



**Grassy Mountain Coal Project  
Joint Review Panel Request for  
Additional Information -  
Traditional Land Use**

**Addendum 9**

Benga Mining Limited  
Grassy Mountain Coal Project

**January 21, 2019**

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## 1.0 INTRODUCTION

### 1.1 Project Background

Benga Mining Limited (Benga), a wholly owned subsidiary of Riversdale Resources Limited (Riversdale), is proposing to develop a nominal 4.5 million clean tonnes per year steelmaking coal mine, referred to as the Grassy Mountain Coal Project (the Project). The Project is located in southwest Alberta, approximately 150 km southwest of Calgary in the Crowsnest Pass. The proposed steelmaking coal processing facility is planned to be located approximately 7 km north of the community of Blairmore. Benga has been consulting and engaging with Aboriginal groups that may be affected by the Project since June 2013.

### 1.2 Purpose of the Report

In accordance with the First Nations Consultation Plan approved December 15, 2014 and the supplemented Plan included in the EIS, Benga has consulted with potentially affected First Nations identified by the Alberta Aboriginal Consultation Office (ACO) during the pre-Application and Application review phases of the environmental assessment process.

Section H of the EIS assesses potential impacts on Aboriginal Valued Components (VCs) based on information that was made available up to August 2016. This Consultation Update Report considers information received through consultation with Aboriginal groups, including meetings, statement of concerns, information requests, and Traditional Land Use (TLU) studies between August 2016 and December 2018. Consultation activities are ongoing, have continued since the submittal of the EIS, and will continue through the EA process and beyond.

This report also provides a response to the letter dated December 21, 2018 from the Joint Review Panel (JRP) to Benga wherein the JRP makes the following requests:

*“the Panel requests that Benga submit the results of the following studies and any additional assessment that Benga has completed as a result:*

- Kainai Nation (Blood Tribe):
  - Traditional Land Use Assessment
  - Kainai Nation Cumulative Effects Assessment
  - EIS Technical Review
- Piikani Nation:
  - Traditional Land Use Assessment
- Siksika Nation
  - Traditional Land Use Assessment

- Siksika Nation Cumulative Effects Assessment
- Stoney Nakoda Nation:
  - Cultural Assessment Overview
  - Technical Review of the EIS
- Tsuut'ina Nation
  - Traditional Land Use Assessment
- Ktunaxa Nation:
  - Ktunaxa Knowledge and Use Study"

### **1.3 Aboriginal Groups identified for Consultation**

Aboriginal groups that are potentially affected by the Project are defined in the *Terms of Reference for Environmental Impact Assessment Report* (Alberta Energy Regulator [AER] 2015) and the *Guidelines for the Preparation of the Environmental Impact Statement* (Canadian Environmental Assessment Agency [CEAA] 2015). Aboriginal groups identified as potentially affected by the Project are:

#### **Treaty 7 Nations**

- Kainai Nation (Blood Tribe);
- Piikani Nation;
- Siksika t Nation;
- Stoney Nakoda Nation;
  - Bearspaw Nation;
  - Chiniki Nation;
  - Wesley Nation; and,
- Tsuut'ina Nation.

#### **Aboriginal Groups Identified as Less Affected by the Project by CEAA**

- Ktunaxa Nation;
  - St. Mary's Indian Band;
  - Lower Kootenay Indian Band;
  - Tobacco Plains Indian Band;
  - Akisq'nuk Nation;
- Samson Cree Nation;
- Shuswap Indian Band;

- Foothills Ojibway First Nation;
- Métis Nation of Alberta; and,
- Métis Nation of British Columbia.

#### **1.4 Aboriginal Consultation Objectives**

The goal of Benga’s consultation plan is to develop a greater understanding of, and address, potential impacts to Aboriginal Interests. The objectives of the consultation are as follows:

- timely sharing and discussion of Project information, including Project updates, baseline information, assessment results, and mitigation measures;
- facilitation of discussions around site-specific information with Aboriginal groups;
- collaboration with Aboriginal groups to develop work plans and to include Aboriginal groups in field work opportunities; including seeking feedback and important information from Aboriginal groups by conducting TK studies, seeking input on potential effects and mitigation measures; and,
- ongoing and open communication with Aboriginal groups through the life of the Project to address issues and concerns.

#### **1.5 Structure of the Consultation Update Report**

The following sections of this report present an overview of consultation activities to date and those planned for the foreseeable future ([Section 2.0](#)); the approach used to consider new information ([Section 3.0](#)); a summary for each Aboriginal group of key consultation activities, supplementary studies and reports, and specific concerns, and consideration of new information ([Sections 4.0 to 5.0](#)).

## 2.0 SUMMARY OF CONSULTATION ACTIVITIES

### 2.1 Treaty 7 Nations

Consultation activities undertaken with each Treaty 7 Nation include:

- provision of the EIS, filed August 12, 2016 and subsequent Addenda, Project updates and newsletters, technical reports, and other related regulatory documents;
- provision of notice of EA milestones and timelines;
- Project presentations and meetings to discuss issues and concerns, Project impacts, mitigation measures, and traditional use and knowledge;
- community information sessions;
- provision of bi-monthly communication records for First Nation review;
- provision of Specific Concerns and Response Tables for First Nation review and comment and meetings to discuss issues, as needed; and
- where supplementary reports were received, report findings were considered and discussed in this report.

Benga has provided capacity funding to support the participation of First Nations in the review process and has provided funding for First Nation supplementary studies and reports.

Consultation activities are summarized for each Treaty 7 Nation in [Section 4.0](#).

### 2.2 Other Affected Aboriginal Communities

Key consultation activities undertaken with each of the lesser affected Nations include:

- provision of the EIS, filed August 12, 2016 and subsequent Addenda, Project updates and newsletters, technical reports, and other related regulatory documents;
- provision of notice of EA milestones and timelines; and
- Project presentations and meetings to discuss issues and concerns, Project impacts, mitigation measures, and traditional use and knowledge where requested.

Benga has provided funding for supplementary studies and reports.

Consultation activities are summarized for each of the other affected Aboriginal communities in [Section 5.0](#).

### 2.3 Planned Consultation Activities

Consultation activities planned for both Treaty 7 and other affected Nations include:

- organize and participate in community information sessions with Aboriginal groups to provide an opportunity for community members to speak with Benga representatives about results of the EIS;
- work with Aboriginal groups to determine the most appropriate ongoing processes for consultation activities, schedules, and Project timelines, including regulatory process timeframes for comment;
- continue actively working with Aboriginal groups to review and provide input on mitigation measures, and effects management and monitoring plans;
- continue working with Aboriginal groups to review and address findings of supplementary Aboriginal studies and reports as they become available; and,
- continue to work with Aboriginal groups to prepare cultural awareness training for construction and operations teams.

### **3.0 APPROACH TO CONSIDERING NEW INFORMATION**

#### **3.1 Methods**

Benga used the following approach when considering new information from Aboriginal groups:

- New information was reviewed and compared with Section H of the EIS.
- New traditional use information specific to the Aboriginal VCs was reviewed and included in this report.
- If the new information applied to Aboriginal VCs that were already assessed in Section H of the EIS, Benga considered that new information in an updated assessment of the potential Project effects on those VCs, with the same methodology that was used in Section H. This was done in the following steps:
  - determine if the new information identified any new potential adverse effects, and if so, describe them;
  - identify whether new mitigation measures are required to address these effects; and,
  - characterize the residual adverse effects, and if there is a change from the EIS, describe that change.
- If the new information received from Aboriginal groups identified new sites, locations, or areas within the local or regional study areas, these were included in the discussion of potential adverse effects and considered in the effects assessment.

[Table 3-1](#) lists the Aboriginal Valued Components and Potential Effects outlined in Section H of the EIS.

<b>Table 3-1 Aboriginal Valued Components and Potential Effects</b>		
<b>Aboriginal Valued Components and Sub-Components</b>	<b>Potential Effects to Aboriginal Interests</b>	<b>Associated Valued Component</b>
<b>Current Use of Lands and Resources for Traditional Purposes</b>		
Hunting	Change in identified hunted species and habitat Change in use or access to identified hunting locations Change in preferred harvesting method	Wildlife Land and Resource Use
Trapping	Change in identified trapped species and habitat Change in use or access to identified trap lines or trapping locations	Wildlife Land and Resource Use
Fishing	Change in identified fishing species and habitat Change in use or access to identified fishing locations Change in preferred harvesting method	Aquatic Resources Land and Resource Use
Plant Gathering	Change in use or access to identified vegetation species and habitat Change in use or access to identified plant harvesting locations Change in preferred plant harvesting method	Vegetation Land and Resource Use
Trails and Travelways	Change in use or access to identified trails and travelways Disturbance to features associated with trails and travelways	Land and Resource Use Historical Resources
<b>Aboriginal Health</b>		
	Change in human health from disturbance to air quality	Human Health

<b>Table 3-1 Aboriginal Valued Components and Potential Effects</b>		
<b>Aboriginal Valued Components and Sub-Components</b>	<b>Potential Effects to Aboriginal Interests</b>	<b>Associated Valued Component</b>
	Change in human health from disturbance to water quality Change in human health from consumption of country foods Change in human health from noise	
<b>Aboriginal Socio-Economic Conditions</b>		
	Disturbance to Aboriginal commercial activity Disturbance to Aboriginal forestry and logging operations Disturbance to Aboriginal recreational use	Socio-Economics Land and Resource Use
<b>Aboriginal Physical and Cultural Heritage</b>		
	Disturbance to physical and cultural heritage Change in access to physical and cultural heritage Change to cultural value or importance associated with physical and cultural heritage	Historical Resources Land and Resource Use

Source: Section H of the August 2016 EIS

#### 4.0 TREATY 7 NATIONS

##### 4.1 Kainai Nation (Blood Tribe)

###### 4.1.1 Summary of Key Consultation Activities

Between August 16, 2016 and December 31, 2018, Benga and Kainai Nation representatives have had ongoing dialogue regarding the EIS, mitigation measures and issues and concerns. Kainai Nation have engaged in a Project review, submitting comments, participating in meetings, undertaking traditional use field work and site visits and carrying out the following additional work for the Project:

- Cumulative effects assessment;
- Traditional Knowledge and Use Assessment; and
- Assessment of archaeological sites of interest identified as part of the Historic Resources Impact Assessment (HRIA).

In December 2018, Benga received two reports from Kainai Nation:

- Cumulative Effects Assessment for Kainai Nation (Carlson *et al.*, 2018a); and
- Blood Tribe/Káínai Traditional Knowledge & Use Assessment Grassy Mountain Coal Project (O’Connor, 2018)

Benga provided funding to support Kainai Nation’s participation in the Project environmental assessment process.

Table 4-1 below provides a chronology of key consultation activities with Kainai Nation. The documents referenced above and communications from Kainai Nation use the following terms and spellings: Bloods, Blood Tribe, Káínai, Káínai or Kainai First Nation. For the purpose of this report, Benga uses Kainai Nation.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
September 2, 2016	Mail	Benga provided a cover letter and copy of the Updated Environmental Impact Statement that was filed with the regulator in August 2016.
October 25, 2016	E-mail	Benga provided Kainai Nation with a brief update on the status of the Alberta Energy Regulator’s (AER) review of the Environmental Impact Statement (EIS).
October 28, 2016	Meeting	<p>Main discussion items included:</p> <ul style="list-style-type: none"> <li>• Kainai Nation community events and elections;</li> <li>• transition to new Chief and Council;</li> <li>• economic opportunities;</li> <li>• the need for a ceremony;</li> <li>• site specific mitigation;</li> <li>• timing for a meeting to review issues and concerns; and,</li> <li>• mitigations.</li> </ul> <p>Benga provided an update on Project activities, and the status of the AER review and Joint Panel Review process with the Canadian Environmental Assessment Agency. Benga acknowledged receipt of the Statement of Concern (SOC) issued by the Kainai Nation on January 4, 2016 and advised that Benga would respond to the SOC in a letter.</p>

**Table 4-1 Chronology of Key Consultation Activities with Kainai Nation**

Date	Method of Communication	Topic
November 8, 2016	Meeting	<p>Main discussion items included:</p> <ul style="list-style-type: none"> <li>• updates to phases outlined in the Kainai Nation Draft Consultation Workplan;</li> <li>• site specific results of Kainai Nation’s traditional land use assessment and;</li> <li>• the Nation's technical review of Piikani Nation’s Technical Review Report on the GMP Project EIS.</li> </ul>
November 25, 2016	Meeting	<p>Main discussion items included:</p> <ul style="list-style-type: none"> <li>• timing for tour of the reserve;</li> <li>• information sharing with community;</li> <li>• site specific traditional land use information;</li> <li>• access to harvesting areas; and,</li> <li>• timing for a presentation to new Chief and Council.</li> </ul> <p>The Kainai Nation Draft Consultation Workplan was also reviewed.</p>
November 29, 2016	E-mail	Benga provided contact information for land access to the area where Kainai Nation would like to harvest.
November 29, 2016	E-mail	Benga provided the revised Kainai Nation Draft Consultation Workplan for review and requested a time to discuss and further develop the Workplan.
December 9, 2016	Meeting and Site Visit	Benga participated in a guided tour of the reserve. A meeting was then held to discuss the Consultation Workplan and timing for the mitigation meeting.
December 9, 2016	E-mail	Benga sent a copy of the “Conveyor - the Grassy Mountain Fall 2016 Community Newsletter (Vol. 4 Issue 4)”. The Newsletter covered: creating a sustainable economy through diversity; understanding Project waterways; Coleman fish and game pond improvements; environmental impact assessment update; and, community updates.
January 13, 2017	E-mail	Benga provided the Kainai Nation Draft Consultation Workplan.
February 15, 2017	Meeting	<p>Benga and Kainai Nation met to further develop the Kainai Nation Draft Consultation Workplan. Main discussion items included:</p> <ul style="list-style-type: none"> <li>• Kainai Nation community participation in monitoring;</li> <li>• timing of mitigation meetings;</li> <li>• ceremony; and,</li> <li>• timing of EIS technical review workshop.</li> </ul>

**Table 4-1 Chronology of Key Consultation Activities with Kainai Nation**

Date	Method of Communication	Topic
February 22, 2017	E-mail	Benga provided the revised Kainai Nation Draft Consultation Workplan.
February 23, 2017	E-mail	Benga provided information requested by Kainai to complete First Nation Traditional Land Use fieldwork.
March 13, 2017	Phone call	Benga and Kainai Nation discussed consultation planning and participation of Kainai Nation in conference calls to review the Piikani Nation Technical Review Report on the GMP Project EIS.
April 18 and 21, 2017	Phone call	Benga and Kainai Nation discussed the Kainai Nation Draft Consultation Workplan.
May 8, 2017	E-mail	Benga provided the Kainai Nation Draft Consultation Workplan and requested a phone call to review the document.
May 19, 2017	Meeting	<p>Benga and Kainai Nation met to review Project updates, provide Addenda to the EIS, and discuss consultation activities moving forward. Benga hand delivered a USB containing the Updated Aquatic Ecology Assessment (Consultant Report #6) (January 2017) and the Updated Wildlife Assessment (Consultant Report #8) (January 2017). Main discussion items included:</p> <ul style="list-style-type: none"> <li>• a meeting date for EIS presentation;</li> <li>• technical review of the EIS;</li> <li>• timing for a Project ceremony;</li> <li>• a cultural awareness session; and,</li> <li>• harvesting by Kainai Nation.</li> </ul>
June 6, 2017	Meeting	<p>Benga and Kainai Nation met to provide a presentation and summary of the main objectives and results of the Environmental Impact Assessment (August 2016 version) and to answer questions related to consultation timelines, the technical aspects of the assessment, and follow up programs. Representatives from the Canadian Environmental Assessment Agency attended to provide a consultation process update. Handouts included a hard copy of EIS presentation, and Project infrastructure and Crown land maps. Main discussion items included:</p> <ul style="list-style-type: none"> <li>• review of timelines and Project components;</li> <li>• an overview of construction, operations, reclamation, and closure phases;</li> </ul>

**Table 4-1 Chronology of Key Consultation Activities with Kainai Nation**

Date	Method of Communication	Topic
		<ul style="list-style-type: none"> <li>• the status of Project applications, including federal and provincial approvals; and,</li> <li>• the development of the monitoring program and adaptive management plans.</li> </ul>
June 28, 2017	E-mail	Benga provided the documents provided at the May 19, 2017 meeting, and a copy of the “Conveyor - the Grassy Mountain Spring 2017 Community Newsletter (Vol. 2 Issue 1)”. The Newsletter covered: The Newsletter included research into the winter ecology of Cutthroat Trout and community updates.
July 19, 2017	Hand delivery	Benga delivered a printed copy of the Environmental Impact Statement.
October 3, 2017	E-mail	Benga provided the Specific Concern and Response Table, Environmental Management Plan Summary, and Access Management Plan framework.
October 5, 2017	Phone call	Benga and Kainai Nation discussed concerns regarding archaeological camp site Dj Po-98 and Benga’s engineering work to consider options to move the sedimentation pond. Kainai Nation requested access to the camp site and a presentation on the results of the Historic Resources Impact Assessment (HRIA).
October 6, 2017	E-mail	Benga provided an update on engineering plans for camp site Dj Po-98.
October 12, 2017	E-mail	Pending completion of Alberta Culture and Tourism’s review of the HRIA, Benga provided the Historic Resources section of the EIS and a presentation on the results of the HRIA.
October 26, 2017	E-mail	In advance of the October 27, 2017 meeting, Benga provided electronic copies of the Environmental Management Plan Summary, an updated version of the Specific Concern and Response table, and Appendix 7 of the EIS (the Aboriginal Access Management Plan).
October 27, 2017	Meeting	<p>Benga and Kainai Nation met to review Specific Concerns and Response tables. Main discussion items were:</p> <ul style="list-style-type: none"> <li>• cumulative impact review;</li> <li>• Project status and timeline;</li> <li>• Bison Archaeology presentation on archaeology work performed for the Project; and,</li> </ul>

**Table 4-1 Chronology of Key Consultation Activities with Kainai Nation**

Date	Method of Communication	Topic
		<ul style="list-style-type: none"> <li>• other items including issues table, property ownership, and reclamation plan.</li> </ul>
November 1, 2017	E-mail	Benga advised Kainai Nation of AER’s posting of the Notice of Application for the Project.
November 3, 2017	E-mail	Benga provided a transmittal letter to JFK Law (Kainai Nation legal representation) which was sent that day along with a copy of the integrated application and Environmental Impact Assessment submission to the AER.
February 12, 2018	E-mail / Mail	Benga provided a Project update letter and the “Conveyor: Winter 2018 edition” Newsletter. The Newsletter covered: a regulatory process update; water conservation; Project FAQs; and community involvement updates.
April 19, 2018	Meeting	Main discussion items included: <ul style="list-style-type: none"> <li>• Cumulative Effects Assessment;</li> <li>• traditional land use;</li> <li>• technical review of EIS;</li> <li>• mitigation measures; and,</li> <li>• access management.</li> </ul>
May 29, 2018 June 8, 2018	E-mail Mail	Benga provided the “Conveyor Spring 2018 edition” Project Newsletter for distribution in community. The Newsletter covered: the Riversdale volunteer program; employee profiles; Project FAQs; rail loadout information; regulatory process update; and, community updates.
June 7, 2018	Meeting	Project updates were discussed including: <ul style="list-style-type: none"> <li>• finalization of Capacity Letter of Agreement;</li> <li>• review of IEG/ALCES proposal for a Cumulative Effects Assessment;</li> <li>• Rights Impact Assessment; and,</li> <li>• Commercial opportunities and financial components of a potential Relationship Agreement.</li> </ul>
June 12, 2018	E-mail / Mail	Benga provided a Project update letter and information package including the following information: <ul style="list-style-type: none"> <li>• Project update letter (June 6, 2018);</li> <li>• two maps of the Project footprint in 2015 and 2016;</li> </ul>

**Table 4-1 Chronology of Key Consultation Activities with Kainai Nation**

Date	Method of Communication	Topic
		<ul style="list-style-type: none"> <li>• a list of all Crown lands within the Mine Permit Boundary and a comparison of 2015 to current;</li> <li>• a complete list of Crown land where Benga has submitted applications for Mineral Surface lease and License of Occupation dispositions; and,</li> <li>• the location of proposed dispositions.</li> </ul>
June 19, 2018	E-mail	Kainai Nation requested a tour of HRIA sites the same day as the Siksika Nation tour (June 27, 2018).
June 26, 2018	Meeting	<p>Benga presented on Environmental Management Plans, Access Management, discussed status of TU/TK work, and Specific Concern and Response tables. Main discussion items included:</p> <ul style="list-style-type: none"> <li>• Kainai Nation issues and concerns and recommendations for mitigations; and,</li> <li>• Project information and mitigation measures.</li> </ul>
June 27, 2018	Site Visit	Tour of HRIA sites with Siksika Nation.
July 25, 2018	Site Visit	Assessment of HRIA sites by Kainai Nation.
July 26, 2018	Site Visit	Assessment of HRIA sites by Kainai Nation.
October 30, 2018	Mail	<p>Benga provided copies <i>via</i> USB of the Technical Application and EIS (integrated application), filed August 12, 2016 and addenda to date including:</p> <ul style="list-style-type: none"> <li>• Addendum #1, filed January 31, 2017</li> <li>• Addendum #2, filed October 16, 2017</li> <li>• Addendum #3, filed November 9, 2017</li> <li>• Addendum #4, filed November 27, 2017</li> <li>• Addendum #5, filed February 28, 2017</li> <li>• Addendum #6, filed April 30, 2018</li> <li>• Addendum #7, filed May 28, 2018</li> <li>• Addendum #8, filed October 17, 2018</li> </ul>
October 31, 2018	E-mail / Mail	Benga provided a Project update letter and the “Conveyor Fall 2018 edition” Project Newsletter. The Newsletter covered: regulatory timelines; fieldwork updates; investment update; and, community updates.

**Table 4-1 Chronology of Key Consultation Activities with Kainai Nation**

Date	Method of Communication	Topic
November 5, 2018	E-mail	Benga provided the Canadian Environmental Assessment Agency's announcement of the Joint Panel Review public comment period for the Project.
November 23, 2018	E-mail	Benga provided a series of documents for the period December 15, 2014 to April 15, 2018 including: <ul style="list-style-type: none"> <li>• a covering letter;</li> <li>• cumulative Record of Consultation Log;</li> <li>• cumulative revisions table;</li> <li>• cumulative response table; and,</li> <li>• communication summary of all correspondence with Kai Scott.</li> </ul>
November 29, 2018	E-mail	Benga informed Kainai Nation that the ACO had extended its timelines for review of the materials sent by Benga to Kainai Nation on November 23, 2018.
December 6, 2018	E-mail	JFK Law Corporation provided Benga the Cumulative Effects Assessment for Kainai Nation (Carlson et al., 2018a) on behalf of Kainai Nation.
December 7, 2018	E-mail	JFK Law Corporation provided Benga a link to the Blood Tribe/Káínai Traditional Knowledge & Use Assessment Grassy Mountain Coal Project report (O'Connor, 2018).
December 10, 2018	Phone Call	Benga and Kainai Nation discussed Kai Scott's role on the Project. Kainai Nation requested a summary of the topic from Benga.
December 11, 2018	E-mail	Benga provided a summary of Kai Scott's role on the Project, including a background and summary of communications.

#### 4.1.2 Issues Raised Since Submission of the EIS

The following is a list of the concerns and interests raised by Kainai Nation since the submission of the EIS. For a full list of concerns and responses by Benga to date, see Appendix A-1.

Kainai Nation raised issues regarding the following Aboriginal Interests:

- Air Quality & Climate
- Aboriginal Physical & Cultural Heritage
- Aboriginal Socio-Economic Conditions
- Fish & Fish Habitat

- Fishing
- Hunting
- Plant Gathering;
- Terrain & Soils
- TK/TU
- Trails & Travelways
- Trapping
- Vegetation & Wetlands
- Wildlife

In addition, Kainai Nation raised the following concerns:

- Access
- Consultation
- Cumulative Effects
- Environmental Impact Assessment
- Human & Wildlife Health
- Hydrology
- Visual Impacts
- Land Use
- Mitigation
- Monitoring
- Noise
- Reclamation
- Surface Water Quality

Benga understands that Project impacts to biophysical features, lands and resources are linked to the Nation's ability to continue to pursue their Aboriginal Interests and maintain their cultural way of life. Benga has considered and is working actively to address Kainai Nation's concerns in the following ways:

- provision of information on how impacts were assessed in the EIS;
- consultation on mitigation measures, management and monitoring plans;
- support for pre-disturbance Project ceremony;
- support for additional fieldwork to take place in 2019 to mark locations for harvesting and in relation to fisheries offset planning;
- meetings with Kainai Nation to discuss and resolve issues and concerns; and
- review and consideration of reports received since the submission of the EIS.

#### **4.1.3 Summary of Reports Received Since Submission of the EIS**

##### **4.1.3.1 Cumulative Effects Assessment for Kainai Nation, December 6, 2018**

The Kainai Nation have indicated that they wish to submit the Cumulative Effects Assessment for Kainai Nation (Carlson *et al.*, 2018a) directly to the JRP. For the purposes of this report, the

contents are summarized below. The assessment was conducted using a focal study area defined as the approximately 6,000 km<sup>2</sup> Upper Oldman Crowsnest Pass watershed, and a regional study area defined as the approximately 62,904 km<sup>2</sup> area of 14 watersheds surrounding the Project area (2018a). The assessment within the focal study area involved comparison of current conditions to pre-industrial/range of natural variability as well as future forecast timeframes, and in the regional study area a comparison of current conditions and pre-industrial/range of natural variability was conducted.

The report provides an initial assessment of cumulative effects of land development on ecological indicators of cultural importance to Kainai Nation. Using an online landscape simulation model, the report addresses:

- industrial and regulatory activities that potentially restrict or exclude land uses by Kainai Nation members;
- the loss of remaining relatively intact ecosystems within the Kainai Nation traditional territory; and
- effects of current development activities on ecosystems and species on which Kainai Nation traditional land uses depend (Carlson *et al.*, 2018a).

Issues were raised about hunting, fishing, trapping, and plant harvesting, specifically the accessibility of the land for traditional activities and ongoing loss of habitat and associated opportunities for traditional land use.

#### 4.1.3.2 Blood Tribe/Kainai Traditional Knowledge & Use Assessment - Grassy Mountain Coal Project

The Kainai Nation have indicated that they wish to submit the Blood Tribe/Kainai Traditional Knowledge & Use Assessment (TKUA) for the Grassy Mountain Coal Project (O'Connor, 2018) directly to the JRP. The TKUA was completed in summer of 2018 to “further access and refine recommendations for mitigation of specific Traditional Use sites and areas within the Grassy Mountain Project area identified by Kainai Nation during their 2014 and 2015 Traditional Land Use Assessment fieldwork” and to “assess potential impacts of the Project on archaeological sites of interest identified as part of the Historic Resources Impact Assessment” (O'Connor, 2018, p.5). The report outlines the methodology of the TKUA, discusses general Kainai Nation history, culture, and traditional use patterns, provides a technical review of the EIS, and undertakes an assessment of the potential effects of the Project on traditional use, traditional resources, and areas of ceremonial, spiritual, cultural, educational or historical value to Kainai Nation.

#### 4.1.4 Identification of VCs, Resources or Species

Within the Blood Tribe/Kainai Traditional Knowledge & Use Assessment, Kainai Nation categorizes its VCs in the following three broad categories:

- traditional use practices or activities of importance to the Kainai Nation;
- traditional resources/species of importance to the Kainai Nation; and
- sites or areas of current use for ceremonial, spiritual cultural, educational or historical value, or unique ecological characteristics of interest to the Kainai Nation (O'Connor, 2018).

Each of the VC categories above include lists of the traditional and cultural values of most interest to Kainai Nation in the context of the Project. In addition to these VCs, Kainai Nation specifies that additional archaeological features within the Mine Disturbance Area and the Mine Permit Area are also of interest to the Kainai Nation (O'Connor, 2018).

The Kainai Nation Cumulative Effects Assessment (Carlson *et al.*, 2018a) includes the following indicators:

- direct and indirect disturbance of land,
- area of intact habitat (core area and patch size),
- habitat quality for three wildlife species (moose, elk, and mule deer),
- fish community stressors, and
- traditional land use (hunting, trapping, fishing, plant gathering, travelling) including TLU accessibility (Carlson *et al.*, 2018a).

Although these VCs, resources, and indicators are categorized differently from the VCs in the EIS Update and amendments, they fall within the following VCs from the EIS Update Section H Aboriginal Consultation, and Section E Environmental Impact Assessment Summary:

- Current Use of Lands and Resources for Traditional Purposes (hunting, trapping, fishing, plant gathering, trails and travelways);
- Aboriginal Socio-Economic Conditions;
- Aboriginal Health;
- Aboriginal Physical and Cultural Heritage; and
- related environmental VCs: Wildlife, Fisheries, Historical Resources, Vegetation, Land and Resource Use, Human Health, Socio-Economics.

4.1.4.1 Hunting and Fishing – Kainai Nation Identified Values

Kainai Nation has identified a number of wildlife and fish species of importance for hunting and of cultural and traditional value. These are listed in [Table 4-2](#), with a note on whether they were included in the EIS.

<b>Table 4-2 Wildlife &amp; Fish Species of Importance and Value Identified by Kainai Nation and Inclusion in EIS</b>				
<b>Species</b>	<b>TKUA Report-December 2018</b>	<b>Cumulative Effects Assessment - December 2018</b>	<b>Included in EIS</b>	<b>Comments</b>
Elk	✓	✓	✓	Included as a VC in the EIS
Moose	✓	✓	✓	Included as a VC in the EIS
Mule deer	✓	✓	✓	Moose and Elk used as indicator (or surrogate) species for grassland/successional species
Big horn sheep	✓	x	✓	Included as a Special Status Species in the EIS
Grizzly bear	✓	x	✓	Included as a VC in the EIS
Black bear	✓	x	✓	Grizzly Bear used as indicator (or surrogate) species
Beaver	✓	x	✓	Columbia Spotted Frog and Western Toad used as indicator (or surrogate) species for wetland-dependent wildlife
Rabbit	✓	x	✓	Canada Lynx used as indicator (or surrogate) species for early successional species. Major prey species for lynx

<b>Table 4-2 Wildlife &amp; Fish Species of Importance and Value Identified by Kainai Nation and Inclusion in EIS</b>				
<b>Species</b>	<b>TKUA Report-December 2018</b>	<b>Cumulative Effects Assessment - December 2018</b>	<b>Included in EIS</b>	<b>Comments</b>
Ruffed grouse	✓	x	✓	Canada Lynx, Great Grey Owl, Moose used as indicator (or surrogate) species for early successional to mature forest-dependent wildlife.
Sharp-tailed grouse	✓	x	✓	Represented by the mammalian species category
Eagle	✓	x	✓	Included as a VC in the EIS
Hawk	✓	x	✓	Eagle used as indicator (or surrogate species) -
Osprey	✓	x	✓	Eagle used as indicator (or surrogate species)
Canada goose	✓	x	✓	Columbia Spotted Frog and Western Toad used as indicator (or surrogate) species for wetland-dependent wildlife
Mallard duck	✓	x	✓	Columbia Spotted Frog and Western Toad used as indicator (or surrogate) species for wetland-dependent wildlife
Merganser duck	✓	x	✓	Columbia Spotted Frog and Western Toad used as indicator (or surrogate) species for wetland-dependent wildlife

<b>Table 4-2 Wildlife &amp; Fish Species of Importance and Value Identified by Kainai Nation and Inclusion in EIS</b>				
<b>Species</b>	<b>TKUA Report-December 2018</b>	<b>Cumulative Effects Assessment - December 2018</b>	<b>Included in EIS</b>	<b>Comments</b>
West-slope cutthroat trout	x	✓	✓	Included as a VC in the EIS
Rainbow trout	x	✓	✓	Similar to WSCT
Bull trout	x	✓	✓	Similar to WSCT
Rocky Mountain whitefish	x	✓	n/a	Not found in Gold Creek or Blairmore Creek therefore not studied.
Brook trout	x	✓	✓	Similar to WSCT

As noted in Section 3.2 of EIA Volume 6, CR#9 Wildlife Assessment:

It is not feasible to assess all wildlife species; therefore, Benga selected a set of wildlife VCs that are representative of wildlife in the area. Similarly, while Benga recognizes the traditional and cultural value of many wildlife species to Aboriginal Groups, not all species with traditional value identified in the available TU reports or from Aboriginal Consultation sessions are individually assessed.

The approach taken for the Project to identify wildlife VCs focussed on the selection of species that are representative species for other wildlife species/groups that exhibit similar use of various habitat types at various spatial (foraging) and temporal (*e.g.* breeding, overwintering) scales. To determine the representative wildlife species the following criteria were used:

- known or reported occurrence in and overlap with the WLSA;

- reported to have value to traditional (Aboriginal Groups), recreational (hunters), subsistence (trappers), and/or non-consumptive (wildlife viewing) users;
- provincial (“At Risk”, “May Be At Risk”, or “Sensitive”) and/or federal (Schedule 1 SARA species, “Endangered”, “Threatened”, or “Special Concern”) status, or is known to be declining in the region;
- use of major habitats and/or reliance on habitat types that are limited in geographic extent and that may be affected by Project development; and
- is a “keystone” species that has a disproportionate effect on the ecosystems it is found in or other species require its presence to persist in the area.

Based on this approach, ten wildlife VCs consisting of two amphibian, two avian, and six mammalian species were selected for the wildlife Baseline Assessment and Application Assessment. In addition, one fish species was selected for the Fisheries Assessment.

#### 4.1.4.2 Plant Gathering – Kainai Nation Identified Values

Kainai Nation identified vegetation species of interest in its December 2018 TKUA report (Table 4-3).

<b>Species</b>	<b>TKUA Report-December 2018</b>	<b>Included in EIS</b>	<b>Comments</b>
Saskatoon berries	✓	✓	
Chokecherries	✓	✓	
Blueberries	✓		
Huckle-berries	✓	✓	
Bear-berries	✓	✓	
Strawberries	✓	✓	
Lodgepole pine	✓	✓	
Willow bark	✓	✓	
Sweet pine	✓	✓	
Spruce sap	✓	✓	
Pine sap	✓	✓	

**Table 4-3 Plant Species of Importance and Value Identified by Kainai Nation and Inclusion in EIS**

Species	TKUA Report-December 2018	Included in EIS	Comments
Birch bark	✓	✓	
Poplar bark	✓	✓	
Willow branches	✓	✓	
Lodgepole pine	✓	✓	
Tamarack	✓		
Birch logs	✓	✓	
Poplar trees	✓	✓	
Aspen	✓	✓	
Cottonwood	✓	✓	
Wild licorice	✓	✓	
Horsetail	✓	✓	
Juniper	✓	✓	
Dry tree moss	✓	✓	
Moist ground moss	✓	✓	
Yarrow	✓	✓	
Rose hip	✓	✓	
Raspberries	✓	✓	
Thimbleberries	✓	✓	
Mushrooms	✓	✓	
Buffalo berries	✓		
Goose berries	✓		
Moss	✓	✓	
Prairie crocus	✓		
Labrador tea	✓		
Sweet grass	✓	✓	
Wolfwillow	✓		

<b>Species</b>	<b>TKUA Report-December 2018</b>	<b>Included in EIS</b>	<b>Comments</b>
Paintbrush plants	✓		
Cow parsnip	✓		
Red-osier dogwood	✓		
Wild onion	✓		
Lay-down root	✓		

Strawberries, Labrador tea, and cow parsnip, were not identified by Kainai prior to submission of the EIS, however, these plants and berries were identified by other Indigenous groups and were considered in the overall vegetation VC. Tamarack, blueberries were identified in the EIS.

Benga considers that the addition of the vegetation species listed above would not change the conclusions of the EIS since the vegetation impact assessment was not done on the level of species but rather on a number of vegetation and wetland elements selected as VCs. As noted in Section 2.4.2 of EIA Volume 6, CR#8 Vegetation and Wetlands Assessment:

*Assessing the Project’s potential effects on all vegetation and wetland resource components is not possible; subsequently, in accordance with current practice, this assessment focuses on a number of vegetation and wetland elements that were selected as VCs. These VCs represent vegetation and wetland resources that may be affected by the proposed Project. All chosen VCs are known to occur in the LSA and can be monitored by accepted scientific methods. Additionally, VCs must fit into one of the following categories:*

- *is an important contributor to biodiversity at the local, landscape, or regional level;*
- *is considered to be a “Threatened” or “Endangered” species at the provincial or federal level, or is known to be declining in the region;*
- *is valued by Aboriginal Group traditional users (specifically Treaty 7 First Nations); and*
- *is a unique habitat type that is limited in area and may be impacted by Project.*

*To determine the VCs for the vegetation and wetlands assessment, regulatory requirements and guidelines were reviewed along with the information needs of stakeholders (e.g., government agencies, the public, industry). Additionally, the specific requirements outlined in the TOR for the Project, as well as previous EIS reports for coal mining projects and other industries (Teck Coal Limited 2014,*

*Cardinal River Coals Ltd. 1996, Coal Valley Resources Inc. 2012) and the C5 Forest Management Plan 2006-2026 (Government of Alberta, 2010) were considered. The vegetation and wetland VCs were discussed with and compared to VCs identified by Treaty 7 First Nations.*

#### 4.1.4.3 Trails and Travelways – Kainai Nation Identified Values

Kainai Nation identifies trails and travelways as values to be considered in its December 2018 TKUA report. This is included as a sub-component of the Current Use of Lands and Resources for Traditional Purposes VC in the EIS and Aboriginal Cumulative Effects Assessment. Information on trails and travelways was not provided by Kainai prior to the EIS submission. Background information from the TKUA report is presented below in [Section 4.1.5.1](#).

#### 4.1.4.4 Aboriginal Physical and Cultural Heritage – Kainai Nation Identified Values

In the TKUA report, Kainai Nation identifies multiple sites of importance due to their ceremonial, spiritual, cultural, educational or historical value. Similar kinds of values are included in the EIS, however, the TKUA provides more detail on sites and locations. Background information from the TKUA report is presented below in [Section 4.1.5.1](#).

### 4.1.5 Current Use of Lands and Resources for Traditional Purposes

#### 4.1.5.1 Background Information

This section summarizes background information related to the Current Use of Lands for Traditional Purposes VC (and its VC subcomponent) which has been provided by Kainai Nation since the EIS was submitted, in the TKUA (O'Connor, 2018) and the Kainai Nation Cumulative Effects Assessment (Carlson *et al.*, 2018a).

##### *General*

Kainai Nation describes that the primary driver of decreased access to TLU suitable lands is the conversion of Crown lands to private property and other restricted land uses (parks, ecological reserves, *etc.*) (Carlson *et al.*, 2018a).

##### *Hunting*

The TKUA indicates that the Project TLU LSA and RSA is habitat for many important species hunted for ceremonial and subsistence purposes, including elk, mule deer, bighorn sheep, moose, and bear (O'Connor, 2018).

The TKUA identifies that, while Kainai Nation members do not use the Project TLU LSA and RSA as extensively to hunt as in the past, the area continues to be the source of wildlife hunted

for use in ceremonies, sacred bundles, and for subsistence purposes. Kainai Nation indicates a preference for mule deer in the mountains over grain-fed deer on the prairies.

The Blood Tribe Hunting Concentration Map in the TKUA depicts Kainai Nation's hunting areas, hunting camps, and big game observations (O'Connor, 2018, p. 78). They hunt, or have hunted, in the following areas: Forestry Trunk Road which provides access to the western portion of the Project TLU RSA and LSA, Gold Creek Valley, and Blairmore Creek Valley (O'Connor, 2018). The TKUA describes the potential value of big game hunting within the TLU LSA and observes occurrences of the following: bone fragments (potentially deer and elk), moose, bear, and elk scat, bear claw marks, mule deer, moose habitat, suitable moose habitat, ducks, and grouse (O'Connor, 2018).

Kainai Nation have indicated that they consider national parks, provincial parks, and ecological reserves inaccessible because they do not use these areas for hunting (Carlson *et al.*, 2018a). Kainai Nation does not hunt in close proximity to well sites (approximately 500 m), and it was assumed in Kainai Nation's Cumulative Effects Assessment that they would not hunt near industrial sites, settlements, rural residence, and other features used for non-TLU purposes (Carlson *et al.*, 2018a).

### *Trapping*

The TKUA indicates trapping in the Crowsnest Pass and in the TLU LSA and RSA has been constrained since the 1950s due to settlement, industrial expansion, and coal mining (O'Connor, 2018), however, Kainai Nation may trap in the Project TLU and RSA. The TKUA further explains that trapping would most likely be for subsistence and ceremonial purposes. Species identified in the TKUA are beaver, muskrats and eagle. Kainai Nation members use specialized trapping methods to obtain eagle feathers on Bluff Mountain, and possibly on Grassy Mountain prior to mining in the area.

### *Fishing*

The TKUA indicates that Kainai Nation members fish for subsistence purposes in the Crowsnest River watershed and the Old Man River watershed north of the Project TLU RSA. The TKUA identifies the following species of importance to the Kainai Nation: Westslope cutthroat trout, rainbow trout, bull trout, and Rocky Mountain whitefish (O'Connor, 2018).

The TKUA summarizes information identified in EIS Volume 1, Section E, noting the importance of the habitat the Crowsnest River, Blairmore Creek, Gold Creek and two upstream tributaries and the presence of Westslope cutthroat trout (*Oncorhynchus clarkii lewisii*); Brook trout (*Salvelinus fontinalis*); Rainbow trout (*Oncorhynchus mykiss*); Mountain whitefish (*Prosopium*

*williamsoni*); and, Bull trout (*Salvelinus confluentus*) in those waters. In addition, the Kainai Nation research team observed occurrences of fish in the Blairmore Creek and noted that Brook trout is not native to the area (O'Connor, 2018).

The Kainai Nation TKUA indicates that disturbances to fish habitat in the watershed, inclusive of TLU LSA streams Blairmore Creek and Gold Creek, could interfere with the availability of subsistence fish species such as Mountain whitefish or trout and impact Kainai Nation rights to fish for food (O'Connor, 2018).

The Blood Tribe Food & Medicinal Plant Gathering Areas, Fishing & Trapping Map in the TKUA depicts the areas where these fish were found (O'Connor, 2018, p. 86).

Kainai Nation have explained that do not hunt or fish in national parks, provincial parks, and ecological reserves, and these areas were therefore deemed inaccessible for traditional land use.(Carlson *et al.*, 2018a). Furthermore, Kainai Nation does not fish in close proximity to well sites (approximately 500 m), and it was assumed in Kainai Nation's Cumulative Effects Assessment that they would not fish near industrial sites, settlements, rural residence, and other features used for non-TLU purposes (Carlson *et al.*, 2018a).

#### *Plant Gathering*

The TKUA indicates that Kainai Nation uses plants and foods for medicinal, cultural and subsistence purposes, as well as for traditional building (*e.g.* the use of lodgepole pine to make tipi poles). Harvesting food and plants is described as important to Blackfoot culture, medicine and subsistence (O'Connor, 2018). The TKUA notes that the Project TLU LSA is a valuable source of a variety of trees, shrubs, and other plants with traditional medicinal, subsistence, and artisanal uses and that the vegetation available in the Project TLU LSA is relatively unique compared to the vegetation on the prairie around the Kainai Nation reserve. Some of the vegetation is sourced specifically in the TLU LSA and RSA for ceremonial purposes.

During their field visit, Kainai Nation observed occurrences of the following plants with food, ceremonial, and medicinal use within the TLU LSA: Wild rose (*Rosa acicularis*), Buffalo berries (*Shepherdia canadensis*), Saskatoon berries (*Amelanchier alnifolia*), Yarrow (*Achillea millefolium*), Prairie Crocus (*Anemone patens*), Wild Strawberry (*Ledum glandulosum*), Labrador Tea (*Ledum glandulosum*), Saskatoon berries (*Amelanchier alnifolia*), Arboreal mosses, Lodgepole pine (*Pinus contorta latifolia*), White spruce (*Picea glauca*), Rocky Mountain alpine fir (*Abies bifolia*), Common juniper berry (*Juniperus communis*), Sweetgrass (*Hierochloe odorata*), Willow Trees (*Salix bebbiana*), Paintbrush plants (*Castilleja spp.*), Gooseberry (*Ribes inerme*), Horsetail (*Equisetum arvense*),

Wolfwillow (*Elaeagnus commutate*), and Red cherry or currant (*Ribes viscosissimum* or *sanguineum*).

The TKUA identifies other plants with food, ceremonial, and medicinal use within the TLU local study: Indian rhubarb (likely cow parsnip or *Heracleum maximum* but also possibly *Darmera peltate*), Bear root (possibly bear-grass root from *Xerophyllum tenax*), bitterroot (*Lewisia rediviva*), wild licorice (*Glycyrrhiza lepidota*), wild onion (*Allium textile* or *Allium geyeri*), a sweet root, and red tea (likely Red-osier dogwood, or *Cornus sericea*).

The Blood Tribe Food & Medicinal Plant Gathering Areas, Fishing & Trapping Map in the TKUA depicts the areas where these plants were found (O'Connor, 2018, p.86).

#### *Trails and Travelways*

The TKUA indicates that traditional Blackfoot trails and travelways into the Crowsnest Pass were roughly in line with Highway 3 and that the areas within the Project TLU LSA and RSA were used as camping and hunting areas along the trade route (O'Connor, 2018). Sites within the Project TLU LSA and RSA, such as DjPo-63, could contain archaeological and historic resources that are associated with Blackfoot use of trails in the area (O'Connor, 2018). The TKUA identifies the following trails and travelways:

- Access roads into TLU LSA from Highway 3;
- Access into TLU LSA from Highway 40 *via* a gas lease road; and
- Daisy Creek Trail.

#### *Analysis*

The background information from the TKUA presented above for hunting, fishing, and plant gathering is captured in EIS Update Section H (Background Information), the Aboriginal Cumulative Effects Assessment and associated VC sections of the EIS Update. The analysis presented by Carlson et al. provides more detail than what was provided prior to submission of the EIS and subsequent Addenda and is considered complementary to the information provided in this report.

The TKUA and Cumulative Effects Assessment discuss the importance of hunting, fishing, trapping, and plant gathering to Kainai members and identify harvested species and harvesting areas. Most of the species described are captured in the EIS and the Aboriginal Cumulative Effects Assessment (August, 2018), as discussed in [Section 4.1.4](#). As described in the section above, the Kainai Nation reports provide an additional level of detail with respect to wildlife, fish and plant harvesting (*i.e.* species not identified in past Kainai reports or in the EIS) and with

respect to potential trapping in the Project TLU LSA and RSA, however no new species were identified. Lastly, the reports provide new information regarding trails and travelways.

The reports provide new information and add an additional level of depth to the assessment, the information provided does not alter Benga’s assessment of the potential for the Project to result in effects described in the EIS Update Section H.

4.1.5.2 Assessment of Potential Effects and Proposed Mitigation Measures

This section describes Kainai Nation’s assessment of potential effects to the Current Use of Lands and Resources for Traditional Purposes VC, as described in the TKUA (O’Connor, 2018). While the potential effects identified by Kainai Nation were similar to those in the EIS, the assessment methods were different.

*Hunting*

The TKUA analysis of the Project’s potential effects to Kainai Nation hunting is outlined by O’Connor (2018, p. 102) as the following:

Project-Impact	Related Valued Components	Effects to Kainai TKU
Loss of wildlife habitat, habitat fragmentation and reduced wildlife habitat connectivity (and wildlife movement), impacts on wildlife mortality and wildlife health, and effects on regional wildlife diversity. Disturbance of 1,502.7 ha of land that could support wildlife	Elk, moose, mule deer, bighorn sheep, beaver, eagles; Blairmore Creek valley and tributaries, Bluff Mountain and Grassy Mountain, Gold Creek and tributaries, access roads and trails, traditional hunting camps	Loss of crown land to practice hunting; loss of access to wildlife habitat and related loss of hunting opportunities and a likely decline in hunting in the TLU LSA and RSA, infringement on Aboriginal and Treaty Rights

*Trapping*

The TKUA states that potential effects to trapping are the potential effects to hunting, including reducing the availability of nesting areas for bald eagles and golden eagles and sensory disturbance that could lead to eagle displacement. The TKUA identifies interference with traditional Kainai Nation trapping of eagles and harvesting of eagle feathers as an effect to Kainai Nation TKU. The TKUA re-states the Proponent’s proposed mitigation and provides their analysis and comments (O’Connor, 2018). No new mitigation measures for trapping were identified.

*Fishing*

The TKUA analysis of the Project’s potential effects to Kainai Nation fishing is outlined by O’Connor (2018, p. 102) as the following:

<b>Project-Impact</b>	<b>Related Valued Components</b>	<b>Effects to Kainai Nation TKU</b>
Changes in water flows, sedimentation, fish mortality and morbidity in Blairmore Creek, Gold Creek and Crowsnest River	Blairmore Creek and tributaries; Gold Creek and Tributaries; Crowsnest River, Westslope cutthroat trout, Brook trout, Rainbow Trout, Mountain Whitefish bull trout	Loss of availability and quality of fish and related decline in Kainai Nation fishing opportunities; loss of access to fishing areas, infringement on Aboriginal and Treaty Rights

*Plant Gathering*

The TKUA analysis of the Project’s potential effects to Kainai Nation fishing is outlined by O’Connor (2018, p. 102) as the following:

<b>Project-Impact</b>	<b>Related Valued Components</b>	<b>Effects to Kainai Nation TKU</b>
Loss of ecosites supporting a wide variety of traditional use plants; Disturbance to 1,502.7 ha of land that could support vegetation; loss of availability of plants	Lodgepole pine, sweet pine, cottonwood, birch, aspen, spruce, wild licorice, horsetail, juniper, bearberry, dry tree moss, moist ground moss, yarrow, rose hip, raspberries, thimbleberries, and mushrooms, buffalo berries, goose berries, gooseberries, moss, prairie crocus, strawberry, Labrador tea, sweet grass, wolfwillow, paintbrush plants, cow parsnip, red-osier dogwood, wild onion, bear-root, lay-down root	Loss of availability and abundance of traditional use plants, loss of space to harvest, loss of access to harvesting areas, decline in use and enjoyment of plants of cultural and ceremonial significance, infringement on Aboriginal and Treaty Rights

*Trails and travelways*

The TKUA analysis of the Project’s potential effects to Kainai Nation trails and travelways is outlined by O’Connor (2018, p. 102) as the following:

Project-Impact	Related Valued Components	Effects to Kainai Nation TKU
Access restrictions to southern portion of TLU LSA; Access changes to northern portion of TLU LSA	Crownsnest Pass historic travel corridor; access roads into TLU LSA from south; access into TLU LSA from Highway 40; Daisy Creek Trail	This loss of access to areas for the exercise Aboriginal rights poses risks of a potential infringement of Aboriginal and treaty rights on crown land portions of the TLU LSA.

*Mitigation Measures*

The following additional mitigation measures were identified in the TKUA:

- Quarterly reports provided to Kainai Nation on the environmental impacts of the Project.
- Binding commitment prior to project approval to turn over privately owned lands within the Mine Permit Area to Kainai Nation or the Blackfoot Confederacy upon final mine closure and reclamation.
- Funding support prior to construction and vegetation clearing for a Kainai Nation cultural camp within the Project footprint.  
(O’Connor, 2018).

The following additional mitigation measures were identified in the Cumulative Effects Assessment:

- Establishment of a network of provincial, national parks and sanctuaries where hunting is prohibited. These areas provide refugia for wildlife and act as source areas for repopulating adjacent areas where mortality rates may be higher.
- In a sense, Alberta’s hunting “constraint” regulations (number of available tags, when and where one can harvest) reflect the basic understanding that hunters with extensive “access” to the regional landscape of a wildlife species can, if unregulated, create a combined mortality rate that is excessive relative to population objectives. The greater the extent to which the hunting community can access wildlife habitat with vehicles (including OHVs), the greater the need for regulatory constraints.
- Road sanctuary buffers on selected roads. These buffers are generally applied to roads where hunting is prohibited within 365 m of the road right of way.
- Prohibition of some forms of transportation (such as OHVs) along selected linear features (roads, seismic lines) during defined times of the day or week.

- Integrated landscape management strategies that seek to reduce the quantity of linear footprint that is needed to extract natural resources  
(Carlson *et al.*, 2018, p. C-14).

### *Analysis*

In EIS Section H, the Aboriginal Cumulative Effects Assessment, and subsequent management plans, Benga has committed to implementing mitigation measures that will address the effects to hunting, fishing, trapping and plant gathering discussed in those same assessment documents. These mitigations also apply to the effects described by Kainai Nation above. Where Kainai Nation has identified additional mitigation measures, these will be discussed with Kainai Nation in follow-up meetings.

Kainai Nation had not provided information on trails and travelways for the EIS and, consequently effects to trails and travelways were not identified in the EIS for Kainai Nation. However, effects to trails and travelways are discussed in the Aboriginal Cumulative Effects Assessment, along with associated mitigation measures.

The background information provided in the TKUA does require a change to the background information provided in the EIS and related Addenda. Mitigations related to access for hunting, trapping and plant gathering identified in the EIS apply to the potential effects to trails and travelways. In addition, Benga is currently working with the Kainai Nation on the development of an access management plan that will take into account access needs to areas for traditional use and cultural practices.

#### 4.1.5.3 Characterization of Residual Effects

The TKUA characterizes residual effects to the Current Use of Lands and Resources VC (and VC subcomponents) (O'Connor, 2018). Because the methods and assumptions used by Kainai differ from those used in the EIS and Aboriginal Cumulative Effects Assessment, the TKUA acts as a supplementary document. In this report, Benga has incorporated information provided by Kainai Nation using the methods in the EIS and those described in [Section 3.1](#) above, no changes are required to the results of Benga's characterization of residual effects to the Current Use of Lands and Resources for Traditional Purposes VC.

#### 4.1.5.4 Cumulative Effects Assessment

Kainai Nation provided a Cumulative Effects Assessment that provides additional detail to what was provided prior to the submission of the EIS. The Cumulative Effects Assessment (Carlson *et al.* 2018) concluded that regionally there is a moderate risk to the fish community and a high risk to elk and mule deer related to loss of land cover and high linear footprint

densities, and that regional accessibility for traditional use is limited to an estimated 20% of the landscape (2018a). Loss of land cover was found to be lower in the focal study area, though still below natural conditions resulting in moderate risk to elk and mule deer and associated land use. The fish community was found to be at a moderate risk due to fragmentation and access for fishing and was found to be at a high risk over the next 50 years due to warming. The assessment concluded that “any further decline in opportunities for traditional land use may be of concern given that risk to traditional land use is already assessed as high” (Carlson *et al.*, 2018, p. 38).

The methods used by Carlson *et al.* are different from those used in the EIS and are therefore not comparable to the EIS’s characterization of cumulative effects. In this report, Benga has incorporated information provided by Kainai Nation using the methods in the EIS and Aboriginal Cumulative Effects Assessment (August 2018), and methods described in [Section 3.1](#) above; no changes are required to the results of Benga’s characterization of cumulative effects to the Current Use of Lands and Resources for Traditional Purposes VC.

#### 4.1.5.5 Follow-up and Monitoring

Benga has committed to follow up and monitoring in the EIS Section H and the Aboriginal Cumulative Effects Assessment. These measures apply to the residual effects identified in the Kainai TKUA and Cumulative Effects Assessment. Benga will continue to discuss and seek input from Kainai Nation on follow up and monitoring programs prior to construction.

#### 4.1.6 Aboriginal Health

No new information has been provided by Kainai Nation related to Aboriginal Health. No changes to the findings of the EIS are required.

#### 4.1.7 Aboriginal Socio-Economic Conditions

No new information has been provided by Kainai Nation related to Aboriginal Socio-Economic Conditions. No changes to the findings of the EIS are required.

#### 4.1.8 Aboriginal Physical and Cultural Heritage

##### 4.1.8.1 Background Information

This section summarizes background information related to the Aboriginal Physical and Cultural Heritage VC which has been provided by Kainai Nation since the EIS was submitted, in the TKUA (O’Connor, 2018) and the Kainai Nation Cumulative Effects Assessment (Carlson *et al.*, 2018a).

The TKUA indicates that the Crowsnest Pass area is a “very sensitive area” and is central to Blackfoot culture, spirituality, and religion (O’Connor, 2018, p. 63). The TKUA specifies sites within the Project TLU LSA and RSA are significant for traditional material culture, such as material for knives and arrowheads (O’Connor, 2018).

The Kainai Nation field team visited thirteen (13) sites that relate to Aboriginal physical and cultural heritage. The Blood Tribe Sites of Cultural, Historical, Ceremonial or Archaeological Significance and the Blood Tribe Traditional Occupancy (Pre-Contact) & Archaeological Sites Map in the TKUA depicts the areas where these sites are located (O’Connor, 2018, p. 61 & 62). Of these sites, nine (9) out of thirteen (13) were included in the EIS. The TKUA indicates the following four (4) have not been included in the EIS:

- DjPo-216
- DjPo-219
- DjPo-214
- DjPo-37

These sites are described and assessed in the HRIA. Fieldwork has been completed and a report filed with Alberta Culture for the Project. Alberta Culture has responded indicating that additional studies at sites 214, 216 and 219 are required if avoidance is not possible while no additional studies are required at site 37.

The TKUA indicated the following are sites or areas of current use for ceremonial, spiritual, cultural, educational or historical value, or unique ecological characteristics of interest to Kainai Nation:

- Ancient camps and associated archaeological features along Blairmore Creek;
- Tipi rings and stone cairns in proposed South Dump;
- Ancient camps and battle grounds in South Dump and related features;
- Bison jump site and archaeological and heritage resources in South Dump;
- Tipi rings and iniskim along ridge above rail load-out area;
- Crowsnest River Valley pre-contact travel and trade route;
- Wetlands (Tall Grass Lakes) as nesting grounds and migratory bird habitat; and
- Natural spring features.

(O’Connor, 2018, p. 41)

The discovery of tipi rings and erratics during field work suggested the potential for additional archaeological or historical resources significant to Kainai Nation culture. Additional features of interest indicated within the PDA are: fire broken rocks, pottery, medicine wheels, vision

quest sites, stone effigies, artifact scatters or deposits, arrowheads, pipes or carvings, bone piles, human remains, stone effigies, and a healing sulphur spring.

The TKUA indicates that cumulative loss of access to lands has altered traditional occupancy patterns, and states that access to areas of physical and cultural heritage has been diminished by logging, oil and gas facilities, pipelines, and powerlines and cutlines. The TKUA further explains that while most land in the southern and eastern portion of the TLU LSA is private and therefore restricted for traditional harvesters, land in the northern and western portions of the TLU LSA is mainly crown land. Land Camping areas within the TLU RSA are still in use today (O’Connor, 2018). The Blood Tribe Current Occupancy & Cumulative Effects Map in the TKUA depicts the areas where these sites are located (O’Connor, 2018, p. 71).

