerations identified in Section 4.11.

The positive effects and potential positive legacies have been identified in this chapter which includes Tahltan input and feedback. The information provided are to focus on Tahltan communities, address the shrinking of services, benefits, people, infrastructure and socio-cultural factors. The final nature and scope of positive effects, benefits, and legacies will be finalized through bilateral agreements with Skeena Resources and as part of the Tahltan Risk Assessment and final draft conditions recommendations.

In addition, TCG has provided specifically for the ECRP, feedback and direction on potential effects that may be addressed through bilateral commitments, and potential conditions for the co-design of mitigations, strategies, conditions, and management plans for current and future generations.

As well, TCG and THREAT identified additional technical uncertainties related to project components and design effects related to water, wildlife (plants, soils, and ecosystems), heritage, CFLUTP and QEL.

The linkage of aquatic and terrestrial effects linkages to CFLUTP and QEL which can result in greater effects than reported when the interconnection of effects are considered.

Finally it was identified where, as the project is currently proposed, irreversible and far-future reversible effects are reported that are not consistent with several of the Tahltan Sustainability Requirements. Groundwater and surface water components have reported irreversible effects and water treatment in perpetuity. Reclamation and closure strategies with terrestrial ecosystems and wildlife have higher uncertainties which may create longer-term effects than estimated, which can effect Tahltan access to lands, way of life, and the ability to restore the health of the land and water. With water treatment required in perpetuity, long-term reclamation requirements, and the potential for existing ground access not being reclaimed in perpetuity, all result in increase effects to Tahltan and can be inconsistent with several sustainability requirements.

The final assessment on the scope and overall assessment of the projects ability to meet Tahltan Sustainability Requirements will be finalized through the Tahltan Risk Assessment and final draft conditions recommendations.

The Hybrid AIR identifies for this section "*The Application must report on the Tahltan Sustainability Requirements; delivery of the assessment to the satisfaction of Tahltan; issues of importance to Tahltan; the analysis on potential effects of Eskay Creek with the identified mitigations, contingencies, uncertainties, and confidences; and the estimated positive, neutral, or negative effects with their related levels of significance.*"

As this is the first environmental assessment in the Nation to consider Tahltan Sustainability Requirements and the requirements for Skeena Resources to report on the delivery of information in the Revised Application, there will be considerations on how this was achieved and where additional actions can occur as part of the Tahltan Risk Assessment.

Skeena Resources has, as reported above, provided their perspectives with the ECRP's potential positive and negative effects related to the requirements. The Revised Application has a dedicated section in each Valued Component Chapter that is aligned with Tahltan Values. There has been reporting for the values with the identified mitigations, contingencies, uncertainties, and confidences; and the estimated positive, neutral, or negative effects with their related levels of significance for Skeena Resources. Tahltan have expressed similar information for AOIs with the exception the level of significance and final assessment of potential effects as they will be determined in the Tahltan Risk Assessment.

Skeena Resources has reported where there is consistent and inconsistent aspects of the project with Tahltan Sustainability Requirements and provided rationales and mitigations identifying the extent, magnitude, and duration of effects. TCG and THREAT reviewed the application, provided feedback and perspectives, and in several values and project components identified where there are greater uncertainties, potential effects, or additional mitigations to be more consistent with the sustainability requirements. In addition, where the potential effects to water, aquatic, and terrestrial ecosystems have a connection to Tahltan Core Priorities, TSP directions, or way of life/land uses, it was identified to Skeena and reported in this chapter.

It appears the Revised Application has provided information to meet most of the Hybrid AIR requirements; however with additional uncertainties and perspectives identified by Tahltan. The Revised Application has identified by both Skeena Resources and Tahltan where there are project components and potential effects

consistent and inconsistent with Tahltan Sustainability Requirements. The final determination if the Revised Application has been delivered to the satisfaction to Tahltan will be through the Adequacy Decision and Tahltan Risk Assessment and final draft conditions recommendations.