#### 4.1.8.2 Assessment of Potential Effects and Proposed Mitigation Measures

The TKUA analysis of the Project’s potential effects to Kainai Nation sites of archaeological, historical, cultural or spiritual importance and occupancy is outlined by O’Connor (2018) as the following:

Project-Impact	Related Valued Components	Effects to Kainai Nation TKU
Disturbance or destruction of sites of archaeological, historical, cultural importance including both documented and previously undocumented archaeological site	Pre-contact camps, tipi rings, stone cairns, artifacts, hearths, tools, lithics, ceremonial sites, historic occupancy areas, bones, traditional ceremonial vegetation	Disturbance or destruction of sites would have negative effects to Kainai Nation members’ psychological well-being, cultural sustainability and use and sense of connection to the portions of their traditional territory within the TLU LSA.
Access Restrictions to TLU LSA and RSA	Sites of archaeological, historical, or cultural importance, traditional camps, aquatic resources, vegetation, building materials, wildlife	Loss of access and use of traditionally occupied crown lands in the northern portion of the TLU LSA; continued and ongoing restrictions on access to privately owned land in southern portion of TLU LSA.

#### *Mitigation Measures*

The TKUA proposed the following mitigation measures for observed sites within the TLU local study area:

- A buffer zone of 100 meters be established around the rocky hill associated with DkPo-7, tipi rings and erratics located during the TKUA field work, DjPo-219, DjPo-184, DjPo-217, DjPo-216, DjPo-214, DjPo-116, DjPo-98.
- Further information provided to Kainai Nation by Benga on the status of DjPo-130 and the findings of any additional archaeological field research completed at the site.
- Further information provided to Kainai Nation by Benga about additional excavations and mitigation measures that Benga plans to implement for DjPo-63, DjPo-52, and DjPo-32 prior to disturbance.
- Protection from future development for DjPo-37.
- Map rock art sites within the TLU RSA on Bluff Mountain and submit a request to Alberta Culture and Tourism to have the site designated or otherwise protected from future development (O'Connor, 2018).

Section H of the EIS acknowledges that the Project could result in measurable effects on sacred, gathering, and habitation sites used by Kainai Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project would still affect current use if sites are directly disturbed or removed.

In EIS Section H, the Aboriginal Cumulative Effects Assessment, and subsequent management plans, Benga has committed to implementing mitigation measures for impacts to sites of importance. These mitigations also apply to the effects described by Kainai Nation above. Where Kainai Nation has identified additional mitigation measures, these will be discussed with Kainai Nation in follow-up meetings.

#### 4.1.8.3 Characterization of Residual Effects

The methods and assumptions used by Kainai Nation in its characterization of effects to the Aboriginal Physical and Cultural Heritage VC (O'Connor, 2018) differ from those used in the EIS. In this report, Benga has incorporated information provided by Kainai Nation using the methods in the EIS and methods described in [Section 3.1](#) above; no changes are required to the results of Benga's characterization of residual effects to the Aboriginal Physical and Cultural Heritage VC.

#### 4.1.8.4 Cumulative Effects Assessment

Kainai Nation did not provide a Cumulative Effects Assessment for Aboriginal Physical and Cultural Heritage. Benga has provided a Cumulative Effects Assessment for this VC in Addendum #8 Aboriginal Cumulative Effects Assessment. No changes are required to Benga's assessment.

#### 4.1.8.5 Follow-up and Monitoring

Benga has committed to follow up and monitoring in EIS Section H and the Aboriginal Cumulative Effects Assessment. These measures apply to the residual effects identified in the Kainai Nation TKUA section on Aboriginal Physical and Cultural Heritage. Benga will continue to discuss and seek input from Kainai Nation on follow up and monitoring prior to construction.

#### 4.1.9 Conclusions

Information that Kainai Nation has provided to Benga since the submittal of the EIS in August 2016 has informed ongoing consultation and Project planning including the further development of mitigation measures and construction management and monitoring plans. The new information, which is summarized above, does not change the identification of Aboriginal VCs, the identification of potential adverse effects on Aboriginal VCs, or the residual effects characterizations as presented in Section H of the EIS; or the characterization of residual cumulative effects as presented in EIS Addendum #8, Appendix A-1.

### 4.2 Piikani Nation

#### 4.2.1 Summary of Key Consultation Activities

Between August 16, 2016 and December 31, 2018, Benga and Piikani Nation representatives have had ongoing dialogue regarding the EIS, mitigation measures and issues and concerns. Piikani Nation have engaged actively in Project review, submitting comments, participating in meetings, traditional land use fieldwork and site visits and preparing the following reports:

- Piikani Nation’s Review of the Grassy Mountain (Ksiistsiiko’om oomoiyyi) Coal Project Environmental Impact Study (July 2016) (Piikani Nation Technical Review)

Benga has been addressing the Piikani Nation’s technical review comments throughout the EIS review period. Benga does not expect additional reporting from the Piikani Nation. Piikani Nation has also completed an assessment of the archaeological sites of interest identified as part of the Historic Resources Impact Assessment (HRIA). Benga has provided funding to support Piikani Nation’s participation in the environmental assessment process. [Table 4-4](#) below provides a chronology of key consultation activities with Piikani Nation.

**Table 4-4 Chronology of Key Consultation Activities with Piikani Nation**

Date	Method of Communication	Topic
September 27, 2016	E-mail	Benga provided a cover letter to Piikani Nation, and a copy of the Updated Environmental Impact Statement application that was submitted to regulators in August 2016.
December 22, 2016	E-mail	Piikani Nation sent a letter (dated December 15, 2016) outlining plans for on-going consultation with Piikani Nation on the Project.
February 2, 2017	Meeting	<p>Benga and Piikani Nation met to review Project updates. Benga hand delivered 1 USB containing the Environmental Impact Statement (EIS, August 2016 update) and Addenda (wildlife and aquatics). Main discussion items included:</p> <ul style="list-style-type: none"> <li>• a regulatory update on Project activities and status of the AER review and joint review panel process with CEAA;</li> <li>• consultation planning and upcoming tasks related to the EIS technical review workshop planned to discuss issues presented in the summary letter (December 15, 2016);</li> <li>• timing and format of an issues and mitigations meeting;</li> <li>• review of the nine issues and recommendations presented in the summary letter; and,</li> <li>• the implementation of a monitoring program.</li> </ul>
March 1, 2017	E-mail	Benga provided Traditional Land Use fieldwork location data for review.
March 20, 2017	E-mail	Piikani Nation provided questions for series of conference calls to be held from March 20-24, 2017.
March 22, 2017	E-mail	For discussion purposes during the conference calls, Benga provided draft responses to the questions sent by Piikani Nation on March 20, 2017. Benga advised that the responses would be updated after the conference call.
March 22, 2017	Telephone Conference	<p>Conference call (1 of 3) to discuss ground water, surface water, hydrology, fisheries offsets and trout recovery in preparation for the April 2017 Piikani Nation Technical Review workshop to address concerns and recommendations outlined in the Piikani Nation Technical Review. Main areas of discussion included:</p> <ul style="list-style-type: none"> <li>• management and monitoring plans including details on the integration of traditional knowledge into the design;</li> </ul>

<b>Table 4-4 Chronology of Key Consultation Activities with Piikani Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
		<ul style="list-style-type: none"> <li>• First Nation involvement in the monitoring, management plan, stewardship program and mitigation measure development;</li> <li>• assessment of natural springs; and,</li> <li>• communication of results to First Nation members.</li> </ul>
March 23, 2017	Telephone Conference	<p>Conference call (2 of 3) to discuss dust, air, noise, human health and Aboriginal food consumption in preparation for the April 2017 Piikani Nation Technical Review workshop to address concerns and recommendations outlined in the Piikani Nation Technical Review. The discussion included:</p> <ul style="list-style-type: none"> <li>• mitigation, management and monitoring plan development including details on the integration of First Nation involvement in each area; and,</li> <li>• the communication of results to First Nation members and reporting mechanisms.</li> </ul> <p>Conference call (3 of 3) to discuss reclamation planning, biodiversity management, wildlife and access management in preparation for the April 2017 Piikani Nation Technical Review workshop. The discussion included:</p> <ul style="list-style-type: none"> <li>• design and implementation of the conservation and reclamation plan;</li> <li>• mitigation;</li> <li>• management and monitoring plan development including details on the integration of First Nation involvement and traditional use values in each area;</li> <li>• the communication of results to First Nation members; and,</li> <li>• reporting mechanisms.</li> </ul>
May 1, 2017	E-mail	Piikani Nation provided comments on a map of the Project footprint.
May 2, 2017	E-mail	<p>Benga provided the following documents:</p> <ul style="list-style-type: none"> <li>• Conceptual Offset Plan Memo;</li> <li>• Environmental Impact Assessment Update Memo; and,</li> <li>• questions and answers for March 22-23, 2017 conference calls.</li> </ul>

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
May 4, 2017	Meeting	Benga and Piikani Nation met to follow up on the Piikani Nation community based Technical Review Workshop that took place on May 3, 2017. The intent was to address the nine key issue areas outlined in the Piikani Nation Technical Review, and to discuss what Piikani Nation would like to see in the follow up and monitoring programs.
May, 2017	Mail	Benga sent a Project update letter and a hard copy of the “Conveyor - the Grassy Mountain Spring 2017 Community Newsletter (Vol. 2 Issue 1)”, and the following documents: <ul style="list-style-type: none"> <li>• EIS (August 2016)</li> <li>• Update to Aquatic Ecology Assessment (Consultant Report #6) (January 2017)</li> <li>• Update to Wildlife Assessment (Consultant Report #8) (January 17)</li> </ul> The Newsletter included: research into the winter ecology of Cutthroat Trout, and community updates.
June 20, 2017	E-mail	Benga provided a copy of the Environmental Management Plan summary for review.
June 28, 2017	E-mail	Benga provided electronic files from a mailout sent to Piikani Nation in May, 2017.
October 23, 2017	Meeting/Site Tour	Benga and Piikani Nation toured the Grassy Mountain Project site.
November 6, 2017	Mail	Benga sent a letter providing information on the Alberta Energy Regulator Notice of Application for the Grassy Mountain Coal Project (including a link to the application and list of documents submitted to the AER). A USB was included which provided an electronic copy of the EIS, Addendum #1 (Wildlife and Aquatics Addenda completed in January 2017) and Addendum #2 (Updates to EIS Sections C.5.1 and C.5.2).
November 7, 2017	E-mail	Benga sent an electronic copy of the letter and materials included in the November 6, 2017 mailout.
November 8, 2017	E-mail	Benga provided an environmental management plan summary and information on monitoring programs.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
November 21, 2017	E-mail	Benga provided a monitoring plan summary, access management plan framework, management plans summary, and addendum cover letter.
November 23, 2017	Meeting	<p>Main discussion items were:</p> <ul style="list-style-type: none"> <li>• Benga progress update;</li> <li>• Project status and timelines;</li> <li>• Impact Benefit Agreement/Capacity Agreement;</li> <li>• monitoring and development of Environmental Management Plans;</li> <li>• mitigation meeting; and,</li> <li>• consultation budget.</li> </ul> <p>Meeting handouts included: EIS Appendix 7d (i) and (ii): Aboriginal Access Management Plan/Cultural Site Discovery Contingency Plan; EIS Monitoring Summary; Environmental Management Plans (EMPs) Summary; Specific Concern and Response table (Draft Version – Nov 23, 2017).</p>
January 9, 2018	Meeting	<p>Benga and Piikani Nation met to discuss the January 25-26, 2018 mitigation meeting and plan for Project-related activities. Main discussion items were:</p> <ul style="list-style-type: none"> <li>• Project regulatory process;</li> <li>• status of Traditional Use (TU)/Traditional Knowledge (TK) Information; and,</li> <li>• mitigation measures.</li> </ul>
January 12, 2018	E-mail	Benga provided a March 9, 2017 letter from Dustin Wolfe outlining the objectives for the technical calls and follow up meetings, notes from each of the 3 conference calls, the Specific Concern and Response table, and the EIS Appendix 7d.
January 16, 2018	E-mail	Benga provided a map produced for Piikani Nation community meetings in 2017.
January 24, 2018	E-mail	<p>Benga provided Project information including:</p> <ul style="list-style-type: none"> <li>• the EA Monitoring Summary from November 24, 2017;</li> <li>• the EIS Appendix 7d;</li> <li>• the Grassy Mountain Project Management Plans Summary 2017; and,</li> </ul>

<b>Table 4-4 Chronology of Key Consultation Activities with Piikani Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
		<ul style="list-style-type: none"> <li>the Piikani Nation Technical Review Table of Responses draft from January 2018.</li> </ul>
January 25, 2018	Meeting	Benga and Piikani Nation met to discuss the Piikani Technical Review.
January 26, 2018	E-mail	Benga provided an updated version of the EIS Technical Review Table of Responses.
February 2, 2018	E-mail	Piikani Nation provided comments on the EIS Technical Review Table of Responses.
February 12, 2018	E-mail	Benga provided a Project update letter and the “Conveyor: Winter 2018 edition” Newsletter. The Newsletter included information on: a regulatory process update; water conservation; Project FAQs; and community involvement updates.
April 16, 2018	E-mail	Benga provided: <ul style="list-style-type: none"> <li>the EIS Technical Review Responses;</li> <li>ACO Format Issues spreadsheet; and,</li> <li>the commitments table.</li> </ul>
May 4, 2018	Meeting	Meeting to discuss the next steps of the consultation process. Benga provided the Project Footprint Map. Discussion items included: <ul style="list-style-type: none"> <li>access planning;</li> <li>communication protocols;</li> <li>harvesting;</li> <li>concern and response table; and,</li> <li>traditional land use.</li> </ul>
May 29, 2018	E-mail	Benga provided the “Conveyor Spring 2018 edition” Project Newsletter. The Newsletter covered: the Riversdale volunteer program; employee profiles; Project FAQs; rail loadout information; regulatory process update; and, community updates.
May 29, 2018	Mail	Benga sent a Project update letter and the “Conveyor Spring 2018 edition” Project Newsletter.
June 1, 2018	E-mail	Benga provided the Grassy Mountain Project Environmental Management Plans Summary.
June 11, 2018	E-mail	Piikani Nation provided a draft budget for the June 14 and 15, 2018 EIS technical issues meetings.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
June 12, 2018	E-mail	<p>Benga provided a Project update letter and information package including:</p> <ul style="list-style-type: none"> <li>• Project update letter (June 6, 2018);</li> <li>• two maps of the Project footprint in 2015 (Fig. 1) and 2016 (Fig. 2);</li> <li>• a list of all Crown lands within the Mine Permit Boundary and a comparison of 2015 to current (Table 1);</li> <li>• a complete list of Crown land where Benga has submitted applications for Mineral Surface lease and License of Occupation dispositions (Table 2); and,</li> <li>• the location of proposed dispositions (Fig 3).</li> </ul>
June 12, 2018	Telephone Conference	<p>Benga and Piikani Nation met to discuss:</p> <ul style="list-style-type: none"> <li>• development and community review of the Environmental Management Plans;</li> <li>• process for reviewing management plans and budgets; and,</li> <li>• scheduling of meeting for summer 2018.</li> </ul>
July 3, 2018	E-mail	Benga provided a table of the Environmental Management Plans and their progress.
July 18, 2018	Site Visit	Tour of HRIA sites.
July 31, 2018	Site Visit	Tour of HRIA sites.
August 1, 2018	Site Visit	Tour of HRIA sites.
September 4, 2018	Meeting	<p>Benga and Piikani Nation met to discuss:</p> <ul style="list-style-type: none"> <li>• project regulatory updates;</li> <li>• ACO bimonthly reporting;</li> <li>• update on 2018 fieldwork; and,</li> <li>• various timelines for required information.</li> </ul>
September 26, 2018	Phone Call	Benga and Piikani Nation discussed objectives of upcoming meeting with Nation Chief and Council, and potential dates for a Piikani Nation Elders Information Session.
October 22, 2018	Meeting	<p>Benga and Piikani Nation met to discuss:</p> <ul style="list-style-type: none"> <li>• EIS overview presentation;</li> <li>• project overview and regulatory updates;</li> </ul>

<b>Table 4-4 Chronology of Key Consultation Activities with Piikani Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
		<ul style="list-style-type: none"> <li>overview of construction, operations, reclamation and closure phases;</li> <li>Environmental Impact Statement;</li> <li>engagement summary of consultation activities to date;</li> <li>monitoring program development;</li> <li>future process of Piikani Nation and Benga to follow through on consultation commitments; and,</li> <li>Piikani, Kainaiwa, Siksika and Amskapii Piikani and the Blackfoot confederacy moving forward as collective entity.</li> </ul>
October 30, 2018	Mail	<p>Benga provided copies <i>via</i> USB of the Technical Application and EIS (integrated application), filed August 12, 2016 and addenda to date including:</p> <ul style="list-style-type: none"> <li>Addendum #1, filed January 31, 2017</li> <li>Addendum #2, filed October 16, 2017</li> <li>Addendum #3, filed November 9, 2017</li> <li>Addendum #4, filed November 27, 2017</li> <li>Addendum #5, filed February 28, 2017</li> <li>Addendum #6, filed April 30, 2018</li> <li>Addendum #7, filed May 28, 2018</li> <li>Addendum #8, filed October 17, 2018</li> </ul>
November 1, 2018	E-mail Mail	<p>Benga provided a project update letter and the Fall 2018 newsletter Hard copies <i>via</i> USB to follow</p>
November 5, 2018	E-mail	<p>Benga provided the Canadian Environmental Assessment Agency’s announcement of the Joint Panel Review public comment period for the Project.</p>
November 23, 2018	E-mail	<p>Benga provided a series of documents for the period December 15, 2014 to April 15, 2018 including:</p> <ul style="list-style-type: none"> <li>a covering letter;</li> <li>cumulative Record of Consultation Log;</li> <li>cumulative revisions table;</li> <li>cumulative response table; and,</li> </ul>

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
		<ul style="list-style-type: none"> <li>communication summary of all correspondence with Kai Scott.</li> </ul>
November 29, 2018	E-mail	Benga informed Piikani Nation that the ACO had extended its timelines for review of the materials sent that Benga sent to Piikani Nation on November 23, 2018.

#### 4.2.2 Issued Raised Since Submission of the EIS

Piikani Nation has raised a number of concerns and interests throughout the environmental assessment process. The following is a summary of these concerns and interests and an overview of how Benga has considered them. For a full list of specific concerns and responses by Benga, see [Appendix A-2](#).

Piikani Nation raised issues regarding the following Aboriginal Interests:

- Aboriginal Health
- Monitoring
- Aboriginal Physical & Cultural Heritage
- Aboriginal Socio-Economic Conditions
- Current Use of Lands & Resources for Traditional Purposes
- Fish & Aquatic Resources
- Fishing
- Hunting
- Plant Gathering
- Terrain & Soils
- Trails & Travelways
- Trapping
- Vegetation & Wetlands
- Wildlife
- TK/TU

In addition, Piikani Nation raised the following concerns:

- Access
- Air Quality & Climate
- Biodiversity
- Consultation
- EA Process
- Human & Wildlife Health
- Hydrogeology
- Hydrology
- Noise
- Reclamation
- Surface Water Quality

While Piikani Nation concerns have been categorized by Valued Component (VC) or other major topic area, they should be seen as interrelated. Benga understands that Project impacts to biophysical features, lands and resources are linked to the Nation's ability to continue to pursue their Treaty Rights and maintain their cultural way of life.

Benga has considered and addressed Piikani's concerns in the following ways:

- provision of information on how impacts were assessed in the EIS;
- consultation on mitigation measures, management and monitoring plans;
- arrangement of ceremonies and support of cultural orientation programs;
- review and response to Piikani Technical review report and meetings to discuss;
- working with Piikani Nation to provide employment opportunities including job readiness training;
- support for additional fieldwork to take place in 2019 to mark locations for harvesting and in relation to fisheries offset planning; and
- meetings with Piikani Nation to discuss and resolve issues and concerns.

#### **4.2.3 Summary of Reports Received Since Submission of the EIS**

##### 4.2.3.1 Updated Review of Riversdale Resources Riversdale Limited Grassy Mountain (Ksiistsiiko'om oomoiyyi) Coal Project Environmental Impact Study, July 2016

The Updated Review of Riversdale Resources Riversdale Limited Grassy Mountain (Ksiistsiiko'om oomoiyyi) Coal Project Environmental Impact Study (the Updated Technical Review) completed by Schaldemose & Associates reviews the Grassy Mountain Coal Mine Application, highlighting issues of concern Piikani Nation may raise (2016). The Updated Technical Review provides recommendations to address potential environmental, cultural and cumulative effects based on an understanding of the community's key concerns (Schaldemose & Associates, 2016, p. 4). The summary table of issues from the Updated Technical Review that are not listed in the Piikani Nation Specific Concern and Response Table are attached in [Appendix B](#).

The Update Technical Report assesses the following:

- completeness of the Environmental Assessment application to Environmental Impact Statement Guidelines and Terms of Reference;
- assessment conclusions that do not represent Piikani Nation's perspective in terms of potential impacts to rights; and

- potential environmental effects, cultural effects and cumulative effects that might affect Piikani Nation’s ability to exercise constitutionally protected rights.  
(Schaldemose & Associates, 2016, p. 4).

#### 4.2.4 Conclusions

Information that Piikani Nation has provided to Benga since the submittal of the EIS in August 2016 has informed ongoing consultation and Project planning including the further development of mitigation measures and construction management and monitoring plans. The new information, which is summarized above, does not change the identification of Aboriginal VCs, the background information, the identification of potential adverse effects on Aboriginal VCs, or the residual effects characterizations as presented in Section H of the EIS; or the characterization of residual cumulative effects as presented in EIS Addendum #8, [Appendix A-2](#).

### 4.3 Siksika Nation

#### 4.3.1 Summary of Key Consultation Activities

Between August 16, 2016 and December 31, 2018, Benga and Siksika Nation representatives have had ongoing dialogue regarding the EIS, mitigation measures and issues and concerns. Siksika Nation has engaged actively in Project review, submitting comments, participating in meetings, traditional land use field work and site visits, and conducting the following additional work related to the Project:

- Traditional land use visits and studies
- Assessment of HRIA sites

In December 2018, Benga received two reports from Siksika Nation:

- *Cumulative Effects Assessment for Siksika Nation*, November, 2018. Integral Ecology Group and ALCES Group. (See Appendix D)
- *Siksika Traditional Use Study Report #4 Grassy Mountain Coal Mine*. December, 2018. Siksika Consultation Office. (See Appendix E)

Benga has provided funding to support Siksika Nation’s participation in the Project environmental assessment process.

[Table 4-5](#) provides a chronology of key consultation activities with Siksika Nation.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
August 16, 2016	E-mail	Siksika Nation requested an update on the status of the EIS filing.
August 26, 2016	Meeting	<p>Main discussion items included:</p> <ul style="list-style-type: none"> <li>• actions identified from the previous meeting;</li> <li>• Environmental Assessment submission;</li> <li>• next steps in the regulatory process, consultation planning; and,</li> <li>• an open house.</li> </ul> <p>Benga provided a copy of the EIS that was submitted to regulators on August 15, 2016 and a cover letter at the meeting.</p>
October 3, 2016	E-mail	Siksika Nation requested access for a two-day site-visit for a supplemental traditional use study. Benga responded that accommodating access to the site would not be a problem.
December 9, 2016	E-mail	Benga provided the “Conveyor - the Grassy Mountain Fall 2016 Community Newsletter (Vol. 4 Issue 4)”. The Newsletter covered: creating a sustainable economy through diversity; understanding Project waterways; Coleman fish and game pond improvements; environmental impact assessment update; and, community updates.
February 10, 2017	Telephone Conference	<p>Main discussion items included:</p> <ul style="list-style-type: none"> <li>• Project regulatory updates on the AER and Joint Panel Review process;</li> <li>• consultation process and planning; and,</li> <li>• Traditional land use assessment fieldwork.</li> </ul>
February 10, 2017	E-mail	Benga provided the Grassy Mountain First Nation Consultation Plan and Draft Consultation Workplan for Siksika Nation.
March 10, 2017	Meeting	<p>Benga and Siksika Nation met to discuss:</p> <ul style="list-style-type: none"> <li>• Project updates;</li> <li>• provide addenda to the Environmental Impact Statement;</li> <li>• discuss the Consultation Workplan;</li> <li>• Traditional Land Use Assessment; and,</li> <li>• consultation activities moving forward.</li> </ul> <p>Benga hand delivered a USB containing the Updated Aquatic Ecology Assessment (Consultant Report #6) (January 2017) and</p>

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
		the Updated Wildlife Assessment (Consultant Report #8) (January 2017).
March 15, 2017	E-mail	Siksika Nation requested archaeological information related to the Project. Benga responded that they would send the HRIA information as soon as possible.
March 15, 2017	E-mail	Benga provided an updated Draft Consultation Workplan for Siksika Nation.
March 27, 2017	E-mail	Benga provided Section E 13 of the Environmental Impact Statement including a summary of the HRIA in response to Siksika Nation's request for archaeological information on March 15, 2017.
March 31, 2017	E-mail	Benga provided an updated Draft Consultation Workplan for Siksika Nation.
April 6, 2017	Phone Call	Topics discussed included Traditional Knowledge/Traditional Land Use information and quarter section spreadsheet.
May 11, 2017	E-mail	Benga informed Siksika Nation that the Consultation Workplan had been approved.
May, 2017	Mail	<p>Benga sent a Project update letter and a hard copy of the "Conveyor - the Grassy Mountain Spring 2017 Community Newsletter (Vol. 2 Issue 1)", and the following documents:</p> <ul style="list-style-type: none"> <li>• EIS (August 2016);</li> <li>• Update to Aquatic Ecology Assessment (Consultant Report #6) (January 2017); and,</li> <li>• Update to Wildlife Assessment (Consultant Report #8) (January 17).</li> </ul> <p>The Newsletter included: research into the winter ecology of Cutthroat Trout, and community updates.</p>
June 23, 2017		Benga sponsored and attended a Cross Cultural Awareness Session hosted by Siksika Nation at Head Smashed In Buffalo Jump, Alberta.
June 24, 2017	E-mail	Siksika Nation provided an invitation to a shared Dropbox folder titled "Siksika Saikiminakssin Grassy Mtn Site Tour June 2014".
June 28, 2017	E-mail	Benga provided electronic files from a mailout sent to Siksika Nation in May, 2017.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
July 6, 2017	E-mail	Siksika Nation requested copies of the Joint Review Panel's Environmental Assessment report, the Draft Review Panel Terms of Reference, the Joint Review Panel Agreement, the Environmental Impact Statement (EIS), and the EIS summary.
July 17, 2017	E-mail	Benga proposed a meeting to present the EIS.
August 4, 2017	Meeting	Benga and the Siksika Nation met to discuss the August 22-25, 2017 Traditional Land Use fieldwork and to provide Siksika Nation with a printed copy of the Environmental Impact Statement and EIS Summary.
August 9, 2017	E-mail	Benga provided a workplan for Traditional Land Use fieldwork which required a signature from Siksika Nation.
August 22, 2017	Meeting	A pre-field meeting at the Benga Office in Blairmore was held in preparation for the Traditional Land Use Field work scheduled for August 22-25, 2017. Agenda items included: <ul style="list-style-type: none"> <li>• safety induction;</li> <li>• review Project infrastructure (presentation with infrastructure examples – sedimentation pond, dump area, soil stockpile covered overland conveyor, construction camp, coal handling processing plant, train load out, rail loop); and,</li> <li>• provide Project update and review timelines.</li> </ul>
October 2, 2017	E-mail	Benga provided the HRIA summary.
October 5, 2017	E-mail	Benga provided the HRIA presentation.
October 6, 2017	E-mail	Benga provided an update on engineering plans for the pre-contact camp site Dj Po-98.
October 17, 2017	E-mail	Benga provided the updated HRIA presentation.
November 6, 2017	Mail	Benga sent a letter providing information on the Alberta Energy Regulator Notice of Application for the Grassy Mountain Coal Project (including a link to the application and list of documents submitted to the AER). A USB was included which provided an electronic copy of the EIS, Addendum #1 (Wildlife and Aquatics Addenda completed in January 2017) and Addendum #2 (Updates to EIS Sections C.5.1 and C.5.2).
November 7, 2017	E-mail	Benga provided an electronic copy of the letter in the November 6, 2017 mail-out.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
February 12, 2018	E-mail	Benga provided Project update letters and the “Conveyor: Winter 2018 edition” Project Newsletter. The Newsletter included: employee profiles and human resources; a regulatory process update; water conservation; Project FAQs; and community involvement updates.
February 21, 2018	E-mail	Benga provided documents for reference in advance of the February 23, 2018 meeting: <ul style="list-style-type: none"> <li>• Concern and Response Table 2018-02-08;</li> <li>• Environmental Assessment (EA) Monitoring Summary 2017;</li> <li>• Environmental Impact Statement (EIS) Appendix 7d;</li> <li>• EIS Conservation and Reclamation Plan; and</li> <li>• Grassy Mountain Project Management Plans Summary 2017.</li> </ul>
February 23, 2018	Meeting	Meeting to review issues, concerns, and recommendations for mitigation identified by the Siksika Nation since the onset of consultation activities on the Grassy Mountain Coal Project.
February 27, 2018	E-mail	Benga provided a zip folder containing a draft series of maps which include the paths taken by archaeologists during the HRIA, as requested by Siksika Nation. Each of the maps show the following: <ul style="list-style-type: none"> <li>• the 2015 Project Boundary;</li> <li>• the boundaries of all the archaeological sites (pre-contact sites are in red, historic sites are in grey) and their associated labels;</li> <li>• all of Bison Archaeology’s survey tracks;</li> <li>• shovel tests results; and</li> <li>• all the surface exposures examined.</li> </ul>
March 7, 2018	E-mail	Benga provided the link to all documents related to Grassy Mountain Project in response to Siksika Nation’s request for Hydrology and Hydrogeology studies and assessments.
April 4, 2018	Phone call	Benga and Siksika Nation discussed planning: <ul style="list-style-type: none"> <li>• a follow up mitigation meeting;</li> <li>• a cultural awareness session for Benga; and</li> </ul>

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
		<ul style="list-style-type: none"> <li>a collaborative cultural session among the Blackfoot Nations.</li> </ul>
April 24, 2018	Phone call	Benga and Siksika Nation discussed consultation activities.
May 3, 2018	Phone call	Benga and Siksika Nation discussed TU fieldwork planning for summer 2018 and mitigation meeting follow-up.
May 10, 2018	Phone Call	Benga and Siksika Nation discussed fieldwork for the 2018 season and budgeting for follow up meetings.
June 8, 2018	Meeting	<p>Benga and Siksika Nation discussed fieldwork details for summer 2018. Items discussed were:</p> <ul style="list-style-type: none"> <li>review of HRIA site tour; and</li> <li>general timelines and a process to complete fieldwork related to the HRIA sites.</li> </ul>
June 12, 2018	E-mail	<p>Benga provided a Project update letter and information package including:</p> <ul style="list-style-type: none"> <li>project update letter (June 6, 2018);</li> <li>two maps of the Project footprint in 2015 (Fig. 1) and 2016 (Fig. 2);</li> <li>a list of all Crown lands within the Mine Permit Boundary and a comparison of 2015 to current (Table 1);</li> <li>a complete list of Crown land where Benga has submitted applications for Mineral Surface lease and License of Occupation dispositions (Table 2); and</li> <li>the location of proposed dispositions (Fig 3).</li> </ul>
June 13, 2018	Phone Call	Benga and Siksika Nation discussed planning for June and July 2018 fieldwork.
June 18, 2018	Site Visit	Tour of HRIA sites.
June 27, 2018	Site Visit	Tour of HRIA sites.
July 10, 2018	Site Visit	Assessment of HRIA sites.
July 11, 2018	Site Visit	Assessment of HRIA sites.
July 12, 2018	Site Visit	Assessment of HRIA sites.
August 15, 2018	E-mail	Benga proposed dates to Siksika Nation for consultation process and planning meeting.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
September 17, 2018	E-mail	Siksika Nation expressed Project interest from Councillors and requested to bring members to the cairn.
September 17, 2018	E-mail	Benga proposed tour of project area to view cairn, as requested by Siksika Nation.
September 20, 2018	Meeting	Benga and Siksika Nation to discuss: <ul style="list-style-type: none"> <li>• project updates;</li> <li>• planning for upcoming activities including a formal mitigation meeting;</li> <li>• results of the 2018 field work; and</li> <li>• review the Draft Access Management Plan.</li> </ul>
September 20, 2018	E-mail	Benga proposed date for a Project site tour and archaeological site tour.
October 4, 2018	E-mail	Benga provided a Project summary document and associated informational sheets. Benga proposed fieldwork and mitigation meeting logistics.
October 29, 2018	Meeting	Benga met with Siksika Nation to discuss preparations for upcoming archeological site visits, and specific sites of interest.
October 29, 2018	Site Visit	Tour of HRIA sites.
October 30, 2018	Mail	Benga provided copies <i>via</i> USB of the Technical Application and EIS (integrated application), filed August 12, 2016 and addenda to date including: <ul style="list-style-type: none"> <li>• Addendum #1, filed January 31, 2017</li> <li>• Addendum #2, filed October 16, 2017</li> <li>• Addendum #3, filed November 9, 2017</li> <li>• Addendum #4, filed November 27, 2017</li> <li>• Addendum #5, filed February 28, 2017</li> <li>• Addendum #6, filed April 30, 2018</li> <li>• Addendum #7, filed May 28, 2018</li> <li>• Addendum #8, filed October 17, 2018</li> </ul>
November 1, 2018	E-mail	Benga provided fieldwork documents and workplan from the October 29, 2018 site visit with Siksika Nation. Benga proposed Dec. 2018 management meeting with Blackfoot Nations and

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
		requested Siksika Nation discuss the potential meeting with Kainai Nation and Piikani Nation.
November 21, 2018	E-mail	Benga provided informational sheets for the Project.
November 23, 2018	E-mail	Benga provided a series of documents for the period December 15, 2014 to April 15, 2018 including: <ul style="list-style-type: none"> <li>• a covering letter;</li> <li>• cumulative Record of Consultation Log;</li> <li>• cumulative revisions table;</li> <li>• cumulative response table; and</li> <li>• communication summary of all correspondence with Kai Scott.</li> </ul>
November 29, 2018	E-mail	Benga informed Siksika Nation that the ACO had extended its timelines for review of the materials sent that Benga sent to Siksika Nation on November 23, 2018.
December 5, 2018	E-mail	Siksika Nation provided draft Siksika Traditional Use Study (TUS) Report #4.
December 5, 2018	E-mail	Siksika Nation provided final version of Siksika Traditional Use Study (TUS) Report #4.
December 6, 2018	Mail	Benga sent by mail printed Project informational material for Siksika Nation.
December 11, 2018	E-mail	Benga requested confirmation that the Cumulative Effects Assessment report received from MLT Aikins LLP is the formal submission of the report from Siksika Nation Consultation.

#### 4.3.2 Issues Raised Since Submission of the EIS

Siksika Nation has raised a number of concerns and Aboriginal Interests. The following is a summary of these concerns and interests and an overview of how Benga has considered them. For a full list of specific concerns and responses by Benga, see [Appendix A-3](#).

Siksika Nation raised issues regarding the following Aboriginal Interests:

- Aboriginal Physical & Cultural Heritage
- Sacred and Ceremonial Lands

- Fishing
- Hunting
- 
- Plant Gathering
- TK/TU
- Vegetation & Wetlands
- Wildlife

In addition, Siksika Nation raised the following concerns:

- Access Management
- Construction Activities
- Consultation
- Environmental Assessment Process
- Human & Wildlife Health
- Land Use
- Noise
- Reclamation
- Surface Water Quality

While Siksika Nation concerns have been categorized by Valued Component (VC) or other major topic area, they should be seen as interrelated. Benga understands that Project impacts to biophysical features, lands and resources are linked to the Nation's ability to continue to pursue their Treaty Rights and maintain their cultural way of life.

Benga has been considering and addressing Siksika's concerns in the following ways:

- provision of information on how impacts were assessed in the EIS;
- consultation on mitigation measures, management and monitoring plans;
- support for cultural events and Project ceremonies;
- working with Siksika Nation to develop a cultural awareness training opportunities;
- ongoing meetings with Siksika Nation to discuss and resolve issues and concerns;
- tracking of issues and responses; and
- review and consideration of new information in reports provided.

### **4.3.3 Summary of Reports Received Since Submission of the EIS**

#### **4.3.3.1 Cumulative Effects Assessment for Siksika Nation, November 28, 2018**

The Cumulative Effects Assessment for Siksika Nation (Carlson et al., 2018b) is presented in full in [Appendix C](#). The Cumulative Effects Assessment presented in Carlson et al. was conducted in a focal study area defined as the approximately 6,000 km<sup>2</sup> Upper Oldman Crowsnest Pass watershed, and a regional study area defined as the approximately 62,904 km<sup>2</sup> area of 14 watersheds surrounding the Project area (2018b; [Appendix C](#)). The assessment within the focal

study area involved comparison of current conditions to pre-industrial/range of natural variability as well as future forecast timeframes, and in the regional study area a comparison of current conditions and pre-industrial/range of natural variability was conducted.

The report provides an initial assessment of cumulative effects of land development on ecological indicators of cultural importance to Siksika Nation. Using the ALCES Group's online landscape simulation model, the report addresses:

- industrial and regulatory activities that potentially restrict or exclude land uses by Siksika Nation members;
- the loss of remaining relatively intact ecosystems within the Siksika Nation traditional territory; and
- effects of current development activities on ecosystems and species on which Siksika Nation traditional land uses depend  
(Carlson *et al.*, 2018b).

Concerns were raised about hunting, fishing, trapping, and plant harvesting, specifically the accessibility of the land for traditional activities and ongoing loss of habitat and associated opportunities for traditional land use.

#### 4.3.3.2 Siksika Traditional Use Study Report #4, 2018

The Siksika's Traditional Use Study Report #4 (TLUS Report) (Siksika Consultation Office, 2018) is presented in full in [Appendix D](#). The TLUS Report provides information based on field work undertaken by the Siksika Consultation Office in July 2018 (Siksika Consultation Office, 2018; [Appendix D](#)). The TLUS Report reaffirms the information provided in the Riversdale Grassy Mountain Proposed Metallurgical Coal Mine Interim TUS Assessment and Report of March 2015. The TLUS Report indicates that sites in the Crowsnest Pass region close to Crowsnest Mountain as well as ceremonial, medicinal, spiritual, hunting and burial sites at Grassy Mountain have been used intensively for millennia and continue to be used. Siksika Nation members continue to have spiritual and traditional use ties to the area as a whole, not just to specific sites, and view the sites as part of a ceremonial and spiritual complex.

#### 4.3.4 Identification of VCs, Resources or Species

The TLUS Report identifies the following traditional use values:

- ceremonial and spiritual sites;
- sacred, medicinal and ceremonial plants;

- hunting;
- wildlife;
- water ;
- seasonal camp sites; and
- burial sites.

The Cumulative Effects Assessment by Carlson et al. included the following indicators: direct and indirect disturbance of land, area of intact habitat (core area and patch size), habitat quality for three wildlife species (moose, elk, and mule deer), fish community stressors, and traditional land use (hunting, trapping, fishing, plant gathering, travelling) including TLU accessibility (2018b).

Although these traditional use values identified in the TLUS Report (Siksika Consultation Office, 2018) and indicators identified in the Cumulative Effects Assessment (Carlson *et al.*, 2018b) are categorized differently from the VCs in the EIS Update and amendments, they fall within the VC categories of EIS Update Section H Aboriginal Consultation below:

Current Use of Lands and Resources for Traditional Purposes:

- hunting;
- trapping;
- fishing;
- plant gathering; and
- trails and travelways.

Aboriginal Physical and Cultural Heritage

And the following related VCs: Wildlife, Fisheries, Cultural Resources, Vegetation.

#### **4.3.5 Current Use of Lands and Resources for Traditional Purposes**

##### **4.3.5.1 Background Information**

This section summarizes background information related to the Current Use of Lands for Traditional Purposes VC (and its VC subcomponents) which has been provided by Siksika Nation since the EIS was submitted, in the Siksika Nation TLUS Report (Siksika Consultation Office, 2018) and the Siksika Nation Cumulative Effects Assessment (Carlson *et al.*, 2018b).

### *Hunting*

Siksika indicate that all animals living on the mountain are important. Siksika members report having used the Project area and mule deer, elk and moose are identified as valued species (Siksika Consultation Office, 2018; Carlson *et al.*, 2018a).

Siksika Nation have indicated that they consider national parks, provincial parks, and ecological reserves inaccessible because they do not use these areas for hunting (Carlson *et al.*, 2018a). Siksika Nation does not hunt in close proximity to well sites (approximately 500 m), and it was assumed in Siksika Nation's Cumulative Effects Assessment that they would not hunt near industrial sites, settlements, rural residence, and other features used for non-TLU purposes (Carlson *et al.*, 2018a).

### *Trapping*

The TLUS Report did not include any information on trapping.

### *Fishing*

In the TLUS Report, Siksika raises concerns regarding potential contamination of the Gold and Blairmore creek water systems and microclimate as it would affect fish and Siksika's traditional use of the creek bottoms. No fish species or fishing areas are specified.

Siksika Nation have indicated that they consider national parks, provincial parks, and ecological reserves inaccessible because they do not use these areas for fishing (Carlson *et al.*, 2018a). Furthermore, Siksika Nation does not fish in close proximity to well sites (approximately 500 m), and it was assumed in Siksika Nation's Cumulative Effects Assessment that they would not fish near industrial sites, settlements, rural residence, and other features used for non-TLU purposes (Carlson *et al.*, 2018a).

### *Plant Gathering*

The Report indicates that sacred, medicinal and ceremonial plants grow at Gold Creek and elsewhere at Grassy Mountain. Ceremonial paint called yellow ochre was identified near the golf course. No other medicinal, sacred, or ceremonial plants were identified in the report.

### *Trails and Travelways*

The TLUS Report did not include any information on trails and travelways.

### *Analysis*

While the information provided in the TLUS Report will be beneficial in ongoing consultation discussions, no new background information was presented that would require changes to the assessment of effects to the Current Use of Lands for Traditional Purposes VC.

#### 4.3.5.2 Assessment of Potential Effects and Proposed Mitigation Measures

The TLUS and the Cumulative Effects Assessment raise concerns about the following:

- hunting, fishing, trapping, and plant harvesting, specifically the accessibility of the land for traditional activities and ongoing loss of habitat and associated opportunities for traditional land use;
- potential contamination of the Gold and Blairmore creek water systems and microclimate as it would impact plants and affect Siksika Nation's traditional use of the creek bottoms;
- potential impacts to Siksika aboriginal and treaty rights; and
- potential impacts to Blackfoot culture.

The TLUS Report identifies the following mitigation measures:

- continued consultation with Siksika Nation to identify measures to avoid and/or mitigate impacts to Siksika Nation traditional use sites. Where impacts cannot be avoided, Siksika Nation calls for accommodation or compensation;
- Once plants are located, a plan for their protection can be developed in consultation with Siksika Nation; and
- water bodies affected by mine effluent should be fenced off or alternative clean water drinking areas be created.

The potential effects above have been considered in the EIS and there are no changes required to the discussion of effects in the Current Use of Lands for Traditional Purposes VC.

In EIS Section H, the Aboriginal Cumulative Effects Assessment, and subsequent management plans, Benga has committed to implementing mitigation measures that will address the effects to hunting, fishing, trapping and plant gathering discussed in the same assessment documents. These mitigations also apply to the potential effects identified by Siksika Nation above. Benga will continue to discuss and refine mitigations with Siksika Nation.

#### 4.3.5.3 Characterization of Residual Effects

No changes are required to the results of Benga’s characterization of residual effects to the Current Use of Lands and Resources for Traditional Purposes VC.

#### 4.3.5.4 Cumulative Effects Assessment

The Cumulative Effects Assessment by Carlson et al. concluded that regionally there is a moderate risk to the fish community and a high risk to elk and mule deer related to loss of land cover and high linear footprint densities, and that regional accessibility for traditional use is limited to an estimated 20% of the landscape (2018a). Loss of land cover was found to be lower in the focal study area, though still below natural conditions resulting in moderate risk to elk and mule deer and associated land use. Fish community was found to be at a moderate risk due to fragmentation and access for fishing and was found to be at a high risk over the next 50 years due to warming. The assessment concluded that “Any further decline in opportunities for traditional land use may be of concern given that risk to traditional land use is already assessed as high” (Carlson *et al.*, 2018, p. 38).

The methods used by Carlson et al. are different from those used in the EIS and are therefore not comparable to the EIS’s characterization of cumulative effects. In this report, Benga has incorporated information provided by Siksika Nation using the methods in the EIS and methods described in [Section 3.1](#) above; no changes are required to the results of Benga’s characterization of cumulative effects to the Current Use of Lands and Resources for Traditional Purposes VC.

#### 4.3.5.5 Follow-up and Monitoring

Benga has committed to follow-up and monitoring in EIS Section H and the Aboriginal Cumulative Effects Assessment. Benga will continue to discuss and seek input from Siksika Nation on follow up and monitoring prior to construction.

### 4.3.6 Aboriginal Health

Siksika Nation has not provided additional information on Aboriginal health.

### 4.3.7 Aboriginal Socio-Economic Conditions

Siksika Nation has not provided additional information on Aboriginal socio-economic conditions.

### 4.3.8 Aboriginal Physical and Cultural Heritage

#### 4.3.8.1 Background Information

This section summarizes background information related to the Aboriginal Physical and Cultural Heritage VC which has been provided by Siksika Nation since the EIS was submitted, in the Siksika Nation TLUS Report (Siksika Consultation Office, 2018) and the Siksika Nation Cumulative Effects Assessment (Carlson *et al.*, 2018b). While the information provided will be beneficial in ongoing consultation discussions, there was no information provided which required changes to the assessment of effects to the Aboriginal Physical and Cultural Heritage VC.

The TLUS report describes a ceremonial and spiritual complex comprising multiple sites in the Gold Creek and Blairmore Creek valleys and benches, and the saddle of land connecting Grassy Mountain and Grassy Mountain South. This complex includes areas of importance outside the Project area at Crowsnest Mountain, including the location where the Siksika Thunder Pipe ceremony is held, where Siksika Nation youth engage in vision quests, and where burial sites are found. Crowsnest Mountain is viewed as one of the most sacred sites within Siksika Nation's territory, and its importance is compared to that of the Sanctuary of Our Lady of Lourdes for the Roman Catholic.

The Report identifies a stone cairn found in the proposed south dump area (DkPo-07).

Section H of the EIS acknowledges that the Project could result in measurable effects on sacred, gathering, and habitation sites used by Siksika Nation. With the implementation of mitigation measures including access management planning and ongoing consultation, the Project would still affect current use if sites are directly disturbed or removed.

#### 4.3.8.2 Assessment of Potential Effects and Proposed Mitigation Measures

The Siksika Nation TLUS Report raises concerns regarding the continued taking up of land, its potential impacts on traditional use rights and traditional use sites, and any associated impact on Siksika Nation traditional culture. The Report indicates the need for further work to be done to locate other burial sites within one kilometre of the cairn found in the proposed south pit area (DkPo-07).

Siksika Nation calls for continued consultation to identify measures to avoid and/or mitigate impacts to Siksika Nation's traditional use sites, use of the ceremonial and spiritual complex at Grassy Mountain, and Siksika Nation rights. Where impacts cannot be avoided, Siksika Nation calls for accommodation or compensation.

In this report, Benga has incorporated information provided by Siksika Nation using the methods in the EIS and methods described in [Section 3.1](#) above, no changes are required to the results of Benga’s characterization of residual effects to the Aboriginal Physical and Cultural Heritage VC.

#### 4.3.8.3 Characterization of Residual Effects

There were no additional residual effects identified by Siksika Nation for Aboriginal Physical and Cultural Heritage. There are no changes required to the results of Benga’s characterization of residual effects to the Aboriginal Physical and Cultural Heritage VC.

#### 4.3.8.4 Cumulative Effects Assessment

There was no Cumulative Effects Assessment provided by Siksika Nation for Aboriginal Physical and Cultural Heritage. There are no changes required to the results of Benga’s characterization of residual effects to the Aboriginal Physical and Cultural Heritage VC.

#### 4.3.8.5 Follow-up and Monitoring

Benga has committed to follow-up and monitoring in EIS Section H and the Aboriginal Cumulative Effects Assessment. Benga will continue to discuss and seek input from Siksika Nation on follow up and monitoring prior to construction.

### 4.3.9 Conclusions

Information that Siksika Nation has provided to Benga since the submittal of the EIS in August 2016 has informed ongoing consultation and Project planning including the further development of mitigation measures and construction management and monitoring plans. The new information, which is summarized above, does not change the existing baseline information, the identification of Aboriginal VCs, the identification of potential adverse effects on Aboriginal VCs, or the residual effects characterizations as presented in Section H of the EIS; or the characterization of residual cumulative effects as presented in EIS Addendum #8, Appendix A-3.

## 4.4 Stoney Nakoda Nation

### 4.4.1 Summary of Key Consultation Activities

Between August 16, 2016 and December 31, 2018, Benga and Stoney Nakoda Nation, including Bearspaw Nation, Chiniki Nation and Wesley Nation, have maintained an ongoing dialogue regarding the EIS, mitigation measures and issues and concerns. Stoney Nakoda Nation have engaged actively in a Project review, providing comments, participating in meetings, traditional

land use field work (Cultural Assessment Overview) and site visits, and undertaking the following additional work related to the Project:

- Cultural Assessment Overview.

Assessment of archaeological sites of interest identified as part of the Historical Resources Impact Assessment (HRIA). As of December 31, 2018, Benga had not received the reports from Stoney Nakoda Nation on the above noted work. Stoney Nakoda Nation advised Benga that a timeline for submission will be determined at a future date. New information provided to Benga after the submission of this consultation update report will be considered by Benga and incorporated into Project planning as appropriate.

Benga has provided funding to support Stoney Nakoda Nation’s participation in the Project environmental assessment process.

Table 4-6 below provides a chronology of key consultation activities with Stoney Nakoda Nation.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
September 2, 2016	Mail	Benga provided a copy of the EIS that was submitted to regulators on August 15, 2016.
December 9, 2016	E-mail	Benga sent a copy of the “Conveyor - the Grassy Mountain Fall 2016 Community Newsletter (Vol. 4 Issue 4)”. The Newsletter covered: creating a sustainable economy through diversity; understanding Project waterways; Coleman fish and game pond improvements; environmental impact assessment update; and, community updates.
January 12, 2017	Meeting	Benga and the Stoney Nakoda Nation met to discuss the following: <ul style="list-style-type: none"> <li>• activities and events in which Stoney Nakoda Nation is involved;</li> <li>• Project regulatory updates and status of the AER review and Joint Panel Review process;</li> <li>• the consultation process and planning with Stoney Nakoda Nation;</li> </ul>

<b>Table 4-6 Chronology of Key Consultation Activities with Stoney Nakoda Nation (Bears paw Nation, Chiniki Nation and Wesley Nation)</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
		<ul style="list-style-type: none"> <li>• technical review of the EIS;</li> <li>• place naming and trail signage within Project area; and</li> <li>• cultural assessment of the Project area.</li> </ul>
January 20, 2017	E-mail	Benga provided a copy of the Piikani Nation Technical Review Report. Benga requested a meeting to discuss the development of a Nation specific consultation workplan.
March 18, 2017	Meeting	<p>Main discussion items included:</p> <ul style="list-style-type: none"> <li>• Project regulatory updates;</li> <li>• timing for a meeting to review the EIS and Canadian Environmental Assessment Agency (CEAA) process;</li> <li>• consultation planning;</li> <li>• completion of a Cultural Assessment Overview (CAO); and</li> <li>• Benga's community-based programs.</li> </ul> <p>Stoney Nakoda Nation indicated its interest in conducting an independent technical review of the Project Environmental Impact Assessment Updated (August 2016). Benga hand delivered a USB containing the Updated Aquatic Ecology Assessment (Consultant Report #6) and the Updated Wildlife Assessment (Consultant Report #8).</p>
April 3, 2017	Phone call	Benga and the Stoney Nakoda Nation discussed TLU fieldwork. Stoney Nakoda Nation indicated that the report included in the Environmental Impact Statement was based on a site tour of the Project area. A Cultural Assessment Overview (CAO) has not yet been completed for the Project area. Stoney Nakoda Nation expressed interest in completing fieldwork for the Project, and harvesting was one of the recommendations outlined in the report. Benga indicated that a CAO can be scheduled during the upcoming field season. Benga also advised that they provide copies of the files and reporting related to the site tour if needed.
April 11, 2017	E-mail	Stoney Nakoda Nation provided a draft report prepared for the Project Environmental Impact Assessment. The report was based on the results of the site tour that took place in July 2015.
April 28, 2017	Meeting	Benga and Stoney Nakoda Nation met to discuss the EIS updates and the Canadian Environmental Assessment Agency (CEAA)

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
		process. Handouts provided: 11x17 hard copy maps of Project area with Crown land and proposed infrastructure, hard copy of presentation on the EIS.
June 29, 2017	E-mail	Benga provided a draft Crown land map which included details related to Project infrastructure.
September 5, 2017	Phone call	Benga and Stoney Nakoda Nation discussed fieldwork planning.
September 14, 2017	Meeting	Stoney Nakoda Nation conducted community-based interviews as a component of the Cultural Assessment Overview (CAO).
September 17, 2017	Site Visit	Stoney Nakoda Nation initiated fieldwork component of the Cultural Assessment Overview (CAO) of the Grassy Mountain Project.
September 25, 2017	E-mail	Benga notified Stoney Nakoda Nation that land access was open for fieldwork.
November 6, 2017	Mail	Benga sent a letter providing information on the Alberta Energy Regulator Notice of Application for the Grassy Mountain Coal Project (including a link to the application and list of documents submitted to the AER). A USB was included which provided an electronic copy of the EIS, Addendum #1 (Wildlife and Aquatics Addenda completed in January 2017) and Addendum #2 (Updates to EIS Sections C.5.1 and C.5.2).
November 6, 2017	E-mail	Benga notified Stoney Nakoda Nation of the Project information mailout sent November 6, 2017 and provided an electronic copy of the letters in the mailout.
November 8, 2017	Phone call	Benga notified Stoney Nakoda Nation by phone of the Notice of Assessment posting on the Alberta Energy Regulator website, and the mailout package sent by mail November 6, 2017.
November 16, 2017	E-mail	Benga provided meeting materials for the November 24, 2017 issues and mitigations meeting. Attachments included: <ul style="list-style-type: none"> <li>• a summary of the monitoring programs presented in the Grassy Mountain Coal Project Environmental Assessment (EA);</li> <li>• EA Appendix 7d(i): Aboriginal Access Management Plan Framework;</li> </ul>

Table 4-6 Chronology of Key Consultation Activities with Stoney Nakoda Nation (Bears paw Nation, Chiniki Nation and Wesley Nation)		
Date	Method of Communication	Topic
		<ul style="list-style-type: none"> <li>EA Appendix 7d(ii): Cultural Site Discovery Contingency Plan – Framework;</li> <li>a summary of the Project Environmental Management Plans; and</li> <li>Specific Concern and Response table.</li> </ul>
November 24, 2017	Meeting	<p>Benga and Stoney Nakoda Nation met to review issues, concerns and recommendations for mitigation identified by the Stoney Nakoda Nation since the onset of consultation activities on the Grassy Mountain Project. Benga reviewed the contents of the meeting information package and provided documents for SNN review and input:</p> <ul style="list-style-type: none"> <li>EIS Appendix 7d (i) and (ii): Aboriginal Access Management Plan/Cultural Site Discovery Contingency Plan;</li> <li>EIS Monitoring Summary; GMP Environmental Management Plans Summary; and</li> <li>Concern and Response Table (Nov 24 version).</li> </ul> <p>The Canadian Environmental Assessment Agency presented on the Joint Review Panel process. Millennium presented a review of Management Plans. Bison Archaeology presented the HRIA. Benga and the Stoney Nakoda Nation reviewed each item in the November 24, 2017 version of the Stoney Nakoda Nation Specific Concern and Response table.</p> <p>Stoney Nakoda Nation presented their study on Grizzly Bears in the Kananaskis region. A discussion of Wildfire Control and Prevention Plan was held. Stoney Nakoda Nation provided a presentation developed in cooperation with the University of Alberta on the traditional relationship of the Stoney Nakoda Nation with the Rocky Mountains.</p> <p>The Cultural Assessment Overview was discussed. The Stoney Nakoda Nation indicated the site visits are scheduled for completion in 2018, and once complete, the Stoney Nakoda Nation will have more to add to the Conservation and Reclamation Plan.</p>
February 12, 2018	E-mail	Benga provided Project update letters and the “Conveyor: Winter 2018 edition” Project Newsletter. The Newsletter covered: a

<b>Table 4-6 Chronology of Key Consultation Activities with Stoney Nakoda Nation (Bears paw Nation, Chiniki Nation and Wesley Nation)</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
		regulatory process update; water conservation; Project FAQs; and community involvement updates.
April 3, 2018	E-mail	Stoney Nakoda Nation provided a proposed budget for the meeting on Project updates and planning for Stoney Nakoda Nation Consultation and Elders.
April 10, 2018	E-mail	Benga provided link to the Canadian Environmental Assessment Agency (CEAA) website for Stoney Nakoda Nation to retrieve information and documents related to the Project.
April 18, 2018	E-mail	Benga provided Project information sheets on steel, mine infrastructure and Project FAQs.
April 18, 2018	E-mail	Benga provided the April 19, 2018 meeting presentation Environmental Assessment Overview for First Nation Consultation 2018.
April 19, 2018	Meeting	<p>Benga and Stoney Nakoda Nation met to discuss Project updates and the regulatory schedule. Main discussion items included:</p> <ul style="list-style-type: none"> <li>• EA and regulatory process;</li> <li>• update on consultation activities;</li> <li>• update on HRIA fieldwork; and</li> <li>• issues and concerns.</li> </ul> <p>Handouts included:</p> <ul style="list-style-type: none"> <li>• Project information sheets: FAQ's, Mine Infrastructure, Water, Fish, Wildlife, Air Quality, Reclamation, 'About the Grassy Mountain Project', Facts about steel;</li> <li>• Grassy Mountain Project Presentation – Environmental Assessment Overview for First Nation Consultation;</li> <li>• Stoney Nakoda Nation (Bears paw Nation, Chiniki Nation and Wesley Nation) specific concerns and response table (Version – updated to February 2018); and,</li> <li>• A USB with the following meeting notes, January 12, 2017; March 18, 2017; November 24, 2017.</li> </ul>
July 4, 2018	Phone call	Benga and Stoney Nakoda Nation discussed plans for upcoming fieldwork related to Stoney Nakoda Nation's Cultural Assessment Overview (CAO) of the Grassy Mountain Project, focusing on Crown land.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
July 6, 2018	E-mail	Stoney Nakoda Nation provided the July 2018 workplan to Benga.
July 6, 2018	E-mail	Benga provided a Project update letter and information package including: <ul style="list-style-type: none"> <li>• Project update letter (June 6, 2018);</li> <li>• two maps of the Project footprint in 2015 (Fig. 1) and 2016 (Fig. 2);</li> <li>• a list of all Crown lands within the Mine Permit Boundary and a comparison of 2015 to current (Table 1);</li> <li>• a complete list of Crown land where Benga has submitted applications for Mineral Surface lease and License of Occupation dispositions (Table 2); and</li> <li>• the location of proposed dispositions (Fig 3).</li> </ul>
July 17, 2018	Site Visit	Assessment of HRIA sites and Cultural Assessment Overview.
July 18, 2018	Site Visit	Assessment of the HRIA sites and Cultural Assessment Overview.
July 19, 2018	Site Visit	Assessment of the HRIA sites and Cultural Assessment Overview.
August 15, 2018	E-mail	Benga proposed a meeting to discuss consultation-related activities for September 2018 with Stoney Nakoda Nation. Benga requested a report on fieldwork and interview findings from Stoney Nakoda Nation.
October 1, 2018	E-mail	Benga provided the Terms of Reference for Environmental Impact Statement Report, and the Public Notice from the AER, and requested confirmation Stoney Nakoda Nation had previously received these documents.
October 30, 2018	Mail	Benga provided copies <i>via</i> USB of the Technical Application and EIS (integrated application), filed August 12, 2016 and addenda to date including: <ul style="list-style-type: none"> <li>• Addendum #1, filed January 31, 2017</li> <li>• Addendum #2, filed October 16, 2017</li> <li>• Addendum #3, filed November 9, 2017</li> <li>• Addendum #4, filed November 27, 2017</li> <li>• Addendum #5, filed February 28, 2017</li> <li>• Addendum #6, filed April 30, 2018</li> <li>• Addendum #7, filed May 28, 2018</li> </ul>

<b>Table 4-6 Chronology of Key Consultation Activities with Stoney Nakoda Nation (Bears paw Nation, Chiniki Nation and Wesley Nation)</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
		<ul style="list-style-type: none"> <li>• Addendum #8, filed October 17, 2018</li> <li>• Addendum #8, filed October 17, 2018</li> </ul>
November 1, 2018	E-mail	Benga requested meeting with Stoney Nakoda Nation for project update review and planning.
November 8, 2018	Meeting	<p>Benga met with Stoney Nakoda Nation to discuss:</p> <ul style="list-style-type: none"> <li>• regulatory updates regarding the Joint Review Panel;</li> <li>• mitigation meeting to discuss issues and concerns on November 20, 2018; and</li> <li>• Stoney Nakoda Nation independent review of the August 2016 Environmental Impact Assessment.</li> </ul>
November 20, 2018	Meeting	<p>Benga and Stoney Nakoda Nation met to discuss:</p> <ul style="list-style-type: none"> <li>• project overview and updates;</li> <li>• Environmental Management Plans;</li> <li>• Fisheries offset plan, Monitoring and Environmental Management Plans;</li> <li>• issues and concerns raised by Stoney Nakoda Nation; and</li> <li>• next steps for consultation and mitigation.</li> </ul> <p>Handouts included printed copies of:</p> <ul style="list-style-type: none"> <li>• Grassy Mountain Project (GMP) Environmental Assessment – Monitoring Summary (2017);</li> <li>• GMP EIS Appendix 7d (i) – Aboriginal Access Management Plan Framework and 7d (ii) Cultural Site Discovery Contingency Plan – Framework; and</li> <li>• Specific Concerns and Response Table.</li> </ul>
November 23, 2018	E-mail	<p>Benga provided a series of documents for the period December 15, 2014 to April 15, 2018 including:</p> <ul style="list-style-type: none"> <li>• a covering letter;</li> <li>• cumulative Record of Consultation Log;</li> <li>• cumulative revisions table;</li> <li>• cumulative response table; and</li> <li>• communication summary of all correspondence with Kai Scott.</li> </ul>

<b>Date</b>	<b>Method of Communication</b>	<b>Topic</b>
November 29, 2018	E-mail	Benga informed Stoney Nakoda Nation that the ACO had extended its timelines for review of the materials sent that Benga sent to Stoney Nakoda Nation on November 23, 2018.
November 30, 2018	E-mail	Benga provided Stoney Nakoda Nation summary of Workplan 2 payments to date and accompanying documents.

#### 4.4.2 Issues Raised Since Submission of the EIS

Stoney Nakoda Nation has raised a number of concerns and Aboriginal Interests. The following is a summary of these concerns and interests and an overview of how Benga has considered them. For a full list of specific concerns and responses by Benga, see [Appendix A-4](#) to [A-6](#).

Stoney Nakoda Nation raised issues regarding the following Aboriginal Interests:

- Aboriginal Physical & Cultural Heritage
- Aboriginal Socio-Economic Conditions
- Current Use of Lands & Resources for Traditional Purposes
- Fishing
- Hunting
- Land Resource Use
- Plant Gathering
- TK/TU
- Trapping
- Wildlife

In addition, Stoney Nakoda Nation raised the following concerns:

- Air Quality & Climate
- Environmental Assessment
- Environmental Impact Assessment
- Surface Water Quality
- Water Quality
- Wildfire

While Stoney Nakoda Nation concerns have been categorized by Valued Component (VC) or other major topic area, they should be seen as interrelated. Benga understands that Project impacts to biophysical features, lands and resources are linked to the Nation’s ability to continue to pursue their Treaty Rights and maintain their cultural way of life.

Benga has considered and is actively addressing Stoney Nakoda’s concerns in the following ways:

- provision of information on how impacts were assessed in the EIS;
- consultation on mitigation measures, management and monitoring plans;
- developing an agreement with Stoney Nakoda Nation on employment and training; and
- meetings with Stoney Nakoda Nation to discuss and resolve issues and concerns.

#### **4.4.3 Conclusions**

Information that Stoney Nakoda Nation has provided to Benga since the submittal of the EIS in August 2016 has informed ongoing consultation and Project planning including the further development of mitigation measures and construction management and monitoring plans. The new information, which is summarized above, does not change the existing baseline information, the identification of Aboriginal VCs, the identification of potential adverse effects on Aboriginal VCs, or the residual effects characterizations as presented in Section H of the EIS; or the characterization of residual cumulative effects as presented in EIS Addendum #8, [Appendix A-4 to A-6](#).

### **4.5 Tsuut’ina Nation**

#### **4.5.1 Summary of Key Consultation Activities**

Between August 16, 2016 and December 31, 2018, Benga and Tsuut’ina Nation representatives have had ongoing dialogue around the EIS, mitigation measures and issues and concerns. Tsuut’ina Nation have engaged actively in Project review, submitting comments, participating in meetings, traditional land use field work and site visits.

As of December 31, 2018, Benga had not received the reports from Tsuut’ina Nation on the above noted work, and it is unclear when or if reports will be received by Benga. New information provided to Benga after the submission of this consultation update report will be considered by Benga and incorporated into Project planning as appropriate.

Benga has provided funding to support Tsuut’ina Nation’s participation in the environmental assessment and Project review process.

[Table 4-7](#) provides a chronology of key consultation activities with Tsuut’ina Nation.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
August 16, 2016	E-mail	The Tsuut’ina Nation requested a copy of the Piikani Nation “Updated Review of Riversdale Resources Riversdale Limited Grassy Mountain (Ksiistsiiko'om oomoiyyi) Coal Project Environmental Impact Study (July 2016)”, and Benga updates to EIS in response to Canadian Environmental Assessment Agency requirements.
August 16, 2016	E-mail	Benga provided the Piikani Nation “Updated Review of Riversdale Resources Riversdale Limited Grassy Mountain (Ksiistsiiko'om oomoiyyi) Coal Project Environmental Impact Study (July 2016)”.
September 2, 2016	Mail	Benga sent a copy of the EIS (August 2016).
December 9, 2016	E-mail	Benga sent a copy of the “Conveyor - the Grassy Mountain Fall 2016 Community Newsletter (Vol. 4 Issue 4)”. The Newsletter covered: creating a sustainable economy through diversity; understanding Project waterways; Coleman fish and game pond improvements; environmental impact assessment update; and, community updates.
March 10, 2017	Meeting	Benga hand delivered an USB of the Addendum to the Grassy Mountain, Environmental Impact Assessment including the Updated Aquatic Ecology Assessment and summary and the Updated Wildlife Assessment. Main discussion items included: <ul style="list-style-type: none"> <li>• Project and regulatory updates;</li> <li>• changes to the consultation department and organization under the newly appointed Chief and Council;</li> <li>• general Project updates and activities;</li> <li>• information sharing within the community; and</li> <li>• status of traditional land use fieldwork.</li> </ul>
April 21, 2017	Meeting	Benga and Tsuut’ina Nation met to plan for upcoming consultation activities and to discuss Project updates. Main discussion items included: <ul style="list-style-type: none"> <li>• changes within the Tsuut’ina Nation's consultation department;</li> <li>• provincial and federal consultation processes and the Environmental Impact Statement;</li> <li>• planning for consultation activities including a Project ceremony; and</li> </ul>

<b>Table 4-7 Chronology of Key Consultation Activities with Tsuut'ina Nation</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
		<ul style="list-style-type: none"> <li>status of traditional land use fieldwork.</li> </ul>
May, 2017	Mail	<p>Benga sent Project update letter and a hard copy of the “Conveyor - the Grassy Mountain Spring 2017 Community Newsletter (Vol. 2 Issue 1)”, and a USB with the following documents:</p> <ul style="list-style-type: none"> <li>EIS (August 2016);</li> <li>Update to Aquatic Ecology Assessment (Consultant Report #6) (January 2017); and</li> <li>Update to Wildlife Assessment (Consultant Report #8) (January 17).</li> </ul> <p>The Newsletter included: research into the winter ecology of Cutthroat Trout, and community updates.</p>
May 15, 2017	E-mail	<p>Benga:</p> <ul style="list-style-type: none"> <li>advised of the Canadian Environmental Assessment Agency’s availability to meet June 2, 2017;</li> <li>sent a draft consultation workplan with tasks associated to steps in the consultation process and offered assistance to develop the plan further;</li> <li>asked about the timing for the Project ceremony;</li> <li>asked about the status of the Traditional Land Use fieldwork; and</li> <li>sent the Piikani Nation “Updated Review of Riversdale Resources Limited Grassy Mountain (Ksiitsiiko'om oomoiyyi) Coal Project Environmental Impact Study (July 2016)”.</li> </ul>
June 8, 2017	Meeting	<p>Benga provided a presentation on the main objectives and results of the Updated Grassy Mountain Environmental Impact Statement (August 2016 version). Main discussion items included consultation timelines and technical aspects of the assessment and follow up programs. Representatives from CEEA provided a consultation process update.</p> <p>Hard copy hand outs included:</p> <ul style="list-style-type: none"> <li>the EIS presentation;</li> <li>Project infrastructure and Crown land map (June, 2017); and</li> <li>the “Conveyor - the Grassy Mountain Spring 2017 Community Newsletter (Vol. 2 Issue 1)”. The Newsletter</li> </ul>

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
		included research into the winter ecology of Cutthroat Trout, and community updates.
June 12, 2017	E-mail	Benga sent the Environmental Impact Statement presentation and a link to the CEEA Project Registry where public information about the Project can be accessed.
June 15, 2017	Ceremony	A pipe ceremony was conducted by Tsuut'ina Nation at Gold Creek to mitigate the impact of the Project on the land, environment, wildlife and people working on or in relation to the Project. Benga staff participated in the ceremony.
June 15, 2017	E-mail	Benga provided options for dates/times to review the locations where fieldwork has taken place and where Traditional Land Use fieldwork needs to be completed.
June 28, 2017	E-mail	Benga provided electronic copies of documents sent in the May, 2017 mailout.
July 5, 2017	E-mail	Benga offered to deliver a draft workplan for fieldwork.
July 19, 2017	Phone call	Benga and Tsuut'ina Nation discussed fieldwork planning and logistics.
July 20, 2017	E-mail	Benga provided fieldwork details and indicated they would send a workplan for review and signature.
July 24, 2017	E-mail	Benga provided the Traditional Land Use workplan for Tsuut'ina Nation's review and signature.
July 31, 2017	E-mail	Tsuut'ina Nation indicated that some medicinal plants had been found, and recommended site visits to investigate it further.
July 31, 2017	E-mail	Benga indicated that they were open to discussing the medicinal plant findings, and that recommendations should be included in the field report to provide to Benga for consideration.
August 11, 2017	E-mail	Tsuut'ina Nation enquired about timing for harvesting a rare plant found during fieldwork.
September 5, 2017	E-mail	Tsuut'ina Nation notified Benga that the rare plant harvest was complete.
November 1, 2017	E-mail	Benga advised that the Alberta Energy Regulator (AER) had posted the Notice of Application (NOA) for the Grassy Mountain Coal Project.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
November 1, 2017	Phone call	Benga and Tsuut'ina Nation discussed Traditional Land Use reporting and dates for a meeting to discuss the regulatory process.
November 6, 2017	Mail	Benga sent a letter providing information on the Alberta Energy Regulator Notice of Application for the Grassy Mountain Coal Project (including a link to the application and list of documents submitted to the AER). A USB was included which provided an electronic copy of the EIS, Addendum #1 (Wildlife and Aquatics Addenda completed in January 2017) and Addendum #2 (Updates to EIS Sections C.5.1 and C.5.2).
December 6, 2017	E-mail	Benga provided a copy of the Environmental Management Plans summary.
February 12, 2018	E-mail	Benga provided a Project update letter and the “Conveyor: Winter 2018 edition” Newsletter. The Newsletter included: a regulatory process update; water conservation; Project FAQs; and community involvement updates.
March 5, 2018	Meeting	<p>Benga and Tsuut'ina Nation met to discuss the following items:</p> <ul style="list-style-type: none"> <li>• introduce Norine Saddleback, newly appointed to Tsuut’ina Nation Consultation, to the Grassy Mountain Project (GMP) Project team;</li> <li>• provide a summary of the main objectives and results of the EIS;</li> <li>• consultation process and timelines;</li> <li>• Joint Panel Review process; and</li> <li>• Project updates and activities moving forward.</li> </ul> <p>Benga provided copies of the following: EA Monitoring Summary 2017, EIS Appendix 7d, EIS Conservation &amp; Reclamation Plan, and Management Plans Summary).</p>
March 12, 2018	E-mail	Benga provided electronic versions of the material that was provided at the March 5, 2018 meeting.
March 21, 2018	Meeting	Benga and Tsuut’ina Nation met to review issues and concerns, and recommendations for mitigation. Tsuut'ina Nation requested a complete version of the EIS and associated Addenda.
March 22, 2018	E-mail	Benga provided materials from March 21, 2018 meeting, including:

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
		<ul style="list-style-type: none"> <li>• Specific Concerns and Response Table;</li> <li>• draft workplan that was developed with Tsuut’ina Nation consultation in May 2017 to include phases and activities associated with the consultation process; and</li> <li>• Historical Resource Impact Assessment (HRIA) presentation.</li> </ul>
March 26, 2018	E-mail	<p>Tsuut’ina Nation requested the following documents from Benga:</p> <ul style="list-style-type: none"> <li>• a description and summary of capacity provided to date;</li> <li>• a draft of the current ACO consultation report;</li> <li>• contact information for the ACO representatives that Riversdale is working with; and</li> <li>• a copy of the current EIS and, amendment documents that have been submitted to CEAA and AER.</li> </ul>
April 5, 2018	Meeting	<p>Benga and Tsuut’ina Nation met to discuss:</p> <ul style="list-style-type: none"> <li>• EIS;</li> <li>• HRIA;</li> <li>• Tsuut’ina Nation mitigation issues and concerns; and</li> <li>• engagement process and consultation activities.</li> </ul>
April 26, 2018	E-mail	<p>Tsuut’ina Nation provided the most recent version of Grassy Mountain Coal Project Traditional Land Use (TLU) Report 2018. Tsuut’ina Nation later requested that Benga not review or consider the report.</p>
May 29, 2018	E-mail	<p>Benga provided the “Conveyor Spring 2018 edition” Project Newsletter. The Newsletter covered: the Riversdale volunteer program; employee profiles; Project FAQs; rail loadout information; regulatory process update; and, community updates.</p>
June 12, 2018	E-mail	<p>Benga provided a Project update letter and information package including:</p> <ul style="list-style-type: none"> <li>• Project update letter (June 6, 2018);</li> <li>• two maps of the Project footprint in 2015 and 2016;</li> <li>• a list of all Crown lands within the Mine Permit Boundary and a comparison of 2015 to current (Table 1);</li> <li>• a complete list of Crown land where Benga has submitted applications for Mineral Surface lease and License of Occupation dispositions (Table 2); and</li> </ul>

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
		<ul style="list-style-type: none"> <li>the location of proposed dispositions (Fig 3).</li> </ul>
June 15, 2018	E-mail	<p>Benga provided:</p> <ul style="list-style-type: none"> <li>update to the TK/TU work completed;</li> <li>attached the Historic Resource Impact Assessment (HRIA) presentation by Bison Archeology; and</li> <li>the issue response table from June 8, 2018.</li> </ul>
July 13, 2018	E-mail	Benga proposed a HRIA site tour with Tsuut’ina Nation.
August 7, 2018	E-mail	Tsuut’ina Nation provided a budget for the proposed Historic Resources Impact Assessment (HRIA) site tour and Elders site tour.
August 8, 2018	E-mail	Benga provided a work plan for the proposed Historic Resources Impact Assessment (HRIA) site tour and Elders site tour based on Tsuut’ina’s budget for review and agreement.
August 13, 2018	E-mail	Benga provided a list of HRIA sites for the next Tsuut’ina Nation site tour, tentatively scheduled for August 21, 2018.
August 14, 2018	E-mail	Benga contacted Tsuut’ina Nation to confirm August 21, 2018 as the date for the Historic Resources Impact Assessment (HRIA) site tour. Benga highlighted the threat of wildfires and the possibility of postponing fieldwork.
August 14, 2018	E-mail	Tsuut’ina Nation asked to schedule a call on August 15, 2018 to discuss finances and to confirm the tentative August 21, 2018 Historic Resources Impact Assessment (HRIA) site tour.
August 14, 2018	E-mail	Benga responded to Tsuut’ina Nation’s request to speak on August 15, 2018, stating it would be too late to confirm plans for the tentative August 21, 2018 Historic Resources Impact Assessment (HRIA) site tour. Benga suggested postponing fieldwork until September 2018.
August 14, 2018	E-mail	Tsuut’ina Nation confirmed September 2018 would work for the Nation for the Historic Resources Impact Assessment (HRIA) site tour.
October 11, 2018	Letter	Tsuut’ina Nation submitted comments on the environmental assessment of the Grassy Mountain Coal Project to the CEAA.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
October 26, 2018	Letter	Benga responded to Tsuut'ina Nation's comments on the environmental assessment of the Grassy Mountain Coal Project in a letter to the CEAA.
October 30, 2018	Mail	Benga provided copies <i>via</i> USB of the Technical Application and EIS (integrated application), filed August 12, 2016 and addenda to date including: <ul style="list-style-type: none"> <li>• Addendum #1, filed January 31, 2017</li> <li>• Addendum #2, filed October 16, 2017</li> <li>• Addendum #3, filed November 9, 2017</li> <li>• Addendum #4, filed November 27, 2017</li> <li>• Addendum #5, filed February 28, 2017</li> <li>• Addendum #6, filed April 30, 2018</li> <li>• Addendum #7, filed May 28, 2018</li> <li>• Addendum #8, filed October 17, 2018</li> </ul>
October 31, 2018	E-mail	Benga provided a Project update letter and the "Conveyor Fall 2018 edition" Project Newsletter. The Newsletter covered: regulatory timelines; fieldwork updates; investment update; and, community updates. Benga stated hard copies of the documents in addition to the August 2016 EIS and Addenda #1-8 were mailed to Tsuut'ina Nation.
November 5, 2018	E-mail	Benga provided the Canadian Environmental Assessment Agency's announcement of the Joint Panel Review public comment period for the Project.
November 23, 2018	E-mail	Benga requested confirmation for the November 30, 2018 meeting with Tsuut'ina Nation to discuss issues raised in preparation for the Joint Panel Review process.
November 23, 2018	E-mail	Benga provided a series of documents for the period December 15, 2014 to April 15, 2018 including: <ul style="list-style-type: none"> <li>• a covering letter;</li> <li>• cumulative Record of Consultation Log;</li> <li>• cumulative revisions table;</li> <li>• cumulative response table; and</li> <li>• communication summary of all correspondence with Kai Scott.</li> </ul>

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
November 29, 2018	E-mail	Benga provided the most recent report version of the July 2015 Grassy Mountain Coal Project Public Report on Tsuut’ina Traditional Knowledge and Use of the Grassy Mountain Area.
November 29, 2018	E-mail	Benga informed Tsuut’ina Nation that the ACO had extended its timelines for review of the materials sent that Benga sent to Tsuut’ina Nation on November 23, 2018.
December 7, 2018	E-mail	Tsuut’ina Nation stated they had met with the CEAA, and re-confirmed previous requests made by the Nation concerning consultation and engagement timelines. Tsuut’ina Nation stated they would be providing an update on the Joint Review Panel (JRP) comments with fieldwork to follow.

#### 4.5.2 Issues Raised Since Submission of the EIS

Tsuut’ina Nation has raised a number of concerns and Aboriginal interests. The following is a summary of these concerns and interests and an overview of how Benga has considered them. For a full list of specific concerns and responses by Benga, see [Appendix A-7](#).

Tsuut’ina Nation raised issues regarding the following Aboriginal Interests:

- Aboriginal Physical & Cultural Heritage
- Aboriginal Socio-Economic Conditions
- Human & Wildlife Health
- Hunting
- Plant Gathering
- Terrain & Soils
- TK/TU
- Wildlife

In addition, Tsuut’ina Nation raised the following concerns:

- Consultation
- Construction
- Cumulative Effects
- Environmental Assessment Process
- Hydrogeology
- Monitoring
- Project Design
- Surface Water Quality

While Tsuut’ina Nation concerns have been categorized by Valued Component (VC) or other major topic area, they should be seen as interrelated. Benga understands that Project impacts to

biophysical features, lands and resources are linked to the Nation's ability to continue to pursue their Treaty Rights and maintain their cultural way of life.

Benga has considered and addressed Tsuut'ina Nation's concerns in the following ways:

- provision of information on how impacts were assessed in the EIS;
- consultation on mitigation measures, management and monitoring plans;
- working with Tsuut'ina Nation to provide employment opportunities; and
- meetings with Tsuut'ina Nation to discuss and resolve issues and concerns.

#### **4.5.3 Summary of Reports Received Since Submission of the EIS**

No reports have been received.

#### **4.5.4 Identification of VCs, Resources or Species**

No new VCs, resources, or species have been identified.

#### **4.5.5 Current Use of Lands and Resources for Traditional Purposes**

No new information regarding Current Use of Lands and Resources for Traditional Purposes has been provided.

#### **4.5.6 Aboriginal Health**

No new information regarding Aboriginal Health has been provided.

#### **4.5.7 Aboriginal Socio-Economic Conditions**

No new information regarding Aboriginal Socio-Economic Conditions has been provided.

#### **4.5.8 Aboriginal Physical and Cultural Heritage**

No new information regarding Aboriginal Physical and Cultural Heritage has been provided.

#### **4.5.9 Conclusions**

Information provided and issues raised by Tsuut'ina Nation since the submittal of the EIS in August 2016 have informed ongoing consultation and Project planning including the further development of mitigation measures and construction management and monitoring plans. Tsuut'ina Nation has not provided new information to Benga since the EIS was submitted in August 2016, and therefore no changes were required to the existing baseline information, the identification of Aboriginal VCs, the identification of potential adverse effects on Aboriginal

VCs, or the residual effects characterizations as presented in Section H of the EIS; or the characterization of residual cumulative effects as presented in EIS Addendum #8.

## 5.0 OTHER AFFECTED ABORIGINAL COMMUNITIES

### 5.1 Ktunaxa Nation

#### 5.1.1 Summary of Key Consultation Activities

Between August 16, 2016 and December 31, 2018, Benga and Ktunaxa Nation Council (KNC) (representing St. Mary’s Indian Band, Lower Kootenay Indian Band, Akisq’nuk Nation and Tobacco Plains Indian Band) have had ongoing dialogue regarding the review of the Application, mitigation measures and issues and concerns. Ktunaxa Nation Council has participated actively in a Project review.

Ktunaxa Nation is currently carrying out a Ktunaxa Knowledge and Use Study. Benga had not yet received reports from Ktunaxa Nation on this work as of December 31, 2018, however, Ktunaxa Nation advised Benga that a report is forthcoming in January 2019. New information provided to Benga after the submission of this consultation update report will be considered by Benga and incorporated into Project planning as appropriate.

Benga has provided funding to support KNC’s participation in the environmental assessment and Project review process.

Table 5-1 below provides a chronology of key consultation activities with Ktunaxa Nation.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
September 2, 2016	Mail	Benga sent a USB with a copy of EIS along with a Project update and cover letter.
February 1, 2017	Meeting	A Project update meeting was held to review proposed scope of work associated to the development of a panel submission outlining Ktunaxa Nation Council interests in the relation to the Grassy Mountain Project. Main discussion items included: <ul style="list-style-type: none"> <li>• Project overview;</li> <li>• regulatory update;</li> <li>• Ktunaxa Nation Council’s submitted scope of work; and</li> <li>• monitoring.</li> </ul>

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
February 2, 2017	E-mail	Ktunaxa Nation Council provided information regarding the Teck Coal Elk Valley Water Quality Program/Permit (#107517) and environmental monitoring.
February 17, 2017	E-mail	Benga proposed an information sharing workshop between Ktunaxa Nation Council and Kainai Nation.
June 14, 2017	Mail	<p>Benga sent a Project update letter, hard copy of the “Conveyor - the Grassy Mountain Spring 2017 Community Newsletter (Vol. 2 Issue 1)”, and a USB with the following information:</p> <ul style="list-style-type: none"> <li>• EIS;</li> <li>• Update to Aquatic Ecology Assessment (Consultant Report #6) (January 2017);</li> <li>• Updated Section E.6 (Summary of Consultant Report #6); and</li> <li>• Update to Wildlife Assessment (Consultant Report #8) (January 17).</li> </ul> <p>The Newsletter included: research into the winter ecology of Cutthroat Trout, and community updates.</p>
June 27, 2017	E-mail	Ktunaxa Nation requested a site tour with KNC staff and Ktunaxa knowledge holders.
July 17, 2017	Site Visit	Ktunaxa Nation participated in a guided tour of the Project area by Benga.
November 1, 2017	E-mail	Benga provided notice that the AER had issued their Notice of Application and provided a link to the AER website for more information. Ktunaxa Nation advised that they would not comment on provincial permitting and would only review the EIS. Ktunaxa Nation requested a letter from Benga authorizing them to proceed with data gathering and review of the EIS.
February 12, 2018	E-mail	Benga attached a copy of the “Conveyor: Winter 2018 edition” Newsletter and asked if Ktunaxa Nation had any questions on the information provided. The Newsletter covered: a regulatory process update; water conservation; Project FAQs; and, community involvement updates.
June 20, 2018	Mail and E-mail	Benga sent a Project Update letter and the “Conveyor Spring 2018 edition” Project Newsletter. The Newsletter covered: the Riversdale volunteer program; employee profiles; Project FAQs;

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
		rail loadout information; regulatory process update; and, community updates.
October 9, 2018	Meeting	Benga met ( <i>via</i> conference call) with Ktunaxa Nation and provided a Project status summary.
October 9, 2018	E-mail	Ktunaxa Nation requested updated Project document and the most recent EIS report.
October 30, 2018	Mail	Benga provided hard copies <i>via</i> USB of the Technical Application and EIS (integrated application), filed August 12, 2016 and addenda to date including: <ul style="list-style-type: none"> <li>• Addendum #1, filed January 31, 2017</li> <li>• Addendum #2, filed October 16, 2017</li> <li>• Addendum #3, filed November 9, 2017</li> <li>• Addendum #4, filed November 27, 2017</li> <li>• Addendum #5, filed February 28, 2017</li> <li>• Addendum #6, filed April 30, 2018</li> <li>• Addendum #7, filed May 28, 2018</li> <li>• Addendum #8, filed October 17, 2018</li> </ul>
October 31, 2018	E-mail	Benga provided a Project update letter and the “Conveyor Fall 2018 edition” Project Newsletter. The Newsletter covered: regulatory timelines; fieldwork updates; investment update; and, community updates. Benga stated hard copies of the documents in addition to the August 2016 EIS and Addenda #1-8 were mailed to Ktunaxa Nation.
November 5, 2018	E-mail	Benga provided the Canadian Environmental Assessment Agency’s announcement of the Joint Panel Review public comment period for the Project.
November 6, 2018	E-mail	Benga requested Ktunaxa Nation confirm hard copies of the EIS were to be sent <i>via</i> mail.
November 7, 2018	E-mail	Ktunaxa Nation provided the December 5, 2017 budget approval letter and requested for Benga to sign and return.
November 13, 2018	E-mail	Benga provided the signed December 5, 2017 budget approval letter.
November 27, 2018	E-mail	Ktunaxa Nation provided Benga the invoice for September – October 2018 Project work.

### 5.1.2 Issues Raised Since Submission of the EIS

No new issues have been raised by Ktunaxa Nation.

### 5.1.3 Conclusions

Ktunaxa Nation has not provided new information to Benga since the EIS was submitted in August 2016, and therefore no changes were required to the existing baseline information, the identification of Aboriginal VCs, the identification of potential adverse effects on Aboriginal VCs, or the residual effects characterizations as presented in Section H of the EIS; or the characterization of residual cumulative effects as presented in EIS Addendum #8.

## 5.2 Samson Cree Nation

### 5.2.1 Summary of Key Consultation Activities

Between August 16, 2016 and December 31, 2018, Benga has regularly provided Project information to the Samson Cree Nation and Benga and the Samson Cree Nation have met to discuss the Project EIS, mitigation measures and issues and concerns. Samson Cree Nation has participated actively in Project review through its review of the EIS and submission of a Statement of Concern. Benga has reviewed and responded to the Statement of Concern.

In September 2017, Samson Cree Nation completed a site tour of the Grassy Mountain Coal Project and met with Benga staff to review the Project.

Table 5-2 provides a chronology of key consultation activities with Samson Cree Nation.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
September 2, 2016	Mail	Benga sent USB with copy of the EIS and Project Update.
December 9, 2016	E-mail	Benga sent a copy of the “Conveyor - the Grassy Mountain Fall 2016 Community Newsletter (Vol. 4 Issue 4)”. The Newsletter covered: creating a sustainable economy through diversity; understanding Project waterways; Coleman fish and game pond improvements; environmental impact assessment update; and, community updates.
June 14, 2017	Mail	Benga sent a Project update letter, hard copy of the “Conveyor - the Grassy Mountain Spring 2017 Community Newsletter (Vol. 2 Issue 1)”, and a USB with the following information: <ul style="list-style-type: none"> <li>EIS (August 2016);</li> </ul>

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
		<ul style="list-style-type: none"> <li>Update to Aquatic Ecology Assessment (Consultant Report #6) (January 2017);</li> <li>Updated Section E.6 (Summary of Consultant Report #6); and</li> <li>Update to Wildlife Assessment (Consultant Report #8) (January 17).</li> </ul> <p>The Newsletter included: research into the winter ecology of Cutthroat Trout, and community updates.</p>
June 28, 2017	E-mail	Benga provided electronic files from a mail-out sent to Samson Cree Nation on June 14, 2017.
November 9, 2017	E-mail	Benga sent out the “Conveyor Fall 2017 edition” Project Newsletter. The Newsletter covered: updates on the federal and provincial regulatory process for the Project; Project information including details on the mine footprint and associated infrastructure; FAQs on Project timelines, employment, environmental concerns, mine infrastructure, environmental monitoring and water; and, details on the Community Investment Program.
September 7, 2017	Meeting	Samson Cree and Benga met to discuss project updates, the EIS, and infrastructure.
December 15, 2017	E-mail	Samson Cree submitted a Statement of Concern (SOC).
February 12, 2018	E-mail	Benga sent a Project update letter and the “Conveyor: Winter 2018 edition” Newsletter. The Newsletter covered: a regulatory process update; water conservation; Project FAQs; and community involvement updates.
February 22, 2018	E-mail	Benga provided a letter in response to Samson Cree’s SOC.
June 20, 2018	Mail and E-mail	Benga sent a Project Update letter and the “Conveyor Spring 2018 edition” Project Newsletter. The Newsletter covered: the Riversdale volunteer program; employee profiles; Project FAQs; rail loadout information; regulatory process update; and, community updates.
October 30, 2018	Mail	<p>Benga provided hard copies <i>via</i> USB of the Technical Application and EIS (integrated application), filed August 12, 2016 and addenda to date including:</p> <ul style="list-style-type: none"> <li>Addendum #1, filed January 31, 2017</li> </ul>

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
		<ul style="list-style-type: none"> <li>• Addendum #2, filed October 16, 2017</li> <li>• Addendum #3, filed November 9, 2017</li> <li>• Addendum #4, filed November 27, 2017</li> <li>• Addendum #5, filed February 28, 2017</li> <li>• Addendum #6, filed April 30, 2018</li> <li>• Addendum #7, filed May 28, 2018</li> <li>• Addendum #8, filed October 17, 2018</li> </ul>
November 1, 2018	Mail and E-mail	Benga provided a Project update letter and the “Conveyor Fall 2018 edition” Project Newsletter. The Newsletter covered: regulatory timelines; fieldwork updates; investment update; and, community updates. Benga stated hard copies of the documents in addition to the August 2016 EIS and Addenda #1-8 were mailed to Samson Cree Nation.
November 5, 2018	E-mail	Benga provided the Canadian Environmental Assessment Agency’s announcement of the Joint Panel Review public comment period for the Project.

### 5.2.2 Issues Raised Since Submission of the EIS

No new issues have been raised by Samson Cree Nation.

### 5.2.3 Conclusions

Samson Cree Nation provided some new information to Benga since the EIS was submitted in August 2016, *via* their December 2017 SOC. However, Benga was able to address this new information with a response letter to the SOC, and no changes were required to the existing baseline information, the identification of Aboriginal VCs, the identification of potential adverse effects on Aboriginal VCs, or the residual effects characterizations as presented in Section H of the EIS; or the characterization of residual cumulative effects as presented in EIS Addendum #8.

## 5.3 Shuswap Indian Band

### 5.3.1 Summary of Key Consultation Activities

Between August 16, 2016 and December 31, 2018, Benga has regularly provided Project information to Shuswap Indian Band and has provided the opportunity to meet to discuss the Project.

Table 5-3 provides a chronology of key consultation activities with Shuswap Indian Band.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
September 2, 2016	Mail	Benga sent USB with copy of the EIS.
December 9., 2016	E-mail	Benga provided a copy of the “Conveyor - the Grassy Mountain Fall 2016 Community Newsletter (Vol. 4 Issue 4)”. The Newsletter covered: creating a sustainable economy through diversity; understanding Project waterways; Coleman fish and game pond improvements; environmental impact assessment update; and, community updates.
April 20, 2017	Telephone	Benga advised that they would be sending a Project update in the mail. Shuswap Indian Band indicated they were looking into CEAA funding to participate in the Project review and determining whether there was enough interest in the Project to engage. Shuswap Indian Band indicated that they would need to close the file if they could not get funding and requested that Benga review their files to see what information had been provided.
April 28, 2017	Mail	Benga sent a Project update letter, hard copy of the “Conveyor - the Grassy Mountain Spring 2017 Community Newsletter (Vol. 2 Issue 1)”, and a USB with the following information: <ul style="list-style-type: none"> <li>• EIS (August 2016);</li> <li>• Update to Aquatic Ecology Assessment (Consultant Report #6) (January 2017);</li> <li>• Updated Section E.6 (Summary of Consultant Report #6); and</li> <li>• Update to Wildlife Assessment (Consultant Report #8) (January 17).</li> </ul> The Newsletter included research into the winter ecology of Cutthroat Trout and community updates.
June 28, 2017	E-mail	Benga e-mailed copies of the documents sent in the mail-out on April 28, 2017.
November 9, 2017	E-mail	Benga sent out the “Conveyor Fall 2017 edition” Project Newsletter. The Newsletter covered: updates on the federal and provincial regulatory process for the Project; Project information including details on the mine footprint and associated infrastructure; FAQs on Project timelines, employment,

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
		environmental concerns, mine infrastructure, environmental monitoring and water; and, details on the Community Investment Program.
February 12, 2018	E-mail	Benga sent a Project update letter and the “Conveyor: Winter 2018 edition” Newsletter. The Newsletter covered: a regulatory process update; water conservation; Project FAQs; and community involvement updates.
May 24, 2018	E-mail	Benga provided notification of information session dates, times and locations.
June 20, 2018	Mail and E-mail	Benga sent a Project Update letter and the “Conveyor Spring 2018 edition” Project Newsletter. The Newsletter covered: the Riversdale volunteer program; employee profiles; Project FAQs; rail loadout information; regulatory process update; and, community updates.
October 30, 2018	Mail	Benga provided hard copies <i>via</i> USB of the Technical Application and EIS (integrated application), filed August 12, 2016 and addenda to date including: <ul style="list-style-type: none"> <li>• Addendum #1, filed January 31, 2017</li> <li>• Addendum #2, filed October 16, 2017</li> <li>• Addendum #3, filed November 9, 2017</li> <li>• Addendum #4, filed November 27, 2017</li> <li>• Addendum #5, filed February 28, 2017</li> <li>• Addendum #6, filed April 30, 2018</li> <li>• Addendum #7, filed May 28, 2018</li> <li>• Addendum #8, filed October 17, 2018</li> </ul>
November 1, 2018	Mail and E-mail	Benga provided a Project update letter and the “Conveyor Fall 2018 edition” Project Newsletter. The Newsletter covered: regulatory timelines; fieldwork updates; investment update; and, community updates. Benga stated hard copies of the documents in addition to the August 2016 EIS and Addenda #1-8 were mailed to Shuswap Indian Band.
November 5, 2018	E-mail	Benga provided the Canadian Environmental Assessment Agency’s announcement of the Joint Panel Review public comment period for the Project.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
November 5, 2018	Voicemail	Benga called to discuss the project update recently sent to Shuswap Indian Band.

### 5.3.2 Issues Raised Since Submission of the EIS

No new issues have been raised by Shuswap Indian Band.

### 5.3.3 Conclusions

Shuswap Indian Band has not provided new information to Benga since the EIS was submitted in August 2016, and therefore no changes were required to the existing baseline information, the identification of Aboriginal VCs, the identification of potential adverse effects on Aboriginal VCs, or the residual effects characterizations as presented in Section H of the EIS; or the characterization of residual cumulative effects as presented in EIS Addendum #8.

## 5.4 Foothills Ojibway First Nation

### 5.4.1 Summary of Key Consultation Activities

Between August 16, 2016 and December 31, 2018, Benga has regularly provided Project information to Foothills Ojibway Society.

Table 5-4 below provides a chronology of key consultation activities with Foothills Ojibway First Nation.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
August 29, 2016	Mail	Benga sent a letter update and a copy of the EIS.
September 2, 2016	Mail	Benga sent USB with copy of the EIS.
December 9, 2016	E-mail	Benga sent a copy of the “Conveyor - the Grassy Mountain Fall 2016 Community Newsletter (Vol. 4 Issue 4)”. The Newsletter covered: creating a sustainable economy through diversity; understanding Project waterways; Coleman fish and game pond

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
		improvements; environmental impact assessment update; and, community updates.
June 14, 2017	Mail	<p>Benga sent a Project update letter, hard copy of the “Conveyor - the Grassy Mountain Spring 2017 Community Newsletter (Vol. 2 Issue 1)”, and a USB with the following information:</p> <ul style="list-style-type: none"> <li>• EIS (August 2016);</li> <li>• Update to Aquatic Ecology Assessment (Consultant Report #6) (January 2017);</li> <li>• Updated Section E.6 (Summary of Consultant Report #6); and</li> <li>• Update to Wildlife Assessment (Consultant Report #8) (January 17).</li> </ul> <p>The Newsletter covered research into the winter ecology of Cutthroat Trout and community updates.</p>
June 28, 2017	E-mail	Benga provided electronic files from a mail-out sent on June 14, 2017.
November 9, 2017	E-mail	Benga sent out the “Conveyor Fall 2017 edition” Project Newsletter. The Newsletter covered: updates on the federal and provincial regulatory process for the Project; Project information including details on the mine footprint and associated infrastructure; FAQs on Project timelines, employment, environmental concerns, mine infrastructure, environmental monitoring and water; and, details on the Community Investment Program.
February 12, 2018	E-mail	Benga sent a Project update letter and the “Conveyor: Winter 2018 edition” Newsletter. The Newsletter covered: human resources; a regulatory process update; water conservation; Project FAQs; and community involvement updates.
June 20, 2018	Mail and E-mail	Benga sent a Project Update letter and the “Conveyor Spring 2018 edition” Project Newsletter. The Newsletter covered: the Riversdale volunteer program; employee profiles; Project FAQs; rail loadout information; regulatory process update; and, community updates.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
October 30, 2018	Mail	<p>Benga provided hard copies <i>via</i> USB of the Technical Application and EIS (integrated application), filed August 12, 2016 and addenda to date including:</p> <ul style="list-style-type: none"> <li>• Addendum #1, filed January 31, 2017</li> <li>• Addendum #2, filed October 16, 2017</li> <li>• Addendum #3, filed November 9, 2017</li> <li>• Addendum #4, filed November 27, 2017</li> <li>• Addendum #5, filed February 28, 2017</li> <li>• Addendum #6, filed April 30, 2018</li> <li>• Addendum #7, filed May 28, 2018</li> <li>• Addendum #8, filed October 17, 2018</li> </ul>
October 31, 2018	E-mail	<p>Benga provided a Project update letter and the “Conveyor Fall 2018 edition” Project Newsletter. The Newsletter covered: regulatory timelines; fieldwork updates; investment update; and, community updates. Benga stated hard copies of the documents in addition to the August 2016 EIS and Addenda #1-8 were mailed to Foothills Ojibway Nation.</p>
November 5, 2018	E-mail	<p>Benga provided the Canadian Environmental Assessment Agency’s announcement of the Joint Panel Review public comment period for the Project.</p>

#### 5.4.2 Issues Raised Since Submission of the EIS

No new issues have been raised by Foothills Ojibway First Nation.

#### 5.4.3 Conclusions

Foothills Ojibway First Nation has not provided new information to Benga since the EIS was submitted in August 2016, and therefore no changes were required to the existing baseline information, the identification of Aboriginal VCs, the identification of potential adverse effects on Aboriginal VCs, or the residual effects characterizations as presented in Section H of the EIS; or the characterization of residual cumulative effects as presented in EIS Addendum #8.

## 5.5 Métis Nation of Alberta Region 3

### 5.5.1 Summary of Key Consultation Activities

Between August 16, 2016 and December 31, 2018, Benga and the Métis Nation of Alberta Region 3 (MNAR3) have had ongoing dialogue regarding the review of the Application, mitigation measures and issues and concerns. The Métis Nation of Alberta Region 3 has participated actively in Project review.

In July 2016, two reports were prepared on behalf of the Métis Nation of Alberta: the Métis Nation of Alberta Region 3, Traditional Land Use Study (TLU) Report for the proposed Grassy Mountain Coal Project prepared by Kisik Environmental Services; and, the Grassy Mountain Mine Environmental Impact Assessment Review by Solstice Canada Corp. prepared for Kisik Environmental Services. Meetings to finalize these reports were held in fall 2016. Benga has reviewed the two reports and concludes that the reports only contain information that was already considered in the EIS.

[Table 5-5](#) provides a chronology of key consultation activities with Métis Nation of Alberta Region 3.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
September 2, 2016	Mail	Benga sent USB with copy of the EIS along with Project update.
November 6, 2016	Meeting	Benga and MNAR3 met to review the Métis Nation of Alberta Region 3 Traditional Land Use Study Report for the Proposed Grassy Mountain Coal Project (July 2016).
December 9, 2016	E-mail	Benga sent a copy of the “Conveyor - the Grassy Mountain Fall 2016 Community Newsletter (Vol. 4 Issue 4)”. The Newsletter covered: creating a sustainable economy through diversity; understanding Project waterways; Coleman fish and game pond improvements; environmental impact assessment update; and, community updates.
April 4, 2017	E-mail	Benga provided the latest version of the Road/Land Use Agreement Memorandum of Agreement and a copy of the Solstice EIS review report in preparation for the meeting on April 7, 2017.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
April 7, 2017	Meeting	A Project update meeting was held to discuss: Project updates from Benga, the draft access management agreement, and other related issues.
June 14, 2017	Mail	<p>Benga sent a Project update letter and a hard copy of the “Conveyor - the Grassy Mountain Spring 2017 Community Newsletter (Vol. 2 Issue 1)”, and a USB with the following information:</p> <ul style="list-style-type: none"> <li>• EIS (2016);</li> <li>• Update to Aquatic Ecology Assessment (Consultant Report #6) (January 2017);</li> <li>• Section E.6 (Summary of Consultant Report #6); and</li> <li>• Update to Wildlife Assessment (Consultant Report #8) (January 17).</li> </ul> <p>The Newsletter included: research into the winter ecology of Cutthroat Trout, and community updates.</p>
June 28, 2017	E-mail	Benga provided electronic files from a mail-out sent to MNAR3 on April 28, 2017.
September 18, 2017	E-mail	Benga offered to meet to discuss the completion of the Road/Land Use Agreement Memorandum of Agreement
November 9, 2017	E-mail	Benga provided the “Conveyor Fall 2017 edition” Project Newsletter. The Newsletter covered: updates on the federal and provincial regulatory process for the Project; Project information including details on the mine footprint and associated infrastructure; FAQs on Project timelines, employment, environmental concerns, mine infrastructure, environmental monitoring and water; and, details on the Community Investment Program.
March 26, 2018	E-mail	Benga provided the Conveyor Winter 2017 Project Newsletter.
May 24, 2018	E-mail	Benga notified of Information Booth dates, times and locations.
May 29, 2018		Benga provided the “Conveyor Spring 2018 edition” Project newsletter, for the Grassy Mountain Coal Project.
September 27, 2018	E-mail	Métis Nation of Alberta Region 3 proposed a meeting with Benga to discuss Project work to date.

<b>Table 5-5 Chronology of Key Consultation Activities with Métis Nation of Alberta Region 3 (MNAR3)</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
September 28, 2018	Phone Call	Benga and Métis Nation of Alberta Region 3 discussed: <ul style="list-style-type: none"> <li>• Project work to date;</li> <li>• scheduling meetings;</li> <li>• finalization of Memorandum of Understanding; and</li> <li>• federal and provincial consultation process.</li> </ul>
October 24, 2018	E-mail	Benga provided a series of documents concerning work with the Métis Nation of Alberta Region 3 over the past few years including: <ul style="list-style-type: none"> <li>• meeting notes;</li> <li>• Project letters;</li> <li>• various reports including Traditional Land Use study budgets and reports; and,</li> <li>• draft 2016 Memorandum of Understanding.</li> </ul>
October 30, 2018	Mail	Benga provided hard copies <i>via</i> USB of the Technical Application and EIS (integrated application), filed August 12, 2016 and addenda to date including: <ul style="list-style-type: none"> <li>• Addendum #1, filed January 31, 2017</li> <li>• Addendum #2, filed October 16, 2017</li> <li>• Addendum #3, filed November 9, 2017</li> <li>• Addendum #4, filed November 27, 2017</li> <li>• Addendum #5, filed February 28, 2017</li> <li>• Addendum #6, filed April 30, 2018</li> <li>• Addendum #7, filed May 28, 2018</li> <li>• Addendum #8, filed October 17, 2018</li> </ul>
October 31, 2018	E-mail	Benga provided a Project update letter and the “Conveyor Fall 2018 edition” Project Newsletter. The Newsletter covered: regulatory timelines; fieldwork updates; investment update; and, community updates. Benga stated hard copies of the documents in addition to the August 2016 EIS and Addenda #1-8 were mailed to Métis Nation of Alberta Region 3.
November 5, 2018	E-mail	Benga provided the Canadian Environmental Assessment Agency’s announcement of the Joint Panel Review public comment period for the Project.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
November 7, 2018	E-mail	Benga provided the November 8, 2018 meeting agenda, information sheets on the Project and the fall 2018 newsletter.
November 8, 2018	Meeting	<p>Benga met with Métis Nation of Alberta Region 3 to:</p> <ul style="list-style-type: none"> <li>• provide project information;</li> <li>• review engagement activities to date with the MNAR3; and</li> <li>• plan next steps.</li> </ul> <p>Handouts included:</p> <ul style="list-style-type: none"> <li>• USB containing MNAR3 letters and Updates, MNAR3 Meeting Notes, MNAR3 Reports, MNAR3 TLU, MNAR3/Benga MOU (draft), November 8, 2018 handouts; and,</li> <li>• Hard copies of the information handouts.</li> </ul>
December 18, 2018	E-mail	Benga provided the draft December 18, 2018 letter regarding access. Benga proposed a meeting to discuss the draft letter, and the results of the Historic Resources Impact Assessment (HRIA).

### 5.5.2 Issues Raised Since Submission of the EIS

No new issues have been raised by Métis Nation of Alberta Region 3.

### 5.5.3 Conclusions

Métis Nation of Alberta Region 3 has not provided new information to Benga since the EIS was submitted in August 2016, and therefore no changes were required to the existing baseline information, the identification of Aboriginal VCs, the identification of potential adverse effects on Aboriginal VCs, or the residual effects characterizations as presented in Section H of the EIS; or the characterization of residual cumulative effects as presented in EIS Addendum #8.

## 5.6 Métis Nation of British Columbia Region 4

### 5.6.1 Summary of Key Consultation Activities

Between August 16, 2016 and December 31, 2018, Benga has regularly provided Project information to the Métis Nation of British Columbia Region 4.

Table 5-6 below provides a chronology of key consultation activities with Métis Nation of British Columbia Region 4.

<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
September 2, 2016	Mail	Benga provided USB flash drive copies of EIS with the update and covering letter (package was returned to sender October 6, 2016).
June 14, 2017	Mail	<p>Benga sent a Project update letter, hard copy of the “Conveyor - the Grassy Mountain Spring 2017 Community Newsletter (Vol. 2 Issue 1)”, and a USB with the following information:</p> <ul style="list-style-type: none"> <li>• EIS (August 2016)</li> <li>• Update to Aquatic Ecology Assessment (Consultant Report #6) (January 2017)</li> <li>• Updated Section E.6 (Summary of Consultant Report #6)</li> <li>• Update to Wildlife Assessment (Consultant Report #8) (January 2017)</li> </ul> <p>The Newsletter included research into the winter ecology of Cutthroat Trout and community updates.</p>
June 28, 2017	E-mail	Benga provided electronic files from a mail-out sent to MNBC on June 14, 2017.
October 30, 2018	Mail	<p>Benga provided hard copies <i>via</i> USB of the Technical Application and EIS (integrated application), filed August 12, 2016 and addenda to date including:</p> <ul style="list-style-type: none"> <li>• Addendum #1, filed January 31, 2017</li> <li>• Addendum #2, filed October 16, 2017</li> <li>• Addendum #3, filed November 9, 2017</li> <li>• Addendum #4, filed November 27, 2017</li> <li>• Addendum #5, filed February 28, 2017</li> <li>• Addendum #6, filed April 30, 2018</li> <li>• Addendum #7, filed May 28, 2018</li> <li>• Addendum #8, filed October 17, 2018</li> </ul>
October 31, 2018	E-mail	Benga provided a Project update letter and the “Conveyor Fall 2018 edition” Project Newsletter. The Newsletter covered: regulatory timelines; fieldwork updates; investment update; and, community updates. Benga stated hard copies of the documents

<b>Table 5-6 Chronology of Key Consultation Activities with Métis Nation of British Columbia Region 4</b>		
<b>Date</b>	<b>Method of Communication</b>	<b>Topic of Communication</b>
		in addition to the August 2016 EIS and Addenda #1-8 were mailed to Métis Nation of British Columbia Region 4.
November 9, 2017	E-mail	Benga provided the “Conveyor Fall 2017 edition” Project Newsletter. The Newsletter covered: updates on the federal and provincial regulatory process for the Project; Project information including details on the mine footprint and associated infrastructure; FAQs on Project timelines, employment, environmental concerns, mine infrastructure, environmental monitoring and water; and, details on the Community Investment Program.
November 5, 2018	E-mail	Benga provided the Canadian Environmental Assessment Agency’s (CEAA) announcement of the Joint Panel Review public comment period for the Project.

### 5.6.2 Issues Raised Since Submission of the EIS

No new issues have been raised by Métis Nation of British Columbia Region 4.

### 5.6.3 Conclusions

Métis Nation of British Columbia Region 4 has not provided new information to Benga since the EIS was submitted in August 2016, and therefore no changes were required to the existing baseline information, the identification of Aboriginal VCs, the identification of potential adverse effects on Aboriginal VCs, or the residual effects characterizations as presented in Section H of the EIS; or the characterization of residual cumulative effects as presented in EIS Addendum #8.

## 6.0 REFERENCES

- Carlson, M., Berg, K., Dyck, T., Stelfox, B., and Straker, J. (2018a). Cumulative Effects Assessment for Kainai First Nation. Prepared for Kainai First Nation, Standoff, AB, and JFK Law, Vancouver, BC. Prepared by Integral Ecology Group, Ltd., Duncan, BC, and the ALCES Group, Calgary, AB.
- Carlson, M., Berg, K., Dyck, T., Stelfox, B., and Straker, J. (2018b). Cumulative Effects Assessment for Siksika Nation. Prepared for Siksika First Nation, Standoff, AB, and JFK Law, Vancouver, BC. Prepared by Integral Ecology Group, Ltd., Duncan, BC, and the ALCES Group, Calgary, AB.
- Government of Alberta. (2010). C5 Forest Management Plan 2006-2026.
- Kainai Nation. (2015). Public Report on Kainai Traditional Knowledge and Use of the Grassy Mountain Area. Compiled by Kai Scott for Riversdale Resources.
- O'Connor, D. (2018). Blood Tribe/Kainai Traditional Knowledge & Use Assessment. Prepared by Dermot O'Connor, Oak Road Concepts Inc., Cochrane AB.
- Schaldemose & Associates. (2016). Updated Review of Riversdale Resources Riversdale Limited Grassy Mountain (Ksiistsiiko'om oomoiyyi) Coal Project Environmental Impact Study. Prepared for Piikani Nation.
- Siksika Consultation Office. (2018). Siksika Traditional Use Study Report #4.