4.7 References

Albright, Sylvia. 1984. *Tahltan Ethnoarchaeology*. Publication Number 15. Burnaby: SFU Archaeology Press.

British Columbia. 2018. *Environmental Assessment Act* [SBC 2018, c. 51].

Dawson, George M. 1888. *Report on an Exploration in the Yukon District, N.W.T., and adjacent northern portion of British Columbia, 1887*. Appendix II. Notes on the Indian Tribes of the Yukon District and adjacent northern portion of British Columbia. Annual Report of the Geological Survey of Canada, n.s., 3(2): 191B-213B. Montreal: Dawson Brothers

Emmons, George T. 1911. *The Tahltan Indians*. Philadelphia: University Museum.

Fisher, Tal, Colin Moyer, Duncan McLaren, Rob Diaz, Morely Eldridge, 1998. Archaeological Overview Assessment of the Cassiar-Iskut-Stikine LRMP. Volume I. Report on File within the BC Archaeology Branch.

Friesen, D., 1985. *Aboriginal Settlement Patterns in the Upper Stikine River Drainage, Northwestern British Columbia.* Permit 1983-1*5.* Unpublished Master's Thesis, Department of Archaeology, University of Calgary, Calgary.

Hauksdottir, S., E.G. Enegren, and J.K, Russell, 1994. *Recent basaltic volcanism in the Iskut-Unuk rivers area, northwestern British Columbia*. Geological Survey of Canada: Current research 1994-A. Cordillera and pacific margin. Pp. 57-68.

Higgins, Howard C. 1982. The Tahltan Feast for the Dead: A Symbolic Examination of Space. University of New Mexico, PhD Dissertation.

Jones B. and D. McLaren. 2020. A Review of Tahltan Traditional Law Regarding Resource Ownership and Management. Draft report submitted to the Tahltan Central Government Lands Department.

Jones, B., B. Gray, N. MacLean and D. McLaren. 2021. A Report on Tahltan Land Use and Occupancy in the Vicinity of the Red Chris Mine Project. Report prepared on behalf of the Tahltan Central Government.

Patterson, R.M. 2007 [1966]. *Trail to the Interior*. TouchWood Editions.

Stasiuk, M.V. and J.K Russell, 1990*. Quaternary volcanic rocks of the Iskut River region, northwestern British Columbia. Geological Survey* of Canada: Current research Part E. Cordillera and pacific Margin. Pp. 153-158.

Tahltan Central Council and British Columbia. 2015. Klappan Strategic Initiative. Report on file with British Columbia.

Teit, James A. n.d.1. Report on Tahltan Fieldwork among the Tahltan, Kaska, and Bear Lake Indians (1912-1915). Typescript, Box 121, file 3, 1210.4b, VI-O-8M, Canadian Museum of History.

Teit, James A. n.d.2. Field notes: Tahltan, Kaska and Bear Lake Indians. 1912-1915. Handwritten, Box 173, files 3 & 4, VI-0-2M, Canadian Museum of History.

Teit, James A. 1919. Tahltan Tales. *Journal of American Folklore* 32(124): 198-250.

Teit, James A. 1921. Tahltan Tales. *Journal of American Folklore* 34(133): 223-253.

Teit, James A. 1956. Field Notes on the Tahltan and Kaska Indians, 1912–15. *Anthropologica* 3(1):40–171.

Thorman, T.P.W. n.d. Miscellaneous Materials Relating to the Tahltan Indians. BC Provincial Archives. File: F/3/ T39.

Thompson, Judy (Edosdi). 2012. Hedekeyeh Hot'ih Kahidi – "Our Ancestors are in Us": Strengthening Our Voices Through Language Revitalization from a Tahltan Worldview. PhD Thesis. University of Victoria, Interdisciplinary Studies.

Weber Scannell, P. 2012. Stikine River mining activity risk assessment. Alaska Department of Fish and Game, Technical Report No. 10-06, Douglas, Alaska