# **Appendix A-1: Kainai Nation Specific Concern and Response Table**

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<div style="border: 1px solid black; text-align: center; width: 33px; height: 23px; margin-bottom: 2px;">+</div> <div style="border: 1px solid black; text-align: center; width: 33px; height: 23px;">-</div>	<p>January 4, 2016 Statement of Concern to Benga</p>	<p>I am concerned that the chemicals and pollutants resulting from the development will affect the health of the animals, fish and birds. If the animals are sick, and we eat the animals, then we will get sick.</p>	<p>Aboriginal Health - Human &amp; Wildlife Health - Pollution and Wildlife Health</p> <p>Current Use of Lands and Resources for Traditional Purposes - Hunting; Fishing</p>	<p>A list of wildlife species specifically identified as being potential country foods, culturally, or spiritually important by Blood Tribe is provided in Table 2.2-1 of the wildlife assessment in Consultant Report #9. A wildlife risk assessment (WRA) was conducted, using the same models and air concentrations as the human health risk assessment. The results of the screening-level WRA indicates that there is no potential risk of adverse effects associated with Project emissions on the health of wildlife in the study areas.</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Blood Tribe to review this issue.</p> <p>Benga has developed a conceptual wildlife monitoring plan, and will seek further input from Blood Tribe prior to construction.</p>	<p>Ongoing; working with Blood Tribe.</p>
<div style="border: 1px solid black; text-align: center; width: 33px; height: 23px; margin-bottom: 2px;">+</div> <div style="border: 1px solid black; text-align: center; width: 33px; height: 23px;">-</div>	<p>December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe identified a potential impact of Access Restrictions to TLU LSA and RSA for sites of archaeological, historical, or cultural importance, traditional camps, aquatic resources, vegetation, building materials, and wildlife.</p> <p>Potential effects are loss of access and use of traditionally occupied crown lands in the northern portion of the TLU LSA and continued and ongoing restrictions on access to privately owned land in southern portion of TLU LSA.</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe identified a potential impact of disturbance or destruction of sites of archaeological, historical, cultural importance including both documented and previously undocumented archaeological sites (Pre-contact camps, tipi rings, stone cairns, artifacts, hearths, tools, lithics, ceremonial sites, historic occupancy areas, bones, and traditional ceremonial vegetation).</p> <p>Blood Tribe said that disturbance or destruction of sites would have negative effects to BT/K members' psychological well-being, cultural sustainability and use and sense of connection to the portions of their traditional territory within the TLU LSA.</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe would like Benga to, prior to construction and vegetation clearing, provide funding support for a Blood Tribe cultural camp to be held within the Project footprint.</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe requests that a buffer zone of 100 meters be established around:</p> <ul style="list-style-type: none"> <li>- the rocky hill associated with DkPo-7 to protect it from mining activity and related disturbance.</li> <li>- tipi rings at Lat=49.6669° Lon=-114.4175° Alt=1558m (July 25, 2018 Field Visit).</li> <li>- erratics located at Lat=49.6674° Lon=-114.4181° Alt=1556m (July 25, 2018 Field Visit).</li> <li>- DjPo-219 to protect it from mining activity and related disturbance.</li> <li>- DjPo-184 to protect it from mining activity and related disturbance.</li> <li>- DjPo-217 to protect it from mine-related disturbance.</li> <li>- DjPo-216 to protect it from mine-related disturbance.</li> <li>- DjPo-214 to protect it from construction activities.</li> </ul>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe requests additional mitigation measures to avoid disturbing DjPo-116 and DjPo-98 and is suggesting that a buffer zone of 100 m be created around the sites to protect them.</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Although it appears that DjPo-130 is outside of the Project footprint and will not be affected by the coal conveyor infrastructure, Blood Tribe requests further information from Benga about the status of DjPo-130 and the findings of any additional archaeological field research done here.</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe requests further information about additional excavations and mitigation measures that Benga plans to implement for DjPo-63, DjPo-52, DjPo-32 prior to disturbance.</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe requests that DjPo-37 be protected from future development.</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe requests that Benga map rock art sites within the TLU RSA on Bluff Mountain and submit a request to Alberta Culture and Tourism to have the site designated or otherwise protected from future development.</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p style="text-align: center;">December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe has stated that Benga does not clarify what particular measures it would consider to be feasible or possible to mitigate sacred sites within the mine site that may be disturbed or destroyed by mine activities. They state that what is not known is the extent to which Benga is willing to go to protect sites of importance to Blood Tribe for cultural, spiritual, ceremonial, or historical reasons, and what mitigation measures it deems technically and economically feasible.</p> <p>Blood Tribe has stated that the Mine footprint will destroy both documented and previously undocumented sites of archaeological, historical, cultural, or spiritual significance. The mitigation measures proposed by the Benga to date do not adequately mitigate for the loss of these sites.</p>	<p style="text-align: center;">Aboriginal Physical &amp; Cultural Heritage</p>	<p style="text-align: center;">Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p style="text-align: center;">Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p style="text-align: center;">Benga will review concerns with Blood Tribe</p>	<p style="text-align: center;">Ongoing; working with Blood Tribe</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe has indicated that disturbance or destruction of sites of archaeological, historical, ceremonial, spiritual or cultural importance to Blood Tribe would have negative effects to Blood Tribe members' psychological well-being, cultural sustainability and use and sense of connection to the portions of their traditional territory within the TLU LSA.</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe raised a concern about project-related changes to the local environment and socioeconomic conditions that could have adverse effects on the Blood Tribe's traditional knowledge and use through interfering with knowledge and cultural transmission.</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe has stated that the arrival of additional workers from outside the region – including people who may be unfamiliar with Blood Tribe's connections to the Project areas – threatens to further undermine the relationship that Blood Tribe members have with the land.</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting February 21, 2015</p> <p>Meeting June 23, 2015</p> <p>Meeting June 6, 2017</p>	<p>A ceremony should be performed in advance of ground or vegetation disturbance.</p>	<p>Aboriginal Physical &amp; Cultural Heritage - Ceremony required prior to ground disturbance.</p>	<p>Benga supports this event and has discussed options and planning for a ceremony with Blood Tribe.</p>	<p>Blood Tribe has indicated that they will work with Benga to schedule a ceremony before ground disturbance.</p>	<p>Benga has committed to arrange for a ceremony to be performed in advance of ground disturbance for construction of the Project.</p>	<p>Complete</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>October 11, 2017 email from Blood Tribe</p> <p>Meeting October 27, 2017</p>	<p>The Blood Tribe requested the Historic Resources Impact Assessment (HRIA) for the Grassy Mountain Project (GMP)</p>	<p>Aboriginal Physical &amp; Cultural Heritage - Cultural Resources; HRIA</p>	<p>Benga responded by email that the HRIA is still under review by Alberta Culture and is not available for release at this point. The name and contact information for the Alberta Culture representative on the GMP HRIA was provided.</p> <p>Benga sent the Historic Resources section (Sect E 13) of the Environmental Impact Assessment, and a presentation that was put together by Bison Archaeology on the results of the HRIA</p> <p>In October 2017, Bison Historical Resources provided a presentation to the Blood Tribe on the Historic Resources Impact Assessment (HRIA) for the Project. Bison described the process and regulatory context, main results and recommendations proposed in the HRIA.</p>	<p>The Blood Tribe acknowledged receipt of the information.</p>	<p>Benga provided a summary presentation of the field work results from the HRIA, and has provided contact information for Alberta Culture.</p>	<p>Complete</p>

<div style="border: 1px solid black; width: 20px; height: 20px; margin: 5px auto; text-align: center; line-height: 20px;">+</div> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 5px auto; text-align: center; line-height: 20px;">-</div>	<p>Phone Call October 5, 2017</p> <p>Meeting June 23, 2018</p>	<p>Blood Tribe indicated that the camp site, Dj Po-98 is of particular concern. Blood Tribe would like to assess the area either in October 2017 or in the spring/summer of 2018. The Blood Tribe would also like a presentation on the HRIA results.</p>	<p>Aboriginal Physical &amp; Cultural Heritage - Sites of Concern</p>	<p>The proposed plant site sedimentation pond overlays a portion of the identified historical resource site. Benga advised the Blood Tribe of the potential to relocated the sedimentation pond to avoid the site Dj Po-98.</p> <p>Historical Resource DjPo-98 is an unnamed pre-contact period site located on private land within the proposed the proposed Coal Handling Preparation Plant (CHPP) area. This site was partly evaluated and excavated when it was first recorded, however, 2015 testing and assessment indicated the presence of additional deeply buried material.</p> <p>The mitigation measures for historical resource DjPo-98 are discussed in Section E.13.3.3.4 of the August 2016 EIA Summary.</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback</p>	<p>Benga confirmed that cultural site (DjPo-98) would be avoided.</p> <p>In October 2017 Bison Historical Resources provided a presentation to the Blood Tribe on the Historic Resources Impact Assessment (HRIA) for the Project. Bison described the process and regulatory context, main results and recommendations proposed in the HRIA.</p> <p>This issue was discussed in June 2018 and resolved with the Blood Tribe. Blood Tribe and Benga scheduled a site visit to DjPo-98 on June 27, 2018. This site is located on private land. Blood Tribe will assess the site and provide feedback on avoidance and site management options.</p> <p>A preliminary tour of the archaeological sites of interest took place on June 27 2018. As a follow up, Blood Tribe conducted focused site assessments from July 24-27 2018 to consider mitigation measures. Blood Tribe's recommendations for the management of site DjPo-98 will be provided to Benga.</p>	<p>Complete</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>January 4, 2016 Statement of Concern to Benga</p> <p>June 23, 2018</p>	<p>In addition to removing the lands for use by Blood Tribe members, this taking-up will impact Blood Tribe members' ability to transmit traditional knowledge about the area to younger generations. In short, the Applications, if approved, will have lasting adverse impacts on Blood Tribe's culture.</p>	<p>Aboriginal Physical &amp; Cultural Heritage - Traditional Knowledge; Culture</p>	<p>As part of the review of the Conservation and Reclamation (C&amp;R) plan, Benga will collaborate with Blood Tribe in establishing end land use objectives and developing and implementing its reclamation plans for the project. This could include ongoing Blood Tribe participation in progressive reclamation activities and performance monitoring of reclaimed areas. Collaboration will enable the sharing of Traditional Knowledge and learnings from site monitoring with all members of the Blood Tribe throughout the life of the mine to final closure.</p>	<p>In June 2018, Blood Tribe indicated that TEK was left out of initial work that was performed for the EIA and advised that Blood Tribe needs to perform inventory work at the same time as the environmental surveys. The concern documented on is linked to that deficiency.</p> <p>Blood Tribe would like to see the establishment of a Blackfoot stewardship program.</p>	<p>Benga acknowledged interest in establishing an Indigenous environmental stewardship program.</p> <p>Blood Tribe and Benga discussed the development of a First Nation directed environmental stewardship committee and the addition of TEK assessments. Blood Tribe proposed the inclusion of 3 Elders and 3 Youth; site visits to take place seasonally. The program can be run in parallel with the western-based program. Details of the program to be further discussed with Benga over the next year; feedback into the Conservation and Reclamation plan could be facilitated through this committee.</p> <p>Benga commits to involving Blood Tribe in the development of the reclamation plan and to ongoing monitoring through the stewardship program.</p> <p>This concern is also being addressed by Benga through their support of the Blood Tribe's Cumulative Effects and Traditional Use/Traditional Ecological Knowledge Study which were</p>	<p>On-going; working with Blood Tribe.</p>
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+ -	(Continued from row above)	(Continued from row above)	(Continued from row above)	(Continued from row above)	(Continued from row above)	completed in 2018.	(Continued from row above)
+ -	December 2018 Blood Tribe Káinai Traditional Knowledge & Use Assessment Grassy Mountain Coal Project	Blood Tribe raised a concern of the loss of culturally important subsistence, sharing, and production practices.	Aboriginal Physical & Cultural Heritage  Current Use of Lands and Resources for Traditional Purposes - Hunting; Fishing; Trapping; Plant Gathering	Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.	Blood Tribe has provided their Traditional Knowledge & Use Assessment study	Benga will review concerns with Blood Tribe	Ongoing; working with Blood Tribe
+ -	May 24, 2016 email from Mike Oka to Cal Clark	The Blood Tribe expressed concern that many of the jobs created would not be long-term.	Aboriginal Socio-Economic Conditions - Employment	Benga will be employing a variety of different positions of different durations during their 30 year mine life.	Blood Tribe is interested in employment opportunities.	Benga has met with the Blood Tribe to review this issue, and will continue to work with Blood Tribe on employment opportunities for Blood Tribe members.	Complete
+ -	April 9, 2018 meeting	Blood Tribe would like an agreement on access.	Access	Benga referenced the operational area and permit area, and advised that within the operational area, access will be tightened. It is different outside of the boundary.	Blood Tribe will create a working draft of the Access Schedule.	Benga welcomes Blood Tribe's working draft of the Access Schedule.	Complete
+ -	April 19, 2018 meeting	Access into reclaimed areas needs to be established for Blood Tribe.	Access - Access Management	Discussed access to area in the vicinity where Blood Tribe would like to harvest lodgepole pine. Clearing to occur in Year 5-6. Access schedule to include: - Construction - Active mining - Reclamation	Blood Tribe has indicated that they will review the information.	Benga and Blood Tribe to discuss access through the life of the project.	Ongoing; working with Blood Tribe.

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting June 23, 2015</p>	<p>Particulate matter from the mine may settle in nearby towns, including Nanton and Cardston.</p>	<p>Air Quality &amp; Climate - Impact of particulate matter on Human Health</p>	<p>The results of the Environmental Assessment (EA) were submitted in 2015 and again in August 2016. Section E.1.3 of the EA provides an assessment of potential effects of the Project including the potential for effects on air quality in the region especially related to dust and particulates. Mitigation measures are proposed in Section E.1.5 of the EA including measures for dust management. No significant impacts were predicted in the EA.</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Blood Tribe to review this issue.  Benga will seek further input on management and monitoring plans from Blood Tribe prior to construction.</p>	<p>Ongoing; working with Blood Tribe.</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe has stated that Benga's mitigation measures for vegetation and land and resource use in the EIA, there is no mention of promoting or inviting Blood Tribe members to participate in ongoing vegetation and reclamation monitoring programs for the life of the mine project.</p>	<p>Conservation and Reclamation Plan; Monitoring</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting June 23, 2015</p>	<p>Concerns that none of the non-Blackfoot Aboriginal groups included by the Canadian Environmental Assessment Agency (CEAA) have a legitimate claim on the area.</p>	<p>Consultation - Consultation process (CEAA)</p>	<p>Benga is committed to adhering to consultation and engagement requirements as identified by provincial Alberta Consultation Office (ACO) and federal (CEAA) authorities.</p>	<p>Blood Tribe has not provided a response.</p>	<p>Concerns have been noted and Benga has forwarded to Brett Maracle at CEAA.</p>	<p>Complete</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	Meeting April 9, 2018	Blood Tribe would like a combined cumulative study with Siksika Nation.	Cumulative Effects	Benga indicated that Blood Tribe will need to define a process on how this will proceed.	Blood Tribe would like a response from Benga regarding the cumulative effects assessment.	Blood Tribe submitted their Cumulative Effects Assessment to Benga in December 2018.	Ongoing; working with Blood Tribe.
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	December 2018 Blood Tribe Káínai Traditional Knowledge & Use Assessment Grassy Mountain Coal Project	Blood Tribe has stated that Benga's proposed mitigation measures to avoid or minimize potential effects to the availability of fishing areas ignores potential psychological effects of the mine's presence on the desirability of fishing or consuming fish from the creeks in proximity to the open pit mine.	Current Use of Lands and Resources for Traditional Purposes - Fishing	Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.	Blood Tribe has provided their Traditional Knowledge & Use Assessment study	Benga will review concerns with Blood Tribe	Ongoing; working with Blood Tribe
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	December 2018 Blood Tribe Káínai Traditional Knowledge & Use Assessment Grassy Mountain Coal Project	<p>Blood Tribe identified a potential impact of changes in water flows, sedimentation, fish mortality and morbidity in Blairmore Creek, Gold Creek and Crowsnest River for Westslope cutthroat trout, Brook Trout, Rainbow Trout, and Mountain Whitefish bull trout.</p> <p>Blood Tribe has identified potential effects to TKU are loss of availability and quality of fish and related decline in Blood Tribe fishing opportunities, loss of access to fishing areas, and infringement on Aboriginal and Treaty Rights.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Fishing</p> <p>Fish and Fish habitat</p>	Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.	Blood Tribe has provided their Traditional Knowledge & Use Assessment study	Benga will review concerns with Blood Tribe	Ongoing; working with Blood Tribe

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>January 4, 2016 Statement of Concern to Benga  Meeting June 26, 2018</p>	<p>The proponent intends to divert surface and groundwater for use in the Project. Further, the Project area is located at the headwaters of many downstream rivers used by the Blood Tribe.</p> <p>This is likely to permanently reduce the suitability of affected water-ways for traditional use activities. Any leaching or spills from the Project's tailings ponds could prove catastrophic.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Fishing; Trails &amp; Travelways - Water Management and potential effect on traditional use activities.</p>	<p>In the August 2016 Environmental Impact Assessment (EIA) Update, Benga provided information and clarification around the Project's Water Management Plan (WMP). This WMP was developed to ensure all water within the mine site is captured in appropriately sized holding ponds that allow for the testing of water quality prior to being released into the surrounding environment. The WMP was assessed to determine potential effects on river flows and water quality in the neighbouring and downstream rivers. The results of the assessment indicate that there will not be any impacts to the environment with the implementation of the WMP. To verify that changes in flow do not affect fish and their habitat, Benga also conducted a detailed Instream Flow Needs study (IFN).</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>Benga welcomes feedback on the information provided in the EIA specific to the WMP.</p> <p>Benga will seek further input on management and monitoring plans from Blood Tribe prior to construction.</p> <p>This issue was discussed resolved with the Blood Tribe in June 2018. Benga and Blood Tribe agreed that this issue will be managed as part of the establishment of an environmental stewardship committee and monitoring program.</p> <p>Blood Tribe would like to see the establishment of a Blackfoot stewardship program.</p> <p>Benga acknowledged interest in establishing an Indigenous environmental stewardship program.</p> <p>Blood Tribe and Benga discussed the development of a First Nation directed environmental stewardship committee and the addition of TEK assessments. Blood Tribe proposed the inclusion of 3 Elders and 3 Youth; site visits to take place</p>	<p>Complete.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from row above)	(Continued from row above)	(Continued from row above)	(Continued from row above)	(Continued from row above)	<p>seasonally. The program can be run in parallel with the western-based program. Details of the program to be further discussed with Benga over the next year; feedback into the Conservation and Reclamation plan could be facilitated through this committee.</p> <p>Benga commits to involving Blood Tribe in the development of the reclamation plan and to ongoing monitoring through the stewardship program.</p>	(Continued from row above)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe stated that while potential effects to hunting stem from Project impacts on wildlife, direct effects to wildlife are not the only factors that would affect Blood Tribe hunting. Other factors such as access through and around the site, preference for a particular species, purpose of the hunt (subsistence vs ceremony), may also be affected by the Project in direct and indirect ways.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe stated that in the EIA section intended to identify potential Project effects to Blood Tribe equates Blood Tribes use of the area with access for recreational use. This position ignores the protected status of Blood Tribe hunting as an Aboriginal and Treaty right.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe would like access and road use agreements between Benga and Blood Tribe developed to mitigate the effects to hunting from mine-related access changes.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe believes that Benga does not acknowledge that Blood Tribe hunting is protected as an Aboriginal right and differs from recreational hunting, access restrictions to Blood Tribe hunters create a risk of potential infringement of the right.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p>December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe raised a concern about additional loss of crown land for hunting and potential access restrictions due to mining activity. This will contribute to the cumulative effects of land loss in the foothills and in the front ranges of the Rocky Mountains.</p> <p>Negotiating access to crown land portions of the TLU LSA and maintaining access to continue to hunt in the future is a priority for Blood Tribe.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p>December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe indicated that the loss of wildlife habitat could contribute to the loss of land for the exercise of Blood Tribe hunting rights and could lead to a potential infringement of these rights.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	December 2018 Cumulative effects assessment for Kainai First Nation Report	Blood Tribe has indicated that accessibility of the land for traditional activities is also of concern with an estimated 40% being inaccessible. When inaccessibility is combined with habitat effectiveness, opportunity for hunting elk and mule deer declines to about one quarter of natural, resulting in an assessment of high risk to traditional land use.	Current Use of Lands and Resources for Traditional Purposes - Hunting	Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.	Blood Tribe has provided their cumulative effects assessment	Benga will review concerns with Blood Tribe	Ongoing; working with Blood Tribe
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> <div style="border-bottom: 1px solid black; padding: 2px;">+</div> <div style="padding: 2px;">-</div> </div>	<p>Meeting June 23, 2015</p> <p>Meeting June 26, 2018</p>	<p>Insufficient consideration of the effect to Blood Tribe hunting during wildlife surveys, as Blood Tribe technicians did not participate in the fieldwork.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting - Consideration of the Project effect on hunting during the wildlife assessment.</p>	<p>The results of the Environmental Assessment (EA) were submitted in 2015 and updated in August 2016. Information provided in the Blood Tribe Traditional Use Study, including information about wildlife, is considered in the EA under potential effects to wildlife and potential effects to hunting. This information has been provided to Blood Tribe.</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>Benga will seek further input on management and monitoring plans from Blood Tribe prior to construction.</p> <p>In June 2018, Blood Tribe indicated that TEK was left out of initial work that was performed for the EIA and advised that Blood Tribe needs to perform inventory work at the same time as the environmental surveys.</p> <p>The concern documented on June 23, 2015 about hunting and wildlife surveys is linked to that deficiency. Blood Tribe would like to see the establishment of a Blackfoot stewardship program. Benga acknowledged interest in establishing an Indigenous environmental stewardship program. Blood Tribe and Benga discussed the development of a First Nation directed environmental stewardship committee and the addition of TEK assessments. Blood Tribe proposed the inclusion of 3 Elders and 3 Youth; site visits to take place seasonally. The program can be run in parallel with the western-based program. Details of the program to be further</p>	<p style="text-align: center;">Complete</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from row above)	(Continued from row above)	(Continued from row above)	(Continued from row above)	(Continued from row above)	discussed with Benga over the next year. Benga commits to involving Blood Tribe in ongoing monitoring through the stewardship program.	(Continued from row above)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Blood Tribe Traditional Knowledge and Use of the Grassy Mountain Area.</p> <p>Meeting June 26, 2018</p>	<p>The Project will make some land inaccessible for hunting, which will impose cumulative effects on Blood Tribe's land base which has already been reduced due to the inaccessibility of private land and reduced acreage of Crown land.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting - Cumulative effect of development on land access and impact to hunting</p>	<p>Cumulative effects within the Project's defined cumulative effects assessment study area were assessed. Cumulative effects on Blood Tribe's hunting rights outside of the project area are outside of the scope of the assessment. Benga has forwarded this comment on to Canadian Environmental Assessment Agency (CEAA) and Aboriginal Consultation Office (ACO).</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>Concerns have been noted and Benga has forwarded to the provincial and federal government.</p> <p>In June 2018, Blood Tribe confirmed that this concern has been sufficiently addressed by Benga through their support of the Blood Tribe's Cumulative Effects Study.</p>	<p>Complete</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe stated that project-related access restrictions and road closures will change patterns of access to and movement into the TLU LSA and RSA which could also reduce opportunities for Blood Tribe hunters to exercise their Aboriginal rights in the TLU LSA and RSA.</p> <p>Blood Tribe stated that the Project-related changes to wildlife (habitat loss, fragmentation, reduced connectivity, increased mortality and morbidity) together with access restrictions will reduce the abundance, availability and quality of big game species in the TLU LSA and RSA and together with access restrictions will likely reduce the opportunities for Blood Tribe hunters to exercise their hunting rights in the TLU LSA, potentially infringing upon Blood Tribe's Aboriginal and Treaty rights.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting</p> <p>Wildlife</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>April 9, 2018 meeting</p>	<p>Blood Tribe would like to perform supplementary Traditional Land Use work with a focus on hunting and fishing.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting; Fishing</p>	<p>Benga indicated this discussion will continue at the next meeting.</p>	<p>Blood Tribe conducted fieldwork in June and July 2018, and provided a report to Benga in December 2018.</p>	<p>Benga has received Blood Tribe's TU report, and will work with Blood Tribe to develop management strategies based on the information provided.</p>	<p>Ongoing; working with Blood Tribe.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>January 4, 2016 Statement of Concern to Benga</p>	<p>I am concerned about hunting and fishing in the Project area because of the effect of the chemicals on the animals and fish. I am concerned about the tailings ponds leaching into the waterways and affecting the fish health and habitat and the health of the moose and elk that drink out of those waterways. I am concerned this will affect the quality of the meat.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting; Fishing</p> <p>Water Quality - Water Management Plan</p> <p>Emergency Response</p> <p>Wildlife</p>	<p>A list of wildlife species specifically identified as being potential country foods, culturally, or spiritually important by Blood Tribe is provided in Table 2.2-1 of the wildlife assessment in Consultant Report #9. A wildlife risk assessment (WRA) was conducted, using the same models and air concentrations as the human health risk assessment. The results of the screening-level WRA indicates that there is no potential risk of adverse effects associated with Project emissions on the health of wildlife in the study areas. This information has been provided to Blood Tribe. Benga will be implementing a Water Management Plan (WMP) that will prevent any unwanted release of water that may not meet provincial or federal water quality guidelines. All water (surface and groundwater) will be collected, held, and only released once it meets the appropriate or applicable water quality guideline.</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Blood Tribe to review this issue.</p> <p>Benga will seek further input on management and monitoring plans from Blood Tribe prior to construction.</p>	<p>Ongoing; working with Blood Tribe.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>Meeting: June 6, 2017</p> <p>Meeting: June 26, 2018</p>	<p>Treaty rights are impacted adversely if we cannot hunt or fish. Need to figure out how to address and mitigate this.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting; Fishing - Treaty rights</p>	<p>This information has been included in the updated Environmental Impact Assessment (EIA) (August 2016) which has been provided to Blood Tribe. Information from the Blood Tribe will help shape the structure and objectives of monitoring plan.</p> <p>The results of the Environmental Assessment (EA) were submitted in 2015 and updated in August 2016. Information provided in the Blood Tribe Traditional Use Study, including information about wildlife, is considered in the EIA under potential effects to wildlife and potential effects to hunting.</p>	<p>In June 2018, Blood Tribe indicated that TEK was left out of initial work that was performed for the EIA and advised that Blood Tribe needs to perform inventory work at the same time as the environmental surveys. The concern documented is linked to that deficiency.</p> <p>Blood Tribe would like to see the establishment of a Blackfoot stewardship program.</p>	<p>In June 2018, Benga acknowledged interest in establishing an Indigenous environmental stewardship program.</p> <p>Blood Tribe and Benga discussed the development of a First Nation directed environmental stewardship committee and the addition of TEK assessments. Blood Tribe proposed the inclusion of 3 Elders and 3 Youth; site visits to take place seasonally. The program can be run in parallel with the western-based program.</p> <p>Benga commits to involving Blood Tribe in ongoing monitoring through the stewardship program.</p> <p>Benga has developed a conceptual wildlife monitoring plan and will seek further input from Blood Tribe prior to construction.</p>	<p>Ongoing; working with Blood Tribe.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>January 4, 2016 Statement of Concern to Benga</p> <p>Meeting June 6, 2017</p> <p>Meeting June 26, 2018</p>	<p>The Project will have irreparable adverse impacts on Blood Tribe's ability to exercise its traditional activities in and around the Project area. Treaty rights will be impacted if we cannot hunt or fish. The Project would be located in Blood Tribe's traditional territory in the heart of an area used intensively by Blood Tribe members for hunting, fishing, gathering and ceremonial purposes. Need to figure out how to address and mitigate this.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting; Fishing; Plant Gathering</p> <p>Aboriginal Physical &amp; Cultural Heritage - Adverse impacts to traditional activities, hunting, fishing, and plant gathering; ceremonies</p>	<p>This information has been included in the updated Environmental Assessment (EA) (August 2016) which has been provided to Blood Tribe.</p> <p>Information from the Blood Tribe will help shape the structure and objectives of monitoring plan.</p> <p>The results of the Environmental Assessment (EA) were submitted in 2015 and updated in August 2016. Information provided in the Blood Tribe Traditional Use Study, including information about wildlife, is considered in the EIA under potential effects to wildlife and potential effects to hunting.</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>Benga will seek further input on management and monitoring plans from Blood Tribe prior to construction.</p> <p>This concern was discussed in June 2018, and is being addressed by Benga through their support of the Blood Tribe's Cumulative Effects and Traditional Use / Traditional Ecological Knowledge Study to be completed in 2018. TEK and TU will also be included as part of on-going work in 2018 and as a component of the site visits to the archaeological sites of interest identified as part of the Historic Resources Impact Assessment (HRIA).</p> <p>Blood Tribe advised that this issue can be dealt with as part of the development of the Access Management Plan. Benga and Blood Tribe discussed the draft plan at the meeting. Issue resolved through access discussion with the Blood Tribe.</p>	<p>Complete</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Cumulative effects assessment for Kainai First Nation Report</p>	<p>Blood Tribe has indicated that the mine would contribute to ongoing loss of habitat and associated opportunities for traditional land use, and impacts may be greater if consequences of water contamination (e.g., selenium, calcite) were to be considered. Any further decline in opportunities for traditional land use may be of concern given that risk to traditional land use is already assessed as high.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting; Fishing; Trapping; Plant Gathering</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their cumulative effects assessment</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe has stated that it does not appear that Benga included beavers or mule deer or white tailed deer in its assessment even though these species are important to many Aboriginal groups.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting; Trapping  Wildlife</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p style="text-align: center;">December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe identified a potential impact of loss of wildlife habitat, habitat fragmentation and reduced wildlife habitat connectivity (and wildlife movement), impacts on wildlife mortality and wildlife health, and effects on regional wildlife diversity (including Elk, moose, mule deer, bighorn sheep, beaver, and eagles).</p> <p>Blood Tribe has stated that another potential impact is the disturbance of 1,502.7 ha of land that could support wildlife (including Blairmore Creek valley and tributaries, Bluff Mountain and Grassy Mountain, Gold Creek and tributaries, access roads and trails, and traditional hunting camps).</p> <p>The Blood Tribe has stated that potential impacts to TKU are loss of crown land to practice hunting; loss of access to wildlife habitat and related loss of hunting opportunities and a likely decline in hunting in the TLU LSA and RSA, and infringement on Aboriginal and Treaty Rights.</p>	<p style="text-align: center;">Current Use of Lands and Resources for Traditional Purposes - Hunting; Wildlife</p>	<p style="text-align: center;">Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p style="text-align: center;">Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p style="text-align: center;">Benga will review concerns with Blood Tribe</p>	<p style="text-align: center;">Ongoing; working with Blood Tribe</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p style="text-align: center;">December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe has stated that Benga's proposed mitigation measure for effects to plant gathering in the EIA does not address or reduce the ongoing Project effects to vegetation resources in the mine area, nor does it address the Project's contributions to the future loss of vegetation resources and the future decline of Blood Tribe plant harvesting in the Project areas due to mining activities.</p>	<p style="text-align: center;">Current Use of Lands and Resources for Traditional Purposes - Plant Gathering</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p style="text-align: center;">Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p style="text-align: center;">Benga will review concerns with Blood Tribe</p>	<p style="text-align: center;">Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p style="text-align: center;">December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe raised a concern about the Project's additional contribution to the loss of areas where their traditional use plants are found.</p>	<p style="text-align: center;">Current Use of Lands and Resources for Traditional Purposes - Plant gathering</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood tribe to discuss it.</p>	<p style="text-align: center;">Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p style="text-align: center;">Benga will review concerns with Blood Tribe</p>	<p style="text-align: center;">Ongoing; working with Blood Tribe</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p style="text-align: center;">December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe stated that the physical removal of lodgepole pine forests, old growth forests, lands with high traditional use potential, rare plant communities and wetlands together suggest that the Project would have a negative effect on the availability, quantity and quality of traditional resources for Blood Tribe to harvest. Furthermore, they stated that access restrictions related to the Project could interfere with Blood Tribe members' opportunities to enter the area to harvest, resulting in a loss of opportunities to gather dozens of species of plants and a potential infringement of Blood Tribe's Aboriginal rights.</p>	<p style="text-align: center;">Current Use of Lands and Resources for Traditional Purposes - Plant Gathering</p>	<p style="text-align: center;">Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p style="text-align: center;">Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p style="text-align: center;">Benga will review concerns with Blood Tribe</p>	<p style="text-align: center;">Ongoing; working with Blood Tribe</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p style="text-align: center;">December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe has stated that Benga's mitigation measures for vegetation and land and resource use in the EIA, it is not clear who will do the harvesting of the lodgepole pine and other culturally important plants and whether the Proponent will invite Blood Tribe harvesters to gather plants in the mine area prior to construction or whether it will provide lodge pole pine timber and other resources to Blood Tribe.</p> <p>Blood Tribe would like Benga to, prior to construction and vegetation clearing, agree to invite Blood Tribe harvesters to harvest timber, food and medicinal plants from the Project Footprint areas.</p>	<p style="text-align: center;">Current Use of Lands and Resources for Traditional Purposes - Plant Gathering</p>	<p style="text-align: center;">Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p style="text-align: center;">Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p style="text-align: center;">Benga will review concerns with Blood Tribe</p>	<p style="text-align: center;">Ongoing; working with Blood Tribe</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	December 2018 Blood Tribe Káínai Traditional Knowledge & Use Assessment Grassy Mountain Coal Project	<p>Blood Tribe has indicated that direct access into the TLU LSA from Highway 3 will likely be controlled by Benga, potentially blocking Blood Tribe access to harvesting areas in Blairmore Creek and around Bluff Mountain. This will likely require access management plans and road use agreements as a mitigation measures. Arranging for continued access to northern portions of the TLU LSA will likely be required as part of an access management plan (between Benga and Blood Tribe) to offset loss of access to other areas as a result of the Project.</p>	Current Use of Lands and Resources for Traditional Purposes - Plant gathering / Access Management	Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.	Blood Tribe has provided their Traditional Knowledge & Use Assessment study	Benga will review concerns with Blood Tribe	Ongoing; working with Blood Tribe
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p style="text-align: center;">December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe has indicated that Benga's mitigation measures (providing "...lodge pole pine that is cleared for the Project to Káínai Nation, Piikani Nation and Tsuu T'ina Nation. Benga will continue to work with Káínai Nation to identify other species of importance for harvesting in advance of construction activities in the Aboriginal Access Management Plan") on effects to plant gathering does not address or reduce the ongoing Project effects to vegetation resources in the mine area, nor does it address the Project's contributions to the future loss of vegetation resources and the future decline of Blood Tribe plant harvesting in the Project areas due to mining activities.</p>	<p style="text-align: center;">Current Use of Lands and Resources for Traditional Purposes - Plant Gathering  Vegetation</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p style="text-align: center;">Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p style="text-align: center;">Benga will review concerns with Blood Tribe</p>	<p style="text-align: center;">Ongoing; working with Blood Tribe</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting June 26, 2018</p> <p>Meeting April 19, 2018</p> <p>July 2015 Grassy Mountain Coal Project Public Report on Blood Tribe Traditional Knowledge and Use of the Grassy Mountain Area.</p> <p>Meeting February 21, 2015</p>	<p>Timely harvest of medicinal and ceremonial plants prior to effect by the Project.</p> <p>Continued and/or improved access to ceremonial plants.</p> <p>Blood Tribe requested that lodgepole pine in and around the Grassy Mountain be provided. Blood Tribe stated a preference for harvesting lodgepole pine for both the Elder's Lodge and ceremonial tipis at the end of June.</p> <p>Access to reclaimed areas needs to be established for Blood Tribe</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Plant Gathering; medicinal and ceremonial.</p> <p>Access Management</p>	<p>Benga has committed to providing lodgepole pine that is cleared for the Project to Nations. Benga engage further with Blood Tribe on environmental management plans.</p> <p>Access to harvesting areas will be included as a component of the Aboriginal Access Management plan.</p> <p>Discussed access to area in the vicinity where Blood Tribe would like to harvest lodgepole pine. Clearing to occur in Year 5-6. Access schedule to include:</p> <ul style="list-style-type: none"> <li>- Construction</li> <li>- Active mining</li> <li>- Reclamation</li> </ul>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>This issue was discussed at the June 26, 2018 meeting and resolved with the Blood Tribe. Tree removal will be managed as part of Benga's tree removal program. Benga committed to provide timber for community projects.</p> <p>Access to harvesting areas to be planned as part of the Access Management Plan.</p> <p>Blood Tribe and Benga will develop Communication protocols regarding access to harvesting areas; this will be dealt with through the establishment of an environmental stewardship steering committee.</p> <p>Access will be discussed through the life of the project.</p>	<p>Complete.</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe has stated that the Project would mean a further loss of occupancy and use of traditionally occupied lands.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Traditional use of lands and resources</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p style="text-align: center;">December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe identified a potential impact of access restrictions to southern portion of TLU LSA and access changes to northern portion of TLU LSA for Crowsnest Pass historic travel corridor, access roads into TLU LSA from south, access into TLU LSA from Highway 40, and Daisy Creek Trail.</p> <p>Blood Tribe has indicated that a loss of access to areas for the exercise Aboriginal rights poses risks of a potential infringement of Aboriginal and treaty rights on crown land portions of the TLU LSA.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Trails, Travel &amp; Access; hunting; fishing; trapping; gathering</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe stated that Benga did not include in the EIA trapping as a valued component of Blood Tribe's use of the Project area because it equated trapping with commercial operation of a Registered Fur Management Area and not with Indigenous snaring, catching or trapping activities associated with subsistence or ceremonial use.</p> <p>Blood Tribe trapping in the Project TLU LSA and RSA may occur and is likely for both subsistence and ceremonial purposes.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Trapping</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe stated that the Project could reduce the availability of nesting areas for bald eagles and golden eagles. Further, Project-related noise, dust and pollution and other sensory disturbance could displace eagles from the Project footprint. Any Project-related effects to eagles in the TLU LSA and RSA would interfere with traditional BT/K trapping of eagles and harvesting of eagle feathers according to Blackfoot customs and protocols governing trapping practices of this culturally significant species.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Trapping  Wildlife</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p style="text-align: center;">December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe identified a potential impact of loss of ecosites supporting a wide variety of traditional use plants, disturbance to 1,502.7 ha of land that could support vegetation, and loss of availability of plants for Lodgepole pine, sweet pine, cottonwood, birch, aspen, spruce, wild licorice, horsetail, juniper, bearberry, dry tree moss, moist ground moss, yarrow, rose hip, raspberries, thimbleberries, mushrooms, buffalo berries, goose berries, gooseberries, moss, prairie crocus, strawberry, Labrador tea, sweet grass, wolfwillow, paintbrush plants, cow parsnip, red-osier dogwood, wild onion, bear-root, and lay-down root.</p> <p>Blood Tribe has raised concerns about the loss of availability and abundance of traditional use plants, loss of space to harvest, loss of access to harvesting areas, decline in use and enjoyment of plants of cultural and ceremonial significance, and infringement on Aboriginal and Treaty Rights.</p>	<p style="text-align: center;">Current Use of Lands and Resources for Traditional Purposes - Plant Gathering  Aboriginal Physical and Cultural Heritage</p>	<p style="text-align: center;">Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p style="text-align: center;">Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p style="text-align: center;">Benga will review concerns with Blood Tribe</p>	<p style="text-align: center;">Ongoing; working with Blood Tribe</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p style="text-align: center;">December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe has stated that a key shortcoming of the EIA and its assessment methodology is that the criteria of direction of the effect is missing from the overall framework (does the effect indicate a positive change (an increase in the quantity or quality of the valued component compared to baseline) or a negative change (a decrease in the status of the valued component compared to baseline). The direction of the effect could be stated as positive, negative or neutral.</p>	<p>Environmental Impact Assessment Process - EIA methodology: residual effects criteria</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>The Blood Tribe has stated that in Benga's Aboriginal Assessment, Benga's criteria for determining the significance of an effect only take into account the Proponent's judgment about whether a residual effect after mitigation is expected to have adverse effects or not, and the basis for judging whether an effect is adverse or not is made based on whether the expected changes are reversible or not. (pdf p. 39)</p> <p>Blood Tribe has stated that for significant effects to Aboriginal VC's, Benga downplays the likelihood of occurrence in order to diminish the significance. The said that Benga confounds significance with reversibility while ignoring the other criteria it claims to consider (magnitude, duration, frequency of effect, etc.). Blood Tribe stated that Benga will only consider Project effects to be significant if they cannot be reversed. This methodological decision therefore minimizes or ignores all active Project effects to valued components including hunting, fishing, gathering</p>	<p>Environmental Impact Assessment Process - EIA methodology: significance determination</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from row above)	<p>during the Project's lifetime, that is, during the operational phase of the mine.</p> <p>Furthermore, this ignores the significance of lost sites of archaeological, cultural, historical or ceremonial importance that would be destroyed and could not be replaced or reclaimed post-mining.</p>	(Continued from row above)	(Continued from row above)	(Continued from row above)	(Continued from row above)	(Continued from row above)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe indicated that Benga was inconsistent in its application of the analytical framework and offered conclusions about the significance of residual effects that were not consistent with its definitions of significance.</p>	<p>Environmental Impact Assessment Process - Significance determination</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káinai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe stated that the project could contribute to a deterioration of the quality of fish habitat, leading to loss of local availability of already threatened or endangered fish species, delaying recovery efforts for these species.</p>	<p>Fish and Fish Habitat</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p style="text-align: center;">Meetings: June 23, 2015 June 6, 2017</p>	<p>The Project's direct and indirect effects to water quality impose a cumulative effect to aquatic life in streams already carrying an increased phosphorous load from farming and sewage.</p> <p>There are a great deal of problems with phosphorus in the water. Will the explosions create cracks in the earth and lead to added releases of nutrients in the water?</p>	<p style="text-align: center;">Hydrology - Water quality</p>	<p>Cumulative effects within the Project's defined Cumulative Effects Assessment study area were assessed. Cumulative effects outside of the project study area are out of the scope of this assessment.</p> <p>Benga submitted an updated cumulative effect assessment in Appendix A-1 of Addendum 8 to the EIA.</p> <p>Benga will implement a Water Management Plan (WMP) that will prevent any unwanted release of water that may not meet provincial or federal water quality guidelines. All water (surface and groundwater) will be collected, held, and only released once it meets the appropriate or applicable water quality guideline. For any acute releases (i.e., in the event of an emergency), Benga will have the appropriate (and effective) Emergency Response Plans in place, and will ensure qualified staff are in place to implement these plans. All of the holding ponds that will be onsite were over engineered to meet Alberta's Dam Safety requirements. Benga</p>	<p>The Blood Tribe has indicated that they will review the response and provide feedback.</p> <p>Blood Tribe submitted their Cumulative Effects Assessment to Benga in December 2018.</p>	<p>Benga has met with the Blood Tribe to review this issue.</p> <p>Concerns about cumulative effects have been noted and forwarded to Brett Maracle, Canadian Environmental Assessment Agency.</p> <p>Benga has received Blood Tribe's cumulative effects assessment report, and will work with Blood Tribe to develop management strategies based on the information provided.</p> <p>Benga will seek further input on the WMP from Blood Tribe prior to construction.</p>	<p style="text-align: center;">Ongoing; working with Blood Tribe.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from row above)	(Continued from row above)	(Continued from row above)	will develop and implement an Emergency Response Plan in relation to potential accidents that would affect the environment, and are committed to discussing and receiving input from the Blood Tribe on these plans.	(Continued from row above)	(Continued from row above)	(Continued from row above)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	Meeting October 27, 2017	The Blood Tribe raised concern about the possibility of Benga selling the property after approval.	Land Use	Benga responded that there are no plans to sell the property.	Blood Tribe acknowledged the response.	Benga has met with Blood Tribe to discuss this issue, and addressed their concern.	Complete
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	December 2018 Blood Tribe Káinai Traditional Knowledge & Use Assessment Grassy Mountain Coal Project	Blood Tribe would like Benga to, prior to the Project approval, make a binding commitment to turn over privately owned lands within the Mine Permit Area to Blood Tribe or the Blackfoot Confederacy upon final mine closure and reclamation.	Mine Closure and Reclamation; Land Ownership	Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.	Blood Tribe has provided their Traditional Knowledge & Use Assessment study	Benga will review concerns with Blood Tribe	Ongoing; working with Blood Tribe
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	December 2018 Blood Tribe Káinai Traditional Knowledge & Use Assessment Grassy Mountain Coal Project	Blood Tribe stated that at the time of submission of its EIA, Benga had yet to identify potential mitigation measures to address potential effects to Aboriginal groups.	Mitigation measures	Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.	Blood Tribe has provided their Traditional Knowledge & Use Assessment study	Benga will review concerns with Blood Tribe	Ongoing; working with Blood Tribe

<div style="border: 1px solid black; text-align: center; width: 33px; height: 27px;">+</div> <div style="border: 1px solid black; text-align: center; width: 33px; height: 27px;">-</div>	<p style="text-align: center;">December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe would like Benga to agree to provide quarterly reports to Blood Tribe on the environmental impacts of the Project including (but not limited to) summaries of data collection in regards to water quality, wildlife movement, reclamation progress, and access changes.</p>	<p style="text-align: center;">Monitoring</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p style="text-align: center;">Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p style="text-align: center;">Benga will review concerns with Blood Tribe</p>	<p style="text-align: center;">Ongoing; working with Blood Tribe</p>
<div style="border: 1px solid black; text-align: center; width: 33px; height: 27px;">+</div> <div style="border: 1px solid black; text-align: center; width: 33px; height: 27px;">-</div>	<p style="text-align: center;">Meeting June 23, 2015  Meeting June 6, 2017</p>	<p>Blood Tribe would like active community involvement in the environmental monitoring before, during and after the project.</p>	<p style="text-align: center;">Monitoring - Community Participation in Monitoring</p>	<p>Benga has provided information to Blood Tribe about potential ways they can participate in environmental monitoring.</p>	<p>The Blood Tribe has indicated that they will review the Environmental Impact Assessment and provide feedback. Blood Tribe has not yet provided input into the design of monitoring programs.</p>	<p>Benga has met with the Blood Tribe to review this issue.  Benga has developed a conceptual wildlife monitoring plan and will seek further input on the plan from Blood Tribe prior to construction.</p>	<p style="text-align: center;">Ongoing; working with Blood Tribe.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	Meeting June 6, 2017	<p>Monitoring may need to be done further out than the area currently being considered.</p> <p>When looking at adverse impacts to First Nation Treaty rights, this is something that needs to be focused on because the impact to sensitive wildlife may go beyond current monitoring boundaries. Noise will bounce off the mountains and carry over. This may cause impacts to the wildlife. The Nation will need to find out where the wildlife are moving to.</p>	Monitoring  Wildlife  Noise	<p>Benga has provided information to Blood Tribe about potential ways they can participate in environmental monitoring. Benga is beginning to develop monitoring plans and will continue to work with the Blood Tribe to identify ways in which community members can contribute to and participate in monitoring. Benga is scheduling a meeting with the Blood Tribe in October 2017 to discuss further.</p> <p>Potential interactions with wildlife related to noise are assessed in the Environmental Impact Assessment (EIA) update (August 2016), Wildlife Consultant Report #9, Section 3. This assessment included sensory disturbance during construction and operations. Noise from the active mine site would be mitigated through the use of mufflers on all internal combustion engines, installing berms around the southern dump to absorb noise, utilizing mine pit topography to shield noise generated from haul trucks, and conducting blasting during daylight hours.</p>	The Blood Tribe has indicated that they will review the response and provide feedback.	<p>Benga has met with the Blood Tribe to review this issue.</p> <p>Benga has developed a conceptual wildlife monitoring plan and will seek further input on the plan from Blood Tribe prior to construction.</p>	Ongoing; working with Blood Tribe.
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>January 4, 2016 Statement of Concern to Benga</p> <p>Meeting June 26, 2018</p>	<p>Blood Tribe has raised the concern that as a part of the remediation process the land must be returned as Alberta Crown land. Benga has not sufficiently responded to this concern, answering instead that "there will be opportunity to discuss steps for decommissioning and reclamation."</p>	<p>Reclamation - Decommissioning, Reclamation and access to Crown land.</p>	<p>This comment is outside of the scope of this assessment.</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback. for consideration.</p>	<p>Concerns have been noted and Benga has forwarded to Aboriginal Consultation Office (ACO) and Canadian Environmental Assessment Act (CEAA).</p> <p>This issue was discussed and resolved with Blood Tribe in June 2018. Blood Tribe indicated that this relates to the idea that the concerns would be lost in a transfer of ownership of the company.</p>	<p style="text-align: center;">Complete</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting January 13, 2015</p> <p>July 2015 Grassy Mountain Coal Project Public Report on Blood Tribe Traditional Knowledge and Use of the Grassy Mountain Area.</p> <p>Meeting June 26, 2018</p>	<p>To ensure that the Reclamation Plan satisfies their needs and expectations, Blood Tribe expressed interest in participating in its development. Blood Tribe also expressed that the Plan may not meet its objectives.</p>	<p>Reclamation - Reclamation Plan</p>	<p>Section F in the August 2016 EIA document provides the proposed Conservation and Reclamation (C&amp;R) Plan for the Project. This was provided to Blood Tribe in August 2016. Section F.1.5 describes the reclamation goals and principles that were incorporated in the C&amp;R and closure plans. Section F.1.6 describes proposed End Land Use goals and includes a commitment that end land use decisions will be made in consultation with affected First Nations (including Blood Tribe) as well as local and government stakeholders.</p>	<p>In June 2018, Blood Tribe indicated that TEK was left out of initial work that was performed for the EIA and advised that Blood Tribe needs to perform inventory work at the same time as the environmental surveys. The concern documented on is linked to that deficiency.</p> <p>Blood Tribe would like to see the establishment of a Blackfoot stewardship program.</p>	<p>In June 2018, Benga acknowledged interest in establishing an Indigenous environmental stewardship program.</p> <p>Blood Tribe and Benga discussed the development of a First Nation directed environmental stewardship committee and the addition of TEK assessments. Blood Tribe proposed the inclusion of 3 Elders and 3 Youth; site visits to take place seasonally. The program can be run in parallel with the western-based program. Details of the program to be further discussed with Benga over the next year; feedback into the Conservation and Reclamation plan could be facilitated through this committee.</p> <p>Benga commits to involving Blood Tribe in ongoing monitoring through the stewardship program.</p> <p>Feedback received on the C&amp;R plan in the EIA will be incorporated into the next version of the plan.</p> <p>Prior to construction, Benga will engage with Blood Tribe on the Reclamation Plan.</p>	<p>Complete</p>
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<div style="border: 1px solid black; text-align: center; width: 33px; height: 26px; margin-bottom: 2px;">+</div> <div style="border: 1px solid black; text-align: center; width: 33px; height: 26px;">-</div>	<p>Meeting, June 26, 2018</p> <p>Meeting June 23, 2015</p>	<p>The Project's direct and indirect effects to water quality impose a cumulative effect to aquatic life in streams already carrying an increased phosphorous load from farming and sewage (Blood Tribe Nation (Blood Tribe) 2015b).</p>	<p>Surface Water Quality - Cumulative Effects on Water Quality</p>	<p>Cumulative effects within the Project's defined Cumulative Effects Assessment study area were assessed. Cumulative effects outside of the project study area are out of the scope of this assessment.</p> <p>Benga submitted an updated cumulative effect assessment in Appendix A-1 of Addendum 8 to the EIA.</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>Benga forwarded the concern to Brett Maracle from the Canadian Environmental Assessment Agency.</p> <p>In June 2018, Benga and Blood Tribe discussed that this concern is being addressed by Benga through their support of the Blood Tribe's Cumulative Effects and Traditional Use/ Traditional Ecological Knowledge Study which were completed in 2018. Blood Tribe advised that this issue has been sufficiently addressed by Benga and is complete.</p>	<p style="text-align: center;">Complete</p>
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<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">       + -     </div>	<p>Meeting June 26, 2018</p> <p>January 4, 2016 Statement of Concern to Benga</p> <p>July 2015 Grassy Mountain Coal Project Public Report on Blood Tribe Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p>There has been found to be a direct correlation between cumulative waste rock volumes and increases in selenium concentrations found in local rivers and streams. According to the Blood Tribe Traditional Knowledge (TK)/Traditional Use (TU) Report, several Elders recommended an Emergency Preparedness Plan in the event of leaks, spills, or other disasters to address concerns about effects on water quality and species dependent on clean water sources.</p> <p>This plan is to address concerns about effects to water quality and species that depend on water quality.</p>	<p>Surface Water Quality - Emergency Response and Water Quality</p>	<p>The results of the Environmental Impact Assessment (EIA) were submitted in 2015 and again in August 2016. Benga provided a discussion of the Emergency Response Plan as part of the EA in Section C.7.6.3. Benga will be implementing a Water Management Plan (WMP) that will prevent any unwanted release of water that may not meet provincial or federal water quality guidelines. All water (surface and groundwater) will be collected, held, and only released once it meets the appropriate or applicable water quality guideline. For any acute releases (i.e., in the event of an emergency), Benga will have the appropriate (and effective) Emergency Response Plans in place, and will ensure qualified staff are in place to implement these plans. All of the holding ponds that will be onsite were over engineered to meet Alberta's Dam Safety requirements. Benga will develop and implement an Emergency Response Plan in relation to potential accidents that would affect the environment, and are</p>	<p>At the June 26, 2018 meeting, Blood Tribe noted this issue as complete. Sufficient information provided by Benga.</p>	<p>This issue was discussed at the June 26, 2018 meeting and resolved with the Blood Tribe.</p> <p>Agreement that this issue will be managed as part of the establishment of and environmental stewardship committee and monitoring program.</p> <p>Environmental Communications Protocol to be developed and implemented via the environmental stewardship committee.</p> <p>Blood Tribe and Benga discussed the development of a First Nation directed environmental stewardship committee and the addition of TEK assessments. Blood Tribe proposed the inclusion of 3 Elders and 3 Youth; site visits to take place seasonally. The program can be run in parallel with the western-based program. Details of the program to be further discussed with Benga over the next year; feedback into the Conservation and Reclamation plan could be facilitated through this committee.</p>	<p>Complete</p>
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<table border="1"><tr><td>+</td></tr><tr><td>-</td></tr></table>	+	-	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	committed to discussing and receiving input from the Blood Tribe on these plans.	(Continued from previous row)	Benga commits to involving Blood Tribe in ongoing monitoring through the stewardship program.	(Continued from previous row)
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<div style="border: 1px solid black; text-align: center; width: 33px; height: 24px; margin-bottom: 2px;">+</div> <div style="border: 1px solid black; text-align: center; width: 33px; height: 24px;">-</div>	<p>January 4, 2016 Statement of Concern to Benga</p> <p>June 26, 2018 Meeting</p>	<p>Blood Tribe understands that Benga activities in or near the Project area may have resulted in a release of contaminants into Gold Creek and the Crowsnest River, resulting in an Alberta Energy Regulator (AER) investigation (July - August 2015).</p> <p>This is of concern to Blood Tribe as it may speak to the availability of Benga to conduct its operations without harming the biophysical environment. Equally concerning is the fact that Benga was not proactive in directly advising Blood Tribe of the circumstances of this release and subsequent investigation.</p>	<p>Surface Water Quality</p> <p>Consultation</p>	<p>To date, Benga have only conducted coal quantity and quality exploration programs on Grassy Mountain. For each program, the appropriate drilling procedures and mitigations were in place, and there have not been any releases of contaminants from any of these programs.</p> <p>The 2015 AER investigation pertained to the deposition of silt and coal fines from the historical (or legacy) coal piles that already exist on Grassy Mountain from the mining activities back in the 1950s and 1960s. This deposition occurred during multiple high rainfall events in a short period of time in 2015. Benga has been working with the AER, as well as the Department of Fisheries and Oceans (DFO), to ensure proper mitigations are in place to prevent any further deposition of silt and coal fines from these historical coal piles. As part of the Project mine plan, it is Benga's intention to clean up and reclaim the environment affected by the legacy mining activities.</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>Benga will seek further input from Blood Tribe on management and monitoring plans prior to construction.</p> <p>This issue was discussed at the June 26, 2018 meeting and resolved with the Blood Tribe. Blood Tribe noted this issue as complete. Sufficient information provided by Benga. Agreement that this issue will be managed as part of the establishment of and environmental stewardship committee and monitoring program. Environmental Communications Protocol to be developed and implemented via the environmental stewardship committee.</p> <p>Benga commits to involving Blood Tribe in ongoing monitoring through the stewardship program.</p>	<p>Complete.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>January 4, 2016 Statement of Concern to Benga</p> <p>June 26, 2018 Meeting</p>	<p>I am concerned with the impact of development on the waterways and lakes that sustain the animals. Moose and elk need a lot of water in particular when they are in rut.</p> <p>My main concern is the impact on the water. I am concerned that if the water gets polluted this would make the animals, fish and birds unhealthy.</p>	<p>Surface Water Quality</p> <p>Wildlife - Water Management Plan</p>	<p>As part of the August 2016 Environmental Impact Assessment (EIA) Update, Benga have added additional information and clarification around the Project's Water Management Plan (WMP). This WMP was developed to ensure all water within the mine site is captured in appropriately sized holding ponds that allow for the testing of water quality prior to being released into the surrounding environment. The WMP was assessed to determine potential effects on river flows and water quality in the neighbouring and downstream rivers. The results of the assessment indicate that there will not be any impacts to the environment with the implementation of the WMP. To verify that changes in flow do not affect fish and their habitat, Benga also conducted a detailed Instream Flow Needs study (IFN).</p> <p>A list of wildlife species specifically identified as being potential country foods, culturally, or spiritually important by Blood Tribe is provided in Table 2.2-1 of the wildlife assessment in Consultant Report #9. A</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has developed a conceptual wildlife monitoring plan and will seek further input on the plan from Blood Tribe prior to construction.</p> <p>This issue was discussed at the June 26, 2018 meeting and resolved with the Blood Tribe. Blood Tribe noted this issue as complete. Sufficient information provided by Benga. Agreement that this issue will be managed as part of the establishment of and environmental stewardship committee and monitoring program. Environmental Communications Protocol to be developed and implemented via the environmental stewardship committee.</p> <p>Benga commits to involving Blood Tribe in ongoing monitoring through the stewardship program.</p>	<p>Complete.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from row above)	(Continued from row above)	(Continued from row above)	wildlife risk assessment (WRA) was conducted, using the same models and air concentrations as the human health risk assessment. The results of the screening-level WRA indicates that there is no potential risk of adverse effects associated with Project emissions on the health of wildlife in the study areas. Benga will implement a Water Management Plan (WMP) that will prevent any unwanted release of water that may not meet provincial or federal water quality guidelines. All water (surface and groundwater) will be collected, held, and only released once it meets the appropriate or applicable water quality guideline.	(Continued from row above)	(Continued from row above)	(Continued from row above)
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting February 21, 2015</p> <p>Meeting June 23, 2015</p>	<p>Dust particulates may render the soil more acidic, which may cause a change to the species of vegetation that can grow in the area.</p>	<p>Terrain &amp; Soils - Impacts of dust on soil and vegetation</p>	<p>The results of the Environmental Assessment (EA) were submitted in 2015 and again in August 2016. Section E.1.3 of the EA provides an assessment of potential effects of the Project including the potential for effects on air quality in the region especially related to dust and particulates. Mitigation measures are proposed in Section E.1.5 of the EA including measures for dust management. No significant impacts were predicted in the EA.</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Blood Tribe to review this issue.</p> <p>Benga will seek further input on management and monitoring plans from Blood Tribe prior to construction.</p>	<p>Ongoing; working with Blood Tribe.</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 2018 Blood Tribe Káínai Traditional Knowledge &amp; Use Assessment Grassy Mountain Coal Project</p>	<p>Blood Tribe stated that Benga did not seriously consider TK in the EIA. TU/TK was not consistently or systematically considered in the selection of valued components, the choice of spatial and temporal boundaries, and in the selection of mitigation measures; rather these were chosen based on industry best practices and not necessarily drawn from TK.</p>	<p>TK/TU - Consideration of TK</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Blood Tribe to discuss it.</p>	<p>Blood Tribe has provided their Traditional Knowledge &amp; Use Assessment study</p>	<p>Benga will review concerns with Blood Tribe</p>	<p>Ongoing; working with Blood Tribe</p>

						<p>Benga has met with the Blood Tribe to review this issue. Benga will continue to work with Blood Tribe to identify ways in which TK can be considered during Project activities and in the development of environmental management plans.</p>	
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div>	<p>June 23, 2015 Meeting</p>	<p>Concerns that field work did not sufficiently cover Traditional Knowledge (TK) which should be used together with western science to manage environmental and cultural effects.</p>	<p>TK/TU - TK and management of environmental and cultural effects.</p>	<p>Benga has worked with Blood Tribe to collect TK and will continue to work with Blood Tribe to identify ways in which TK can be considered through the Environmental Assessment (EA) process and during Project activities. TK information has been used throughout the application process to inform and enhance the biophysical assessment and to assess potential effects to Blood Tribe. Benga has provided the EA to Blood Tribe for their review.</p>	<p>Blood Tribe has indicated that they will review the EA and provide additional feedback.</p>	<p>In June 2018, Blood Tribe and Benga discussed that this comment relates to the Nation being left out of the EIA. Blood Tribe was not involved in the surveys that were conducted as part of the EIA. Discussion of Benga's interest in an Indigenous stewardship program. Blood Tribe would like to see the establishment of a Blackfoot stewardship program. Discussion of an FN directed environmental stewardship committee and TEK assessments.</p>	<p>Ongoing; working with Blood Tribe.</p>
	<p>June 26, 2018 Meeting</p>					<p>Possible to have 3 Elders and 3 Youth, site visits seasonally. Can be done in parallel with the western program. Benga commits to involving Blood Tribe in ongoing monitoring through the stewardship program.</p> <p>This concern is being addressed by Benga through their support of the Blood Tribe's</p>	

+	(Continued from row above)	(Continued from row above)	(Continued from row above)	(Continued from row above)	(Continued from row above)	Cumulative Effects and Traditional Use/ Traditional Ecological Knowledge Study to be completed in 2018.	(Continued from row above)
-							

						<p>Benga will continue to work with Blood Tribe to identify ways in which TK can be considered during Project activities and in the development of environmental management plans.</p>	
+	June 23, 2015 Meeting						
-	June 26, 2018 Meeting	<p>Traditional Knowledge (TK) must influence all aspects of the environmental assessment, rather than simply be considered as a step in the Traditional Use (TU) process.</p>	TK/TU - TK Incorporation	<p>Benga has worked with Blood Tribe to collect TK and will continue to work with Blood Tribe to identify ways in which TK can be considered through the Environmental Assessment process and during Project activities. TK information has been used throughout the application process to inform and enhance the biophysical assessment and to assess potential effects to Blood Tribe. Benga has provided the Environmental Assessment (EA) to Blood Tribe for their review.</p>	<p>Blood Tribe has indicated that they will review the EA and provide additional feedback.</p>	<p>In June 2018, Blood Tribe indicated that TEK was left out of initial work that was performed for the EIA and advised that Blood Tribe needs to perform inventory work at the same time as the environmental surveys. The concern documented is linked to that deficiency. Blood Tribe would like to see the establishment of a Blackfoot stewardship program. Benga acknowledged interest in establishing an Indigenous environmental stewardship program. Blood Tribe and Benga discussed the development of a First Nation directed environmental stewardship committee and the addition of TEK assessments. Blood Tribe proposed the inclusion of 3 Elders and 3 Youth; site visits to take place seasonally. The program can be run in parallel with the western-based</p>	<p>On-going; working with the Blood Tribe.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from row above)	(Continued from row above)	(Continued from row above)	(Continued from row above)	(Continued from row above)	<p>program. Details of the program to be further discussed with Benga over the next year. Benga commits to involving Blood Tribe in ongoing monitoring through the stewardship program.</p>	(Continued from row above)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	Meeting February 21, 2015	Blood Tribe requested a tour of the new areas proposed for development at Grassy Mountain (on Version E of the mine plan).	TK/TU - Traditional Use	These areas are not new but just smaller compared to the options presented in the August and September 2014 versions of the mine plan.	<p>Blood Tribe Traditional Knowledge still needs to be collected and is not a desk-based endeavor. Elders need to out to the area to understand the dynamics of species, water, and land.</p> <p>Blood Tribe conducted fieldwork in June and July 2018, and provided a report to Benga in December 2018.</p>	<p>Benga has met with the Blood Tribe to review this issue.</p> <p>Benga will seek further input on the plan from Blood Tribe prior to construction.</p> <p>Benga has received Blood Tribe's TU report, and will work with Blood Tribe to develop management strategies based on the information provided.</p>	Ongoing; working with Blood Tribe.

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Blood Tribe Traditional Knowledge and Use of the Grassy Mountain Area.</p> <p>Meeting June 26, 2018</p>	<p>Plan project footprint and activities so as to limit effect to medicinal and ceremonial plants in the vicinity of the Project site.</p>	<p>Vegetation &amp; Wetlands - Effect of Project activities on medicinal and ceremonial plants.</p>	<p>The results of the Environmental Assessment (EA) were submitted in 2015 and again when updated in August 2016. Potential effects of the Project on vegetation including medicinal and ceremonial plants are described in Section E.8.3 of the EA. A discussion of proposed mitigation measures is provided in the EA document. Section E.8.5 and the C&amp;R Plan in Section F.1 describe how traditional plants were incorporated into the proposed closure plan. Mitigation measures include opportunities to transplant to limit potential effects to identified medicinal and ceremonial plants, and incorporating traditional use plant species, native to the area, into reclamation plans. This information has been provided to Blood Tribe.</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>This issue was discussed at the June 26, 2018 meeting and resolved with the Blood Tribe.</p> <p>Benga and Blood Tribe discussed this issue and agreed that it will be managed as part of the reclamation plan and vegetation management program. Blood Tribe and Benga agreed that access to harvesting areas will be planned as part of the Access Management Plan.</p> <p>Blood Tribe and Benga wil develop Communication protocols regarding access to harvesting areas; this will be dealt with through the establishment of an enviromental stewardship steering committee.</p>	<p style="text-align: center;">Complete.</p>
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<div style="border: 1px solid black; text-align: center; width: 33px; height: 25px; margin-bottom: 25px;">+</div> <div style="border: 1px solid black; text-align: center; width: 33px; height: 25px;">-</div>	<p>Meeting June 23, 2015</p> <p>Meeting June 26, 2018</p>	<p>Removal of native vegetation such as lodgepole pine in the vicinity of the Project may cause non-native species such as willow or sweet pine to invade, rendering the area more susceptible to forest fire.</p>	<p>Vegetation &amp; Wetlands - Impact of vegetation removal on fire susceptibility.</p>	<p>The results of the Environmental Assessment (EA) were submitted in 2015 and again when updated in August 2016. The potential for invasive species is assessed in EA Update (August 2016) (with technical detail in Consultant Report # 8 - Vegetation). Proposed mitigation measures related to invasive species are outlined in Section 4.9.4 of Consultant Report #8. An adaptive management approach, including non-native invasive species control and monitoring, and re-vegetation establishment assessments will be used to ensure that sites have been re-vegetated to meet target vegetation communities. This information has been provided to Blood Tribe.</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p> <p>Blood Tribe would like to see the establishment of a Blackfoot stewardship program.</p>	<p>Benga has met with the Blood Tribe to review this issue.</p> <p>In June 2018, Benga and Blood Tribe agreed that this issue will be managed as part of the reclamation plan and vegetation management program.</p> <p>Benga will seek further input from Blood Tribe prior to construction.</p> <p>Benga commits to involving Blood Tribe in the development of the reclamation plan and to ongoing monitoring through the stewardship program.</p>	<p>Ongoing; working with Blood Tribe.</p>
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	<p>Meeting June 26, 2018</p>	<p>Concern about the introduction of foreign plants that will affect the native plants in the area. They may cause irreversible changes to the native flora and fauna. This may in turn affect animals that eat these plants.</p>	<p>Vegetation &amp; Wetlands - Invasive Plants; Vegetation and wildlife</p>	<p>Section E.8 of the August 2016 Environmental Impact Assessment (EIA) document assessed the potential for invasive species (with technical detail in Consultant Report # 8 - Vegetation). Proposed mitigation measures related to invasive species are outlined in Section 4.9.4 of Consultant Report #8. An adaptive management approach, including non-native invasive species control and monitoring, and monitoring of post-reclamation re-vegetation establishment will be used to manage the risk of non-native and invasive species to help ensure that reclaimed sites meet target vegetation communities and reclamation certification requirements.</p> <p>The potential for invasive species is assessed in the Environmental Impact Assessment (EIA) Update (August 2016) (with technical detail in Consultant Report # 8 - Vegetation). Proposed mitigation measures related to invasive species are outlined in Section 4.9.4</p>	<p>Blood Tribe would like to see the establishment of a Blackfoot stewardship program. .</p>	<p>This issue was discussed at the June 26, 2018 meeting and resolved with the Blood Tribe. Benga and Blood Tribe discussed this issue and agreed that it will be managed as part of the Conservation and Reclamation plan and vegetation management program.</p> <p>Benga acknowledged interest in establishing an Indigenous environmental stewardship program.</p> <p>Blood Tribe and Benga discussed the development of a First Nation directed environmental stewardship committee and the addition of TEK assessments. Blood Tribe proposed the inclusion of 3 Elders and 3 Youth; site visits to take place seasonally. The program can be run in parallel with the western-based program. Details of the program to be further discussed with Benga over the next year; feedback into the Conservation and Reclamation plan and recommendations on wildlife monitoring could be facilitated through this committee.</p>	<p>Complete</p>
<p>+</p>	<p>January 4, 2016 Statement of Concern to Benga</p>						

<table border="1"><tr><td>+</td></tr><tr><td>-</td></tr></table>	+	-	(Continued from row above)	(Continued from row above)	(Continued from row above)	(Consultant Report #8). An adaptive management approach, including non-native invasive species control and monitoring, and re-vegetation establishment assessments will be used to ensure that sites have been re-vegetated to meet target vegetation communities.	(Continued from row above)	Benga commits to involving Blood Tribe in the development of the reclamation plan and to ongoing monitoring through the stewardship program.	(Continued from row above)
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Blood Tribe Traditional Knowledge and Use of the Grassy Mountain Area.</p> <p>Meeting June 26, 2018</p>	<p>Request for trees slated for removal at the Project site be replanted on the Blood Reserve or added to riparian areas.</p>	<p>Vegetation &amp; Wetlands - Plant gathering and tree planting.</p>	<p>Benga has committed to providing lodgepole pine that is cleared for the Project to Nations.</p> <p>The results of the Environmental Assessment (EA) were submitted in 2015 and again in August 2016. Potential effects of the Project on vegetation including medicinal and ceremonial plants are described in Section E.8.3 of the EA. A discussion of proposed mitigation measures is provided in Section E.8.5 of the EA. Mitigation measures include opportunities to transplant to limit potential effects to identified medicinal and ceremonial plants. This information has been provided to Blood Tribe.</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has developed a conceptual access management plan. Prior to Construction, Benga will engage with Blood Tribe on this plan.</p> <p>In June 2018, this issue was discussed and resolved with the Blood Tribe. Blood Tribe will identify vegetation of harvesting and transplanting interest. This issue will be managed post approval as part of the Environmental Stewardship Committee (i.e program to be developed with the committee)</p> <p>Benga indicated that tree removal will be managed as part of Benga's tree and tree removal and clearing program. Benga committed to provide timber for community projects.</p> <p>Benga commits to involving Blood Tribe in the development of the reclamation plan and to ongoing monitoring through the stewardship program.</p>	<p>Complete</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p>May 24, 2016 email from Mike Oka to Cal Clark</p>	<p>The Blood Tribe expressed concern about long-term visual impacts to Grassy Mountain.</p>	<p>Visual impacts - Potential visual impacts</p>	<p>Benga entered into an agreement with the Municipality of Crowsnest Pass to provide a natural tree line immediately north of Highway 3 as part of a visual and noise impact mitigation.</p>	<p>Blood Tribe has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Blood Tribe to review this issue, and is scheduling a meeting in 2018 to continue the discussion.</p>	<p>Ongoing; working with Blood Tribe.</p>
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	<p>Meeting June 26, 2018</p>	<p>The Blood Tribe are concerned about the potential impacts of the project on wildlife including the following:</p> <ul style="list-style-type: none"> <li>- irreparable impacts on migratory patterns from noise and traffic from construction and from development of the mine in general - the herds may never return.</li> </ul>		<p>The results of the Environmental Impact Assessment (EIA) were submitted in 2015 and again after updating in August 2016. The assessment of potential effects to wildlife is considered in Sec E.9.3. Many of the project effects associated with habitat loss and wildlife movement will be minimized through the implementation of the Project's reclamation plan. As seen on other mines in Alberta, through proper reclamation, wildlife will and do return to reclaimed mine site areas. Sensory disturbance and habitat loss is expected to occur to elk, deer, and moose during the operations phase, which will cause them to find more suitable areas in the area surrounding the Project site. As the Project will go through progressive reclamation, it is expected that there will be more suitable habitat for wildlife prior to the final end of mine year.</p>	<p>Blood Tribe would like to see the establishment of a Blackfoot stewardship program.</p>	<p>These issues were discussed at the June 26, 2018 meeting and resolved with Blood Tribe.</p> <p>Benga and Blood Tribe agreed that these issues will be managed as part of the Conservation and Reclamation plan, the vegetation management program and the access management plan. The draft access management plan was discussed at the meeting and the issue around access was resolved.</p>	
<p>+ -</p>	<p>January 4, 2016 Statement of Concern to Benga</p>	<ul style="list-style-type: none"> <li>- new roads and access points built for the Project will result in greater accessibility and use by non-Aboriginal hunters and recreational users. This will further impact and disturb the wildlife population in the area</li> </ul> <p>Blood Tribe is concerned that this in turn may affect the success of its' members harvesting activity.</p>	<p>Wildlife - Project impacts on wildlife</p>	<p>Potential interactions with wildlife related to noise are assessed in the Environmental Impact Assessment (EIA) update (August 2016), Wildlife Consultant Report #9,</p>	<p>Blood Tribe advised that the issue regarding new roads and access points can be dealt with as part of the development of the access management plan.</p>	<p>Benga acknowledged interest in establishing an Indigenous environmental stewardship program.</p> <p>Blood Tribe and Benga discussed the development of a First Nation directed environmental stewardship committee and the addition of TEK assessments. Blood Tribe proposed the inclusion of 3 Elders and 3 Youth; site visits to take place seasonally. The program can be run in</p>	<p>Complete.</p>

				<p>Section 3. This assessment included sensory disturbance during construction and operations. Noise from the active mine site would be mitigated through the use of mufflers on all internal combustion engines, installing berms around the southern dump to absorb noise, utilizing mine pit topography to shield noise generated from haul trucks, and conducting blasting during daylight hours. This information has been provided to Blood Tribe. Reclamation efforts on similar mines in Alberta have found that through proper reclamation, wildlife species return to restored habitats.</p>			
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from row above)	(Continued from row above)	(Continued from row above)	<p>Benga provided a conceptual Access Management Plan in the August 2016 update to the Environmental Impact Assessment (EIA). This information has been provided to Blood Tribe.</p>	(Continued from row above)	<p>parallel with the western-based program. Details of the program to be further discussed with Benga over the next year; feedback into the Conservation and Reclamation plan and recommendations on wildlife monitoring could be facilitated through this committee.</p>	(Continued from row above)
				<p>Due to site safety reasons access will be restricted within the Project Permit boundary during construction and operations. This will be enforced by mine operations managers and personnel during</p>		<p>Benga commits to involving Blood Tribe in the development of the reclamation plan and to ongoing monitoring through the stewardship program.</p>	

+	(Continued from row above)	(Continued from row above)	(Continued from row above)	the construction and operations phase.	(Continued from row above)	(Continued from row above)	(Continued from row above)
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## **Appendix A-2: Piikani Nation Specific Concern and Response Table**

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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>March 22 - 23, 2017 Technical Review Conference calls</p> <p>Letter December 15, 2016</p> <p>January 4, 2016 Statement of Concern</p>	<p>The Human Health Risk Assessment (HHRA) describes the nature and significance of potential health risks to the local human population, associated with exposure to chemicals that could be released to the environment from the proposed Project.</p> <p>Piikani is concerned about Project effects to the health and well-being of community members who are actively using the Project area and surrounding area on a regular basis, sometimes for extended periods of time. In the absence of a detailed review of the Human Health Risk Assessment at this time, Piikani is concerned that the assessment was limited (looking at the physical environment, and the presence and quantity of particular pollution exposure at various modeled locations) and did not account for all factors of human health including diet, mental wellbeing, and integrity of family and cultural values.</p> <p>Community members are also concerned about wildlife health and the quality of traditionally harvested</p>	<p>Aboriginal Health - Human health</p>	<p>The assessment of potential effects to Aboriginal health includes potential effects of air quality and air emissions. The assessment shows that residual effects of the Project on Aboriginal health are not anticipated.</p> <p>A list of wildlife species specifically identified as being potential country foods, culturally, or spiritually important by Piikani Nation is provided in Table 2.2-1 of the wildlife assessment in Consultant Report #9. A wildlife risk assessment (WRA) was conducted, using the same models and air concentrations as the human health risk assessment. The results of the screening-level WRA indicates that there is no potential risk of adverse effects associated with Project emissions on the health of wildlife in the study areas.</p>	<p>Piikani would like to work with Riversdale to input into the Human Health Risk Assessment, specifically the analysis of consumption and rates and patterns for Piikani members, and the mitigation and monitoring plans should effects be predicted.</p> <p>Piikani would like to develop an Aboriginal Food Consumption Study and an associated Monitoring Plan.</p>	<p>Benga will consider a proposal and the justification from the Piikani Nation to conduct an Aboriginal Food Consumption Study related to the project.</p>	<p>Complete</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	foods in and around industrial developments. This concern results in avoidance behaviour and more reliance on store-bought foods.	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	March 22 - 23, 2017 Technical Review Conference Calls	Did the update include assessment of contaminant exposure to wildlife through consumption of contaminated water releases?	Aboriginal Health - Human Health; Wildlife health	Through the Water Management Plan (WMP) all water will be captured and treated accordingly (e.g., sediment ponds, saturation zones) which will prevent the release of 'contaminated' water. The Project will not result in the release of any contaminated water to the surrounding environment (terrestrial or aquatic). Based on this, the release of contaminated water was not identified as an operative pathway for exposure to wildlife (surface water assessment); subsequently, no potential risk was identified. In the Human Health Risk Assessment potential exposure to wildlife via deposition of chemicals from predicted air emissions onto water, soil and vegetation was assessed. This information has been provided to Piikani Nation.	Piikani Nation has indicated that they will review the information and provide additional feedback.	Benga met with the Piikani Nation to review this issue and will continue to discuss with Piikani should Piikani raise further concerns.	Complete

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p>Effects to culturally-important and sacred sites that are wholly or partially located within the Project's footprint including locations identified at waypoint sites. To prevent this, Piikani Nation recommends a well-flagged buffer around all sacred sites.</p> <p>Effects to as-of-yet undetected culturally important sites. To prevent this, Piikani Nation recommends developing a chance find procedure.</p>	<p>Aboriginal Physical &amp; Cultural Heritage - Potential effects of the project on physical and cultural heritage.</p>	<p>Waypoints identifying physical and cultural heritage sites that are wholly or partially within the Project footprint were identified as confidential by the Piikani Nation and not to be used in the Environmental Impact Assessment (EIA).</p> <p>Sites of cultural and sacred importance within 100 m of project activity that are identified by Piikani Nation will be flagged prior to construction. Restricted access to areas within the Project Permit Boundary surrounding the project physical footprint will reduce the risk of inadvertent impacts to these sites.</p> <p>Section E.13 of the Environmental Impact Assessment (EIA) considers potential effects to large polygon areas identified by Piikani Nation during field visit where specific sites have not been identified but may still occur within the general area. If culturally-important sites are identified during construction, a Cultural Site Discovery Contingency Plan will be implemented. Piikani Nation will have an opportunity to</p>	<p>Piikani Nation has indicated that they will provide the locations of the culturally important sites.</p>	<p>Benga has met with the Piikani Nation to discuss effects to culturally important and sacred sites. Benga will apply a 100 m buffer around sacred sites.</p> <p>Benga will continue to seek feedback from Piikani Nation on the Cultural Site Discovery Contingency Plan.</p>	<p style="text-align: center;">Complete</p>
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+ -	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	contribute to the Plan.	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
+ -	July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.	The Project may impose a loss of culture for present and future generations.	Aboriginal Physical & Cultural Heritage - Potential effects of the project on physical and cultural heritage.	Benga is committed to working with Piikani Nation to better understand potential effects of the Project to Piikani Nation's physical and cultural heritage. Benga will continue to work with Piikani Nation to discuss ways to mitigate potential effects to Piikani Nation.	Piikani Nation has indicated that they will review the information and provide additional feedback.	Benga has met with the Piikani Nation to review this issue, and will seek further feedback on mitigations prior to construction.	Ongoing; working with Piikani Nation.
+ -	July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.	A ceremony should be performed with Piikani Elders and youth in advance of ground disturbance.	Aboriginal Physical & Cultural Heritage - Potential effects of the project on physical and cultural heritage.	Benga supports this event and has discussed options and planning for a ceremony with Piikani Nation.	Piikani Nation has indicated that they will review the information and provide additional feedback.	Benga will arrange for a ceremony to be performed in advance of ground disturbance for construction of the Project. This will include moving the effigy.	Ongoing; working with Piikani Nation.
+ -	July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.	To help create cultural awareness among non-Native Benga employees and sub-contractors, Benga is urged to support a cultural orientation program on Piikani cultural practices and sacred sites.	Aboriginal Physical & Cultural Heritage - Potential effects of the project on physical and cultural heritage.	Benga will support a cultural orientation program as described in the Impact-Benefit Agreement between Benga and the Piikani Nation.	Piikani Nation has indicated that they will review the information and provide additional feedback.  Piikani Nation has indicated that they will work with Benga to develop and implement a cultural orientation program.	Benga commits to supporting a cultural orientation for staff and sub-contractors.	Complete

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	March 22 - 23, 2017 Technical Review Conference Calls	Assess if the natural springs affected by project are culturally important	Aboriginal Physical & Cultural Heritage - Potential effects of the project on physical and cultural heritage.	Benga would work with their First Nations Consultation consultants and the Piikani Nation to further assess the cultural significance of natural springs on Grassy Mountain. This could be addressed through a focused (site specific) cultural assessment of the natural springs or as a cultural monitoring component of the project Monitoring Plan.	Piikani Nation has indicated that they will review the information and provide additional feedback.	Benga has met with the Piikani Nation to review this issue and will continue to discuss. Benga will seek input into the Water Management Plan and the project monitoring plan prior to construction.	Ongoing; working with Piikani Nation.
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<input type="checkbox"/> + <input type="checkbox"/> -	<p>Meetings: June 17, 2013</p> <p>March 25, 2014</p> <p>July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p>Expressed interest in job-readiness programs to ensure that Piikani community members are prepared to take advantage of employment opportunities related to the project.</p> <p>The potential for employment and training benefits to flow to the Piikani First Nation are extremely important as Piikani members have much higher rates of unemployment and lower levels of education than the surrounding non-aboriginal population.</p> <p>Concern that Piikani businesses may be invited to bid on contracts, being led along through the process, and then not awarded contracts.</p> <p>In recognition of their traditional role of providing security, Benga should consider employing members of the Piikani Nation Brave Dog Society in a similar role on the Project.</p>	<p>Aboriginal Socio-Economic Conditions - Employment, procurement</p>	<p>Benga signed Impact Benefit Agreement (IBA) with Piikani Nation in July 2016. Terms of the IBA include a commitment for job readiness training, employment opportunities and other economic opportunities and benefits over the life of the Project</p> <p>Benga and Piikani Nation are developing a plan and processes to enhance contracting opportunities to Piikani Nation businesses.</p> <p>Human Resources development is included in Impact-Benefit Agreement (IBA) discussions.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga will continue to work with Piikani Nation to address this concern through implementation of the signed IBA.</p>	<p>Complete</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p>Concern about negative socio-economic effects caused by the potential, including: increased spending among Piikani Nation community members, increased income disparity and associated impact on social cohesion in community.</p>	<p>Aboriginal Socio-Economic Conditions - Potential effects of the project on Aboriginal socio-economic conditions.</p>	<p>Impact-Benefit Agreement (IBA) discussions include potential provisions for socio-economic transition measures.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga will continue to work with Piikani Nation to address this concern through implementation of the signed Impact-Benefit Agreement (IBA).</p>	<p>Complete</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>January 4, 2016 Statement of Concern to Benga</p>	<p>Piikani also has concerns about negative impacts from the Project on the biophysical environment as described in other sections, as this would affect where and how traditional activities are undertaken. Piikani has already experienced a major impact on its culture from the change in the Oldman River created by the Oldman River Dam, and any new changes, no matter how small, could have an impact on Piikani culture.</p> <p>The Project will result in changes to local population, employment, traffic volumes and traditional land use and culture.</p>	<p>Aboriginal Socio-Economic Conditions - Socio-economic conditions</p>	<p>Benga and Piikani Nation have signed an agreement that includes provisions for the ongoing engagement (Schedule G of Agreement July 25, 2016) through the Joint Implementation Committee.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga will continue to work with Piikani Nation to address this concern through further mitigation discussion and implementation of the signed Impact-Benefit Agreement (IBA).</p>	<p>Ongoing; working with Piikani Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>March 22 - 23, 2017 Technical Review Conference Calls</p>	<p>Piikani Nation asked if more detail about access restrictions would be found in the update.</p> <p>Piikani Nation indicated the need for a plan for getting First Nation input and communicating any changes to access through the site during the project.</p> <p>Piikani Nation indicated interest in looking at the Project's contribution to cumulative impacts and impacts of the project to regional access issues.</p>	<p>Access - Access Management</p>	<p>For site safety reasons access will be restricted to those lands within the Project Permit boundary during construction and operations. Limited access may be permitted after operations, during reclamation, so long as it does not directly interfere with final reclamation programs (e.g. revegetation, soil contouring). Access through the mine permit area or onto adjacent private lands owned by Benga to Crown lands outside the mine permit boundary can be arranged with sufficient notice in advance and, in the case of the mine site, provided it is safe to do so and does not disrupt operations. Crossing of the mine permit area will require a check in – check out procedure, a site safety orientation, proper personal and vehicle safety equipment and may require an escort. Firearms are not permitted on Benga property or within the project permit boundary.</p> <p>Benga provided a conceptual Access Management Plan in the August 2016 update to the Environmental Impact</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has provided the EIA Update and will seek further input on the conceptual access management plan and wildlife monitoring plan prior to construction.</p>	<p>Complete</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	<p>Assessment (EIA). Due to site safety reasons access will be restricted within the Project Permit boundary during construction and operations. This will be enforced by mine operations managers and personnel during the construction and operations phase.</p> <p>Benga looks forward to discussing regional access issues through the development of the Access Management Plan.</p> <p>Benga submitted an updated cumulative effect assessment in Appendix A-1 of Addendum 8 to the EIS.</p>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>January 4, 2016 Statement of Concern to Benga</p>	<p>The proposed Project is 45km from our reserve and is wholly within our traditional territory and effects are expected to both traditional land use as well as traditionally used resources in the form of decreased air quality including the deposition of dust and acidifying emissions on traditionally harvested plants and traditionally used rivers and lakes.</p> <p>Emission sources include blasting, handling, hauling, and loading on rail cars. Piikani is concerned about the large relative increases in predicted maximum 1-hour concentrations of blasting combustion emissions (SO<sub>2</sub>, NO<sub>2</sub>, CO) on the eastern pit boundary as well as the expected provincial exceedances of PM<sub>2.5</sub>, PM<sub>10</sub>, TSP.</p>	<p>Air Quality &amp; Climate - Air quality</p>	<p>As part of the Environmental Impact Assessment (EIA) Update provided in August 2016, a revised air model was provided that aligned with optimization of the mine plan. In addition, another air model was provided in the EIA Update for the coal product load-out/rail loop area. The results of both models indicated no significant changes to air quality beyond the project footprint. Elevation of total suspended particulate (TSP) was identified; however, this was limited to what is referred to as maximum points of impingement that only occur on the haul roads in the deeper portions of the proposed mine pit. These areas of elevated TSP are short-term and will not affect the neighbouring communities or surrounding environment.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue and will seek further input into the Air Quality management plan prior to construction.</p>	<p>Ongoing; working with Piikani Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	<p>burning. All non-salvageable timber and brush will be chipped or windrowed to promote vegetation growth on disturbed areas.</p> <p>3) Based on road grades and for mine operations health safety and environment reasons, Benga's maximum speed limit on mine roads will be 50 km/hr. Again, this maximum speed limit is a manageable compromise among the variables of safety, production and Air Quality. Through the detailed Air Quality assessment, it has determined that the highest impacts from road dust are immediately adjacent to the roads, with much less impact in communities. During non-winter months, water will be applied to the roads as dust suppression mitigation.</p> <p>4) A general road watering protocol will be designed by the Mine Operation Manager; however, road watering requirements will be monitored on a daily basis. Weather conditions and expected patterns throughout each day, as well as daily mining</p>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	<p>equipment activities will be factored in to determine final road watering requirements.</p> <p>5)Conveyor hoods will be installed over the top of all the conveyor belts that are not within enclosed galleries or structures, in order to protect the belt and product coal from the prevailing weather conditions and minimize potential dust generation. The conveyor belt will terminate at a cladded surge bin structure. A second covered conveyor belt will transfer the coal to the cladded train loadout bin. The cladded bin structures will designed in such a way that there will minimal to no dust creation or coal spillage. The loadout will also sprays a latex binder solution over the top of the coal load to minimize release of dust as the train travels to port.</p>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	March 22 - 23, 2017 Technical Review Conference Calls	Did the update include more specific information on best practices that will be used for air and water pollution mitigation?	Air Quality & Climate Surface Water Quality - Human Health and Aboriginal Food Consumption	Impacts to air and water runoff/discharge into the receiving environments have been assessed and through implementation of project specific mitigations, will not result in air or water 'pollution'. For each assessment (i.e., Air Quality, Hydrology, Hydrogeology, Water Quality, Aquatic Resources) mitigations to minimize any impact are provided. Additional information on process and mining related mitigations (either through design or as a specific equipment specification) are also provided in the Project Description (Section C of Application).	Piikani Nation has received the EIS Update.  Piikani Nation has indicated that they will review the information and provide additional feedback.	Benga provided the EIS Update and has met with the Piikani Nation to review this issue.	Complete
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>March 22 - 23, 2017 Technical Review Conference Calls</p>	<p>How did you address the weaknesses in cumulative impacts assessment in the Project Update? We would like to talk about including explicit provision of pre- and post-development Eco site phases and reduction in quality and how to address this; this information is critical for discussion of any required biodiversity offsetting programs.</p>	<p>Biodiversity - Biodiversity Management</p>	<p>The assessment scenarios in the Environmental Impact Assessment and Update are identified in the project terms of reference. Much of the project site area is disturbed through historical and ongoing land use activities, mining, logging, cattle grazing, recreational use, access, etc. Benga's final land use objectives and final reclamation plans include rehabilitating the site, post-development, to a state that is better than the pre-development conditions which we find it in now. This includes the re-establishing of natural, self-sustaining ecosite conditions able to support a diversity of ecosite phases typical of the site and surrounding natural environment.</p> <p>Benga submitted an updated cumulative effect assessment in Appendix A-1 of Addendum 8 to the EIS.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue and will continue the discussion.</p>	<p>Ongoing; working with Piikani Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p>Changes to the Project may be made on a schedule that prevents meaningful participation by Piikani Nation.</p> <p>Piikani Nation urges that Benga commit to continuing transparent and meaningful communications with Piikani Nation over the long term.</p>	<p>Consultation - Consultation Process</p>	<p>Benga is committed to adhering to consultation and engagement requirements as identified by provincial Alberta Consultation Office (ACO) and federal (CEAA) authorities.</p>	<p>Piikani Nation has provided input into the consultation plan.</p>	<p>Benga is adhering to requirements and has developed a consultation plan along with the Piikani Nation.</p>	<p>Complete</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>March 22 - 23, 2017 Technical Review Conference Calls</p>	<p>How will the First Nation be involved in the development of the Plan?</p>	<p>Consultation - First Nation input into Noise management plans</p>	<p>A mitigation and monitoring summary for noise is included in Section A.11.2 of the EIS (EIA). The summary includes mitigations for noise management, a description of the noise monitoring program; and a plan for determining effectiveness of mitigation, follow-up and monitoring. This plan will be developed further pending project approval and directives from regulators.</p> <p>Benga commits to consult with Piikani Nation in the development of the noise management and monitoring plan to ensure Piikani views are incorporated.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga is beginning to develop environmental management plans and will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in plan development. Benga will seek further input into the noise management and monitoring plan prior to construction.</p>	<p>Ongoing; working with Piikani Nation.</p>

<div style="border: 1px solid black; text-align: center; width: 33px; height: 24px; margin-bottom: 2px;">+</div> <div style="border: 1px solid black; text-align: center; width: 33px; height: 24px;">-</div>	<p>March 22 - 23, 2017 Technical Review Conference Calls</p>	<p>How will the Piikani Nation be involved in the development of the Plan?</p>	<p>Consultation - Groundwater Management</p>	<p> Benga welcomes the review and feedback of a technical groundwater management plan by the Piikani. The final plan has not been developed; however, it would be coordinated by the Mine Operations Manager as the Project moves through the final approval process and into the construction phase. Benga would like to discuss options for the integration of Traditional Knowledge (TK) into the groundwater management plan. Examples of integration could include, 1) obtain feedback on the design and implementation of the groundwater management plan 2) Assist the interpretation of the monitoring data, from a cultural perspective 3) gain input on long-term resource management strategies.   Benga commits to consult with Piikani Nation in the development of the ground water management plan to ensure Piikani Nation views are incorporated. </p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p> Benga has met with the Piikani Nation to review this issue.   Benga will seek further input into the Groundwater Management Plan from Piikani Nation prior to construction. </p>	<p>Ongoing; working with Piikani Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	March 22 - 23, 2017 Technical Review Conference Calls	How will you communicate results to the Piikani Nation members, especially for unexpected events?	Consultation - Groundwater Management	Unexpected events that violate the terms and conditions of the project approvals (noncompliance) must be reported to the appropriate regulatory authority (e.g. Alberta Energy Regulator). All such events are posted publicly and proper notification given First Nations. Should an incident occur on site that poses a risk to public health or safety, or the environment, Benga will enact its emergency management plan (EMP) which will include notification of anyone affected. In regards to any emergency situations, prior to the Operational Phase of the Project, Benga will be developing a process so that any emergency events are communicated to First Nations. Benga will work with Piikani Nation in the development of its emergency management plan (EMP) to ensure it incorporates adequate procedures to properly notify Piikani Nation members, ensure the safety and wellbeing of anyone at risk and implement the proper procedures to protect the environment.	Piikani Nation has indicated that they will review the information and provide additional feedback.	Benga has met with the Piikani Nation to review this issue.  Benga will seek further input into the Groundwater Management Plan from Piikani Nation prior to construction.  Benga and Piikani Nation are in the process of developing a set of communication protocols that will ensure incidents are communicated effectively.	Ongoing; working with Piikani Nation.
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		<p>The Project footprint lies entirely within the Blairmore creek and Gold creek watersheds and has the potential to interact with other projects within the Crowsnest River watershed. Effects on flows include water flows for Blairmore Creek, Gold Creek, and their associated tributaries that are part of the Oldman River watershed all of which are used for traditional purposes by Piikani members for fishing and navigation.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Fishing; Trails &amp; Travelways</p>	<p>As part of the August 2016 Environmental Impact Assessment (EIA) Update, Benga have added additional information and clarification around the Project's Water Management Plan (WMP). This WMP was developed to ensure all water within the mine site is captured in appropriately sized holding ponds that allow for the testing of water quality prior to being released into the surrounding environment. The WMP was assessed to determine potential effects on river flows and water quality in the neighbouring and downstream rivers. The results of the assessment indicate that there will not be any impacts to the environment with the implementation of the WMP. To verify that changes in flow do not affect fish and their habitat, Benga also conducted a detailed Instream Flow Needs study (IFN).</p>		<p>Benga has met with the Piikani Nation to review this issue.</p>	
<p>+</p>	<p>January 4, 2016 Statement of Concern to Benga</p>	<p>There will be interaction with both surface water and groundwater resources during the construction, operation and reclamation of the Project and Piikani is concerned about impacts to these resources from dewatering as well as from changes to surface runoff based on the location of the proposed mine pit, waste rock disposal areas and other mine related infrastructure and the proposed mine drainage and water management plans.</p>	<p>Surface Water Quality - Hydrogeology</p>	<p>Groundwater and Surface Water impacts</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga will seek input into the Water Management Plan and the project monitoring plan prior to construction. Benga will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in plan development.</p>	<p>Ongoing; working with Piikani Nation.</p>
				<p>Based on the detailed hydrology, groundwater, water quality, and fisheries assessments, no significant residual impacts were identified that would permanently reduce</p>			

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	the suitability of the water-ways that are used for traditional use activities. It is important to note that the Grassy Mountain mine design does not have any tailings ponds like those in the Northern Alberta oilsands. Also all ponds used to hold or capture water were engineered to hold a much higher capacity of water than it will ever hold at any one time to meet Alberta's Dam Safety regulations; this will prevent overtopping or any catastrophic failure.	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	<p>included in the assessment of potential effects to hunting.</p> <p>Benga commits to consult with Piikani Nation in the development of the wildlife management and monitoring plan to ensure Piikani Nation views are incorporated.</p>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	January 4, 2016 Statement of Concern	<p>Piikani is concerned about the impact that increased pressure that a larger non-aboriginal population could place on traditional resources. As well, Piikani expects that a Chance Find procedure will be in place prior to construction.</p> <p>The Project lies entirely with Piikani traditional territory and Piikani actively uses the area for hunting, fishing and harvesting. As well, a number of Piikani historic sites are located within or surround the project area including traditional trails and ceremonial sites. As an area used extensively by Piikani harvesters and land users we expect to be consulted by Benga to avoid or mitigate impacts to important traditionally and currently used sites.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting; Fishing; Plant Gathering; Trails &amp; Travelways</p> <p>Aboriginal Physical &amp; Cultural Heritage - Access management; cultural heritage</p>	<p>Benga provided a conceptual Access Management Plan in the August 2016 update to the Environmental Impact Assessment (EIA). Due to site safety reasons access will be restricted within the Project Permit boundary during construction and operations. This will be enforced by mine operations managers and personnel during the construction and operations phase.</p> <p>Benga will be developing a Cultural Site Discovery Contingency plan and would like to get Piikani Nation' input on the plan.</p>	Piikani Nation has indicated that they will review the information and provide additional feedback.	<p>Benga has met with the Piikani Nation to review this issue, and will seek further input from Piikani Nation on the Cultural Site Discovery Contingency Plan.</p> <p>Piikani Nation conducted traditional land use fieldwork on Crown land in 2014 and 2015. In 2018, Piikani Nation performed an assessment of the archaeological features on private land identified as part of the Historic Resources Impact Assessment (HRIA).</p> <p>Benga looks forward to receiving information from Piikani Nation on specific areas of concern so that Benga can consider options to avoid or mitigate impacts to important traditional and current use sites.</p>	Ongoing; working with Piikani Nation.

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>January 4, 2016 Statement of Concern to Benga</p>	<p>Piikani is concerned about the loss of wildlife habitat as well as traditionally used plants and medicines from the construction and operation of the open-pit mine and associated infrastructure. Benga proposes that effects are reversible with reclamation, however Piikani considers these losses irreversible and does not have confidence that the proposed progressive reclamation will provide end land uses that will support the traditional uses and cultural aspects of the land and waters that historically and currently exist.</p> <p>The Local Study Area (LSA) for vegetation and wetlands covers a total area of 4,776 ha. This area lies within the heart of Piikani traditional territory and extensively used lands for traditional purposes. During baseline field surveys 480 plant species were identified including 298 vascular plants, 77 mosses and liverworts, and 105 lichens species. Of these, 41 species are listed as tracked or watched in Alberta (ACIMS 2014). Traditional important plants were also</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting; Plant Gathering</p> <p>Aboriginal Physical &amp; Cultural Heritage - Potential effects to cultural heritage</p>	<p>Section F in the August 2016 Environmental Impact Assessment (EIA) document provides the proposed Conservation and Reclamation (C&amp;R) Plan for the Project. This was provided to Piikani Nation in August 2016. Section F.1.5 describes the reclamation goals and principles that were incorporated in the C&amp;R and closure plans. Section F.1.6 describes proposed End Land Use goals and includes a commitment that end land use decisions will be made in consultation with Piikani Nation.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue, and will seek further input into the Reclamation Plan prior to construction.</p> <p>Piikani Nation conducted traditional land use fieldwork on Crown land in 2014 and 2015. Benga looks forward to receiving information from Piikani Nation on specific areas of conservation concern so that Benga can consider options to avoid or mitigate impacts to those areas.</p>	<p>Ongoing; working with Piikani Nation.</p>
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		<p>identified by Piikani within the LSA boundary, including juniper, sweat pine, lodgepole pine, stone crop, Kinnikikik, and aster. The vegetation</p>					
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>(Continued from previous row)</p>	<p>Regional Study Area (RSA) covers an area of 284,024.8 ha. with approximately 49% (143,006.8 ha) forested, 16% (46,421.3 ha) naturally non-vegetated land, 27% (76,292.5 ha) disturbed land, 7% barren land, and less than 1% (2,591.7 ha) wetland.</p>	<p>(Continued from previous row)</p>	<p>(Continued from previous row)</p>	<p>(Continued from previous row)</p>	<p>(Continued from previous row)</p>	<p>(Continued from previous row)</p>

<div style="border: 1px solid black; width: 20px; height: 20px; margin: 5px auto; text-align: center; line-height: 20px;">+</div>	<p>January 4, 2016 Statement of Concern to Benga</p>	<p>Piikani is concerned that the construction and operation of the Project will result in direct habitat loss, increased habitat fragmentation, disruption of wildlife movement, sensory disturbance to wildlife (particularly to sensitive species), mortality risk, and overall abundance.</p> <p>The Project lies within Piikani's high use area for trapping and harvesting and the direct and indirect loss of traditionally important species is significant to our current use and future use of a large area in close proximity to our community.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting; Trapping</p> <p>Wildlife - Potential effect to wildlife</p>	<p>The results of the Environmental Impact Assessment (EIA) were submitted in 2015 and again after updating in August 2016. The assessment of potential effects to wildlife is considered in Sec E.9.3. Many of the project effects associated with habitat loss and wildlife movement will be minimized through the implementation of the Project's reclamation plan. As seen on other mines in Alberta, through proper reclamation, wildlife will and do return to reclaimed mine site areas. Sensory disturbance and habitat loss is expected to occur to elk, deer, and moose during the operations phase, which will cause them to find more suitable areas in the area surrounding the Project site. As the Project will go through progressive reclamation, it is expected that there will be more suitable habitat for wildlife prior to the final end of mine year.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga has developed a conceptual wildlife monitoring plan and access management plan and will seek input into those plans prior to construction. Benga will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in plan development.</p>	<p>Ongoing; working with Piikani Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p>Requested that Benga provide lodge pole pine cleared from the site to Piikani Nation community.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Plant Gathering - Potential effects of the project on plant gathering.</p>	<p>Benga has committed to allow First Nations including Piikani, access to the site prior to or during clearing operations to enable them to harvest Lodgepole pine for cultural purposes (e.g. teepee poles). Benga has expressed to Piikani Nation an interest in obtaining their input into the development of environmental management plans.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga will provide access to harvest lodgepole pine.</p> <p>Benga has developed a conceptual access management plan and will seek input into the plan prior to construction. Benga will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in plan development.</p>	<p>Ongoing; working with Piikani Nation.</p>
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<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">+</div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 2px auto;">-</div>	<p style="text-align: center;">January 4, 2016 Statement of Concern</p> <p style="text-align: center;">Letter December 15, 2016</p>	<p>Piikani is concerned about the losing Aboriginal fisheries as a result of the Project. There will be both a direct loss from physical works as well as losses due to changes in water quality and quantity. Important traditionally harvested species that will be lost or impacted include: westslope cutthroat trout, cutthroat trout, rainbow trout, mountain whitefish, bull trout, brown trout, brook trout, and lake trout. Piikani is very concerned that fisheries offsetting will not provide for important Aboriginal fisheries that will be used for protection of endangered species such as the cutthroat trout or opportunities for continued harvesting by Community members in artificially altered or constructed habitats.</p> <p>The Project will result in loss of fish and fish habitat from pits, waste dumps and processing facilities as well as from construction and operation as associated changes to hydrology and water quality. There will be direct removal of habitat in a number of tributaries</p>	<p style="text-align: center;">Current Use of Lands and Resources for Traditional Purposes - Potential effect to fishing</p>	<p>An Addendum that comprised a comprehensive Aquatic Environment Impact Assessment was provided to the Alberta Energy Regulator (AER) and Canadian Environmental Assessment Agency (CEAA) on January 31, 2017. This Addendum provides a detailed baseline data site, including a benchmark for fish population in both creeks, a comprehensive habitat assessment, geomorphology assessment, benthic invertebrate assessment, and an instream flow needs (IFN) assessment. The IFN was used to quantify the impacts of the project on the watercourses, focusing in on the potential impacts changes in flow will have on fish and fish habitat in both Gold Creek and Blairmore Creek. As part of the Addendum, a revised impact assessment on Aquatic Resources was provided. There were no significant residual impacts identified as part of this exercise.</p> <p>A detailed Fisheries Offsetting Plan (FOP) is provided in Appendix B-1 of Addendum 8 (October 2018). The</p>	<p style="text-align: center;">Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga will seek input into the offset plan prior to construction.</p>	<p style="text-align: center;">Ongoing; working with Piikani Nation.</p>
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		<p>to both Blairmore and Gold creeks from the development footprint as well as changes to the flow regimes in both the tributaries to Blairmore and Gold creeks and in Blairmore and Gold creeks themselves. The construction and operation of the Project will also result in effects on water quality as a result of release of process-effected water.</p>		<p>purpose of this detailed FOP is to provide an update to the plan that was included in the Application. The FOP has been expanded based on discussions with and information requests received from federal and provincial regulatory agencies, including an update to the description of residual effects described in the aquatic effects assessment (EIS Application, Addendum 2, Consultant Report #6), as well as supplemental field data collected on the existing conditions of fish and fish habitat in the LSA to meet information needs for the joint panel.</p>			
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>(Continued from previous row)</p>	<p>Piikani requests that Riversdale develop a plan to replace any fish habitat they disturb. This will include a couple of different programs, which Piikani would like to be involved with, they are: Piikani Fisheries Offset Plan (create or protect more habitat than Riversdale removes) and a Westslope Cutthroat Trout Recovery Plan</p>	<p>(Continued from previous row)</p>	<p>Benga welcomes the opportunity to discuss the process and request any suggestions regarding this from the Piikani Nation.</p>	<p>(Continued from previous row)</p>	<p>(Continued from previous row)</p>	<p>(Continued from previous row)</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>January 4, 2016 Statement of Concern to Benga</p>	<p>Once a technical review of the Environmental Assessment (EA) is conducted by Piikani, we will be able to provide more detailed concerns as well as provide recommendations to Benga and the regulators to address deficiencies, issues and community concerns. Piikani expects that these recommendations will be addressed in a fashion similar to the Supplemental Information Requirements (SIRs) provided by the regulators to Benga to become part of the public record where appropriate to assess the sufficiency of the information provided in the EA and impacts of the proposed Project (including adequacy of mitigation).</p>	<p>Environmental Assessment Process - Technical review of EIA</p>	<p>Information provided in the Traditional Use Study, including information about wildlife, is considered in the Environmental Impact Assessment (EIA) under potential effects to wildlife and potential effects to hunting. Benga received the Piikani Technical Report Information and addressed the issues raised in the August 2016 update to the EIA.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga integrated issues raised in the Piikani Nation's technical report in the August 2016 updated EIA. Benga has met with the Piikani Nation to review this issue.</p>	<p>Complete</p>
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				<p>Benga have conducted a detailed instream flow needs (IFN) for the project area, and the flows needs for the aquatic environment are well understood. The potential impacts of the project on aquatic resources are well understood under normal seasonal conditions as well as a dry year scenario were now understood. The mitigation of flow augmentation is available under operational conditions if needed. Offset Planning may account for this as well.</p>			
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>March 22 - 23, 2017 Technical Review Conference Calls</p>	<p>The First Nation would like to include options for more equitably dividing flows between the two rivers so that fish habitat in Gold Creek can be sustained under low flow conditions.</p>	<p>Fish &amp; Aquatic Resources - Surface Water Management</p> <p>Hydrology</p>	<p>A detailed Fisheries Offsetting Plan (FOP) is provided in Appendix B-1 of Addendum 8 (October 2018). The purpose of this detailed FOP is to provide an update to the plan that was included in the Application. The FOP has been expanded based on discussions with and information requests received from federal and provincial regulatory agencies, including an update to the description of residual effects described in the aquatic effects assessment (EIS Application, Addendum 2, Consultant Report #6), as well as supplemental</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga welcomes feedback on the information provided in the EIA specific to the Water Management Plan.</p> <p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga will seek input into the Water Management Plan and the project monitoring plan prior to construction.</p>	<p>Ongoing; working with Piikani Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	field data collected on the existing conditions of fish and fish habitat in the LSA to meet information needs for the joint panel.	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	March 22 - 23, 2017 Technical Review Conference Calls	Want to see the results in terms of human and wildlife health effects	Human & Wildlife Health - Effects on human and wildlife health	An update to the Human Health and Wildlife Risk Assessment was provided in the August 2016 Updated Environmental Impact Assessment (EIA). Similar to the previous modeling, the Project is not expected to have significant impacts to humans or wildlife health.	Piikani Nation has indicated that they will review the information and provide additional feedback.	Benga has met with the Piikani Nation to review this issue.	Complete

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>January 4, 2016 Statement of Concern to Benga</p>	<p>Water is a key cultural resource to the practice of Piikani traditional land use and is critical for sustaining life on the land for members and for traditionally harvested species. Piikani is also concerned about potential effects from unplanned spills or leaks to shallow groundwater quality and the resultant effects to traditional land use in areas adjacent to the Project.</p> <p>The Project will permanently affect the underlying and surrounding groundwater system through physical removal and pit de-watering. Piikani is concerned about the effects to shallow groundwater quality, surface water quality via groundwater-surface water interaction and effected groundwater from mine spoil.</p>	<p>Hydrogeology Aboriginal Physical &amp; Cultural Heritage - Groundwater</p>	<p>No significant Project effects on surface water or groundwater quality are anticipated. Exposure to waterborne COPCs (Chemicals of Potential Concern) is not an operative exposure pathway for human or wildlife receptors.</p> <p>Benga will implement a Water Management Plan (WMP) that will prevent any unwanted release of water that may not meet provincial or federal water quality guidelines. All water (surface and groundwater) will be collected, held, and only released once it meets the appropriate or applicable water quality guideline. For any acute releases (i.e., in the event of an emergency), Benga will have the appropriate (and effective) Emergency Response Plans in place, and will ensure qualified staff are in place to implement these plans. As mentioned earlier, all of the holding ponds that will be onsite were over engineered to meet Alberta's Dam Safety requirements. Also, unlike the northern oilsands mines, the Grassy Project will not have a tailings pond. Benga</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga will seek input into the Water Management Plan and the project monitoring plan prior to construction. Benga will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in plan development.</p>	<p>Ongoing; working with Piikani Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	will develop and implement an Emergency Response Plan in relation to potential accidents that would affect the environment, and are committed to discussing and receiving input from the Aboriginal groups on these plans. Benga will implement a ground water monitoring program with the project to ensure that groundwater quality is not adversely affected due to mining activities.	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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	<p>Letter December 15, 2016</p>	<p>Piikani would like to work with Riversdale in the design implementation and monitoring of the Project's environmental management and monitoring plans, including the Air Quality / Dust Monitoring Plan, Noise Management Plan, Biodiversity Management Plan, Groundwater and surface water management and monitoring plans, Wildlife Mitigation and Management Plan, Access Management Plan</p>	<p>Monitoring - Air Quality &amp; Climate; Noise; Biodiversity; Hydrogeology; Wildlife; Access</p>	<p>Benga would like to work with the Piikani Nation to understand how they would like to participate in environmental monitoring.</p> <p>Currently, Benga have ambient dust monitoring locations located in Blairmore, the hospital and near the proposed coal handling and preparation plant (CHPP). Final locations of dust monitoring stations have not been determined at this time. Priority will be set for neighbouring communities and cabins. Benga will meet with Piikani Nation in developing its environmental monitoring programs including dust. Benga is prepared to work with Piikani Nation to develop a mechanism for implementing environmental monitoring at the site.</p> <p>Benga provided a conceptual Access Management Plan in the August 2016 update to the Environmental Impact Assessment (EIA). Due to site safety reasons access will be restricted within the Project Permit boundary during construction and operations. This</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga is beginning to develop monitoring and management plans and will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in monitoring. Benga will seek further input into management and monitoring plans prior to construction.</p>	<p>Ongoing; working with Piikani Nation.</p>
<p>+</p>							
<p>-</p>	<p>March 22 - 23, 2017</p>						
	<p>Technical Review Conference Calls</p>						

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	will be enforced by mine operations managers and personnel during the construction and operations phase.	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	March 22 - 23, 2017 Technical Review Conference Calls	What will be the complaint reporting and resolution system?	Monitoring- Noise Monitoring	Benga is required to comply with provincial and federal regulations, and the conditions of its approvals. Any violations of these terms and conditions can be reported to the regulatory authority that oversees the regulation (e.g. Alberta Energy Regulator, Department of Fisheries and Oceans, Canadian Environmental Impact Assessment Agency, etc.). Any other issues or concerns can be brought directly to the attention of Benga management through its Community and First Nation liaisons.	Piikani Nation has indicated that they will review the information and provide additional feedback.	Benga has met with the Piikani Nation to review this issue.  Benga is beginning to develop environmental management plans and will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in plan development. Benga will seek further input into the noise management and monitoring plan prior to construction.	Ongoing; working with Piikani Nation.

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 15, 2016 Letter</p> <p>March 22-23 2017 Technical Review Conference Calls</p>	<p>Piikani would like to work with Riversdale on an assessment of the projects impacts on Piikani members, potential mitigations to reduce noise effects that may result in avoidance behaviour, as well as involvement in the long-term monitoring of noise.</p>	<p style="text-align: center;">Monitoring</p> <p>Aboriginal Health - Noise Impact Assessment; Noise Mitigation and Monitoring</p>	<p>A revised noise model was provided in the Environmental Impact Assessment (EIA) Update (August 2016) that covered the mine site as a whole, as well as more focused study at the product coal load-out/rail loop area. No significant residual impacts were identified in either of the models. Sensory disturbance to wildlife from mine activity noise is provided in the Wildlife assessment.</p> <p>Benga has recently entered into an agreement with the Municipality of Crowsnest Pass to provide a natural tree line immediately north of Highway 3 as part of a visual and noise impact mitigation.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga is beginning to develop environmental management plans and will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in plan development. Benga will seek further input into the noise management and monitoring plan prior to construction.</p>	<p>Ongoing; working with Piikani Nation.</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>December 15, 2016 Letter re: Consultation Plan sent to Cal Clarke, Benga Mining Ltd., from Dustin Wolfe, Piikani Consultation Manager.</p>	<p>Piikani would like to work with Riversdale in the design, implementation and monitoring of the Dust Mitigation, Management and Monitoring Plan.</p>	<p style="text-align: center;">Monitoring</p> <p>Air Quality &amp; Climate - Dust Mitigation, Management and Monitoring Plan</p>	<p>Benga has provided information to Piikani Nation about potential ways they can participate in environmental monitoring.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga is beginning to develop monitoring plans and will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in monitoring. Benga will seek further input into the dust management and monitoring plan prior to construction.</p>	<p>Ongoing; working with Piikani Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p>March 22 - 23, 2017 Technical Review Conference Calls</p>	<p>How will the First Nation be involved in design and monitoring location selection?</p>	<p>Monitoring  Air Quality &amp; Climate - Dust Monitoring</p>	<p>Currently, Benga have ambient dust monitoring locations located in Blairmore, the hospital and near the proposed coal handling and preparation plant (CHPP). Final locations of dust monitoring stations have not been determined at this time. Priority will be set for neighbouring communities and cabins. Benga will meet with Piikani Nation in developing its environmental monitoring programs including dust. Benga is prepared to work with Piikani Nation to develop a mechanism for implementing environmental monitoring at the site.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga is beginning to develop monitoring plans and will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in monitoring. Benga will seek further input into the dust management and monitoring plan prior to construction.</p>	<p>Ongoing; working with Piikani Nation.</p>
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<div style="border: 1px solid black; text-align: center; width: 40px; height: 30px; margin-bottom: 5px;">+</div> <div style="border: 1px solid black; text-align: center; width: 40px; height: 30px;">-</div>	<p>March 22 - 23, 2017 Technical Review Conference Calls</p>	<p>How frequently will we monitor? want to monitor three time per year</p>	<p style="text-align: center;">Monitoring  Hydrogeology - Groundwater Monitoring</p>	<p>High level details are presented in Section 7.0 of the August 2016 Environmental Impact Assessment (EIA) Update. Section 7.1 states: "The water level monitoring may be monthly during an initial period when water levels are stabilizing in order to establish baseline conditions prior to mining. Once drawdowns become more predictable, monitoring frequency may be decreased. The water sampling frequency is expected to be either bi-annual or annual. Analytical parameters are expected to include major ion chemistry, metals and hydrocarbons depending on location". This information has been provided to Piikani Nation. As for reporting frequency, it will likely be dictated by the approval, but if bi-annual reporting is implemented, then an annual memo could be prepared on the off year and distributed to the Nation to communicate results.</p>	<p style="text-align: center;">Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga will seek further input from Piikani Nation on the Water Management Plan prior to construction. Benga will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in plan development.</p>	<p style="text-align: center;">Ongoing; working with Piikani Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	March 22 - 23, 2017 Technical Review Conference Calls	Did the project update include additional mitigations to reduce noise effects? Which best practices will you use to minimize noise?	Noise - Noise Impact Assessment and Noise Mitigation and Monitoring	No additional noise mitigations are proposed in the project update. The update did include revised noise modelling results that covered the mine site as a whole, as well as more focused study at the product coal load-out/rail loop area. No significant residual impacts were identified.  Noise mitigations and best practices are outlined in Section A of the Environmental Impact Assessment (EIA). These address mitigations for material hauling, blasting noise and vibration, train noise, light duty vehicle back up alarms, and equipment mechanical condition requirements.	Piikani Nation has indicated that they will review the information and provide additional feedback.	Benga has met with the Piikani Nation to review this issue.  Benga is beginning to develop environmental management plans and will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in plan development. Benga will seek further input into the noise management and monitoring plan prior to construction.	Ongoing; working with Piikani Nation.
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>January 4, 2016 Statement of Concern to Benga</p>	<p>The Project, which is in close proximity to Piikani Reserve lands and within our traditional lands, will be affected by both ongoing noise from the Project as well as intermittent blasting and rail hauling. Directive 038 does not account for pure tone frequencies that also affect traditional land use activities and the ability to practice our rights in areas of relative solitude. As well, the Project is predicted to also create sensory disturbances to traditionally harvested wildlife that can lead to changes in habitat use, health, breeding success and longevity.</p> <p>Modeled noise predictions from operations, including blasting and from locomotives indicative that the Project noise levels during the night-time and day-time, with the addition of the Ambient Sound Levels (ASLs), will be below the Permissible Sound Levels (PSLs) for all residential and theoretical 1,500 m receptors. However, for half of the receptors, the dBC-dBA sound levels are greater than 20 dB, indicating the possibility of a low frequency tonal noise</p>	<p>Noise</p>	<p>A revised noise model was provided in the Environmental Impact Assessment (EIA) Update (August 2016) that covered the mine site as a whole, as well as more focused study at the product coal load-out/rail loop area. No significant changes in noise levels were identified in either of the models. Sensory disturbance to wildlife from mine activity noise is provided in the Wildlife assessment.</p> <p>Disturbance due to low tonal noise is difficult to model. Benga commits to investigate any complaints once the mine is in service.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p>	<p>Ongoing; working with Piikani Nation.</p>
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+ -	(Continued from previous row)	from operations.	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
+ -	July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.	Timely harvest of medicinal and ceremonial plants prior to impact by the Project.	Plant Gathering - Potential effects of the project on plant gathering.	Access to harvesting areas will be included as a component of the Aboriginal Access Management plan.	Piikani Nation has indicated that they will review the information and provide additional feedback.	Benga has met with the Piikani Nation to review this issue.  Benga has developed a conceptual access management plan and will seek input into the plan prior to construction. Benga will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in plan development.	Ongoing; working with Piikani Nation.
+ -	March 22 - 23, 2017 Technical Review Conference Calls	What is the maximum timeframe for reclamation of mined areas – backfill and revegetation?	Reclamation - Dust Management	The Projects Conservation and Reclamation Plan (C&R Plan) is a progressive plan meaning that it will start at the early stages of the mine operations, extend through the operations phase and continue through to the end of mine, which will be the start of the 'final reclamation phase' Benga plans to conduct biophysical monitoring in Final Reclamation years 1-12, with a goal of receiving a Reclamation Certificate by Year 15-20.	Piikani Nation has indicated that they will review the information and provide additional feedback.	Benga has met with the Piikani Nation to review this issue  Benga will seek further input in to the Reclamation Plan prior to construction.	Ongoing; working with Piikani Nation.

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p>Concerns that the Project's reclamation program may not achieve objectives.</p>	<p>Reclamation - Project decommissioning</p>	<p>Section F in the August 2016 Environmental Impact Assessment (EIA) document provides the proposed Conservation and Reclamation (C&amp;R) Plan for the Project. This was provided to Piikani Nation in August 2016. Section F.1.5 describes the reclamation goals and principles that were incorporated in the C&amp;R and closure plans. Section F.1.6 describes proposed End Land Use goals and includes a commitment that end land use decisions will be made in consultation with Piikani Nation. Benga has committed to progressive reclamation of sites as they no longer part of the mining operations. Reclamation of some areas may begin as early as year 7. Monitoring of reclaimed sites will provide a measure of reclamation success and enable measures to be implemented in a timely manner as part of Benga's adaptive management strategy to resolve issues as they arise.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue</p> <p>Benga will seek further input into the Reclamation Plan prior to construction.</p> <p>Benga is beginning to develop environmental management and monitoring plans and will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in plan development and monitoring.</p>	<p>Ongoing; working with Piikani Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	December 15, 2016 Letter	Piikani would like to work with Riversdale in the design, implementation and monitoring of the Reclamation Plan.	Reclamation - Reclamation Plan	Section F in the August 2016 Environmental Impact Assessment (EIA) document provides the proposed Conservation and Reclamation (C&R) Plan for the Project. This was provided to Piikani Nation in August 2016. Section F.1.5 describes the reclamation goals and principles that were incorporated in the C&R and closure plans. Section F.1.6 describes proposed End Land Use goals and includes a commitment that end land use decisions will be made in consultation with affected Piikani Nation.	Piikani Nation has indicated that they will review the information and provide additional feedback.	Benga has met with the Piikani Nation to review this issue.  Benga will seek further input into the Reclamation Plan prior to construction.	Ongoing; working with Piikani Nation.
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>June 17, 2013 Meeting</p> <p>July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.</p> <p>January 4, 2016 Statement of Concern</p>	<p>Piikani Nation expressed concern that the Project is an infringement on Piikani Nation's water rights.</p> <p>The Project will decrease water quality in waterbodies in the vicinity of the Project by clearcutting forested areas.</p> <p>Waterbodies in the vicinity of the Project risk contamination through contact with mining by-products.</p> <p>Surface water quality is extremely important to Piikani's traditional livelihood as it plays a role in overall ecosystem health, supporting traditional plant and animal communities in addition to Piikani traditional use and culture.</p> <p>Piikani is concerned about the potential for deleterious substances being released into the receiving environment as well as impacts to surrounding watercourses and associated plant and animal communities upon which our members depend, including for our health and well-being.</p>	<p>Surface Water Quality - Potential effects of the project on water quality.</p>	<p>As part of the August 2016 Environmental Impact Assessment (EIA) Update, Benga have added additional information and clarification around the Project's Water Management Plan (WMP). This WMP was developed to ensure all water within the mine site is captured in appropriately sized holding ponds that allow for the testing of water quality prior to being released into the surrounding environment. The WMP was assessed to determine potential effects on river flows and water quality in the neighbouring and downstream rivers. The results of the assessment indicate that there will not be any impacts to the environment with the implementation of the WMP. To verify that changes in flow do not affect fish and their habitat, Benga also conducted a detailed Instream Flow Needs study (IFN). Based on the detailed hydrology, groundwater, water quality, and fisheries assessments, no significant residual impacts were identified that would permanently reduce the suitability of the</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga welcomes feedback on the information provided in the EIA Update specific to the Water Management Plan, and will seek further input on the Water Management Plan prior to construction.</p>	<p>Ongoing; working with Piikani Nation.</p>
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		<p>The Environmental Assessment (EA) assesses potential Project effects on surface water quality resulting from Project releases and discharges, including from accidental spills and leaks. Assessment predictions classified release of process water as moderately significant with other issues (e.g. effects from acidifying emissions, waste management) predicted to have insignificant residual effects considering proposed mitigation and management.</p>		<p>water-ways that are used for traditional use activities. It is important to note that the Grassy Mountain mine design does not have any tailings ponds like those in the Northern Alberta oilsands. Also all ponds used to hold or capture water were engineered to hold a much higher capacity of water than it will ever hold at any one time to meet Alberta's Dam Safety regulations; this will prevent overtopping or any catastrophic failure.</p>			
<p>+ -</p>	<p>(Continued from previous row)</p>	<p>Six Project process water variables (nitrite, selenium, cobalt, cadmium, and zinc) in the Local Study Area (LSA) and three variables (nitrite, cobalt, and zinc) in the Regional Study Area (RSA) are predicted to exceed Alberta Environment and Parks (AEP) water quality guidelines for the protection of aquatic life.</p>	<p>(Continued from previous row)</p>	<p>In January 2017, Benga completed an Addendum to the EIA which included an updated aquatics ecology assessment to fulfill additional information requests from provincial and federal regulators regarding fish and aquatics. Table E6.6-1 in the Aquatic Ecology Summary indicates no significant impact to the westslope cutthroat trout, the valued component of the study.</p>	<p>(Continued from previous row)</p>	<p>(Continued from previous row)</p>	<p>(Continued from previous row)</p>
		<p>Piikani also, in the absence of reviewing the surface water assessment and proposed mitigation and management, is not confident with the predictions of insignificance or</p>		<p>Benga will implement a Water Management Plan (WMP) that will prevent any unwanted release of water that may not meet provincial or federal water quality</p>			

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	(Continued from previous row)	moderate significance.	(Continued from previous row)	guidelines. All water (surface and groundwater) will be collected, held, and only released once it meets the appropriate or applicable water quality guideline. For any acute releases (i.e., in the event of an emergency), Benga will have the appropriate (and effective) Emergency Response Plans in place, and will ensure qualified staff are in place to implement these plans. As mentioned earlier, all of the holding ponds that will be onsite were over engineered to meet Alberta's Dam Safety requirements. Benga will develop and implement an Emergency Response Plan in relation to potential accidents that would affect the environment, and are committed to discussing and receiving input from the Aboriginal groups on these plans.	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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<div style="border: 1px solid black; text-align: center; width: 34px; height: 23px;">+</div> <div style="border: 1px solid black; text-align: center; width: 34px; height: 23px;">-</div>	<p>March 22 - 23, 2017          Technical Review          Conference Calls</p>	<p>We would like to see biomonitoring that includes measuring Se in attached algae (periphyton) and benthic invertebrates in Blairmore and Gold creeks to ensure that fish tissues remain below the chronic tissue residue guideline of 4 µg Se/g.</p>	<p>Surface Water Quality</p> <p>Fish &amp; Aquatic Resources - Surface Water Management</p>	<p>Detailed plans on monitoring selenium have not been developed to date. Benga welcomes the opportunity to discuss monitoring plans with Piikani Nation.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga is beginning to develop environmental monitoring plans and will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in monitoring.</p>	<p>Ongoing; working with Piikani Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>January 4, 2016 Statement of Concern</p> <p>March 22 - 23, 2017 Technical Review Conference Calls</p>	<p>Piikani members are not confident that the proposed progressive reclamation will provide end land uses that will support the traditional uses and cultural aspects of the land and waters that historically and currently exist.</p> <p>Piikani is concerned that the Project, an open-pit mining operation, will drastically change the terrain and soils of the project development area that lies entirely within Piikani's traditional territory. This includes not only the mine itself but project infrastructure such as roads and related facilities. Reclamation after mine life will not put the land back to its pre-disturbance condition.</p> <p>The Piikani Nation wants to see specific details about restoring the area so that it can be used for traditional land use opportunities.</p>	<p>TK/TU - Conservation and Reclamation Plan</p>	<p>During the development of the Environmental Impact Assessment (EIA), Benga engaged with Piikani Nation members that may be affected by the Project. Elders and technicians provided input on the key issues, themes, observations, wisdom, insights, Traditional Knowledge (TK) and land use through a series of site visits, workshops, meetings, and other communication events. Recommendations and ideas expressed to date by Piikani Nation that are relevant to conservation and reclamation planning were summarized in the Conservation and Reclamation (C&amp;R) Plan. Various traditional land uses objectives were also identified during the consultation (and associated TK reports). Some of the TK principles that Benga will incorporate into the C&amp;R and Closure Plans were summarized in the C&amp;R Plan. Benga is willing to incorporate traditional land use opportunities as part of the end land use objectives of the reclaimed landscape. As the mine progresses, more detailed site specific reclamation plans can be provided</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga will continue to seek input on the Reclamation Plan prior to construction. Benga will continue to work with the Piikani Nation to identify ways in which community members can contribute to and participate in monitoring and management plan development.</p>	<p>Ongoing; working with Piikani Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	<p style="text-align: center;">to Piikani Nation for review and comment.</p> <p>Section F in the August 2016 Environmental Impact Assessment (EIA) document provides the proposed Conservation and Reclamation (C&amp;R) Plan for the Project. This was provided to Piikani Nation in August 2016. Section F.1.5 describes the reclamation goals and principles that were incorporated in the C&amp;R and closure plans. Section F.1.6 describes proposed End Land Use goals and includes a commitment that end land use decisions will be made in consultation with Piikani Nation.</p>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p>March 22 - 23, 2017 Technical Review Conference Calls</p>	<p>Is there an opportunity to do a more detailed study of traditional use vegetation so we know what to strive for in the reveg plan? e.g., bearberry, sweet pine, juniper, mountain holly fern, yarrow, alpine fern, tree lichen, lodgepole pine, willow, poplar, cottonwood, birch, Saskatoon berry, sage.</p>	<p>TK/TU - Conservation and Reclamation Plan</p>	<p>Much information has been gathered on traditionally valued plant species on the project site. Through its ongoing relationship with Piikani Nation and involvement with the project, Benga believes there will be additional opportunity to share more information around traditionally used resources which can be incorporated into the sites final conservation and reclamation plans. Benga's reclamation plans will include the use of native species and wherever possible will support revegetation of traditional-use species as part of its end land use objectives during reclamation.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.  Benga will seek further feedback into the Reclamation Plan prior to construction.</p>	<p>Ongoing; working with Piikani Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	Meeting February 22, 2015	Piikani Nation inquired if there will be field work during the upcoming season and possible Piikani participation, including Elders.	TK/TU - Field work	Benga inquired with Millennium/Arrow about the 2015 field program and whether there is opportunity for Piikani members to participate in the program.	Piikani Nation has indicated that they will review the information and provide additional feedback.	Piikani Nation conducted traditional land use fieldwork on Crown land in 2014 and 2015. In 2018, Piikani Nation performed an assessment of the archaeological features on private land identified as part of the Historic Resources Impact Assessment (HRIA).  Benga looks forward to receiving information from Piikani Nation on specific areas of concern so that Benga can consider options to avoid or mitigate impacts to important traditional and current use sites.	Ongoing; working with Piikani Nation.
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting February 22, 2015</p>	<p>Piikani Nation inquired about the possibility of Piikani Elders working with Arrow on remaining field work this season.</p>	<p>TK/TU - Field work</p>	<p>Arrow will be in touch with Piikani Nation.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Piikani Nation conducted traditional land use fieldwork on Crown land in 2014 and 2015. In 2018, Piikani Nation performed an assessment of the archaeological features on private land identified as part of the Historic Resources Impact Assessment (HRIA).</p> <p>Benga looks forward to receiving information from Piikani Nation on specific areas of concern so that Benga can consider options to avoid or mitigate impacts to important traditional and current use sites.</p>	<p>Ongoing; working with Piikani Nation.</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>March 22 - 23, 2017 Technical Review Conference Calls</p>	<p>How can we incorporate TK into the design?</p>	<p>TK/TU - Integration of TK in Groundwater Management</p>	<p>Key aspects of a groundwater management plan (for seepage capture) are part of the Project's Water Management Plan (WMP); however, final operational details have not been developed at this time. Benga would like to meet with the Piikani to determine how to use information from Piikani Nation's traditional land use report and integrate it into the groundwater management plan.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga welcomes feedback on the information provided in the Environmental Impact Assessment (EIA) specific to the Water Management Plan, and will seek further feedback from Piikani Nation into the groundwater management plan prior to construction.</p>	<p>Ongoing; working with Piikani Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p>Piikani Nation expressed an interest in additional TK/TU fieldwork.</p>	<p>TK/TU - Integration of TK/TU in EA</p>	<p>Benga is open to discussing additional TK work based on specific scope and objectives. If an agreed scope can be clarified, additional field work could be funded through the provisions in the Impact Benefit Agreement (IBA).</p>	<p>Benga and Piikani Nation continue discussions about this topic.</p>	<p>Benga will continue to work with Piikani Nation to address this concern through implementation of the signed IBA.</p>	<p>Ongoing; working with Piikani Nation.</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p>The Project may introduce disturbance to areas that have not been previously disturbed instead of keeping disturbance confined to the areas that had been disturbed by historic mining activities.</p> <p>Particularly where it affects Crown Land, the Project will result in the loss of access to, and use of, traditional lands.</p>	<p>TK/TU - Potential effects of traditional use</p>	<p>The project will disturb some previously undisturbed Crown lands and access to Crown lands during construction and operations will be restricted for safety reasons. To the extent possible on Crown land, Benga has incorporated areas that are already disturbed into the construction and operational plans of the Project to try to minimize new disturbance. Benga provided a conceptual Access Management Plan in the August 2016 update to the Environmental Impact Assessment (EIA). This information has been provided to Piikani. Access on site will be enforced by mine operations managers and personnel during the construction and operations phase.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga has developed a conceptual access management plan seek further input on the plan prior to construction.</p>	<p>Ongoing; working with Piikani Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p>March 22 - 23, 2017 Technical Review Conference Calls</p>	<p>The Piikani Nation would like to see specific plans for revegetation with native species.</p>	<p>Vegetation &amp; Wetlands - Conservation and Reclamation Plan</p>	<p>One of the goals in the updated Conservation &amp; Reclamation Plan is that reclaimed areas will be developed into self-sustaining ecosystems with an acceptable degree of biodiversity (relative number of native species and structural layers as early stage target community). As such, Benga is committed to using native species in its reclamation plans. There is a revegetation plan in place which is outlined in the Environmental Impact Assessment. As the mine progresses, more detailed site specific plans for revegetation can be provided to Piikani Nation for review and comment.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.  Benga will seek further input from Piikani Nation on the Reclamation Plan prior to construction.</p>	<p>Ongoing; working with Piikani Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p>The Project will adversely affect wildlife by increasing animal-vehicle collisions.</p>	<p>Wildlife - Potential effects of the project on hunting.</p>	<p>Information provided in the Traditional Use Study, including information about wildlife, is considered in the Environmental Impact Assessment (EIA) under potential effects to wildlife and potential effects to hunting.</p> <p>Proposed mitigation measures related to managing this potential effect include access management and enforcing speed limits along the main access road and utility corridors. In addition, wildlife crossing signs will be used to minimize wildlife-vehicle collisions.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.</p> <p>Benga will seek further input from Piikani Nation on the access management plan and wildlife monitoring plan prior to construction.</p>	<p>Ongoing; working with Piikani Nation.</p>
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<div style="border: 1px solid black; text-align: center; width: 32px; height: 23px;">+</div> <div style="border: 1px solid black; text-align: center; width: 32px; height: 23px;">-</div>	<p>March 22 - 23, 2017 Technical Review Conference Calls</p>	<p>How can we develop more detailed monitoring and adaptive management programs.</p>	<p>Wildlife - Wildlife Mitigation and Monitoring</p>	<p>Benga supports an adaptive management approach to its monitoring and environmental programs and will try to incorporate this approach into its environmental management plans. Benga will be developing specific environmental monitoring and management plans that comply with its regulatory requirements. Benga will provide Piikani Nation the opportunity to participate in the development and implementation of its environmental programs on site.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.  Benga will seek further input from Piikani Nation on wildlife management and monitoring plans prior to construction.</p>	<p>Ongoing; working with Piikani Nation.</p>
<div style="border: 1px solid black; text-align: center; width: 32px; height: 23px;">+</div> <div style="border: 1px solid black; text-align: center; width: 32px; height: 23px;">-</div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Piikani Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p>The Project will adversely affect wildlife by diminishing their access to clean water.</p>	<p>Wildlife  Surface Water Quality - Potential effects of the project on hunting.</p>	<p>Habitat connectivity and movement is assessed in Section E.9.3 of the Environmental Impact Assessment (EIA).  This information has been provided to Piikani Nation.</p>	<p>Piikani Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Piikani Nation to review this issue.  Benga will seek further input from Piikani Nation on wildlife management and monitoring plans prior to construction.</p>	<p>Complete</p>

## **Appendix A-3: Siksika Nation Specific Concern and Response Table**

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## SPECIFIC CONCERN AND RESPONSE TABLE

First Nation or Metis Settlement

Siksika Nation

Date

Dec 15, 2018

This table is designed to capture project specific concerns raised—by the First Nation/Metis Settlement that is being consulted—during consultation and the proponent’s response to address the concerns through avoidance or mitigation. Any reply provided by the First Nation/Metis Settlement to the proponent’s response should be documented and noted in this table where applicable.

Add/ Delete Row	Document or Meeting Reference	Specific Concern Expressed	Project Specific Aspect of the Concern Expressed	Proponent Response on Effort to Avoid or Mitigate Concern	First Nation/Metis Settlement Response to Proponent's Effort to Avoid or Mitigate Concern	Details on how concerns were addressed, including avoidance or mitigation measures	Outcomes/Comments
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	September 20, 2018 Meeting	Siksika Nation indicated that if an area is impacted a ceremony will need to be conducted.	Aboriginal Physical & Cultural Heritage	Benga has and will continue to support local and First Nation cultural events and ceremonies through its community and First Nation engagement and initiatives such as its community sponsorship program. Smashed in Buffalo Jump was discussed as a potential location for a ceremony.	Siksika Nation has indicated that they will review the information provided.	Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss ceremonies further.	Ongoing; working with Siksika Nation.

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>Siksika Traditional Use Study Report, December 5 2018</p>	<p>The following steps are necessary to protect our traditional use and sites at Grassy Mountain: a funded process of meaningful Consultation between the company acting on behalf of the Crown and Siksika needs to be undertaken and seen to completion that seeks to identify ways to avoidance and/or mitigate impacts to Siksika traditional use sites and rights, and measures to accommodate and/or compensate for unavoidable impacts, while ensuring the future use by Siksika members of our ceremonial and spiritual complex at Grassy Mountain.</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Siksika Nation to discuss it.</p>	<p>Siksika has provided their Traditional Use Study Report</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Siksika Nation to discuss.</p>	<p>Ongoing; working with the Siksika Nation</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>Siksika Traditional Use Study Report, December 5 2018</p>	<p>This spiritual complex at Grassy Mountain has profound spiritual importance to us notwithstanding the gap in our use since the arrival of non-Native settlers. It should be protected with the same or greater authority as the rusting and comparatively recent Greenhill mine workings nearby, that are valued highly and protected by the Province of Alberta.</p> <p>Siksika Nation proposes several examples of traditional use sites that they identify as similar to the Grassy Mountain spiritual complex, as examples of how sites have been previously protected: medicine wheels at Majorville and Sundial Butte (Majorville is protected by Alberta Heritage legislation), Carcross/Tagish First Nation's Yukon glacier site (submitted by Canada for UNESCO world heritage site designation), and Healy Bridge (protected by Alberta government during development of a power line). At Grassy Mountain, the ceremonial and spiritual complex must be protected similarly; this may require adapting the design and operation of the</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Siksika Nation to discuss it.</p>	<p>Siksika has provided their Traditional Use Study Report</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Siksika Nation to discuss.</p>	<p>Ongoing; working with the Siksika Nation</p>
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		<p>mine to go around our spiritual sites and permit us to continue using it into the long-term future, following a process of meaningful consultation between the company and Siksika.</p> <p>It is extraordinarily sociocentric and unacceptable that the Alberta Crown classifies the Greenhill mine workings, a pile of rusted old metal less than 100 years old, as a possible world heritage site deserving of an Alberta Historic Resource Value (HRV) of 1,2 or 3 giving it protection under provincial law, while our ceremonial and spiritual complex site at Grassy mountain, dating back ten millennia and in continuous use until non-Native settlers arrived, is identified as Unprotected.</p>					
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)		(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>Siksika Traditional Use Study Report, December 5 2018</p>	<p>A stone cairn found in the proposed south pit area of the project (DkPo-07) is of particular concern. We have buried our dead on high ground for millennia, some interred and some laid on the ground. More study needs to be done to located other burial sites within about one kilometre of the cairn.</p> <p>Worth pointing out again is that DkPo-07 is not a waymarker as some have suggested. Our protocol for these sites is to leave them alone and stay away from them. There are spirits there that must not be disturbed.</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Siksika Nation to discuss it.</p>	<p>Siksika has provided their Traditional Use Study Report</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Siksika Nation to discuss.</p>	<p>Ongoing; working with the Siksika Nation</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>March 2015 Siksika Interim Traditional Use Study (TUS) Assessment and Report for the Grassy Mountain Project.</p>	<p>Non-Native Benga employees and sub-contractors may not understand the sacred nature of the Project area. Benga is urged to develop and implement a cultural training program in collaboration with Siksika Nation.</p>	<p>Aboriginal Physical &amp; Cultural Heritage - Potential effects of the project on physical and cultural heritage</p>	<p>In June 2017, Benga employees and invited guests from the Aboriginal Consultation Office (ACO) and local municipal government participated in a cultural awareness session at Head-Smashed In Buffalo Jump with the Siksika Nation. Benga supports cultural awareness training for its staff and contractors.</p>	<p>In February 2018, Siksika Nation indicated that they will work with Benga to develop a cultural awareness program. Siksika Nation advised that the information provided by Benga on this issue sufficiently addresses the concern.</p>	<p>Benga has met with the Siksika Nation to review this issue.</p> <p>In February 2018, Benga asked about the cultural awareness training; is it specific to the Siksika Nation or can it be Blackfoot based? Benga will work with Siksika Nation to develop a cultural awareness training program. Siksika Nation responded that if the appropriate confederacy people are selected, then the Blackfoot can work together in a group to provide cultural awareness training. Cultural awareness training program to be developed. Siksika Nation advised that this concern has been sufficiently addressed by Benga.</p>	<p>Complete</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p style="text-align: center;">August 22, 2017 meeting</p>	<p style="text-align: center;">Siksika expressed concerns about the pre-contact camp site Dj Po-98.</p>	<p style="text-align: center;">Aboriginal Physical &amp; Cultural Heritage - Sites of Concern</p>	<p>Currently the proposed plant site sedimentation pond overlays a portion of the identified historical resource site DjPo-98 which is an unnamed Pre-contact Period Site located on private land within the proposed the proposed CHPP area. This site was partly evaluated and excavated when it was first recorded, however, 2015 testing and assessment indicated the presence of additional deeply buried material.</p> <p>Benga committed to relocate the sedimentation pond to avoid the site Dj Po-98 and to protect it from disturbance. The mitigation measures for historical resource DjPo-98 are discussed in Section E.13.3.3.4 of the August 2016 EIA Summary.</p> <p>Benga is committed to working with Siksika Nation to manage site-specific concerns.</p>	<p>Siksika indicated that they received the update.</p> <p>In February 2018, Siksika Nation indicated that they would review the information and provide additional feedback; and that they would like to assess site DjPo-98 during the 2018 field season.</p> <p>Siksika Nation conducted fieldwork in June and July 2018, and provided a report to Benga in December 2018.</p>	<p>Benga is looking into engineering options to move the ponds and will advise Siksika when they become available.</p> <p>Benga provided an update on engineering plans for the pre-contact camp site DjPo-98 by email on October 6, 2017.</p> <p>Benga facilitated access to site DjPo-98 and supported Siksika Nation to conduct a site assessment during the 2018 field season. Results of the field investigation were provided to Benga for consideration.</p> <p>Benga will continue to meet with Siksika Nation to discuss management of DjPo-98.</p>	<p style="text-align: center;">Ongoing; working with Siksika Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p>Meeting August 4, 2017</p> <p>Meeting February 23, 2018</p>	<p>Siksika Nation would like to discuss trail signage, site specific mitigations, Traditional Land Use (TLU) sites, and the provincial and federal processes.</p>	<p>Aboriginal Physical &amp; Cultural Heritage</p> <p>Environmental Assessment Process</p>	<p>Benga scheduled a meeting to discuss the signage, site specific mitigations, TLU sites and the provincial and federal process</p>	<p>Siksika Nation met with Benga and will continue to meet with Benga to discuss the issue.</p> <p>Siksika Nation conducted fieldwork in June and July 2018, and provided a report to Benga in December 2018.</p>	<p>Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p>	<p>Ongoing; working with Siksika Nation.</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p>Siksika Traditional Use Study Report, December 5 2018</p>	<p>This is a paramount concern of ours: the Grassy Mountain project plans to continue the diminution of our traditional culture by irreversibly destroying our spiritual and ceremonial use sites on the Mountain from which we worship at Crowsnest Mountain. Traditional Blackfoot spirituality is the fabric that binds our culture and people together.</p>	<p>Aboriginal Physical and Cultural Heritage - Potential effect on ceremonial lands</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Siksika Nation to discuss it.</p>	<p>Siksika has provided their Traditional Use Study Report</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Siksika Nation to discuss.</p>	<p>Ongoing; working with the Siksika Nation</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>January 4, 2016 Statement of Concern</p> <p>Meeting February 23, 2018</p>	<p>In addition to removing the lands for use by Siksika members, this taking-up will impact Siksika members' ability to transmit traditional knowledge about the area to younger generations. In short, the Applications, if approved, will have lasting adverse impacts on Siksika's culture.</p>	<p>Aboriginal Physical and Cultural Heritage - Potential effects of the project on physical and cultural heritage</p>	<p>Benga appreciates the input from Siksika Nation and is committed to working with Siksika Nation to minimize potential impacts to culture. Section H.3.4 of the Environmental Impact Assessment (EIA) provides an assessment of potential effects to Siksika Nation physical and cultural heritage including proposed mitigation measures to minimize potential effects. Benga welcomes any feedback on the proposed mitigations.</p> <p>In February 2018, Benga and Siksika met. Benga indicated that it looks forward to receiving comments on the conceptual Access Management plan from the Siksika Nation. Access to areas for traditional activities can be managed through the development of the plan.</p>	<p>In February 2018, Siksika Nation indicated it would like to deal with this concern through the development of the Monitoring and Access Management Plans. Siksika Nation indicated that they will discuss further internally and provide feedback to Benga.</p>	<p>Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p> <p>Benga is beginning to develop monitoring plans and will continue to work with the Siksika Nation to identify ways in which community members can contribute to and participate in monitoring. Benga has developed a conceptual access management plan and will seek further input on the plan from the Siksika Nation prior to construction. Benga requested site specific details to assist development of the Access Management Plan.</p>	<p>Ongoing; working with Siksika Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting on February 23, 2018</p>	<p>Siksika Nation asked about the timing of the development of the Access Management Plan. Will the plan start with construction and run until completion?</p>	<p>Access Management</p>	<p>Benga would like feedback from Siksika Nation on the plan – access management is conceptual at this point.</p>	<p>Siksika Nation has indicated that they will meet internally and define what they would like to see as part of the Access Plan. Then, follow up and meet with Benga to review.</p>	<p>Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p> <p>Benga has developed a conceptual access management plan and will request further input on the plan from the Siksika Nation prior to the onset of construction to identify species of importance and access requirements to harvesting areas.</p>	<p>Ongoing; working with Siksika Nation</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting on February 23, 2018</p>	<p>Question about forestry activity and site clearing noticed by Siksika in the area.</p>	<p>Construction Activities - Vegetation</p>	<p>No clearing has been done to date for the Project. The visible logging in the area is from forestry companies/operations.</p>	<p>Siksika Nation and Benga met and Benga responded to Siksika's question.</p>	<p>Benga has met with the Siksika Nation and responded to the concern.</p>	<p>Complete</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>September 30, 2017 email from Richard Right Hand</p>	<p>Siksika Nation expressed difficulty in getting information from Benga for files and reports.</p>	<p>Consultation</p>	<p>Benga has provided Siksika Nation with the requested information.</p>	<p>Siksika indicated that they have received the requested information.</p>	<p>Benga sent the requested information.</p>	<p>Complete</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p style="text-align: center;">Meetings on October 17, 2014, May 6, 2016, and February 23, 2018</p>	<p>Siksika Nation expressed concerns regarding their disadvantage in reviewing the Project's Environmental Impact Assessment (EIA) because of 1) a lack of expertise related to coal mining. 2) lack of capacity funding 3) breadth of community consultation required (need meetings for members in the city as well as on reserve; need meetings with Elders - Open House alone is not sufficient.</p> <p>Siksika Nation is interested in training opportunities and following.</p> <p>Siksika Nation stated that they are paying for the meeting room and subsidizing Benga meetings. Siksika Nation stated a concern that commitments made by Benga are just talk.</p>	<p style="text-align: center;">Consultation - Consultation Process</p>	<p>Benga provided a draft consultation plan.</p> <p>A technical review was completed by the Piikani Nation and the results of the review were shared with the Siksika Nation for their consideration. CEAA funding is available for applicants that wish to engage specialists to review the document.</p> <p>Benga asked if an open house could include other Aboriginal groups or if it would need to be specific to Siksika Nation.</p>	<p>Siksika Nation stated that they would like to agree on a plan and budget for consultation.</p> <p>Siksika Nation indicated they would need to follow-up with senior staff on the question about the open house.</p> <p>In February 2018, Siksika indicated it will review the work done for Piikani and may perform an independent assessment on some additional points and submit a document to Benga. Siksika Nation also noted it is working with CEAA to address the budget.</p>	<p>Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p> <p>Benga indicated that Canadian Environmental Assessment Agency (CEAA) funding can be allocated to consultation meetings.</p> <p>Benga is waiting for an update from Siksika Nation regarding an open house.</p> <p>In February 23, 2018, Benga and Siksika met. Benga noted it would review and respond to Siksika Nation's technical review report once it is provided to Benga. Benga looks forward to receiving any additional feedback from Siksika Nation and will work with Siksika Nation to identify appropriate ways to mitigate potential effects.</p>	<p style="text-align: center;">Ongoing; working with Siksika Nation.</p>
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	<p>Meeting October 17, 2014.</p>					<p>Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p>	
<p>+</p>	<p>Meeting February 23, 2018.</p>	<p>Concerned that participating in the consultation process may be seen to contradict the Siksika position of not wanting any ceremonial lands destroyed.</p>	<p>Consultation - Potential effect on ceremonial lands</p>	<p>Benga appreciates the participation to date by Siksika Nation. Information shared is important in the process of identifying potential effects to Siksika Nation interests. Benga looks forward to receiving any additional feedback from Siksika Nation on how the Project may affect ceremonial lands and will work with Siksika Nation to identify appropriate ways to mitigate potential effects. In addition, a Reclamation Plan will be included in the application and Aboriginal groups will have an opportunity to review and provide comments.</p>	<p>Siksika Nation has indicated that they will review the information and provide additional feedback.</p> <p>Siksika Nation indicated that this issue will require further discussion internally. As a follow up, Siksika Nation will arrange an internal meeting.</p>	<p>In February 2018, Benga indicated it will attempt to minimize Project impacts and accommodate avoidance of areas where possible. Provision of site specific information on the locations of conservation interest will help to manage the access. Benga has developed a conceptual access management plan and will seek further input on the plan from the Siksika Nation prior to construction.</p> <p>Benga requested site specific details to assist development of the Access Management Plan. Siksika Nation advised that this location is one of the most sacred areas to Siksika Nation. Siksika Nation indicated that the consultation process is contradictory because there are economic incentives such as employment on one side, which the Nation needs, and on the other side, it is a sacred area. Siksika Nation would like</p>	<p>Ongoing; working with Siksika Nation.</p>

+	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	Benga to use the term sacred sites, not ceremonial. Benga confirmed that they will use the term sacred as advised by Siksika Nation.	(Continued from previous row)
-						Benga will seek further feedback on mitigations prior to construction.	

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>January 4, 2016 Statement of Concern. Meeting February 23, 2018</p>	<p>I am concerned about the impacts this Project will have on our culture and way of life. It will impact our hunting and other traditional activities in the area for over 30 years.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting</p> <p>Aboriginal Physical &amp; Cultural Heritage - Potential effects of the project on physical and cultural heritage</p>	<p>An assessment of potential effects to Siksika Nation current use for traditional purposes is provided in Section H.5 of the Environmental Impact Assessment. Potential effects to Siksika Nation hunting are described in Section H.5 of the EIA and are considered to be local to the Project area and reversible. The ability to hunt in Siksika Nation territory outside of the Project Area would not be affected.</p>	<p>In February 2018, Siksika Nation indicated that they will work with Benga to develop a cultural awareness program. Site specific concerns related to traditional use can be dealt with through the development of the Access Management Plan. Protocols regarding the management of sacred plants will be discussed internally among Siksika Nation. The appropriate decision will be relayed during follow up meetings with Benga.</p> <p>Siksika Nation conducted fieldwork in June and July 2018, and provided a report to Benga in December 2018.</p>	<p>Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p> <p>Benga will attempt to minimize Project impacts and accommodate avoidance of traditional use areas where possible. Provision of site specific information on the locations of conservation interest will help to manage the access. Benga has developed a conceptual access management plan and will seek further input on the plan from the Siksika Nation prior to construction.</p> <p>Benga requested site specific details to assist development of the Access Management Plan.</p> <p>Benga would like to work with Siksika Nation to develop a cultural awareness training program. Siksika Nation advised that the information provided by Benga on this issue sufficiently addresses the concern related to cultural awareness. Siksika Nation will discuss closure on this item</p>	<p>Ongoing; working with Siksika Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	<p>and advise Benga if response received to date sufficiently addresses the concerns. Prior to or during the development of the access management plan, Siksika will meet with other Blackfoot Nations to discuss how to deal with the sacred plants.</p> <p>As a follow up, a letter/ Charter may be drafted with Siksika Nation.</p>	(Continued from previous row)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	Meeting on February 23, 2018	Siksika Nation wants to access areas for continued traditional use. Want to ensure that vegetation and wildlife are reclaimed for traditional use.	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting; Fishing; Plant Gathering</p> <p>Aboriginal Physical &amp; Cultural Heritage - Traditional use; Reclamation; Access Management</p>	<p>Hunting and harvesting, and possibly ceremonial and recreation to be integrated into access management plans. Benga will need to delineate which areas are safe, and which locations can be used for access (roads, trails).</p>	Siksika Nation has indicated that they will review the information and provide additional feedback.	<p>Benga has met with the Siksika Nation to review this issue.</p> <p>Benga will seek further feedback from Siksika in the access management plan and remediation and reclamation plans prior to construction.</p>	Ongoing; working with Siksika Nation

	<p style="text-align: center;"> <input type="checkbox"/> +  <input type="checkbox"/> - </p> <p style="text-align: center;"> January 4, 2016  Statement of  Concern; Meeting  February 23, 2018 </p>	<p>The Project would be located in Siksika's traditional territory in the heart of an area used intensively by Siksika members for hunting, fishing, gathering and ceremonial purposes.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting; Fishing; Plant Gathering</p> <p>Aboriginal Physical and Cultural Heritage - Potential effects of the project on physical and cultural heritage</p>	<p>A conceptual Aboriginal Access Management Plan has been provided to Siksika Nation, and Benga looks forward to receiving comments on the plan from the Siksika Nation. For site safety reasons access will be restricted to those lands within the Project Permit boundary during construction and operations. Limited access may be permitted after operations, during reclamation, so long as it does not directly interfere with final reclamation programs (e.g. revegetation, soil contouring). Access through the mine permit area or onto adjacent private lands owned by Benga to Crown lands outside the mine permit boundary can be arranged with sufficient notice in advance and, in the case of the mine site, provided it is safe to do so and does not disrupt operations. Crossing of the mine permit area will require a check in – check out procedure, a site safety orientation, proper personal and vehicle safety equipment and may require an escort. Firearms are not permitted on Benga property or within the</p>	<p>In February 2018, Siksika indicated that there are sacred plants within the area that need to be considered. Siksika Nation has protocols that will need to be followed to manage sacred plants. Prior to or during the development of the access management plan, Siksika indicated that they will meet with other Blackfoot Nations to discuss how to deal with the sacred plants.</p> <p>Siksika Nation advised that access to sacred plants can be dealt with through seasonal element of the Access Management plan. Siksika Nation indicated that this issue can be discussed as part of the reclamation process.</p> <p>Siksika Nation Siksika Nation conducted fieldwork in June and July 2018, and provided a report to Benga in December 2018.</p> <p>Protocols regarding the management of sacred plants will be discussed internally among Siksika Nation members. The appropriate decision will be relayed during follow up meetings with Benga</p>	<p>Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p> <p>In February 2018, Benga requested site specific details to assist development of the Access Management Plan. Benga can plot the distribution of the plants to facilitate the protection or harvesting of the plant. Siksika Nation advised that an internal meeting will have to take place. After the internal meeting, Siksika Nation will advise Benga on how to deal with the issue of sacred plants. Benga will provide an initial 5 year construction and operations plan to Siksika Nation to allow identification of sacred plants that could be impacted by the project.</p> <p>Benga and Siksika discussed holding a follow up meeting to review feedback received during Siksika Nation's internal meetings regarding sacred plants. This meeting may take place at Head Smashed In Buffalo Jump.</p>	<p>Ongoing; working with Siksika Nation.</p>
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<table border="1"><tr><td>+</td></tr><tr><td>-</td></tr></table>	+	-	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	project permit boundary.	(Continued from previous row)	Benga has developed a conceptual access management plan and will seek further input on the plan from the Siksika Nation prior to construction.	(Continued from previous row)
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>March 2015 Siksika Interim Traditional Use Study (TUS) Assessment and Report for the Grassy Mountain Project.</p> <p>Meeting February 23, 2018</p>	<p>Siksika Nation is concerned about potential effects to the continued traditional use of the Southern Gate and Crowsnest Mountain by Siksika hunters, herbalists, ceremonialists, and Elders. To support the continued traditional use of the Southern Gate and Crowsnest Mountain by Siksika hunters, herbalists, ceremonialists, and Elders, Benga is encouraged to provide support for Siksika ceremonies and community events.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting; Plant Gathering Hunting</p> <p>Aboriginal Physical and Cultural Heritage - Potential effects of the project on physical and cultural heritage</p>	<p>Benga has and will continue to support local and First Nation cultural events and ceremonies through its community and First Nation engagement and initiatives such as its community sponsorship program.</p>	<p>In February 2018, Siksika indicated that they will work with Benga to develop a cultural awareness program. Siksika advised that the information provided by Benga on this issue sufficiently addresses the concern.</p> <p>Site specific concerns related to traditional use can be dealt with through the development of the Access Management Plan. Protocols regarding the management of sacred plants will be discussed internally among Siksika Nation. The appropriate decision will be relayed during follow up meetings with Benga.</p> <p>Siksika Nation conducted fieldwork in June and July 2018, and provided a report to Benga in December 2018.</p>	<p>Benga has met with the Siksika Nation to review this issue.</p> <p>Benga will work with Siksika Nation to develop a cultural awareness training program. Benga will minimize Project impacts and accommodate avoidance of traditional use areas where possible. Provision of site specific information on the locations of conservation interest will help to manage the access. Benga has developed a conceptual access management plan and will request further input on the plan from the Siksika Nation prior to the onset of construction. Benga requested site specific details to assist development of the Access Management Plan.</p> <p>Prior to or during the development of the access management plan, Siksika Nation will meet with other Blackfoot Nations to discuss how to deal with the sacred plants.</p> <p>Siksika Nation advised that this concern has been sufficiently addressed by Benga. Benga and Siksika</p>	<p>Complete</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	Nation discussed the development of commitment letters. Suggestion that these commitments could take the form of a Charter between Benga and the Nation. As a follow up, a letter/ Charter may be drafted with Siksika Nation.	(Continued from previous row)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	Siksika Traditional Use Study Report, December 5 2018	<p>There are a number of sacred, medicinal and ceremonial plants growing in the microclimate of Gold Creek and elsewhere at Grassy Mountain which need protection from the project but were omitted from the project Environmental Impact Assessment (EIA). We are aware they grow there but have not located them yet, because they only bloom at certain times of the year. Once located, a plan for their protection can be developed through a formal consultation process with the company.</p> <p>The most recent TUS study identified yellow ochre at our sites near the golf course. No further impacts to this sacred paint source should be permitted.</p>	Current Use of Lands and Resources for Traditional Purposes - Plant Gathering	Benga is in the process of reviewing this issue and will schedule a meeting with the Siksika Nation to discuss it.	Siksika has provided their Traditional Use Study Report	Benga is in the process of reviewing this issue and will schedule a meeting with the Siksika Nation to discuss.	Ongoing; working with the Siksika Nation

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	In-person meeting on May 6, 2016	Siksika Nation requested reports done on plants as well as the Historical Resources Impact Assessment (HRIA).	Current Use of Lands and Resources for Traditional Purposes - Plant Gathering	Benga responded that historical resource information including site locations is filed with ACO and not shared with Benga. There is a summary of the report in the Environmental Impact Assessment (EIA).	Siksika Nation has indicated that they will review the information provided.	For a copy of the HRIA, Benga advised that Siksika Nation can talk directly to Anna Kurtis at the ACO. Benga offered to help set up a meeting.  Benga presented the reports to Siksika Nation in February 2018.	Complete
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<p style="text-align: center;">+</p> <p style="text-align: center;">-</p>	<p style="text-align: center;">Meeting July 20, 2014</p> <p style="text-align: center;">March 2015 Siksika Interim Traditional Use Study (TUS) Assessment and Report for the Grassy Mountain Project</p> <p style="text-align: center;">January 4, 2016 Statement of Concern</p> <p style="text-align: center;">May 6, 2016</p> <p style="text-align: center;">Meeting February 23, 2018</p>	<p style="text-align: center;">Siksika Nation is concerned about timely harvest of medicinal and ceremonial plants prior to impact by the Project. Traditional Use (TU) plants that will be otherwise destroyed by the mine should be dug up and moved just off site, or to the edge of the mine site property out of harms way. Year round access to those plants should be made available for Siksika traditional use. Some of these plants do not grow on their reserve lands or on prairie lands so they need to harvest them from the Project area. The TU mitigation and remediation strategy should address this.</p>	<p style="text-align: center;">Current Use of Lands and Resources for Traditional Purposes - Potential effects of the project on plant gathering.</p>	<p style="text-align: center;">Benga will continue to work with Siksika Nation to identify species of importance for harvesting in advance of construction activities in the Aboriginal Access Management Plan.</p> <p style="text-align: center;">Benga will work with Siksika to allow for gathering of traditional plants prior to construction where practicable. Benga has incorporated many of Siksika proposed mitigations into its mitigation plans in the Environmental Impact Assessment (EIA) and will be included where feasible into its environmental management plans.</p> <p style="text-align: center;">Benga provided a conceptual Access Management Plan in the August 2016 update to the Environmental Impact Assessment (EIA). Due to site safety reasons access will be restricted within the Project Permit boundary during construction and operations. This will be enforced by mine operations managers and personnel during the construction and operations phase. Limited access may be permitted after</p>	<p style="text-align: center;">Protocols regarding the management of sacred plants will be discussed internally among Siksika Nation. The appropriate decision will be relayed during follow up meetings with Benga.</p> <p style="text-align: center;">Siksika Nation conducted fieldwork in June and July 2018, and provided a report to Benga in December 2018.</p>	<p style="text-align: center;">Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p> <p style="text-align: center;">Benga has received Siksika Nation's TU report, and will work with Siksika Nation to develop management strategies based on the information provided.</p> <p style="text-align: center;">Benga has developed a conceptual access management plan and will seek further input on the plan from the Siksika Nation prior to construction.</p> <p style="text-align: center;">Access to harvesting areas will be included as a component of the Access Management Plan. Benga will attempt to minimize Project impacts and accommodate avoidance of traditional use areas where possible. Provision of site specific information on the locations of conservation interest will help to manage the access. Benga requested site specific details to manage access.</p> <p style="text-align: center;">Benga is beginning to develop monitoring plans and will continue to work with the Siksika</p>	<p style="text-align: center;">Ongoing; working with Siksika Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	Meeting on February 23, 2018	Siksika Nation expressed issues with protected Crown land because the province leases out and sells the land. Who owns the resources? Siksika Nation advised that this is a question to keep in mind.	Land Use	Benga agrees to keep this question in mind.	Siksika Nation has indicated that they will review the information and provide additional feedback.	Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.	Ongoing; working with Siksika Nation
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	Meeting on February 23, 2018	Siksika Nation asked about the freehold land (i.e. what will be done with the land after the project is complete)?	Land Use	This has not been considered yet because there is no permit at this point. It is something to consider in the future, if the project is approved. Benga has bought the private land and owns title to the resources.	Siksika Nation has indicated that they will review the information and provide additional feedback.	<p>Benga has met with the Siksika Nation to review this issue.</p> <p>Should the project be approved, Benga will consider the issue at that time.</p>	Complete

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>January 4, 2016 Statement of Concern</p>	<p>February 23, 2018</p>	<p>The construction of the Project will lead to increased noise in this area. Siksika members understand that noise has an effect on the wildlife that they harvest, and are concerned that animals will avoid the Project area and surrounding environs altogether due to such noise.</p>	<p>Noise</p> <p>Current Use of Lands and Resources for Traditional Purposes - Hunting</p> <p>Wildlife - Potential effects of noise on wildlife</p>	<p>Potential interactions with wildlife related to noise are assessed in Section 3 of the wildlife assessment including sensory disturbance during construction. Sensory disturbance would result in indirect habitat loss and may result in in wildlife avoiding otherwise suitable habitat. Noise from the active mine site would be mitigated through the use of mufflers on all internal combustion engines, installing berms around the southern dump to absorb noise, utilizing mine pit topography to shield noise generated from haul trucks, and conducting blasting during daylight hours.</p>	<p>In February 2018, Siksika Nation advised that the information provided by Benga on this issue sufficiently addresses the concern.</p>	<p>Benga has met with the Siksika Nation to review this issue.</p> <p>In February 2018, Benga described the type of the noise that will be associated with the project and how noise will be managed. Siksika Nation confirmed that the information provided by Benga adequately addresses the issue. No further discussion required.</p> <p>Benga has developed a conceptual wildlife monitoring plan and will seek further input on the plan from the Siksika Nation prior to construction.</p> <p>Siksika Nation advised that this concern has been sufficiently addressed by Benga.</p>	<p>Complete</p>
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+	<p>March 2015 Siksika Interim Traditional Use Study (TUS) Assessment and Report for the Grassy Mountain Project.</p>	<p>Remediation of the Project site is insufficient to restore traditional use rights and interests to the Project area. To remedy this, at the end of Project's life, the site must be returned to Alberta Crown land.</p>	<p>Reclamation</p>	<p>Benga commits to consult with Siksika in the development and implementation of detailed remediation and reclamation plans to ensure Siksika views are incorporated.</p>	<p>In February 2018, Siksika Nation indicated it would like to discuss donation of Benga private land to the Crown. Siksika explained that the comment means that private land can be donated back to the Crown.</p>	<p>Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p>	<p>Ongoing; working with Siksika Nation.</p>
-	<p>January 4, 2016 Statement of Concern</p>	<p>The Environmental Impact Assessment contemplates taking up 1,582.4 ha of land, much of which is currently, and would otherwise be, used by Siksika members to exercise Treaty and Aboriginal rights. Based on Benga's Applications and their timeline for reclamation, the Project area would not be available to Siksika members for over 30 years.</p>	<p>Reclamation</p>	<p>It is normal that any Crown Land used for the project would be under a lease arrangement. Ultimate title to the Crown Land will remain with the Crown.</p>	<p>Siksika Nation mentioned that during a previous meeting, there was discussion of an interpretive center and needs to be further explored. Siksika Nation expressed an interest in developing a time capsule and filming of the area.</p>	<p>In February 2018, Benga advised that this issue is a post permit discussion related land allocation. Benga has committed to return Crown leases to the Crown.</p>	<p>Ongoing; working with Siksika Nation.</p>
	<p>Meeting February 23, 2018</p>	<p>Based on Benga's Applications and their timeline for reclamation, the Project area would not be available to Siksika members for over 30 years.</p>	<p>Reclamation</p>	<p>It is the understanding of Benga that Crown land would revert to the Crown after reclamation.</p>	<p>Siksika Nation expressed an interest in developing a time capsule and filming of the area.</p>	<p>Benga has forwarded this concern to Canadian Environmental Assessment Agency (CEAA) and the Aboriginal Consultation Office (ACO).</p>	<p>Ongoing; working with Siksika Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>Siksika Traditional Use Study Report, December 5 2018</p>	<p>Our concern is for all animals living on the mountain. There is abundant evidence of a variety of animals living there, drinking from the springs that run down the side of the mountain and eating and resting in protected areas nearby. The lagoons holding runoff from the mountain and effluent from the mine pit should be fenced so that animals big and small do not drink from them. Alternative clean water drinking spots for those animals should be created for them nearby.</p> <p>The Gold Creek microclimate must be preserved because it is rich with harvestable medicinal and ceremonial plants central to our traditions . We would normally assume that the watershed protection measures included in the project design are sufficient and appropriate to protect Gold Creek and its microclimate; but we are not convinced that no water will empty into Gold Creek from the mine, as the company states. Given the fracturing and faulting of the base rock on the Grassy Mountain site and</p>	<p>Surface Water Quality</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Siksika Nation to discuss it.</p>	<p>Siksika has provided their Traditional Use Study Report</p>	<p>Benga is in the process of reviewing this issue and will schedule a meeting with the Siksika Nation to discuss.</p>	<p>Ongoing; working with the Siksika Nation</p>
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		<p>glacial till overburden, it seems extremely unlikely to us that water will not seep through faults and fissures in the walls and benches of the open pit mine, downslope into the Gold or Blairmore creek water system.</p>					
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>(Continued from previous row)</p>	<p>Water seepage through the faulted rocks of the mountain will not be caught in the lagoons on the surface around the mine pit, or in the bottom of the pit itself until the mine pit bottom is lower than Gold or Blairmore creeks.</p>	<p>(Continued from previous row)</p>	<p>(Continued from previous row)</p>	<p>(Continued from previous row)</p>	<p>(Continued from previous row)</p>	<p>(Continued from previous row)</p>
		<p>Even a small spill of contaminated water from the mine would be a disaster for those two sensitive water bodies. and for our traditional use of the creek bottoms and the plants and medicines growing nearby as well as the fish in the creek.</p>					

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<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">       + -     </div>	<p>January 4, 2016 Statement of Concern</p> <p>Project Update Meeting March 10, 2017</p> <p>Meeting February 23, 2018</p>	<p>The proponent intends to divert surface and groundwater for use in the Project. This is likely to permanently reduce the suitability of affected water-ways for traditional use activities. Further, the Project area is located at the headwaters of many downstream rivers used by the Siksika and any leaching or spills from the Project's tailings ponds could prove catastrophic.</p> <p>There is a direct correlation between cumulative waste rock volumes and increases in selenium concentrations found in local rivers and streams. A suggested mitigation strategy in the Siksika Traditional Use Study (TUS) Report is for Benga to establish an effective water protection plan which would attempt to preserve the quality of the water in the Project area.</p> <p>Concern about water quality extends to impacts of reduced water quality on wildlife.</p> <p>The springs appearing at elevation throughout the mine site property seem likely to be destroyed</p>	<p>Surface Water Quality - Potential effects of the project on water quality and wildlife</p>	<p>Potential effects of the Project to water-ways including leaching are summarized in Section E.5 of the Environmental Impact Assessment (EIA). Benga is dedicated to implementing the proposed mitigation measures, reclamation plan, and ongoing monitoring programs to minimize or avoid potential effects to water quality.</p> <p>Benga welcomes input from the Siksika Nation on the mitigation measures. Benga will work with Siksika to get input into the design of the reclamation of the site through consultation on the Conservation and Reclamation plan.</p> <p>Benga has developed a Water Management Plan to manage and control all water on site and ensure that water quality of surrounding surface and groundwater is maintained. This plan includes the collection, treatment, and monitoring of water affected by selenium.</p> <p>Through the Water Management Plan (WMP) all water will be captured and treated accordingly (e.g., sediment ponds,</p>	<p>In February 2018, Siksika advised that these concerns can be dealt with through the development of the monitoring plan and the Environmental Management Plans.</p> <p>Siksika Nation asked a question related to the potential for seepage. Benga indicated that there will be sumps and diversion areas to deal with seepage. Ponds will be fenced. There will be no wildlife drinking the water.</p> <p>Siksika Nation requested that Benga brings a water specialist at the meeting who will be able to provide further detail. Siksika Nation would like to further discuss seepage (i.e. seepage of contaminated water into waterways).</p>	<p>Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p> <p>In February 2018 Benga indicated it is beginning to develop monitoring plans and will continue to work with the Siksika Nation to identify ways in which community members can contribute to and participate in monitoring. Benga will seek feedback from Siksika Nation on the Water Management, Environmental monitoring and the Conservation and Reclamation plans prior to construction.</p> <p>Benga indicated that all water used for the processing plant will be captured, treated, tested and released, only if it meets regulatory standards. Fisheries and Oceans Canada will be advising on Westslope Cutthroat Trout habitat. Water system will be closed and water will be recycled. A lot of research has been done on the creeks. Benga indicated that there will be a program in place to monitor the health of the fish and to check</p>	<p>Ongoing; working with Siksika Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	<p>by the project. If this is the case, it must be done in such a way that no industrial sediment or other downstream effects are allowed to effect the Blairmore or Gold Creeks or the Crowsnest River because those effects could cause serious harm to the animals that rely on that spring water to live (Siksika Nation 2015). A Traditional Use (TU) mitigation and remediation strategy and plan funded by Benga should be prepared with the meaningful participation of Siksika Consultation Office (SCO) staff and Siksika Elders and Societies' representatives to ensure that the animals, waters and plants located at the mine site and nearby are protected during project construction and operation, and are restored fully by end project remediation work.</p> <p>An effective water protection plan should comprise part of the consultation process with Siksika Nation and the necessary Traditional Use (TU) mitigation and remediation strategy.</p>	(Continued from previous row)	<p>saturation zones) which will prevent the release of 'contaminated' water. The Project will not result in the release of any contaminated water to the surrounding environment (terrestrial or aquatic). Based on this, the release of contaminated water was not identified as an operative pathway for exposure to wildlife (surface water assessment); subsequently, no potential risk was identified. In the Human Health Risk Assessment potential exposure to wildlife via deposition of chemicals from predicted air emissions onto water, soil and vegetation was assessed. Relevant TU information that was provided was considered and incorporated into the plan as appropriate.</p>	(Continued from previous row)	<p>for selenium in the fish populations and water.</p> <p>The question regarding seepage will be dealt with through further discussion where Benga will provide a presentation on water.</p>	(Continued from previous row)
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		Siksika Nation commented that they would like to do additional field investigation of this site (HRIA work done by Bison Archaeology) to complement Traditional Use (TU) field work already completed.	TK/TU - Historical resources	Benga requested a list of areas that Siksika Nation would like to assess. Benga committed to support fieldwork focused on assessing sites of interest. Engineering to accompany to assist discussion regarding avoidance.	Siksika Nation indicated that they will meet internally to discuss recommendations regarding the HRIA sites, including Dk Po-7 (Cairn).	Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further regarding recommendations for the HRIA sites.	Ongoing; working with Siksika Nation
+	Meeting on February 23, 2018						
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<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">       + -     </div>	<p>March 2015 Siksika Interim Traditional Use Study (TUS) Assessment and Report for the Grassy Mountain Project.</p> <p>Meeting February 23, 2018</p>	<p>Siksika Consultation Office (SCO) needs to revisit the site in the Spring and Summer growing seasons to obtain the full list of medicinal and ceremonial plants found at the project site that will require protection. The Project site needs to be assessed in detail by the SCO team using a grid system, to ensure no key plants or animal habitat is overlooked.</p>	<p>TK/TU - Potential effects of the project on hunting and plant gathering</p>	<p>Benga provided additional funding for Siksika to revisit the Project site, which occurred in the summer of 2015 and 2017. Benga looks forward to receiving the report outlining the findings from the field work.</p>	<p>In February 2018, Siksika Nation indicated that protocols regarding the management of sacred plants will be discussed internally among Siksika Nation. The appropriate decision will be relayed during follow up meetings with Benga.</p> <p>Siksika Nation conducted fieldwork in June and July 2018, and provided a report to Benga in December 2018.</p>	<p>In February 2018, Benga indicated it will attempt to minimize Project impacts and accommodate avoidance of traditional use areas where possible. Provision of site specific information on the locations of conservation interest will help to manage the access. Benga has developed a conceptual access management plan and will seek further feedback from Siksika on the plan prior to construction.</p> <p>Benga is beginning to develop monitoring plans and will continue to work with the Siksika Nation to identify ways in which community members can contribute to and participate in monitoring.</p> <p>Benga has received Siksika Nation's TU report, and will work with Siksika Nation to develop management strategies based on the information provided.</p> <p>Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p>	<p>Ongoing; working with Siksika Nation.</p>
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<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">       + -     </div>	<p>March 2015 Siksika Interim Traditional Use Study (TUS) Assessment and Report for the Grassy Mountain Project.</p> <p>Meeting: February 23, 2018</p>	<p>To ensure that the Reclamation Plan satisfies Siksika Nation's needs and expectations, a Traditional Use (TU) mitigation and remediation strategy and plan funded by Riversdale should be prepared with the meaningful participation of Siksika Consultation Office (SCO) and Siksika Elders and Societies' representatives. The plan needs to be informed by further TU work to cover the seasonality and detail of our traditional use there. Siksika Nation must also have meaningful participation in the implementation of the TU mitigation and remediation strategy and plan. The plan should be integrated with, and implemented as part of, the Grassy Mountain mine plan. Siksika Nation must have meaningful participation in implementation</p>	<p>TK/TU - Reclamation</p>	<p>Benga will continue to work with Siksika Nation and share project information. The Siksika Nation did participate in additional TU field work in 2017, and Benga look forward to seeing the report that is generated by Siksika Nation that will provide feedback on mitigation measures. TU information provided to date was considered and incorporated into the Conservation and Reclamation plan.</p> <p>Siksika Nation will have an opportunity to review and provide comments on Project activities taking place through the decommissioning phase including reclamation.</p>	<p>In February 2018, Siksika Nation indicated it will provide an interim TU report to Benga for consideration. Site specific concerns related to traditional use can be dealt with through the development of the Monitoring and Access Management Plans. Protocols regarding the management of sacred plants will be discussed internally among Siksika Nation. The appropriate decision will be relayed during follow up meetings with Benga.</p> <p>Siksika Nation conducted fieldwork in June and July 2018, and provided a report to Benga in December 2018.</p>	<p>Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p> <p>In February 2018, Benga indicated it will attempt to minimize Project impacts and accommodate avoidance of traditional use areas where possible. Provision of site specific information on the locations of conservation interest will help to manage the access. Benga is beginning to develop monitoring plans and will continue to work with the Siksika Nation to identify ways in which community members can contribute to and participate in monitoring.</p> <p>Benga has developed a conceptual access management plan and will seek further input on that plan and the Conservation and reclamation Plan prior to construction. Benga requested site specific details to assist development of the Access Management Plan.</p>	<p>Ongoing; working with Siksika Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	Benga has received Siksika Nation's TU report, and will work with Siksika Nation to develop management strategies based on the information provided.	(Continued from previous row)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	Meeting on February 23, 2018	Siksika Nation commented that the draft Traditional Knowledge / Traditional Use (TK/TU) report had been reviewed with band Elders but some changes may be required as a result of the HRIA findings. Siksika Nation expected to make any changes and have a final review with Elders and will provide a report to Benga.	TK/TU - Traditional knowledge and traditional use	Benga will continue to work with Siksika Nation and share project information, and Benga look forward to seeing the report that is generated by Siksika Nation that will provide feedback on mitigation measures.	Siksika Nation conducted fieldwork in June and July 2018, and provided a report to Benga in December 2018.	Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.  Benga has received Siksika Nation's TU report, and will work with Siksika Nation to develop management strategies based on the information provided.	Ongoing; working with Siksika Nation
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	Meeting May 6, 2016  Project Update Meeting March 10, 2017  August 4 and 22 2017	Siksika Nation would like the opportunity to conduct additional Traditional Land Use (TLU) fieldwork.	TK/TU - Traditional land use	Benga worked with Siksika Nation to schedule fieldwork during the 2017 field season.	Siksika Nation undertook fieldwork in August 2017.	Benga met with Siksika Nation on August 4 and 22, 2017 to plan and prepare for TLU fieldwork which occurred August 22 to 25, 2017.	Complete

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>In-person meeting on May 6, 2016</p> <p>Meeting on February 23, 2018</p>	<p>Siksika Nation stated that there are deficiencies in the Traditional Land Use (TLU) study they prepared and requests to do another TLU study. Siksika Nation said that they did not have access to all of the sites in the project area during the original studies. Siksika Nation stated that Arrow identified there were many sites but Siksika Nation did not have access and that the Siksika Nation has their own way of conducting a traditional use study.</p> <p>Siksika Nation commented that the draft Traditional Knowledge / Traditional Use (TK/TU) report had been reviewed with band Elders but some changes may be required as a result of the HRIA findings. Siksika Nation expected to make any changes and have a final review with Elders and will provide a report to Benga.</p>	<p>TK/TU - Traditional Land Use</p>	<p>Benga stated that there was a lot more information gathered during the TLU study that was provided by the TLU consultant and not incorporated into the TLU.</p> <p>Benga asked if it would be helpful to see the TLU study notes again to make revisions to the original study.</p>	<p>Siksika Nation requested that they write up their own report and decided not to incorporate all of the notes.</p> <p>Siksika Nation responded that the notes alone would not be sufficient because the TLU study methods were flawed (i.e. conducting field visits in an ATV).</p> <p>Siksika Nation conducted additional fieldwork in June and July 2018, and provided a report to Benga in December 2018.</p>	<p>Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p> <p>Benga has received Siksika Nation's TU report, and will work with Siksika Nation to develop management strategies based on the information provided.</p>	<p>Ongoing; working with Siksika Nation</p>
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+	January 4, 2016 Statement of Concern	The project may irreparably harm the vegetation and biodiversity of the area.	Vegetation & Wetlands	Consultant Report #8 provides an assessment of potential effects to vegetation including sensitivity of plant community biodiversity to disturbance. The removal of vegetation within the Project footprint will initially reduce species habitat and increase habitat fragmentation. Mitigation and monitoring are described in Section 4.8.4 of the report including reclamation which will reduce present fragmentation from existing disturbances (primarily previous mining operations). Mitigation measures for biodiversity include an adaptive re-vegetation strategy and re- establishing native species.	In February 2018, Siksika advised that these concerns can be dealt with through the development of the monitoring plan and the Environmental Management Plans.	Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.	
-	Meeting, February 23, 2018	I am concerned that the animal habitats will be destroyed and the animals will leave and never return to this area.	Wildlife - Potential effects of the project on hunting and plant gathering.			In February 2018, Benga indicated it is beginning to develop monitoring plans and will continue to work with the Siksika Nation to identify ways in which community members can contribute to and participate in monitoring. This issue will be dealt with through the development of a monitoring program. Benga will seek further feedback from Siksika Nation on monitoring prior to construction.	Ongoing; working with Siksika Nation.

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>March 2015 Siksika Interim Traditional Use Study (TUS) Assessment and Report for the Grassy Mountain Project.</p> <p>Meeting February 23, 2018</p>	<p>Mitigation strategies must be devised jointly with Siksika Elders and Consultation Office to protect, and avoid disturbance to wildlife.</p>	<p>Wildlife - Mitigation Measures</p>	<p>Benga has provided mitigation strategies as part of the Environmental Impact Assessment (EIA), and has presented those strategies to the Siksika Consultation Office and at open houses in the community.</p>	<p>In February 2018, Siksika advised that these concerns can be dealt with through the development of the monitoring plan and the Environmental Management Plans.</p> <p>Additionally, the Siksika Nation will have an opportunity to provide further input into the Reclamation Plan after detailed engineering has taken place. At that time, Benga will hold a workshop with the Siksika Consultation Office staff and Siksika Elders and Societies' representatives to gather input on the plan.</p>	<p>Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p> <p>In February 2018, Benga indicated that feedback received on the Conservation and Reclamation plan that was submitted as part of the EIA will be incorporated into the next version of the plan. Benga will seek further input on the Reclamation Plan from Siksika Nation prior to construction.</p> <p>Benga also noted it is beginning to develop monitoring plans and will continue to work with the Siksika Nation to identify ways in which community members can contribute to and participate in monitoring. Benga will seek further input from Siksika Nation on monitoring plans prior to construction.</p>	<p>Ongoing; working with Siksika Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>March 2015 Siksika Interim Traditional Use Study (TUS) Assessment and Report for the Grassy Mountain Project.</p> <p>January 26, 2016 Statement of Concern</p> <p>Meeting February 23, 2018</p>	<p>The Project will affect the movement and well-being of animals by displacing them for many years and blocking their migratory routes. The Project should include the establishment of appropriate alternative nesting locations off the site but nearby for eagles that will be affected by the project.</p> <p>In our tradition, the eagle is symbolic in many of our ceremonies. They are very sacred to our people.</p> <p>Further, there are concerns about the effects of noise pollution and air pollution from the Project on the eagles' health. A proposed mitigation strategy is to establish alternative nesting locations for the eagles for the duration of the Project.</p>	<p>Wildlife / Aboriginal Physical and Cultural Heritage - Potential effects of wildlife and traditional use</p>	<p>The assessment of potential effects to wildlife includes potential effects to migration and movement with a discussion of proposed mitigation measures in Section E.9.5 of the Environmental Impact Assessment.</p> <p>Eagles are described in Consultant Report #9 and Section H of the Environmental Impact Assessment as culturally and spiritually significant to Treaty 7 First Nations. The wildlife assessment found that project development is unlikely to affect the migration pathways of bald eagles (Section 5.4.4 of Consultant Report #9). The US Fish and Wildlife Service (USFWS) (2015) notes that bald eagles are more tolerant of human activities during the non-breeding season than during the breeding season. Bald eagles may slightly alter their flight pathways or increase their altitudes if very high disturbance activities (e.g. blasting) occur during migration. Project development is not predicted to adversely affect migrating birds. Both</p>	<p>In February 2018, Siksika advised that these concerns can be dealt with through the development of the monitoring plan and the Environmental Management Plans.</p> <p>Additionally, the Siksika Nation will have an opportunity to provide further input into the Reclamation Plan after detailed engineering has taken place. At that time, Benga will hold a workshop with the Siksika Consultation Office staff and Siksika Elders and Societies' representatives to gather input on the plan.</p>	<p>Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.</p> <p>In February 2018, Benga indicated that feedback received on the Conservation and Reclamation plan that was submitted as part of the EIA will be incorporated into the next version of the plan. Benga will seek further input on the Reclamation Plan and other Environmental Management Plans from Siksika Nation prior to construction.</p> <p>Benga also indicated it is beginning to develop monitoring plans and will continue to work with the Siksika Nation to identify ways in which community members can contribute to and participate in monitoring. Benga will seek further input from Siksika Nation on monitoring plans prior to construction.</p>	<p>Ongoing; working with Siksika Nation.</p>
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				<p>bald and golden eagles will migrate over highly disturbed areas they would not otherwise use as habitat, including large cities (e.g. City of Toronto 2009). Project development may result in indirect habitat loss for overwintering or breeding bald eagles if they begin avoiding the Crowsnest River in response to increased anthropogenic disturbance. Bald eagles generally prefer to nest in areas with little to no human disturbance (Peterson 1986). The section of the Crowsnest River located in the Wildlife Local Study Area (WLSA) is already close to a major highway with high traffic volume, an active railway, and a town, so Project development is unlikely to alter bald eagle abundance in the area relative to Baseline levels.</p> <p>No eagle nesting sites were identified during the baseline field surveys. As part of the adaptive environmental management of the site, should monitoring identify sites in the future appropriate mitigation measures will be undertaken to protect the eagles</p>			
<div style="border: 1px solid black; padding: 2px; width: 20px; margin: 0 auto; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; width: 20px; margin: 0 auto; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)		(Continued from previous row)	(Continued from previous row)	(Continued from previous row)

<table border="1"><tr><td>+</td></tr><tr><td>-</td></tr></table>	+	-	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	including avoidance of the nesting site during the breeding season and relocation, if feasible, in the off season.	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>         January 4, 2016          Statement of Concern           Meeting February 23, 2018       </p>	<p>         Concern about impacts of the Project wildlife habitat, migratory patterns and reproduction rates (including bears). Concern that these impacts will in turn affect Siksika culture because it is closely intertwined with the land and animals. As the animals become more scarce it will put more pressure on our culture. These are all the effects of development.       </p>	<p>         Wildlife           Aboriginal Physical &amp; Cultural Heritage - Potential effects of the project on hunting and wildlife       </p>	<p>         Consultant Report #9 provides an assessment of potential effects to wildlife. Grizzly bear is one of the wildlife valued components selected for the assessment. Grizzly bears are expected to be displaced from portions of the Project footprint during the active mining period. Benga will mitigate potential effects of the Project on grizzly bear movement by maintaining a minimum 100 m undisturbed forested zone around Blairmore Creek and other riparian corridors. Benga will leave patches of residual forest within and adjacent to the mine footprint to the extent possible and initiate reclamation early on in mine operations by seeding reclaimable areas with preferred forage species and plant shrub and tree species that provide suitable cover for grizzly bears.       </p> <p>         Progressive reclamation is the key mitigation measure that would return the Project footprint to suitable habitat for grizzly bear. Changes in movement, habitat availability and habitat state for grizzly bear are       </p>	<p>         In February 2018, Siksika advised that these concerns can be dealt with through the development of the monitoring plan and the Environmental Management Plans.       </p>	<p>         Benga has met with the Siksika Nation to review this issue and are in the process of scheduling a meeting with the Siksika to discuss further.       </p> <p>         Benga has developed a conceptual wildlife monitoring plan and will seek further input on the plan prior to construction.       </p> <p>         In February 2018, Benga indicated that feedback received on the Conservation and Reclamation plan that was submitted as part of the EIA will be incorporated into the next version of the plan. Benga will continue to seek feedback from Siksika Nation on the Wildlife monitoring plan, the Conservation Reclamation and Wildlife Management Plan prior to construction. Benga will continue to work with the Siksika Nation to identify ways in which community members can contribute to and participate in monitoring.       </p>	<p>         Ongoing; working with Siksika Nation.       </p>
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				<p>described in more detail in Section 5.3.8 of Consultant Report #9.</p> <p>As seen on other mines in Alberta, through proper reclamation, wildlife will and do return to reclaimed mine site areas. Benga would like to continue to meet with the Siksika Nation for traditional knowledge (TK) input regarding wildlife migrations and to identify monitoring objectives important to the Siksika Nation. Sensory disturbance and habitat loss is expected to occur to elk, deer, and moose during the operations phase, which will cause them to find more suitable areas in the area surrounding the Project site. As the Project will go through progressive reclamation, it is expected that there will be more suitable habitat for wildlife prior to the final end of mine year.</p> <p>Wildlife mitigation and monitoring are described in Section 7 of Consultant Report #9.</p>			
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# **Appendix A-4: Stoney Nakoda Nation (Bears paw First Nation) Specific Concern and Response Table**

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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p style="text-align: center;">January 4, 2016 Statement of Concern</p>	<p>As part of the Environmental Assessment (EA) update provided in August 2016, a revised air model was provided that aligned with optimization of the mine plan. In addition, another air model was provided in the EA Update for the coal product load-out/rail loop area. The results of both models indicated no exceedances or significant residual impacts that would affect the neighbouring communities or surrounding environment.</p>	<p>As part of the Environmental Assessment (EA) update provided in August 2016, a revised air model was provided that aligned with optimization of the mine plan. In addition, another air model was provided in the EA Update for the coal product load-out/rail loop area. The results of both models indicated no exceedances or significant residual impacts that would affect the neighbouring communities or surrounding environment.</p>	<p>As part of the Environmental Assessment (EA) update provided in August 2016, a revised air model was provided that aligned with optimization of the mine plan. In addition, another air model was provided in the EA Update for the coal product load-out/rail loop area. The results of both models indicated no exceedances or significant residual impacts that would affect the neighbouring communities or surrounding environment.</p>	<p>The Stoney Nation is interested in regional air monitoring, and inquired if Benga's air monitoring results could be combined with a future regional air-shed study. Benga agreed the site results could be incorporated into a regional study, and agreed to work on the air monitoring management plans with the Stoney Nation.</p>	<p>Benga will look into air research at the University of Lethbridge.</p> <p>On November 24, 2017, Benga committed that site air monitoring results could be incorporated into a future regional study.</p>	<p style="text-align: center;">Complete</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	November 20, 2018	Concern for effects, inadvertent or otherwise, to sites of cultural or spiritual significance. To forestall this, Benga must install cultural monitoring and implement a mitigation plan for any newly-identified sites.	Aboriginal Physical & Cultural Heritage - Effects of the project on physical and cultural heritage.	Benga has developed a cultural site discovery contingency plan and would like to get the Stoney Nation's input on the plan.	The Stoney Nation recommended Benga include the Shuswap Tribal Council as a potentially affected group, as the Stoney Nation has an MOU with this group to allow joint hunting and gathering on their respective territories. The Stoney Nation can provide a copy of this MOU as part of their Cultural Assessment.	<p>Benga and Stoney Nation met on November 20, 2018. Benga has developed a Conceptual Cultural Site Discovery Contingency Management Plan. Benga requested further input from Stoney Nation to assist development of the Plan. Benga and Stoney Nation agreed to work together on the development of the Plan.</p> <p>Benga will attempt to minimize Project impacts and accommodate avoidance of areas of cultural and spiritual significance where possible. Provision of site specific information on locations of conservation interest will help to manage the development of mitigations.</p> <p>Benga is beginning to develop monitoring plans and will continue to work with Stoney Nation to identify ways in which a cultural monitoring program can be designed and implemented.</p> <p>Stoney Nation and Benga agreed that these issues relate back to the development of an agreement between</p>	Ongoing; working with Stoney Nation.
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	Benga and Stoney Nation. Benga and Stoney Nation are currently working to establish such an agreement.	(Continued from previous row)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting November 20, 2018</p> <p>Meeting November 24, 2017</p> <p>January 4, 2016 Statement of Concern</p>	<p>It would be valuable to the Stoney Nakoda Nation (SNN) that Benga Mining Ltd offer advance training or on-the-job training for SNN members residing in Eden Valley. It would be our desire to see that 10 per cent of both the construction crew and the operation crew be hired from qualified SNN members.</p>	<p>Aboriginal Socio-economic Conditions</p>	<p>Benga thanks Stoney Nation for the interest in working together on the Project. Benga will seek input from Stoney Nation on the Human Resources Plan.</p>	<p>The Stoney Nation requested a list of jobs and the required qualifications.</p> <p>The Stoney Nation noted that they have human resources people at Morley and Eden with lists of the qualifications of community members.</p> <p>On November 20, 2018, Stoney Nation advised that this issue is part of a larger conversation that is taking place with Benga about employment and training.</p>	<p>Benga will seek input on the Human Resources Management Plan with the Stoney Nation.</p> <p>On November 24, 2017, Benga committed to providing Stoney Nation with the requested list of jobs and required qualifications. Stoney Nation can provide a list of band member's qualifications.</p> <p>On November 20, 2018, Stoney Nation and Benga agreed that these issues relate to the development of an agreement between Benga and Stoney Nation. Benga and Stoney Nation are currently working to establish such an agreement.</p>	<p>Ongoing; working with Stoney Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>November 20, 2018</p> <p>Meeting November 24, 2017</p> <p>January 4, 2016 Statement of Concern</p>	<p>Unemployment in Eden Valley is of great concern to the Stoney Nakoda Nation (SNN). The Globe and Mail reported in September 2011 that the unemployment rate in Eden Valley was 70 per cent which is significantly higher than the rate of 37.5 per cent noted in the Application. The Court of Appeal has already deemed Eden Valley to be an "urban centre"; therefore, the Alberta Energy Regulator (AER) and Benga Mining Ltd must consider the socio-economic impacts of the Project on the community and residents of Eden Valley.</p>	<p>Aboriginal Socio-Economic Conditions - Effects of the project on socio-economic conditions.</p>	<p>The information used to identify employment statistics is from the Statistics Canada 2011 census. Benga welcomes feedback from Stoney Nation including identification of potential effects to socio-economic conditions or ways to mitigate potential effects.</p>	<p>The Stoney Nation expressed a concern that Statistics Canada does not include First Nation employment in their employment statistics and this is not explained in the Environmental Impact Assessment (EIA).</p> <p>The Stoney Nation noted that they have human resources people at Morley and Eden with lists of the qualifications of community members.</p>	<p>Benga met with the Stoney Nation on November 24, 2017 to review this issue. Benga will also provide a list of jobs with required qualifications to Stoney Nation. Stoney Nation can provide a list of band member's qualifications.</p> <p>Benga met with the Stoney Nation on November 20, 2018 to review this issue. Stoney Nation advised that this issue is part of a larger conversation that is taking place with Benga about employment and training. Stoney Nation and Benga agreed that these issues relate back to the development of an agreement between Benga and Stoney Nation. Benga and Stoney Nation are currently working to establish such an agreement.</p>	<p>Ongoing; working with Stoney Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting January 15, 2015</p> <p>Meeting November 24, 2017</p>	<p>Concern about air emissions. In Section 2.5 of the Proposed Terms of Reference (PTOR), Stoney Nation would like the Environmental Impact Assessment (EIA) report to include information about government standards and exceedances.</p>	<p>Air Quality &amp; Climate - Potential effects of the project on health and air quality.</p>	<p>As part of the Environmental Assessment (EA) update provided in August 2016, a revised air model was provided that aligned with optimization of the mine plan. In addition, another air model was provided in the EA Update for the coal product load-out/rail loop area. The results of both models indicated no exceedances or significant residual impacts that would affect the neighbouring communities or surrounding environment.</p>	<p>The Stoney Nation is interested in regional air monitoring, and inquired if Benga's air monitoring results could be combined with a future regional air-shed study.</p>	<p>Benga will look into air research at the University of Lethbridge.</p> <p>Benga and Stoney Nakoda met to review this issue. On November 24, 2017, Benga agreed the site monitoring results could be incorporated into a regional study, and agreed to work on the air monitoring management plans with the Stoney Nation.</p>	<p>Complete</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting November 20, 2018</p> <p>Meeting March 18, 2017</p> <p>Phone call April 3, 2017</p> <p>Email April 28, 2017</p> <p>Meeting November 24, 2017</p>	<p>Need for a Cultural Assessment Overview (CAO) of the project area. Earlier reporting was based on a preliminary tour of the project area and fieldwork has not been conducted.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Impacts to physical and cultural heritage, fishing, hunting, plant gathering</p>	<p>Benga facilitated Stoney Nakoda's Cultural Assessment with an overview and access to the site in October 2017. During field work on site, there was a wildfire and Stoney Nation would like to revisit the site in the spring. Benga is anticipating receiving an interim Cultural Assessment Overview (CAO) from Stoney Nation based on the work done to date.</p>	<p>Stoney Nation undertook CAO field work in 2017 and 2018. Stoney Nation indicated that they will review the results of the CAO fieldwork and community interviews conducted in 2017 to assess whether additional fieldwork is needed to provide feedback on this concern. A report is currently underway.</p>	<p>In 2017 and 2018, Benga provided access to Stoney Nation to assess 1) archaeological features on private land identified as part of the Historic Resources Impact Assessment (HRIA) and 2) locations on Crown land within the Project area.</p> <p>Benga will review and respond to Stoney Nation's report once it is provided to Benga.</p>	<p>Ongoing; working with Stoney Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;"> <div style="border: 1px solid black; padding: 1px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 1px; text-align: center;">-</div> </div>	<p>Meeting January 15, 2015</p> <p>Meeting November 24, 2017</p>	<p>Concern about lack of reference to the objectives of the South Saskatchewan Regional Plan (SSRP) and wanted confirmation that current legislated standards and land use designations apply to the Grassy Mountain Project.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Land and Resource Use</p>	<p>The assessment of potential effects to Land and Resource Use in Section E.10 of the Application considers the South Saskatchewan Regional Plan (SSRP).</p> <p>Benga followed up with the Alberta government and received confirmation that existing legislated standards and land use designations continue to apply to the Project.</p>	<p>The Stoney Nation expressed that as long as connections between the frameworks and the proponents are made, the follow-through is making sure the Ministries that should be involved are in fact involved.</p>	<p>Benga followed up with the Alberta government and received confirmation that existing legislated standards and land use designations continue to apply to the Project.</p> <p>On November 24, 2017 Stoney Nation expressed that if the SSRP and the legislative standards apply, this is no longer a concern.</p>	<p style="text-align: center;">Complete</p>
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<div style="border: 1px solid black; padding: 2px; margin-bottom: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px; text-align: center;">-</div>	<p>November 20, 2018</p> <p>Meeting November 24, 2017</p> <p>January 4, 2016 Statement of Concern</p>	<p>Potential loss of important whitefish and trout habitat that includes the Highwood River, Pekisko Creek, Willow Creek, Johnson Creek, Oldman River, and Livingstone River, which is closest to the Project.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Fishing</p>	<p>The Highwood River, Livingstone River, Pekisko Creek, Willow Creek and Johnson Creek are in the Livingstone Watershed, which is north of the project, and will not be impacted by the project. The watercourses associated with the project are in the Oldman River watershed (specifically Gold Creek and Blairmore Creek which flow into the Crowsnest River, and eventually into the Oldman River). Benga have developed a Water Management Plan (WMP) to protect the quantity and quality of the water on and around the mine site, as well as an Instream Flow Needs assessment to quantify any impacts to fish habitat (i.e. reduction in flow or loss in habitat). Through the hydrology, groundwater, water quality and fisheries assessments, no significant residual impacts were identified.</p>	<p>Stoney Nation would like to see the resulting traditional knowledge and recommendations considered in the fisheries offset plan (i.e. used to address the aspects of the plan such as the location of overwintering areas). Stoney Nation would like the CAO to focus on Blairmore Creek and Gold Creek and would like to complete the assessment before 2020. The Stoney Nation is interested to see if there is any ongoing cumulative effect within the watershed, and is interested in short and long term monitoring.</p> <p>On November 20, 2018 Stoney Nation advised that fish and waterways were not considered by Stoney Nation during the Cultural Assessment Overview (CAO) fieldwork conducted thus far. Stoney Nation indicated that the issues related to whitefish and west slope cutthroat trout can be addressed through the completion of a CAO focused on specific waterways and fish populations.</p>	<p>Benga has met with Stoney Nakoda to discuss this issue.</p> <p>Benga's Fisheries plan includes habitat restoration. Benga will seek further input from Stoney Nation on the Fisheries plan prior to construction. Ongoing monitoring may be an outcome of the Fisheries plan.</p> <p>On November 24, 2017 Stoney Nation stated they were to incorporate fish in their Cultural Assessment Overview.</p> <p>On November 20, 2018 Benga agreed to support a CAO focused at Blairmore and Gold Creeks before 2020. Benga indicated that there were no whitefish identified during fish population inventories of Gold Creek and Blairmore Creek. The project will have no effect on the fish populations in the Oldman River.</p>	<p>Ongoing; working with Stoney Nation.</p>
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<input type="checkbox"/> + <input type="checkbox"/> -	Meeting November 20, 2018  Email from Bill Snow June 24, 2017	There are hunting camps going on in the area where people from the Eden Valley community could speak about areas in the Grassy Mountain project area.	Current Use of Lands and Resources for Traditional Purposes - Hunting	Benga will take this into consideration when planning fieldwork.	On November 20, 2018 Stoney Nation advised that this item was brought up during the community interviews conducted in September 2017. A report is being generated that will address this issue. However, there is no definitive timeline for the report.	Fieldwork was conducted October 17, 2017.  On November 20, 2018 Benga committed to review and respond to Stoney Nation's report once it is provided to Benga.	Ongoing; working with Stoney Nation.
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>Meeting November 20, 2018</p> <p>Phone Call April 3, 2017</p>	<p>Stoney Nation has an interest in harvesting within the project area.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting</p> <p>Access Management</p>	<p>Access to harvesting will be included as a component of the Aboriginal Access Management Plan. Benga will work with Stoney Nation to develop a Nation specific Access Management Plan.</p>	<p>Stoney Nation met with Benga to discuss the issue.</p>	<p>On November 20, 2018, Stoney Nation and Benga agreed that access for harvesting will be further discussed in an subsequent meeting focused on access, and that access will be implemented through the development of an Access Management Plan. Benga requested site specific details to assist access planning. Benga and Stoney Nation will work together on the development of the Plan.</p> <p>Benga advised that harvesting will need to take place prior to construction. Access will be provided in advance. Stoney Nation indicated that they will need to hold a ceremony on site, preferably in the summer/fall. Benga agreed to support an on site ceremony in advance of construction.</p> <p>An access permitting process is being developed by Benga. For safety purposes, Stoney Nation members accessing the Project area could be guided by a Nation member that has been employed and trained by Benga.</p>	<p>Ongoing; working with Stoney Nation.</p>
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	Meeting November 20, 2018	Potential loss of important deer, elk, and moose habitat throughout the region hunted by the Stoney Nakoda Nation (SNN) from Eden Valley, along the Whaleback and along the eastern side of the foothills.		Information provided by Stoney Nation members during the initial site tour, including information about wildlife, is considered in the Environmental Assessment (EA) under potential effects to wildlife and potential effects to hunting.			
+	Meeting November 24, 2017	Potential interruption and alteration of migratory and travelling routes for various species of the area.	Current Use of Lands and Resources for Traditional Purposes - Hunting; Trapping	The results of the Environmental Impact Assessment (EIA) were submitted in 2015 and again after updating in August 2016. The assessment of potential effects to wildlife is considered in Sec E.9.3. Many of the project effects associated with habitat loss and wildlife movement will be minimized through the implementation of the Project's reclamation plan. Grassy mountain is a previously disturbed area and, as seen on other mines in Alberta, through proper reclamation, wildlife will and do return to reclaimed mine site areas. Sensory disturbance and habitat loss is expected to occur to elk, deer, and moose during the operations phase, which will cause them to find more suitable areas in the area surrounding the Project site. As the Project will go through progressive	On November 20, 2018 Stoney Nation indicated that they need to review the results of the CAO fieldwork conducted in 2017 and 2018 and speak to trapline holders before providing feedback on this concern.	Benga has met with the Stoney Nation to discuss this issue.	
-	January 4, 2016 Statement of Concern	Potential decrease in common fur-bearing animals, such as black bear, coyote, lynx, squirrel, beaver, mink and marten, in Registered Fur Management Areas, particularly those registered to Stoney Nakoda Nation (SNN) members.	Wildlife - Potential effects of the project on wildlife		The report is currently underway, however, it is uncertain whether information related to hunting and trapping will be included in the report; this input may be provided by Stoney Nation as a stand alone recommendation.	Benga has provided data from the existing wildlife fieldwork completed in support of the Environmental Impact Assessment (EIA) to the Stoney Nation to inform the Cultural Assessment.	Ongoing; working with Stoney Nation.
						Benga confirmed that information from the Cultural Assessment Overview will be used as an information source in development of the Conservation and Reclamation Plan.  On November 20, 2018 Benga stated they will review and respond to Stoney Nation's report once it is provided.	

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	<p style="text-align: center;">reclamation, it is expected that there will be more suitable habitat for wildlife prior to the final end of mine year.</p> <p style="text-align: center;">Benga would like to meet with the Stoney Nakoda Nation (prior to project approvals) for traditional knowledge (TK) input regarding wildlife migrations and to identify monitoring objectives important to the Stoney Nakoda.</p>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> <div style="border: 1px solid black; padding: 1px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 1px; text-align: center;">-</div> </div>	<p>Meeting November 24, 2018</p> <p>Meeting November 24, 2017</p> <p>January 4, 2016 Statement of Concern</p>	<p>Adverse impacts on Traditional uses of the land, which are diverse and include, but are not limited to subsistence hunting, fishing and trapping, harvesting herbs, plants and berries for nutritional and medicinal purposes, and using rocks and lumber for tools, campfire rings, and sweat lodges.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Potential effects of the project on hunting, fishing, trapping, and plant gathering</p> <p>Aboriginal Physical and Cultural Heritage</p>	<p>The results of the Environmental Assessment (EA) were submitted in 2015 and updated in August 2016. An assessment of potential effects of the Project to Stoney Nation is provided in Section H.6 of the EA. Information provided by Stoney Nation, including information about wildlife, is considered in the EA under potential effects to wildlife and potential effects to hunting. Access to harvesting areas will be included as a component of the Aboriginal Access Management plan. Potential effects of the Project on vegetation including medicinal and ceremonial plants are described in Section E.8.3 of the EA. A discussion of proposed mitigation measures is provided in the EA document. Section E.8.5 and the C&amp;R Plan in Section F.1 describes how traditional plants were incorporated into the proposed closure plan. Mitigation measures include opportunities to transplant to limit potential effects to identified medicinal and ceremonial plants, and incorporating traditional use plant species, native to the</p>	<p>On November 20, 2018 Stoney Nation indicated that they need to review the results of the CAO fieldwork conducted thus far to provide feedback on this concern. A report is currently underway and will include comments and recommendations related to this issue.</p>	<p>Benga and Stoney Nakoda have met to discuss.</p> <p>Benga confirmed that Information from the Cultural Assessment Overview will be used as an information source in development of the Conservation and Reclamation Plan.</p> <p>On November 20, 2018 Benga agreed to support a CAO focused at Blairmore and Gold Creeks before 2020. Benga committed to review and respond to Stoney Nation's CAO report once it is provided to Benga.</p>	<p>Ongoing; working with Stoney Nation.</p>
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+	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	area, into reclamation plans.	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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	Meeting November 20, 2018	The Traditional Ecological Knowledge (TEK) of the Stoney Nakoda Nation (SNN) should not be made public. The 15 traditional use sites, identified during the preliminary site tour conducted on July 25, 2014, remain undisturbed by the Project.	Environmental Assessment Process	The Stoney Nation produced a public version of their TEK report which was provided to Benga and which can be shared publicly. Benga does not have access to the confidential report. The Stoney Nation Traditional Knowledge (TK) report provided to Benga does not disclose the location of any traditional use sites.	The Stoney Nation has indicated that they provide the confidential information if Benga will enter into a confidentiality agreement with the Stoney Nation.	On November 24, 2017, Benga confirmed that TEK information will be held confidential unless specifically authorized for public release by Stoney.	Ongoing; working with Stoney Nation.
+	Meeting November 24, 2017				On November 20, 2018, Stoney Nation advised that they do not want confidential traditional knowledge information released into the public domain. An ownership, control, access and possession agreement (OCAP) relating to the use of confidential information will be drafted by Stoney Nation; this will address how cultural information will be protected. SNN would like such an agreement in place with Benga.	Benga has indicated it is willing to enter into an OCAP agreement with the Stoney Nation.	
-	January 4, 2016 Statement of Concern						

<div style="border: 1px solid black; text-align: center; width: 33px; height: 23px;">+</div> <div style="border: 1px solid black; text-align: center; width: 33px; height: 23px;">-</div>	<p>January 4, 2016 Statement of Concern</p> <p>Meeting November 24, 2017</p>	<p>The decision made by the Alberta Energy Regulator (AER) with respect to the Project will likely not consider the federal land and jurisdictional fields impacted by the Project.</p>	<p>Environmental Impact Assessment - Environmental Assessment Process</p>	<p>The Grassy Mountain Coal Project is under both provincial (Alberta Energy Regulator; AER) and federal (Canadian Environmental Assessment Act; CEAA) review based on provincial Environmental Protection and Enhancement Act (EPEA), and federal CEAA triggers. Benga anticipates that the project will undergo a joint panel review (representatives from AER and CEAA), with final decisions taking into consideration or ensuring both government requirements are addressed.</p>	<p>The Stoney Nation is satisfied with the response.</p>	<p>On November 24, 2017, CEAA and Benga clarified that the joint review panel will consider both provincial and federal lands and jurisdictions.</p> <p>Benga and Stoney Nakoda have met to resolve this issue.</p>	<p>Complete</p>
<div style="border: 1px solid black; text-align: center; width: 33px; height: 23px;">+</div> <div style="border: 1px solid black; text-align: center; width: 33px; height: 23px;">-</div>	<p>Meeting November 20, 2018</p> <p>Meeting November 24, 201</p> <p>7 Meeting March 18, 2017</p>	<p>Stoney Nation would like to conduct an independent technical review of the updated (August 2016) Project Environmental Impact Assessment. Stoney Nation's interests may not be reflected in the technical review performed by other First Nations.</p>	<p>Environmental Impact Assessment - Technical Review of the EIA</p>	<p>Benga provided the full August 2016 EIA to Stoney on USB at the meeting. Benga held a meeting with Stoney Nation to review the CEAA process.</p>	<p>Once Stoney Nation identifies a group to perform their review of the EA, they will advise Benga and provide a timeline for the delivery of the report.</p>	<p>Benga has met with the Stoney Nation and has reviewed the CEAA process with Stoney Nakoda on November 24, 2017.</p> <p>Benga looks forward to receiving Stoney Nation's technical review.</p>	<p>Ongoing; working with Stoney Nation.</p>

<div style="border: 1px solid black; padding: 2px; margin-bottom: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting November 20, 2018</p> <p>Meeting November 24, 2017</p> <p>January 4, 2016 Statement of Concern</p>	<p>Diminished water quality resulting from accidental spills.</p>	<p>Water quality - Accidents and malfunctions</p>	<p>As part of the August 2016 Environmental Assessment (EA) update, Benga has added additional information and clarification around the Project's Water Management Plan (WMP). This WMP was developed to ensure all water within the mine site is captured in appropriately sized holding ponds that allow for the testing of water quality prior to being released into the surrounding environment. The WMP was assessed to determine potential effects on river flows and water quality in the neighbouring and downstream rivers. The results of the assessment indicate that there will not be any impacts to the environment with the implementation of the WMP. To verify that changes in flow do not affect fish and their habitat, Benga also conducted a detailed Instream Flow Needs study (IFN). Based on the detailed hydrology, groundwater, water quality, and fisheries assessments, no significant residual impacts were identified that would permanently reduce the suitability of the water-ways that are</p>	<p>The Stoney Nation would like to provide input into the Water Management Plan and be involved in water monitoring. The Stoney Nation would also like to provide input into the Emergency Response Plan.</p> <p>On November 20, 2018, Stoney Nation expressed concerns over the potential environmental impact of increased levels of selenium during mining activities. Stoney Nation expressed the need for additional information related to selenium treatment options.</p> <p>Stoney Nation advised that a report is being generated that will address this issue. However, there is no definitive timeline for the report. Stoney Nation would like additional information on water management.</p>	<p>Benga met with Stoney Nakoda to discuss these issues.</p> <p>Benga will seek further input into the Emergency Response plan and Water Management Plan prior to construction.</p> <p>On November 24, 2017, Benga committed to updating the Aboriginal Access Management Plan to have a ban on fishing by employees, with input from the Stoney Nation, to protect the streams near the mine from impact from possible invasive aquatic species due to contaminated fishing gear.</p> <p>On November 20, 2018, Benga committed to present information related to water quality and selenium to Stoney Nation in January 2019.</p>	<p>Ongoing; working with Stoney Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	<p>used for traditional use activities. It is important to note that the Grassy Mountain mine design does not have any tailings ponds like those in the Northern Alberta oilsands. Also all ponds used to hold or capture water were engineered to hold a much higher capacity of water than it will ever hold at any one time to meet Alberta's Dam Safety regulations; this will prevent overtopping or any catastrophic failure.</p> <p>Benga has acknowledged Stoney Nation's concern about the potential impacts of selenium and has agreed to develop comprehensive material related to water quality.</p>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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+	Meeting November 20, 2018	The Stoney Nation would like to have input into the Wildfire Control and Prevention Plan	Wildfire - Potential effects of the project on Wildfires	The draft Wildfire Control and Prevention Plan is part of the Environmental Assessment (EA) and is focused on wildfire prevention and control on the mine site due to industrial activities.	<p>The Stoney Nation would like to use the Cultural Assessment report to identify concerns with the wildfire plan, and for Benga to use the Cultural Assessment report to inform details of the Environmental Management Plan's mitigation.</p> <p>On November 20, 2018, Stoney Nation advised it is looking to conduct an independent technical review of the Environmental Impact Assessment (EIA) (Aug 2016) with support of CEEA funding. Stoney Nation may address the wildfire control and prevention plan as part of the technical review. Once Stoney Nation identifies a group to perform the review, they will advise Benga and provide a timeline for the delivery of a report.</p>	<p>Benga will seek further input from Stoney Nakoda Nation on the Wildfire Control and Prevention Plan prior to Construction.</p> <p>Benga will review and incorporate results from the Cultural Assessment into the plan as appropriate.</p> <p>Benga and Stoney Nation met on November 20, 2018 to discuss this issue. Benga will await feedback from Stoney Nation on a timeline for an independent technical review of the EIA.</p>	Ongoing; working with Stoney Nation.
-	Meeting November 24, 2017						

# **Appendix A-5: Stoney Nakoda Nation (Chiniki First Nation) Specific Concern and Response Table**

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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p style="text-align: center;">January 4, 2016 Statement of Concern</p>	<p>As part of the Environmental Assessment (EA) update provided in August 2016, a revised air model was provided that aligned with optimization of the mine plan. In addition, another air model was provided in the EA Update for the coal product load-out/rail loop area. The results of both models indicated no exceedances or significant residual impacts that would affect the neighbouring communities or surrounding environment.</p>	<p>As part of the Environmental Assessment (EA) update provided in August 2016, a revised air model was provided that aligned with optimization of the mine plan. In addition, another air model was provided in the EA Update for the coal product load-out/rail loop area. The results of both models indicated no exceedances or significant residual impacts that would affect the neighbouring communities or surrounding environment.</p>	<p>As part of the Environmental Assessment (EA) update provided in August 2016, a revised air model was provided that aligned with optimization of the mine plan. In addition, another air model was provided in the EA Update for the coal product load-out/rail loop area. The results of both models indicated no exceedances or significant residual impacts that would affect the neighbouring communities or surrounding environment.</p>	<p>The Stoney Nation is interested in regional air monitoring, and inquired if Benga's air monitoring results could be combined with a future regional air-shed study. Benga agreed the site results could be incorporated into a regional study, and agreed to work on the air monitoring management plans with the Stoney Nation.</p>	<p>Benga will look into air research at the University of Lethbridge.</p> <p>On November 24, 2017, Benga committed that site air monitoring results could be incorporated into a future regional study.</p>	<p style="text-align: center;">Complete</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>November 20, 2018</p>	<p>Concern for effects, inadvertent or otherwise, to sites of cultural or spiritual significance. To forestall this, Benga must install cultural monitoring and implement a mitigation plan for any newly-identified sites.</p>	<p>Aboriginal Physical &amp; Cultural Heritage - Effects of the project on physical and cultural heritage.</p>	<p>Benga has developed a cultural site discovery contingency plan and would like to get the Stoney Nation's input on the plan.</p>	<p>The Stoney Nation recommended Benga include the Shuswap Tribal Council as a potentially affected group, as the Stoney Nation has an MOU with this group to allow joint hunting and gathering on their respective territories. The Stoney Nation can provide a copy of this MOU as part of their Cultural Assessment.</p>	<p>Benga and Stoney Nation met on November 20, 2018. Benga has developed a Conceptual Cultural Site Discovery Contingency Management Plan. Benga requested further input from Stoney Nation to assist development of the Plan. Benga and Stoney Nation agreed to work together on the development of the Plan.</p> <p>Benga will attempt to minimize Project impacts and accommodate avoidance of areas of cultural and spiritual significance where possible. Provision of site specific information on locations of conservation interest will help to manage the development of mitigations.</p> <p>Benga is beginning to develop monitoring plans and will continue to work with Stoney Nation to identify ways in which a cultural monitoring program can be designed and implemented.</p> <p>Stoney Nation and Benga agreed that these issues relate back to the development of an agreement between</p>	<p>Ongoing; working with Stoney Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	Benga and Stoney Nation. Benga and Stoney Nation are currently working to establish such an agreement.	(Continued from previous row)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting November 20, 2018</p> <p>Meeting November 24, 2017</p> <p>January 4, 2016 Statement of Concern</p>	<p>It would be valuable to the Stoney Nakoda Nation (SNN) that Benga Mining Ltd offer advance training or on-the-job training for SNN members residing in Eden Valley. It would be our desire to see that 10 per cent of both the construction crew and the operation crew be hired from qualified SNN members.</p>	<p>Aboriginal Socio-economic Conditions</p>	<p>Benga thanks Stoney Nation for the interest in working together on the Project. Benga will seek input from Stoney Nation on the Human Resources Plan.</p>	<p>The Stoney Nation requested a list of jobs and the required qualifications.</p> <p>The Stoney Nation noted that they have human resources people at Morley and Eden with lists of the qualifications of community members.</p> <p>On November 20, 2018, Stoney Nation advised that this issue is part of a larger conversation that is taking place with Benga about employment and training.</p>	<p>Benga will seek input on the Human Resources Management Plan with the Stoney Nation.</p> <p>On November 24, 2017, Benga committed to providing Stoney Nation with the requested list of jobs and required qualifications. Stoney Nation can provide a list of band member's qualifications.</p> <p>On November 20, 2018, Stoney Nation and Benga agreed that these issues relate to the development of an agreement between Benga and Stoney Nation. Benga and Stoney Nation are currently working to establish such an agreement.</p>	<p>Ongoing; working with Stoney Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>November 20, 2018 Meeting November 24, 2017  January 4, 2016 Statement of Concern</p>	<p>Unemployment in Eden Valley is of great concern to the Stoney Nakoda Nation (SNN). The Globe and Mail reported in September 2011 that the unemployment rate in Eden Valley was 70 per cent which is significantly higher than the rate of 37.5 per cent noted in the Application. The Court of Appeal has already deemed Eden Valley to be an "urban centre"; therefore, the Alberta Energy Regulator (AER) and Benga Mining Ltd must consider the socio-economic impacts of the Project on the community and residents of Eden Valley.</p>	<p>Aboriginal Socio-Economic Conditions - Effects of the project on socio-economic conditions.</p>	<p>The information used to identify employment statistics is from the Statistics Canada 2011 census. Benga welcomes feedback from Stoney Nation including identification of potential effects to socio-economic conditions or ways to mitigate potential effects.</p>	<p>The Stoney Nation expressed a concern that Statistics Canada does not include First Nation employment in their employment statistics and this is not explained in the Environmental Impact Assessment (EIA).</p> <p>The Stoney Nation noted that they have human resources people at Morley and Eden with lists of the qualifications of community members.</p>	<p>Benga met with the Stoney Nation on November 24, 2017 to review this issue. Benga will also provide a list of jobs with required qualifications to Stoney Nation. Stoney Nation can provide a list of band member's qualifications.</p> <p>Benga met with the Stoney Nation on November 20, 2018 to review this issue. Stoney Nation advised that this issue is part of a larger conversation that is taking place with Benga about employment and training. Stoney Nation and Benga agreed that these issues relate back to the development of an agreement between Benga and Stoney Nation. Benga and Stoney Nation are currently working to establish such an agreement.</p>	<p>Ongoing; working with Stoney Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting November 20, 2018</p> <p>Meeting March 18, 2017</p> <p>Phone call April 3, 2017</p> <p>Email April 28, 2017</p> <p>Meeting November 24, 2017</p>	<p>Need for a Cultural Assessment Overview (CAO) of the project area. Earlier reporting was based on a preliminary tour of the project area and fieldwork has not been conducted.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Impacts to physical and cultural heritage, fishing, hunting, plant gathering</p>	<p>Benga facilitated Stoney Nakoda's Cultural Assessment with an overview and access to the site in October 2017. During field work on site, there was a wildfire and Stoney Nation would like to revisit the site in the spring. Benga is anticipating receiving an interim Cultural Assessment Overview (CAO) from Stoney Nation based on the work done to date.</p>	<p>Stoney Nation undertook CAO field work in 2017 and 2018. Stoney Nation indicated that they will review the results of the CAO fieldwork and community interviews conducted in 2017 to assess whether additional fieldwork is needed to provide feedback on this concern. A report is currently underway.</p>	<p>In 2017 and 2018, Benga provided access to Stoney Nation to assess 1) archaeological features on private land identified as part of the Historic Resources Impact Assessment (HRIA) and 2) locations on Crown land within the Project area.</p> <p>Benga will review and respond to Stoney Nation's report once it is provided to Benga.</p>	<p>Ongoing; working with Stoney Nation.</p>

<div style="border: 1px solid black; text-align: center; width: 33px; height: 23px; margin-bottom: 2px;">+</div> <div style="border: 1px solid black; text-align: center; width: 33px; height: 27px;">-</div>	<p>Meeting January 15, 2015</p> <p>Meeting November 24, 2017</p>	<p>Concern about lack of reference to the objectives of the South Saskatchewan Regional Plan (SSRP) and wanted confirmation that current legislated standards and land use designations apply to the Grassy Mountain Project.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Land and Resource Use</p>	<p>The assessment of potential effects to Land and Resource Use in Section E.10 of the Application considers the South Saskatchewan Regional Plan (SSRP).</p> <p>Benga followed up with the Alberta government and received confirmation that existing legislated standards and land use designations continue to apply to the Project.</p>	<p>The Stoney Nation expressed that as long as connections between the frameworks and the proponents are made, the follow-through is making sure the Ministries that should be involved are in fact involved.</p>	<p>Benga followed up with the Alberta government and received confirmation that existing legislated standards and land use designations continue to apply to the Project.</p> <p>On November 24, 2017 Stoney Nation expressed that if the SSRP and the legislative standards apply, this is no longer a concern.</p>	<p style="text-align: center;">Complete</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>November 20, 2018</p> <p>Meeting November 24, 2017</p> <p>January 4, 2016 Statement of Concern</p>	<p>Potential loss of important whitefish and trout habitat that includes the Highwood River, Pekisko Creek, Willow Creek, Johnson Creek, Oldman River, and Livingstone River, which is closest to the Project.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Fishing</p>	<p>The Highwood River, Livingstone River, Pekisko Creek, Willow Creek and Johnson Creek are in the Livingstone Watershed, which is north of the project, and will not be impacted by the project. The watercourses associated with the project are in the Oldman River watershed (specifically Gold Creek and Blairmore Creek which flow into the Crowsnest River, and eventually into the Oldman River). Benga have developed a Water Management Plan (WMP) to protect the quantity and quality of the water on and around the mine site, as well as an Instream Flow Needs assessment to quantify any impacts to fish habitat (i.e. reduction in flow or loss in habitat). Through the hydrology, groundwater, water quality and fisheries assessments, no significant residual impacts were identified.</p>	<p>Stoney Nation would like to see the resulting traditional knowledge and recommendations considered in the fisheries offset plan (i.e. used to address the aspects of the plan such as the location of overwintering areas). Stoney Nation would like the CAO to focus on Blairmore Creek and Gold Creek and would like to complete the assessment before 2020. The Stoney Nation is interested to see if there is any ongoing cumulative effect within the watershed, and is interested in short and long term monitoring.</p> <p>On November 20, 2018 Stoney Nation advised that fish and waterways were not considered by Stoney Nation during the Cultural Assessment Overview (CAO) fieldwork conducted thus far. Stoney Nation indicated that the issues related to whitefish and west slope cutthroat trout can be addressed through the completion of a CAO focused on specific waterways and fish populations.</p>	<p>Benga has met with Stoney Nakoda to discuss this issue.</p> <p>Benga's Fisheries plan includes habitat restoration. Benga will seek further input from Stoney Nation on the Fisheries plan prior to construction. Ongoing monitoring may be an outcome of the Fisheries plan.</p> <p>On November 24, 2017 Stoney Nation stated they were to incorporate fish in their Cultural Assessment Overview.</p> <p>On November 20, 2018 Benga agreed to support a CAO focused at Blairmore and Gold Creeks before 2020. Benga indicated that there were no whitefish identified during fish population inventories of Gold Creek and Blairmore Creek. The project will have no effect on the fish populations in the Oldman River.</p>	<p>Ongoing; working with Stoney Nation.</p>
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	Meeting November 20, 2018	There are hunting camps going on in the area where people from the Eden Valley community could speak about areas in the Grassy Mountain project area.	Current Use of Lands and Resources for Traditional Purposes - Hunting	Benga will take this into consideration when planning fieldwork.	On November 20, 2018 Stoney Nation advised that this item was brought up during the community interviews conducted in September 2017. A report is being generated that will address this issue. However, there is no definitive timeline for the report.	Fieldwork was conducted October 17, 2017.	Ongoing; working with Stoney Nation.
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-	Email from Bill Snow June 24, 2017					On November 20, 2018 Benga committed to review and respond to Stoney Nation's report once it is provided to Benga.	

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>Meeting November 20, 2018</p> <p>Phone Call April 3, 2017</p>	<p>Stoney Nation has an interest in harvesting within the project area.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting</p> <p>Access Management</p>	<p>Access to harvesting will be included as a component of the Aboriginal Access Management Plan. Benga will work with Stoney Nation to develop a Nation specific Access Management Plan.</p>	<p>Stoney Nation met with Benga to discuss the issue.</p>	<p>On November 20, 2018, Stoney Nation and Benga agreed that access for harvesting will be further discussed in an subsequent meeting focused on access, and that access will be implemented through the development of an Access Management Plan. Benga requested site specific details to assist access planning. Benga and Stoney Nation will work together on the development of the Plan.</p> <p>Benga advised that harvesting will need to take place prior to construction. Access will be provided in advance. Stoney Nation indicated that they will need to hold a ceremony on site, preferably in the summer/fall. Benga agreed to support an on site ceremony in advance of construction.</p> <p>An access permitting process is being developed by Benga. For safety purposes, Stoney Nation members accessing the Project area could be guided by a Nation member that has been employed and trained by Benga.</p>	<p>Ongoing; working with Stoney Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p>Meeting November 20, 2018</p> <p>Meeting November 24, 2017</p> <p>January 4, 2016 Statement of Concern</p>	<p>Potential loss of important deer, elk, and moose habitat throughout the region hunted by the Stoney Nakoda Nation (SNN) from Eden Valley, along the Whaleback and along the eastern side of the foothills.</p> <p>Potential interruption and alteration of migratory and travelling routes for various species of the area.</p> <p>Potential decrease in common fur-bearing animals, such as black bear, coyote, lynx, squirrel, beaver, mink and marten, in Registered Fur Management Areas, particularly those registered to Stoney Nakoda Nation (SNN) members.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting; Trapping</p> <p>Wildlife - Potential effects of the project on wildlife</p>	<p>Information provided by Stoney Nation members during the initial site tour, including information about wildlife, is considered in the Environmental Assessment (EA) under potential effects to wildlife and potential effects to hunting.</p> <p>The results of the Environmental Impact Assessment (EIA) were submitted in 2015 and again after updating in August 2016. The assessment of potential effects to wildlife is considered in Sec E.9.3. Many of the project effects associated with habitat loss and wildlife movement will be minimized through the implementation of the Project's reclamation plan. Grassy mountain is a previously disturbed area and, as seen on other mines in Alberta, through proper reclamation, wildlife will and do return to reclaimed mine site areas. Sensory disturbance and habitat loss is expected to occur to elk, deer, and moose during the operations phase, which will cause them to find more suitable areas in the area surrounding the Project site. As the Project will go through progressive</p>	<p>On November 20, 2018 Stoney Nation indicated that they need to review the results of the CAO fieldwork conducted in 2017 and 2018 and speak to trapline holders before providing feedback on this concern.</p> <p>The report is currently underway, however, it is uncertain whether information related to hunting and trapping will be included in the report; this input may be provided by Stoney Nation as a stand alone recommendation.</p>	<p>Benga has met with the Stoney Nation to discuss this issue.</p> <p>Benga has provided data from the existing wildlife fieldwork completed in support of the Environmental Impact Assessment (EIA) to the Stoney Nation to inform the Cultural Assessment.</p> <p>Benga confirmed that information from the Cultural Assessment Overview will be used as an information source in development of the Conservation and Reclamation Plan.</p> <p>On November 20, 2018 Benga stated they will review and respond to Stoney Nation's report once it is provided.</p>	<p>Ongoing; working with Stoney Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	<p>reclamation, it is expected that there will be more suitable habitat for wildlife prior to the final end of mine year.</p> <p>Benga would like to meet with the Stoney Nakoda Nation (prior to project approvals) for traditional knowledge (TK) input regarding wildlife migrations and to identify monitoring objectives important to the Stoney Nakoda.</p>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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	Meeting November 20, 2018	The Traditional Ecological Knowledge (TEK) of the Stoney Nakoda Nation (SNN) should not be made public. The 15 traditional use sites, identified during the preliminary site tour conducted on July 25, 2014, remain undisturbed by the Project.	Environmental Assessment Process	The Stoney Nation produced a public version of their TEK report which was provided to Benga and which can be shared publicly. Benga does not have access to the confidential report. The Stoney Nation Traditional Knowledge (TK) report provided to Benga does not disclose the location of any traditional use sites.	The Stoney Nation has indicated that they provide the confidential information if Benga will enter into a confidentiality agreement with the Stoney Nation.	On November 24, 2017, Benga confirmed that TEK information will be held confidential unless specifically authorized for public release by Stoney.	Ongoing; working with Stoney Nation.
+	Meeting November 24, 2017				On November 20, 2018, Stoney Nation advised that they do not want confidential traditional knowledge information released into the public domain. An ownership, control, access and possession agreement (OCAP) relating to the use of confidential information will be drafted by Stoney Nation; this will address how cultural information will be protected. SNN would like such an agreement in place with Benga.	Benga has indicated it is willing to enter into an OCAP agreement with the Stoney Nation.	
-	January 4, 2016 Statement of Concern						

<div style="border: 1px solid black; text-align: center; width: 33px; height: 23px; margin-bottom: 2px;">+</div> <div style="border: 1px solid black; text-align: center; width: 33px; height: 23px;">-</div>	<p>January 4, 2016 Statement of Concern</p> <p>Meeting November 24, 2017</p>	<p>The decision made by the Alberta Energy Regulator (AER) with respect to the Project will likely not consider the federal land and jurisdictional fields impacted by the Project.</p>	<p>Environmental Impact Assessment - Environmental Assessment Process</p>	<p>The Grassy Mountain Coal Project is under both provincial (Alberta Energy Regulator; AER) and federal (Canadian Environmental Assessment Act; CEAA) review based on provincial Environmental Protection and Enhancement Act (EPEA), and federal CEAA triggers. Benga anticipates that the project will undergo a joint panel review (representatives from AER and CEAA), with final decisions taking into consideration or ensuring both government requirements are addressed.</p>	<p>The Stoney Nation is satisfied with the response.</p>	<p>On November 24, 2017, CEAA and Benga clarified that the joint review panel will consider both provincial and federal lands and jurisdictions.</p> <p>Benga and Stoney Nakoda have met to resolve this issue.</p>	<p>Complete</p>
<div style="border: 1px solid black; text-align: center; width: 33px; height: 23px; margin-bottom: 2px;">+</div> <div style="border: 1px solid black; text-align: center; width: 33px; height: 23px;">-</div>	<p>Meeting November 20, 2018</p> <p>Meeting November 24, 201</p> <p>7 Meeting March 18, 2017</p>	<p>Stoney Nation would like to conduct an independent technical review of the updated (August 2016) Project Environmental Impact Assessment. Stoney Nation's interests may not be reflected in the technical review performed by other First Nations.</p>	<p>Environmental Impact Assessment - Technical Review of the EIA</p>	<p>Benga provided the full August 2016 EIA to Stoney on USB at the meeting. Benga held a meeting with Stoney Nation to review the CEAA process.</p>	<p>Once Stoney Nation identifies a group to perform their review of the EA, they will advise Benga and provide a timeline for the delivery of the report.</p>	<p>Benga has met with the Stoney Nation and has reviewed the CEAA process with Stoney Nakoda on November 24, 2017.</p> <p>Benga looks forward to receiving Stoney Nation's technical review.</p>	<p>Ongoing; working with Stoney Nation.</p>

<div style="border: 1px solid black; padding: 2px; margin-bottom: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px; text-align: center;">-</div>	<p>Meeting November 20, 2018</p> <p>Meeting November 24, 2017</p> <p>January 4, 2016 Statement of Concern</p>	<p>Diminished water quality resulting from accidental spills.</p>	<p>Water quality - Accidents and malfunctions</p>	<p>As part of the August 2016 Environmental Assessment (EA) update, Benga has added additional information and clarification around the Project's Water Management Plan (WMP). This WMP was developed to ensure all water within the mine site is captured in appropriately sized holding ponds that allow for the testing of water quality prior to being released into the surrounding environment. The WMP was assessed to determine potential effects on river flows and water quality in the neighbouring and downstream rivers. The results of the assessment indicate that there will not be any impacts to the environment with the implementation of the WMP. To verify that changes in flow do not affect fish and their habitat, Benga also conducted a detailed Instream Flow Needs study (IFN). Based on the detailed hydrology, groundwater, water quality, and fisheries assessments, no significant residual impacts were identified that would permanently reduce the suitability of the water-ways that are</p>	<p>The Stoney Nation would like to provide input into the Water Management Plan and be involved in water monitoring. The Stoney Nation would also like to provide input into the Emergency Response Plan.</p> <p>On November 20, 2018, Stoney Nation expressed concerns over the potential environmental impact of increased levels of selenium during mining activities. Stoney Nation expressed the need for additional information related to selenium treatment options.</p> <p>Stoney Nation advised that a report is being generated that will address this issue. However, there is no definitive timeline for the report. Stoney Nation would like additional information on water management.</p>	<p>Benga met with Stoney Nakoda to discuss these issues.</p> <p>Benga will seek further input into the Emergency Response plan and Water Management Plan prior to construction.</p> <p>On November 24, 2017, Benga committed to updating the Aboriginal Access Management Plan to have a ban on fishing by employees, with input from the Stoney Nation, to protect the streams near the mine from impact from possible invasive aquatic species due to contaminated fishing gear.</p> <p>On November 20, 2018, Benga committed to present information related to water quality and selenium to Stoney Nation in January 2019.</p>	<p>Ongoing; working with Stoney Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	<p>used for traditional use activities. It is important to note that the Grassy Mountain mine design does not have any tailings ponds like those in the Northern Alberta oilsands. Also all ponds used to hold or capture water were engineered to hold a much higher capacity of water than it will ever hold at any one time to meet Alberta's Dam Safety regulations; this will prevent overtopping or any catastrophic failure.</p> <p>Benga has acknowledged Stoney Nation's concern about the potential impacts of selenium and has agreed to develop comprehensive material related to water quality.</p>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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+	Meeting November 20, 2018	The Stoney Nation would like to have input into the Wildfire Control and Prevention Plan	Wildfire - Potential effects of the project on Wildfires	The draft Wildfire Control and Prevention Plan is part of the Environmental Assessment (EA) and is focused on wildfire prevention and control on the mine site due to industrial activities.	<p>The Stoney Nation would like to use the Cultural Assessment report to identify concerns with the wildfire plan, and for Benga to use the Cultural Assessment report to inform details of the Environmental Management Plan's mitigation.</p> <p>On November 20, 2018, Stoney Nation advised it is looking to conduct an independent technical review of the Environmental Impact Assessment (EIA) (Aug 2016) with support of CEEA funding. Stoney Nation may address the wildfire control and prevention plan as part of the technical review. Once Stoney Nation identifies a group to perform the review, they will advise Benga and provide a timeline for the delivery of a report.</p>	<p>Benga will seek further input from Stoney Nakoda Nation on the Wildfire Control and Prevention Plan prior to Construction.</p> <p>Benga will review and incorporate results from the Cultural Assessment into the plan as appropriate.</p> <p>Benga and Stoney Nation met on November 20, 2018 to discuss this issue. Benga will await feedback from Stoney Nation on a timeline for an independent technical review of the EIA.</p>	Ongoing; working with Stoney Nation.
-	Meeting November 24, 2017						

# **Appendix A-6: Stoney Nakoda Nation (Wesley First Nation) Specific Concern and Response Table**

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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p style="text-align: center;">January 4, 2016 Statement of Concern</p>	<p>As part of the Environmental Assessment (EA) update provided in August 2016, a revised air model was provided that aligned with optimization of the mine plan. In addition, another air model was provided in the EA Update for the coal product load-out/rail loop area. The results of both models indicated no exceedances or significant residual impacts that would affect the neighbouring communities or surrounding environment.</p>	<p>As part of the Environmental Assessment (EA) update provided in August 2016, a revised air model was provided that aligned with optimization of the mine plan. In addition, another air model was provided in the EA Update for the coal product load-out/rail loop area. The results of both models indicated no exceedances or significant residual impacts that would affect the neighbouring communities or surrounding environment.</p>	<p>As part of the Environmental Assessment (EA) update provided in August 2016, a revised air model was provided that aligned with optimization of the mine plan. In addition, another air model was provided in the EA Update for the coal product load-out/rail loop area. The results of both models indicated no exceedances or significant residual impacts that would affect the neighbouring communities or surrounding environment.</p>	<p>The Stoney Nation is interested in regional air monitoring, and inquired if Benga's air monitoring results could be combined with a future regional air-shed study. Benga agreed the site results could be incorporated into a regional study, and agreed to work on the air monitoring management plans with the Stoney Nation.</p>	<p>Benga will look into air research at the University of Lethbridge.</p> <p>On November 24, 2017, Benga committed that site air monitoring results could be incorporated into a future regional study.</p>	<p style="text-align: center;">Complete</p>
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						<p>Benga and Stoney Nation met on November 20, 2018. Benga has developed a Conceptual Cultural Site Discovery Contingency Management Plan. Benga requested further input from Stoney Nation to assist development of the Plan. Benga and Stoney Nation agreed to work together on the development of the Plan.</p>	
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	November 20, 2018	<p>Concern for effects, inadvertent or otherwise, to sites of cultural or spiritual significance. To forestall this, Benga must install cultural monitoring and implement a mitigation plan for any newly-identified sites.</p>	<p>Aboriginal Physical &amp; Cultural Heritage - Effects of the project on physical and cultural heritage.</p>	<p>Benga has developed a cultural site discovery contingency plan and would like to get the Stoney Nation's input on the plan.</p>	<p>The Stoney Nation recommended Benga include the Shuswap Tribal Council as a potentially affected group, as the Stoney Nation has an MOU with this group to allow joint hunting and gathering on their respective territories. The Stoney Nation can provide a copy of this MOU as part of their Cultural Assessment.</p>	<p>Benga will attempt to minimize Project impacts and accommodate avoidance of areas of cultural and spiritual significance where possible. Provision of site specific information on locations of conservation interest will help to manage the development of mitigations.</p> <p>Benga is beginning to develop monitoring plans and will continue to work with Stoney Nation to identify ways in which a cultural monitoring program can be designed and implemented.</p> <p>Stoney Nation and Benga agreed that these issues relate back to the development of an agreement between</p>	<p>Ongoing; working with Stoney Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	Benga and Stoney Nation. Benga and Stoney Nation are currently working to establish such an agreement.	(Continued from previous row)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting November 20, 2018</p> <p>Meeting November 24, 2017</p> <p>January 4, 2016 Statement of Concern</p>	<p>It would be valuable to the Stoney Nakoda Nation (SNN) that Benga Mining Ltd offer advance training or on-the-job training for SNN members residing in Eden Valley. It would be our desire to see that 10 per cent of both the construction crew and the operation crew be hired from qualified SNN members.</p>	<p>Aboriginal Socio-economic Conditions</p>	<p>Benga thanks Stoney Nation for the interest in working together on the Project. Benga will seek input from Stoney Nation on the Human Resources Plan.</p>	<p>The Stoney Nation requested a list of jobs and the required qualifications.</p> <p>The Stoney Nation noted that they have human resources people at Morley and Eden with lists of the qualifications of community members.</p> <p>On November 20, 2018, Stoney Nation advised that this issue is part of a larger conversation that is taking place with Benga about employment and training.</p>	<p>Benga will seek input on the Human Resources Management Plan with the Stoney Nation.</p> <p>On November 24, 2017, Benga committed to providing Stoney Nation with the requested list of jobs and required qualifications. Stoney Nation can provide a list of band member's qualifications.</p> <p>On November 20, 2018, Stoney Nation and Benga agreed that these issues relate to the development of an agreement between Benga and Stoney Nation. Benga and Stoney Nation are currently working to establish such an agreement.</p>	<p>Ongoing; working with Stoney Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>November 20, 2018</p> <p>Meeting November 24, 2017</p> <p>January 4, 2016 Statement of Concern</p>	<p>Unemployment in Eden Valley is of great concern to the Stoney Nakoda Nation (SNN). The Globe and Mail reported in September 2011 that the unemployment rate in Eden Valley was 70 per cent which is significantly higher than the rate of 37.5 per cent noted in the Application. The Court of Appeal has already deemed Eden Valley to be an "urban centre"; therefore, the Alberta Energy Regulator (AER) and Benga Mining Ltd must consider the socio-economic impacts of the Project on the community and residents of Eden Valley.</p>	<p>Aboriginal Socio-Economic Conditions - Effects of the project on socio-economic conditions.</p>	<p>The information used to identify employment statistics is from the Statistics Canada 2011 census. Benga welcomes feedback from Stoney Nation including identification of potential effects to socio-economic conditions or ways to mitigate potential effects.</p>	<p>The Stoney Nation expressed a concern that Statistics Canada does not include First Nation employment in their employment statistics and this is not explained in the Environmental Impact Assessment (EIA).</p> <p>The Stoney Nation noted that they have human resources people at Morley and Eden with lists of the qualifications of community members.</p>	<p>Benga met with the Stoney Nation on November 24, 2017 to review this issue. Benga will also provide a list of jobs with required qualifications to Stoney Nation. Stoney Nation can provide a list of band member's qualifications.</p> <p>Benga met with the Stoney Nation on November 20, 2018 to review this issue. Stoney Nation advised that this issue is part of a larger conversation that is taking place with Benga about employment and training. Stoney Nation and Benga agreed that these issues relate back to the development of an agreement between Benga and Stoney Nation. Benga and Stoney Nation are currently working to establish such an agreement.</p>	<p>Ongoing; working with Stoney Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting January 15, 2015</p> <p>Meeting November 24, 2017</p>	<p>Concern about air emissions. In Section 2.5 of the Proposed Terms of Reference (PTOR), Stoney Nation would like the Environmental Impact Assessment (EIA) report to include information about government standards and exceedances.</p>	<p>Air Quality &amp; Climate - Potential effects of the project on health and air quality.</p>	<p>As part of the Environmental Assessment (EA) update provided in August 2016, a revised air model was provided that aligned with optimization of the mine plan. In addition, another air model was provided in the EA Update for the coal product load-out/rail loop area. The results of both models indicated no exceedances or significant residual impacts that would affect the neighbouring communities or surrounding environment.</p>	<p>The Stoney Nation is interested in regional air monitoring, and inquired if Benga's air monitoring results could be combined with a future regional air-shed study.</p>	<p>Benga will look into air research at the University of Lethbridge.</p> <p>Benga and Stoney Nakoda met to review this issue. On November 24, 2017, Benga agreed the site monitoring results could be incorporated into a regional study, and agreed to work on the air monitoring management plans with the Stoney Nation.</p>	<p>Complete</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting November 20, 2018</p> <p>Meeting March 18, 2017</p> <p>Phone call April 3, 2017</p> <p>Email April 28, 2017</p> <p>Meeting November 24, 2017</p>	<p>Need for a Cultural Assessment Overview (CAO) of the project area. Earlier reporting was based on a preliminary tour of the project area and fieldwork has not been conducted.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Impacts to physical and cultural heritage, fishing, hunting, plant gathering</p>	<p>Benga facilitated Stoney Nakoda's Cultural Assessment with an overview and access to the site in October 2017. During field work on site, there was a wildfire and Stoney Nation would like to revisit the site in the spring. Benga is anticipating receiving an interim Cultural Assessment Overview (CAO) from Stoney Nation based on the work done to date.</p>	<p>Stoney Nation undertook CAO field work in 2017 and 2018. Stoney Nation indicated that they will review the results of the CAO fieldwork and community interviews conducted in 2017 to assess whether additional fieldwork is needed to provide feedback on this concern. A report is currently underway.</p>	<p>In 2017 and 2018, Benga provided access to Stoney Nation to assess 1) archaeological features on private land identified as part of the Historic Resources Impact Assessment (HRIA) and 2) locations on Crown land within the Project area.</p> <p>Benga will review and respond to Stoney Nation's report once it is provided to Benga.</p>	<p>Ongoing; working with Stoney Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p>Meeting January 15, 2015</p> <p>Meeting November 24, 2017</p>	<p>Concern about lack of reference to the objectives of the South Saskatchewan Regional Plan (SSRP) and wanted confirmation that current legislated standards and land use designations apply to the Grassy Mountain Project.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Land and Resource Use</p>	<p>The assessment of potential effects to Land and Resource Use in Section E.10 of the Application considers the South Saskatchewan Regional Plan (SSRP).</p> <p>Benga followed up with the Alberta government and received confirmation that existing legislated standards and land use designations continue to apply to the Project.</p>	<p>The Stoney Nation expressed that as long as connections between the frameworks and the proponents are made, the follow-through is making sure the Ministries that should be involved are in fact involved.</p>	<p>Benga followed up with the Alberta government and received confirmation that existing legislated standards and land use designations continue to apply to the Project.</p> <p>On November 24, 2017 Stoney Nation expressed that if the SSRP and the legislative standards apply, this is no longer a concern.</p>	<p style="text-align: center;">Complete</p>
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<div style="border: 1px solid black; padding: 2px; margin-bottom: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px; text-align: center;">-</div>	<p>November 20, 2018</p> <p>Meeting November 24, 2017</p> <p>January 4, 2016 Statement of Concern</p>	<p>Potential loss of important whitefish and trout habitat that includes the Highwood River, Pekisko Creek, Willow Creek, Johnson Creek, Oldman River, and Livingstone River, which is closest to the Project.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Fishing</p>	<p>The Highwood River, Livingstone River, Pekisko Creek, Willow Creek and Johnson Creek are in the Livingstone Watershed, which is north of the project, and will not be impacted by the project. The watercourses associated with the project are in the Oldman River watershed (specifically Gold Creek and Blairmore Creek which flow into the Crowsnest River, and eventually into the Oldman River). Benga have developed a Water Management Plan (WMP) to protect the quantity and quality of the water on and around the mine site, as well as an Instream Flow Needs assessment to quantify any impacts to fish habitat (i.e. reduction in flow or loss in habitat). Through the hydrology, groundwater, water quality and fisheries assessments, no significant residual impacts were identified.</p>	<p>Stoney Nation would like to see the resulting traditional knowledge and recommendations considered in the fisheries offset plan (i.e. used to address the aspects of the plan such as the location of overwintering areas). Stoney Nation would like the CAO to focus on Blairmore Creek and Gold Creek and would like to complete the assessment before 2020. The Stoney Nation is interested to see if there is any ongoing cumulative effect within the watershed, and is interested in short and long term monitoring.</p> <p>On November 20, 2018 Stoney Nation advised that fish and waterways were not considered by Stoney Nation during the Cultural Assessment Overview (CAO) fieldwork conducted thus far. Stoney Nation indicated that the issues related to whitefish and west slope cutthroat trout can be addressed through the completion of a CAO focused on specific waterways and fish populations.</p>	<p>Benga has met with Stoney Nakoda to discuss this issue.</p> <p>Benga's Fisheries plan includes habitat restoration. Benga will seek further input from Stoney Nation on the Fisheries plan prior to construction. Ongoing monitoring may be an outcome of the Fisheries plan.</p> <p>On November 24, 2017 Stoney Nation stated they were to incorporate fish in their Cultural Assessment Overview.</p> <p>On November 20, 2018 Benga agreed to support a CAO focused at Blairmore and Gold Creeks before 2020. Benga indicated that there were no whitefish identified during fish population inventories of Gold Creek and Blairmore Creek. The project will have no effect on the fish populations in the Oldman River.</p>	<p>Ongoing; working with Stoney Nation.</p>
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<input type="checkbox"/> + <input type="checkbox"/> -	Meeting November 20, 2018  Email from Bill Snow June 24, 2017	There are hunting camps going on in the area where people from the Eden Valley community could speak about areas in the Grassy Mountain project area.	Current Use of Lands and Resources for Traditional Purposes - Hunting	Benga will take this into consideration when planning fieldwork.	On November 20, 2018 Stoney Nation advised that this item was brought up during the community interviews conducted in September 2017. A report is being generated that will address this issue. However, there is no definitive timeline for the report.	Fieldwork was conducted October 17, 2017.  On November 20, 2018 Benga committed to review and respond to Stoney Nation's report once it is provided to Benga.	Ongoing; working with Stoney Nation.
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>Meeting November 20, 2018</p> <p>Phone Call April 3, 2017</p>	<p>Stoney Nation has an interest in harvesting within the project area.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Hunting</p> <p>Access Management</p>	<p>Access to harvesting will be included as a component of the Aboriginal Access Management Plan. Benga will work with Stoney Nation to develop a Nation specific Access Management Plan.</p>	<p>Stoney Nation met with Benga to discuss the issue.</p>	<p>On November 20, 2018, Stoney Nation and Benga agreed that access for harvesting will be further discussed in an subsequent meeting focused on access, and that access will be implemented through the development of an Access Management Plan. Benga requested site specific details to assist access planning. Benga and Stoney Nation will work together on the development of the Plan.</p> <p>Benga advised that harvesting will need to take place prior to construction. Access will be provided in advance. Stoney Nation indicated that they will need to hold a ceremony on site, preferably in the summer/fall. Benga agreed to support an on site ceremony in advance of construction.</p> <p>An access permitting process is being developed by Benga. For safety purposes, Stoney Nation members accessing the Project area could be guided by a Nation member that has been employed and trained by Benga.</p>	<p>Ongoing; working with Stoney Nation.</p>
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	Meeting November 20, 2018	Potential loss of important deer, elk, and moose habitat throughout the region hunted by the Stoney Nakoda Nation (SNN) from Eden Valley, along the Whaleback and along the eastern side of the foothills.		Information provided by Stoney Nation members during the initial site tour, including information about wildlife, is considered in the Environmental Assessment (EA) under potential effects to wildlife and potential effects to hunting.			
+	Meeting November 24, 2017	Potential interruption and alteration of migratory and travelling routes for various species of the area.	Current Use of Lands and Resources for Traditional Purposes - Hunting; Trapping	The results of the Environmental Impact Assessment (EIA) were submitted in 2015 and again after updating in August 2016. The assessment of potential effects to wildlife is considered in Sec E.9.3. Many of the project effects associated with habitat loss and wildlife movement will be minimized through the implementation of the Project's reclamation plan. Grassy mountain is a previously disturbed area and, as seen on other mines in Alberta, through proper reclamation, wildlife will and do return to reclaimed mine site areas. Sensory disturbance and habitat loss is expected to occur to elk, deer, and moose during the operations phase, which will cause them to find more suitable areas in the area surrounding the Project site. As the Project will go through progressive	On November 20, 2018 Stoney Nation indicated that they need to review the results of the CAO fieldwork conducted in 2017 and 2018 and speak to trapline holders before providing feedback on this concern.	Benga has met with the Stoney Nation to discuss this issue.	
-	January 4, 2016 Statement of Concern	Potential decrease in common fur-bearing animals, such as black bear, coyote, lynx, squirrel, beaver, mink and marten, in Registered Fur Management Areas, particularly those registered to Stoney Nakoda Nation (SNN) members.	Wildlife - Potential effects of the project on wildlife		The report is currently underway, however, it is uncertain whether information related to hunting and trapping will be included in the report; this input may be provided by Stoney Nation as a stand alone recommendation.	Benga has provided data from the existing wildlife fieldwork completed in support of the Environmental Impact Assessment (EIA) to the Stoney Nation to inform the Cultural Assessment.	Ongoing; working with Stoney Nation.
						Benga confirmed that information from the Cultural Assessment Overview will be used as an information source in development of the Conservation and Reclamation Plan.  On November 20, 2018 Benga stated they will review and respond to Stoney Nation's report once it is provided.	

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	<p style="text-align: center;">reclamation, it is expected that there will be more suitable habitat for wildlife prior to the final end of mine year.</p> <p style="text-align: center;">Benga would like to meet with the Stoney Nakoda Nation (prior to project approvals) for traditional knowledge (TK) input regarding wildlife migrations and to identify monitoring objectives important to the Stoney Nakoda.</p>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> <div style="border: 1px solid black; padding: 1px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 1px; text-align: center;">-</div> </div>	<p>Meeting November 24, 2018</p> <p>Meeting November 24, 2017</p> <p>January 4, 2016 Statement of Concern</p>	<p>Adverse impacts on Traditional uses of the land, which are diverse and include, but are not limited to subsistence hunting, fishing and trapping, harvesting herbs, plants and berries for nutritional and medicinal purposes, and using rocks and lumber for tools, campfire rings, and sweat lodges.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Potential effects of the project on hunting, fishing, trapping, and plant gathering</p> <p>Aboriginal Physical and Cultural Heritage</p>	<p>The results of the Environmental Assessment (EA) were submitted in 2015 and updated in August 2016. An assessment of potential effects of the Project to Stoney Nation is provided in Section H.6 of the EA. Information provided by Stoney Nation, including information about wildlife, is considered in the EA under potential effects to wildlife and potential effects to hunting. Access to harvesting areas will be included as a component of the Aboriginal Access Management plan. Potential effects of the Project on vegetation including medicinal and ceremonial plants are described in Section E.8.3 of the EA. A discussion of proposed mitigation measures is provided in the EA document. Section E.8.5 and the C&amp;R Plan in Section F.1 describes how traditional plants were incorporated into the proposed closure plan. Mitigation measures include opportunities to transplant to limit potential effects to identified medicinal and ceremonial plants, and incorporating traditional use plant species, native to the</p>	<p>On November 20, 2018 Stoney Nation indicated that they need to review the results of the CAO fieldwork conducted thus far to provide feedback on this concern. A report is currently underway and will include comments and recommendations related to this issue.</p>	<p>Benga and Stoney Nakoda have met to discuss.</p> <p>Benga confirmed that Information from the Cultural Assessment Overview will be used as an information source in development of the Conservation and Reclamation Plan.</p> <p>On November 20, 2018 Benga agreed to support a CAO focused at Blairmore and Gold Creeks before 2020. Benga committed to review and respond to Stoney Nation's CAO report once it is provided to Benga.</p>	<p>Ongoing; working with Stoney Nation.</p>
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+	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	area, into reclamation plans.	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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+	Meeting November 20, 2018	The Traditional Ecological Knowledge (TEK) of the Stoney Nakoda Nation (SNN) should not be made public. The 15 traditional use sites, identified during the preliminary site tour conducted on July 25, 2014, remain undisturbed by the Project.	Environmental Assessment Process	The Stoney Nation produced a public version of their TEK report which was provided to Benga and which can be shared publicly. Benga does not have access to the confidential report. The Stoney Nation Traditional Knowledge (TK) report provided to Benga does not disclose the location of any traditional use sites.	The Stoney Nation has indicated that they provide the confidential information if Benga will enter into a confidentiality agreement with the Stoney Nation.	On November 24, 2017, Benga confirmed that TEK information will be held confidential unless specifically authorized for public release by Stoney.	Ongoing; working with Stoney Nation.
-	Meeting November 24, 2017						
-	January 4, 2016 Statement of Concern						

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>January 4, 2016 Statement of Concern</p> <p>Meeting November 24, 2017</p>	<p>The decision made by the Alberta Energy Regulator (AER) with respect to the Project will likely not consider the federal land and jurisdictional fields impacted by the Project.</p>	<p>Environmental Impact Assessment - Environmental Assessment Process</p>	<p>The Grassy Mountain Coal Project is under both provincial (Alberta Energy Regulator; AER) and federal (Canadian Environmental Assessment Act; CEAA) review based on provincial Environmental Protection and Enhancement Act (EPEA), and federal CEAA triggers. Benga anticipates that the project will undergo a joint panel review (representatives from AER and CEAA), with final decisions taking into consideration or ensuring both government requirements are addressed.</p>	<p>The Stoney Nation is satisfied with the response.</p>	<p>On November 24, 2017, CEAA and Benga clarified that the joint review panel will consider both provincial and federal lands and jurisdictions.</p> <p>Benga and Stoney Nakoda have met to resolve this issue.</p>	<p>Complete</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Meeting November 20, 2018</p> <p>Meeting November 24, 201</p> <p>7 Meeting March 18, 2017</p>	<p>Stoney Nation would like to conduct an independent technical review of the updated (August 2016) Project Environmental Impact Assessment. Stoney Nation's interests may not be reflected in the technical review performed by other First Nations.</p>	<p>Environmental Impact Assessment - Technical Review of the EIA</p>	<p>Benga provided the full August 2016 EIA to Stoney on USB at the meeting. Benga held a meeting with Stoney Nation to review the CEAA process.</p>	<p>Once Stoney Nation identifies a group to perform their review of the EA, they will advise Benga and provide a timeline for the delivery of the report.</p>	<p>Benga has met with the Stoney Nation and has reviewed the CEAA process with Stoney Nakoda on November 24, 2017.</p> <p>Benga looks forward to receiving Stoney Nation's technical review.</p>	<p>Ongoing; working with Stoney Nation.</p>

<div style="border: 1px solid black; padding: 2px; margin-bottom: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px; text-align: center;">-</div>	<p>Meeting November 20, 2018</p> <p>Meeting November 24, 2017</p> <p>January 4, 2016 Statement of Concern</p>	<p>Diminished water quality resulting from accidental spills.</p>	<p>Water quality - Accidents and malfunctions</p>	<p>As part of the August 2016 Environmental Assessment (EA) update, Benga has added additional information and clarification around the Project's Water Management Plan (WMP). This WMP was developed to ensure all water within the mine site is captured in appropriately sized holding ponds that allow for the testing of water quality prior to being released into the surrounding environment. The WMP was assessed to determine potential effects on river flows and water quality in the neighbouring and downstream rivers. The results of the assessment indicate that there will not be any impacts to the environment with the implementation of the WMP. To verify that changes in flow do not affect fish and their habitat, Benga also conducted a detailed Instream Flow Needs study (IFN). Based on the detailed hydrology, groundwater, water quality, and fisheries assessments, no significant residual impacts were identified that would permanently reduce the suitability of the water-ways that are</p>	<p>The Stoney Nation would like to provide input into the Water Management Plan and be involved in water monitoring. The Stoney Nation would also like to provide input into the Emergency Response Plan.</p> <p>On November 20, 2018, Stoney Nation expressed concerns over the potential environmental impact of increased levels of selenium during mining activities. Stoney Nation expressed the need for additional information related to selenium treatment options.</p> <p>Stoney Nation advised that a report is being generated that will address this issue. However, there is no definitive timeline for the report. Stoney Nation would like additional information on water management.</p>	<p>Benga met with Stoney Nakoda to discuss these issues.</p> <p>Benga will seek further input into the Emergency Response plan and Water Management Plan prior to construction.</p> <p>On November 24, 2017, Benga committed to updating the Aboriginal Access Management Plan to have a ban on fishing by employees, with input from the Stoney Nation, to protect the streams near the mine from impact from possible invasive aquatic species due to contaminated fishing gear.</p> <p>On November 20, 2018, Benga committed to present information related to water quality and selenium to Stoney Nation in January 2019.</p>	<p>Ongoing; working with Stoney Nation.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)	<p>used for traditional use activities. It is important to note that the Grassy Mountain mine design does not have any tailings ponds like those in the Northern Alberta oilsands. Also all ponds used to hold or capture water were engineered to hold a much higher capacity of water than it will ever hold at any one time to meet Alberta's Dam Safety regulations; this will prevent overtopping or any catastrophic failure.</p> <p>Benga has acknowledged Stoney Nation's concern about the potential impacts of selenium and has agreed to develop comprehensive material related to water quality.</p>	(Continued from previous row)	(Continued from previous row)	(Continued from previous row)
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+	Meeting November 20, 2018	The Stoney Nation would like to have input into the Wildfire Control and Prevention Plan	Wildfire - Potential effects of the project on Wildfires	The draft Wildfire Control and Prevention Plan is part of the Environmental Assessment (EA) and is focused on wildfire prevention and control on the mine site due to industrial activities.	<p>The Stoney Nation would like to use the Cultural Assessment report to identify concerns with the wildfire plan, and for Benga to use the Cultural Assessment report to inform details of the Environmental Management Plan's mitigation.</p> <p>On November 20, 2018, Stoney Nation advised it is looking to conduct an independent technical review of the Environmental Impact Assessment (EIA) (Aug 2016) with support of CEEA funding. Stoney Nation may address the wildfire control and prevention plan as part of the technical review. Once Stoney Nation identifies a group to perform the review, they will advise Benga and provide a timeline for the delivery of a report.</p>	<p>Benga will seek further input from Stoney Nakoda Nation on the Wildfire Control and Prevention Plan prior to Construction.</p> <p>Benga will review and incorporate results from the Cultural Assessment into the plan as appropriate.</p> <p>Benga and Stoney Nation met on November 20, 2018 to discuss this issue. Benga will await feedback from Stoney Nation on a timeline for an independent technical review of the EIA.</p>	Ongoing; working with Stoney Nation.
-	Meeting November 24, 2017						

# **Appendix A-7: Tsuut'ina Nation Specific Concern and Response Table**

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## SPECIFIC CONCERN AND RESPONSE TABLE

First Nation or Metis Settlement

Tsuut'ina Nation

Date

Dec 15, 2018

This table is designed to capture project specific concerns raised—by the First Nation/Metis Settlement that is being consulted—during consultation and the proponent's response to address the concerns through avoidance or mitigation. Any reply provided by the First Nation/Metis Settlement to the proponent's response should be documented and noted in this table where applicable.

Add/ Delete Row	Document or Meeting Reference	Specific Concern Expressed	Project Specific Aspect of the Concern Expressed	Proponent Response on Effort to Avoid or Mitigate Concern	First Nation/Metis Settlement Response to Proponent's Effort to Avoid or Mitigate Concern	Details on how concerns were addressed, including avoidance or mitigation measures	Outcomes/Comments
<div style="border: 1px solid black; padding: 2px; text-align: center;">           + -         </div>	<p style="text-align: center;">April 5, 2018 Meeting</p>	<p style="text-align: center;">Tsuut'ina Nation expressed concern about the hunting in the area and the archaeology studies saying that there are 13,000-year-old sacred objects.</p>	<p style="text-align: center;">Aboriginal Physical and Cultural Heritage - Historical Resources</p>	<p style="text-align: center;">Benga would like to avoid disturbing sacred sites if possible within the constraints of the Project. Right now, it is difficult to protect them because the site-specific information gathered remains confidential. Benga stated that Indigenous engagement is important to the Project, and that if there is more work that needs to be done, it needs to be done this season.</p>	<p style="text-align: center;">Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p style="text-align: center;">Benga does not have any site specific information from Tsuut'ina Nation. However, Benga can provide Tsuut'ina Nation with a summary of the TU work that has been completed to date.</p>	<p style="text-align: center;">Ongoing; working with Tsuut'ina Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Tsuut'ina Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p>Tsuut'ina Nation is concerned about inadvertent effects to sacred sites. To prevent this Tsuut'ina Nation recommends a 100 m buffer around all sacred sites including at Waypoint 03.</p>	<p>Aboriginal Physical and Cultural Heritage - Potential effects of the project on physical and cultural heritage.</p>	<p>The Tsuut'ina Nation traditional knowledge (TK)/ Traditional Use (TU) Study did not identify the location of Waypoint 03. Benga will continue to work with Tsuut'ina Nation to identify the location of sacred sites and discuss ways to mitigate potential effects including protective measures like fences and buffer zones where appropriate. Benga will arrange for a ceremony to be performed in advance of ground disturbance for construction of the Project. Benga will continue to work with Tsuut'ina Nation through the life of the Project and looks forward to continued discussion of how Tsuut'ina Nation's traditional use in the area can continue.</p>	<p>Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has requested the location of Waypoint 03, and is scheduling a meeting in the first quarter of 2018 to continue the discussion.</p>	<p>Ongoing; working with Tsuut'ina.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Tsuut'ina Traditional Knowledge and Use of the Grassy Mountain Area.</p> <p>Meeting June 8, 2017</p>	<p>Tsuut'ina Nation indicated that they would like to see permanent workers from each of the Treaty 7 First Nations gain employment in all phases of the project, particularly for youth. Would like to be able to access employment and training, especially for higher level positions. Tsuut'ina Nation would like a list of employment positions and opportunities.</p>	<p>Aboriginal Socio-Economic Conditions - Employment and Training</p>	<p>Benga and Tsuut'ina Nation are committed and working together to provide employment opportunities for Tsuut'ina Nation members.</p>	<p>Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p> <p>Tsuut'ina Nation is awaiting the list from Benga.</p>	<p>Benga has met with the Tsuut'ina Nation to review this issue, and will continue to discuss the Human Resources Management Plan with the Tsuut'ina Nation.</p>	<p>Ongoing; working with Tsuut'ina.</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Tsuut'ina Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p>Concern about the possible use of explosives.</p>	<p>Construction - Potential effects of the project from construction activities.</p>	<p>A description of construction activities including blasting procedures is provided in Section C of the Environmental Impact Assessment (EIA). The potential effects on the environment as a result of blasting activities including to wildlife are considered throughout the EIA. Benga has proposed mitigation measures to reduce or avoid potential effects of blasting on the environment.</p>	<p>Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Tsuut'ina Nation to review this issue and will continue the discussion.</p>	<p>Ongoing; working with Tsuut'ina.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>September 5, 2018 E-mail</p>	<p>Tsuut'ina Nation raised concern Benga had rejected their proposal and has not proposed a solution to accommodate to the needs of the Nation. Concern of no long-term monitoring on Traditional Territory for project-related impacts and lack of benefits for the Nation.</p>	<p>Consultation</p>	<p>Benga wishes to build a long lasting relationship with Tsuut'ina Nation and would like to continue discussions. Benga would like the opportunity to talk to Tsuut'ina Nation about interest in monitoring.</p>	<p>Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga will seek further input on monitoring prior to construction.</p>	<p>Ongoing; working with Tsuut'ina Nation.</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>September 27, 2018 E-mail</p>	<p>Tsuut'ina Nation stated Benga had not performed meaningful and adequate consultation to date in regards to planning consultation activities, monitoring, reviews, engagement, and reporting.</p>	<p>Consultation</p>	<p>Benga wishes to build a long lasting relationship with Tsuut'ina Nation and would like to continue discussions. Benga would like the opportunity to talk to Tsuut'ina Nation about consultation activities, monitoring, reviews, engagement, and reporting.</p>	<p>Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga will seek further input on consultation activities, monitoring, reviews, engagement, and reporting prior to construction.</p>	<p>Ongoing; working with Tsuut'ina Nation.</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>Email from David Onespot August 11, 2017, August 31, 2017</p>	<p>Tsuut'ina Nation requested to harvest some rare plants that were found.</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Plant Gathering</p>	<p>Benga agreed to help Tsuut'ina Nation access the area they needed to harvest the plants.</p>	<p>Tsuut'ina Nation harvested the rare plants.</p>	<p>Benga discussed this issue with Tsuut'ina Nation by email until eventually the harvest was complete September 5 2017.</p>	<p>Complete</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p style="text-align: center;">Meeting June 8, 2017</p>	<p>Tsuut'ina would like to see the environment revert back to its natural state once the mining is complete. There is some vegetation of interest to Tsuut'ina in the area (e.g. sweet pine, bear root, subalpine fir). Some of this information was documented during Tsuut'ina's Traditional Land Use (TLU) assessment. Tsuut'ina Nation would like to be able to access the plants noted in the TLU report.</p>	<p style="text-align: center;">Current Use of Lands and Resources for Traditional Purposes - Plant Gathering; Reclamation</p>	<p>Section F in the August 2016 Environmental Impact Assessment (EIA) document provides the proposed Conservation and Reclamation (C&amp;R) Plan for the Project. This was provided to Tsuut'ina in August 2016. Section F.1.5 describes the reclamation goals and principles that were incorporated in the C&amp;R and closure plans. Section F.1.6 describes proposed End Land Use goals and includes a commitment that end land use decisions will be made in consultation with Tsuut'ina. Currently, Benga does not have detailed site specific TLU information to incorporate into the plan since it was not provided in the public report. However, Benga will continue to consult with Tsuut'ina and incorporate comments into the final reclamation plan.</p>	<p style="text-align: center;">Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has developed a conceptual access management plan seek further input on the plan, including on species of importance and access requirements to harvesting areas, prior to construction.</p> <p>Benga will also seek input from Tsuut'ina Nation on the Conservation and Reclamation Plan prior to construction.</p>	<p style="text-align: center;">Ongoing; working with Tsuut'ina.</p>
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<div style="border: 1px solid black; text-align: center; width: 30px; height: 20px; margin-bottom: 5px;">+</div> <div style="border: 1px solid black; text-align: center; width: 30px; height: 20px;">-</div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Tsuut'ina Traditional Knowledge and Use of the Grassy Mountain Area.</p> <p>Meeting April 6, 2016</p>	<p>The Project will limit Tsuut'ina Nation in their ability to hunt and practice traditional ways on the site. Concern about loss of access and ability to hunt and gather</p>	<p>Current Use of Lands and Resources for Traditional Purposes - Potential effects of the project on hunting and plant gathering.</p>	<p>The results of the Environmental Impact Assessment (EIA) were submitted in August 2016. The assessment of potential effects to wildlife is considered in Sec E.9.3. The ability to continue hunting practices is included in the assessment of potential effects to Tsuut'ina Nation in Section H. Many of the project effects associated with habitat loss and wildlife movement will be minimized through the implementation of the Project's reclamation plan. As seen on other mines in Alberta, through proper reclamation, wildlife will and do return to reclaimed mine site areas. Sensory disturbance and habitat loss is expected to occur to elk, deer, and moose during the operations phase, which will cause them to find more suitable areas in the area surrounding the Project site. As the Project will go through progressive reclamation, it is expected that there will be more suitable habitat for wildlife prior to the final end of mine year.</p>	<p>Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga reviewed and incorporated the results of the Tsuut'ina Nation traditional use studies into the EIA, however, there were no site specific locations provided.</p> <p>Benga has met with the Tsuut'ina Nation to review this issue and will continue to discuss once feedback is received from Tsuut'ina Nation.</p> <p>Benga has developed a conceptual access management plan and seek further input on species of importance and access requirements to harvesting areas.</p>	<p>Ongoing; working with Tsuut'ina.</p>
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				<p>Benga provided a conceptual Access Management Plan in the August 2016 update to the Environmental Impact Assessment (EIA). Due to site safety reasons access will be restricted within the Project Permit boundary during construction and operations. This will be enforced by mine operations managers and personnel during the construction and operations phase. Information provided in the Traditional Use Study, including information about wildlife, is considered in the Environmental Impact Assessment (EIA) under potential effects to wildlife and potential effects to hunting.</p> <p>Benga will continue to work with Tsuut'ina Nation to identify other species of importance for harvesting in advance of construction activities in the Aboriginal Access Management Plan.</p>			
<div style="border: 1px solid black; padding: 2px; width: 20px; margin: 0 auto;">+</div> <div style="border: 1px solid black; padding: 2px; width: 20px; margin: 0 auto;">-</div>	(continued from previous row)	(continued from previous row)	(continued from previous row)		(continued from previous row)	(continued from previous row)	(continued from previous row)

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	Meeting April 23, 2014	Traditional Use (TU) sites must be logged so that they are protected and ceremonial and medicinal plants are harvested before being destroyed. Tsuut'ina Nation expressed interest in harvesting lodge pole pine during the Spring on a regular and ongoing basis with financial support for doing so provided by Benga.	Current Use of Lands and Resources for Traditional Purposes - Potential effects of the project on plant gathering.	Benga has committed to allow First Nations including Tsuut'ina, access to the site prior to or during clearing operations to enable them to harvest Lodgepole pine for cultural purposes	Tsuut'ina Nation has indicated that they will review the information and provide additional feedback	Benga has met with the Tsuut'ina Nation to review this issue.  Benga has developed a conceptual access management plan and will seek further input into plan prior to construction, including on species of importance and access requirements to harvesting areas.	Ongoing; working with Tsuut'ina.
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	March 5, 2018 Meeting	Tsuut'ina Nation advised of that the new Coal Mine Policy Review and asked if this will be considered.	Environmental Assessment Process	The Canadian Environmental Assessment Agency (CEAA) has indicated that the Environmental Assessment process only considers the environmental impacts and impacts to rights. Other agencies are involved in the applications that could be impacted by the Coal Mine Policy Review.	Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.	Benga has met with the Tsuut'ina Nation to review this issue, and will continue to discuss should Tsuut'ina have further questions	Complete
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	March 5, 2018 Meeting	Tsuut'ina Nation advised of that the new Coal Mine Policy Review and asked if this will be considered.	Environmental Assessment Process	The Canadian Environmental Assessment Agency (CEAA) has indicated that the Environmental Assessment process only considers the environmental impacts and impacts to rights. Other agencies are involved in the applications that could be impacted by the Coal Mine Policy Review.	Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.	Benga has met with the Tsuut'ina Nation to review this issue, and will seek further input on the wildlife monitoring plan and the Conservation and Reclamation plan prior to construction.	Ongoing; working with Tsuut'ina Nation.

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>March 5, 2018 Meeting</p>	<p>Tsuut'ina Nation would like cumulative effects to be considered by CEAA. Would also like to see the JRP composed of additional federal representatives.</p>	<p>Environmental Assessment Process</p>	<p>As per section 19(1) of the Canadian Environmental Assessment Act (CEAA) 2012, the Canadian Environmental Assessment Agency's (CEAA) assessment shall include a consideration of cumulative environmental effects that are likely to result from the Project in combination with other projects or activities that have been or will be carried out.</p> <p>Benga submitted an updated cumulative effect assessment in Appendix A-1 of Addendum 8 to the EIS.</p>	<p>Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Tsuut'ina Nation to review this issue, and will seek further input prior to construction.</p>	<p>Ongoing; working with Tsuut'ina Nation.</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>March 5, 2018 Meeting</p>	<p>Tsuut'ina Nation would like cumulative effects to be considered by CEAA. Would also like to see the JRP composed of additional federal representatives.</p>	<p>Environmental Assessment Process</p> <p>Cumulative Effects</p>	<p>As per section 19(1) of the Canadian Environmental Assessment Act (CEAA) 2012, the Canadian Environmental Assessment Agency's (CEAA) a cumulative effects assessment was undertaken for the Project</p> <p>Written comments regarding the Joint Review Panel Agreement posted on the Canadian Environmental Assessment Agency website on February 14, 2018 can be submitted until March 26.</p>	<p>Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Tsuut'ina Nation to review this issue and will continue to discuss once Tsuut'ina has provided feedback.</p>	<p>Ongoing; working with Tsuut'ina Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p style="text-align: center;">April 5, 2018 Meeting</p>	<p style="text-align: center;">Tsuut'ina Nation expressed concern about the hunting in the area and the archaeology studies saying that there are 13,000-year-old sacred objects.</p>	<p style="text-align: center;">Historical Resources</p>	<p>Benga would like to avoid disturbing sacred sites if possible within the constraints of the Project. Right now, it is difficult to protect them because the site-specific information gathered remains confidential. Benga stated that Indigenous engagement is important to the Project, and that if there is more work that needs to be done, it needs to be done this season.</p>	<p style="text-align: center;">Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga does not have any site specific information from Tsuut'ina Nation.</p> <p>However, Benga can provide Tsuut'ina Nation with a summary of the TU work that has been completed to date.</p> <p>Benga will continue to seek input from Tsuut'ina Nation prior to construction.</p>	<p style="text-align: center;">Ongoing; working with Tsuut'ina Nation.</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p style="text-align: center;">July 2015 Grassy Mountain Coal Project Public Report on Tsuut'ina Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p style="text-align: center;">Health and wellness of wildlife, including birds, may be compromised through indirect effects such as increased animal-vehicle collisions.</p>	<p style="text-align: center;">Human &amp; Wildlife Health - Potential effects of the project wildlife health and hunting.</p>	<p>Habitat connectivity and movement is assessed in Section E.9.3 of the Environmental Impact Assessment (EIA) including potential effects to wildlife from traffic. Proposed mitigation measures related to managing this potential effect include access management and enforcing speed limits along the main access road and utility corridors. In addition, wildlife crossing signs will be used to minimize wildlife-vehicle collisions.</p>	<p style="text-align: center;">Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Tsuut'ina Nation to review this issue.</p> <p>Benga has developed a conceptual wildlife monitoring plan and will seek further input into the plan prior to construction</p>	<p style="text-align: center;">Complete</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	<p>Minutes from April 6 2016 Meeting between Tsuut'ina Nation, Benga and Canadian Environmental Assessment Agency (CEAA).</p>	<p>Tsuut'ina Nation is concerned about contamination of groundwater. Describe any potential contamination of groundwater aquifers.</p>	<p>Hydrogeology - Potential effects of the project on groundwater.</p>	<p>The pits will be lined with materials such as clays so there will be no seepage, and the water won't percolate into the groundwater system. By putting water back into the pit, water will naturally want to flow downhill into the natural filtration system. Groundwater monitoring wells will be added to confirm the effectiveness of the Water Management System.</p>	<p>Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga welcomes feedback on the information provided in the Environmental Impact Assessment (EIA) specific to the Water Management Plan.</p> <p>Benga has also met with the Tsuut'ina Nation to review this issue, and will seek further input into the Water Management Plan prior to construction.</p>	<p>Ongoing; working with Tsuut'ina.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Tsuu T'ina Traditional Knowledge and Use of the Grassy Mountain Area</p> <p>Meeting June 8, 2017</p> <p>Meeting March 5, 2018</p>	<p>Tsuut'ina would like to be actively engaged in the development of the monitoring program and requested that Benga provide adequate funding for Tsuut'ina Nation members to conduct annual environmental monitoring.</p> <p>Tsuut'ina advised that water is seen as a medicine and has ceremonial use and that water monitoring should be continuous.</p> <p>Tsuut'ina Nation will further outline their monitoring interests.</p>	<p>Monitoring</p>	<p>Benga will provide annual updates on environmental monitoring, management and remediation activities related to its activities over the life of the project. Reporting is required by Statutory Authorities and Benga, to the extent permitted by regulators, will facilitate engagement with Tsuut'ina when reports are filed.</p> <p>High level details of the water monitoring plan are presented in Section 7.0 of the August 2016 Environmental Impact Assessment (EIA) Update. Monitoring frequency will vary depending on the parameters being monitored and the plan will be approved by Alberta Energy Regulator (AER). Water held in storage ponds will always be tested prior to being released to ensure water quality parameters are being met.</p>	<p>Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Tsuut'ina Nation to review this issue.</p> <p>Benga has developed a conceptual wildlife monitoring plan and will seek input on the plan prior to construction.</p>	<p>Complete</p>
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	<p>March 5, 2018 Meeting</p>	<p>Tsuut'ina Nation indicated that they would like to be actively engaged in the development of a monitoring program. Tsuut'ina Nation will further outline their monitoring interests.</p>	<p>Monitoring</p>	<p>Tsuut'ina and Benga will meet prior to construction to discuss monitoring and access management plans.</p>	<p>Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Tsuut'ina Nation to review this issue.</p> <p>Benga will seek further input on monitoring and the access management plan prior to construction.</p>	<p>Ongoing; working with Tsuut'ina Nation.</p>

<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p style="text-align: center;">Meeting April 6 2016</p>	<p>Tsuut'ina Nation is concerned about waste. What is going into the waste areas identified in the components map? Will there be chemicals in the waste sites?</p>	<p style="text-align: center;">Project Design</p>	<p>Inert waste rock which will be left over after the coal has been extracted. Water quality is being considered heavily in this process. Fines from mining process will be put back into the pit so tailings ponds won't be required. Dumps are oriented north/south instead of the original east/west plan in order to avoid the Blairmore Creek and Gold Creek watersheds and habitats as much as possible. Only rock will be going into the waste piles, but through erosion, chemicals can be leached from the rock. Water that comes into contact with these rocks will be cycled through the pit, and filtered naturally before going back into the environment. There is potential for acid generation which will be mitigated by mixing rock into the pit.</p>	<p style="text-align: center;">Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has met with the Tsuut'ina Nation on this issue and will continue to discuss with Tsuut'ina should Tsuut'ina have additional questions or concerns.</p>	<p style="text-align: center;">Complete</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;"> + - </div>	Meeting January 15, 2015	Concern about sources of water and water management. Want to be involved in discussion about determining key aquatic indicators to assess project effects.	Surface Water Quality - Potential effects of the project on water quality.	No significant Project effects on surface water or groundwater quality are anticipated. Benga will implement a Water Management Plan (WMP) that will prevent any unwanted release of water. All water (surface and groundwater) will be collected, held, and only released once it meets the appropriate or applicable water quality guideline. Benga will implement a ground water monitoring program with the project to ensure that groundwater quality is not adversely affected due to mining activities.	Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.	Benga has met with the Tsuut'ina Nation to review this issue.  Benga welcomes feedback on the information provided in the Environmental Impact Assessment (EIA) specific to the Water Management Plan. Benga will seek further input on the Water Management Plan prior to construction.	Ongoing; working with Tsuut'ina.
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<div style="border: 1px solid black; padding: 2px; text-align: center;">       + -     </div>	<p>July 2015 Grassy Mountain Coal Project Public Report on Tsuut'ina Traditional Knowledge and Use of the Grassy Mountain Area.</p>	<p>The waterbodies adjacent to the project site – Blairmore Creek and Gold Creek, in particular – should be protected and their water quality monitored.</p>	<p>Surface Water Quality - Potential effects of the project on water quality.</p>	<p>As part of the August 2016 Environmental Impact Assessment (EIA) Update, Benga have added additional information and clarification around the Project's Water Management Plan (WMP). This WMP was developed to ensure all water within the mine site is captured in appropriately sized holding ponds that allow for the testing of water quality prior to being released into the surrounding environment. The WMP was assessed to determine potential effects on river flows and water quality in the neighbouring and downstream rivers. The results of the assessment indicate that there will not be any impacts to the environment with the implementation of the WMP. To verify that changes in flow do not affect fish and their habitat, Benga also conducted a detailed Instream Flow Needs study (IFN).</p>	<p>Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Benga has also met with the Tsuut'ina Nation to review this issue. Benga will seek further feedback on the information provided in the EIA specific to the Water Management Plan and on the Water Management Plan itself prior to construction.</p>	<p>Ongoing; working with Tsuut'ina.</p>
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<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	(continued from previous row)	(continued from previous row)	(continued from previous row)	<p>Based on the detailed hydrology, groundwater, water quality, and fisheries assessments, no significant residual impacts were identified that would permanently reduce the suitability of the water-ways that are used for traditional use activities. It is important to note that the Grassy Mountain mine design does not have any tailings ponds like those in the Northern Alberta oilsands. Also all ponds used to hold or capture water were engineered to hold a much higher capacity of water than it will ever hold at any one time to meet Alberta's Dam Safety regulations; this will prevent overtopping or any catastrophic failure.</p>	(continued from previous row)	(continued from previous row)	(continued from previous row)
<div style="border: 1px solid black; padding: 2px; text-align: center;">+</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">-</div>	Meeting October 17, 2014	Concern that mining activity could cause instability and landslides.	Terrain & Soils - Potential effects of the project on soils.	<p>Geotechnical stability is addressed in Section B of the Environmental Impact Assessment (EIA). The analysis demonstrates an adequate factor of safety for slope stability even considering potential seismic activity.</p>	Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.	Benga has met with the Tsuut'ina Nation to review this issue and will continue to discuss should Tsuut'ina have further concerns.	Complete

<table border="1"> <tr> <td>+</td> </tr> <tr> <td>-</td> </tr> </table>	+	-	Meeting March 10, 2017	Tsuut'ina Nation needs to review the status of the Traditional Land Use (TLU) fieldwork that was completed for the project. Additional fieldwork may be required.	TK/TU - Traditional land use	Benga worked with Tsuut'ina to schedule TLU fieldwork during the 2017 field season	Tsuut'ina Nation undertook fieldwork in July 2017	Tsuut'ina Nation conducted fieldwork on July 26 - 28, 2017.	Complete
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<div style="border: 1px solid black; text-align: center; width: 32px; height: 28px; margin-bottom: 2px;">+</div> <div style="border: 1px solid black; text-align: center; width: 32px; height: 28px;">-</div>	<p>Meeting April 6 2016</p>	<p>Tsuut'ina Nation is concerned about wildlife. Will the project footprint area be fenced off from wildlife? Will wildlife be able to drink from the ponds if fencing is put in place?</p>	<p>Wildlife - Potential effects of the project on wildlife.</p>	<p>The results of the Environmental Impact Assessment (EIA) were submitted in 2015 and again after updating in August 2016. The assessment of potential effects to wildlife is considered in Sec E.9.3. Many of the project effects associated with habitat loss and wildlife movement will be minimized through the implementation of the Project's reclamation plan. As seen on other mines in Alberta, through proper reclamation, wildlife will and do return to reclaimed mine site areas. Sensory disturbance and habitat loss is expected to occur to elk, deer, and moose during the operations phase, which will cause them to find more suitable areas in the area surrounding the Project site. As the Project will go through progressive reclamation, it is expected that there will be more suitable habitat for wildlife prior to the final end of mine year. There are currently no plans to fence off the main mine site.</p>	<p>Tsuut'ina Nation has indicated that they will review the information and provide additional feedback.</p>	<p>Feedback on the Conservation and Reclamation plan provided in the EIA is welcome and will be incorporated into the next version of the plan.</p> <p>Benga will seek further input on the wildlife monitoring plan and the Conservation and Reclamation plan prior to construction.</p>	<p>Ongoing; working with Tsuut'ina.</p>
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# **Appendix B: Piikani Nation Technical Review Issues and Response Table**

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# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [83]	Access	Piikani Nation requests that Benga describes how the transfer of public lands (REC910007 and DRS850045) from recreational use to accommodate a coal mine will effect recreational and traditional users of Crown lands and the mitigations it proposes in order to lessen those effects. Piikani Nation also requests that this information is provided in the anticipated Project Update.	Application	Response Regulatory	Other Disposition holders (Industrial, Agricultural and Recreational Use)	The dispositions quoted will not change from recreational to commercial. They will remain recreational for purposes of the golf course. Other portions of the mine on public land that will be transferred to commercial are limited to areas only needed for the mine rather than a larger (unnecessary) berth of land.
EIS Review [85]	Access	Piikani Nation requests that Benga provides a map showing where Access would be limited during Project operations. Further, Piikani Nation requests that Benga discusses how access restrictions will be managed in the Aboriginal Access Management Plan and how Piikani Nation members will be involved in developing appropriate access management measures. Piikani Nation requests that this information is provided in the forthcoming Project Update and prior to the application being deemed complete.	Post-Application	Response Regulatory	Access	Benga will work with Piikani Nation to develop the Access Management Plan.
EIS Review [86]	Access	Piikani Nation requests that Benga provides a cumulative impact assessment describing Project contributions to regional access issues and describes how public or Aboriginal land use would be affected and accommodated throughout the life of the Project prior to the application being deemed complete.	Application	Response Regulatory	Access	This request is not within the scope of the project assessment. Benga will work with Piikani Nation to develop the Access Management Plan.
EIS Review [87]	Access	Piikani Nation requests that Benga confirms its commitment to involve Piikani Nation and ensure cultural and spiritual values are integrated in developing an Aboriginal Access Management Plan.  To ensure that Piikani Nation members have continued access to undisturbed Crown land areas throughout the life of the Project, Piikani Nation requests that a formal notification process is built into any access management plan that outlines the protocol for informing Piikani Nation in advance of any changes to access, and that Benga provides opportunities for Piikani Nation to provide input into any future access management plans.	Post-Application	Response Agreement	Access	Benga will include a notification protocol in the Access Management Plan as requested. Benga will work with Piikani to develop the Access Management Plan.
EIS Review [90]	Access	Piikani Nation requests that Benga clarifies its approach to removing and handling timber cleared from the Project area. Piikani Nation also request that Benga describes how trees cleared from the Project area will be allocated and delivered to each First Nation.	Post-Application	Response Agreement	Timber Resources	From Volume 1, Section F3.4: Timber volumes from Crown land will be offered to the two main quota holders, Spray Lakes Sawmills (1980) Ltd. and Crowsnest Forest Products.  For private land within the Project Footprint, Piikani Nation and other aboriginal groups have expressed interest in small volumes of timber for poles and rails. Benga will engage Piikani Nation and other interested Aboriginal groups in advance of clearing to identify opportunities to provide timber for this purpose. Any remaining merchantable timber will be offered to quota holders of the adjacent public lands or to other interested parties as per the public lands process.  No allocation mechanism has been determined if there are multiple First Nations interested in timber salvage. This can be discussed further when the issue arises.
EIS Review [163]	Access	Piikani Nation requests that Benga addresses land use management in relation to traditional and recreational access to Piikani Nation, including on Benga's privately held lands. Piikani Nation requests that Benga updates its discussion and effects assessment in Section H.4.4.1.3 to include a quantitative analysis of effects, develops a constraints layer or criteria to aid in further Project engineering and planning and discusses how effects to the time, effort and cost to Piikani Nation for using alternate access will be mitigated.  Further, Piikani Nation requests that Benga discusses how potential increased predator access might affect Piikani Nation's traditionally used species.	Application	Response	Access	Benga has provided a Framework for an Access Management Plan in Volume 3, Appendix 7d of the application. This plan will include special considerations for Piikani Nation access requirements. Benga is in the process of developing the framework into a more detailed plan and intends to engage with Piikani Nation in a workshop to gather input and suggestions in the first half of 2018.
EIS Review [179]	Access	Piikani Nation requests that Benga works with Piikani Nation to identify trails and travelways in the LSA and RSA to be assessed in the upcoming Project Update. This would include soliciting information on mitigations including management and monitoring.	Application	Response Regulatory	Aboriginal Engagement	Trails through the Project Area have been identified based on ground truthing although Piikani Nation have not identified any trails with particular importance. Benga will work with Piikani Nation to identify and manage trail access in the Access Management Plan. Benga will work with Piikani to develop the Access Management Plan.

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [198]	Access	Piikani Nation requests that Benga evaluates and discusses in detail avoidance and alienation effects resulting from the Project, including the presence of workers and others resulting from increased access; sensory disturbances affecting the sense of peace and remoteness (visual aesthetics, light, noise, odours, dust); fear of contamination of traditionally used resources; and avoidance caused by the undue hardship (time, cost, security requirements) resulting from access restrictions and control. Further, Piikani Nation requests that this information is provided prior to the application being deemed complete.	Application	Response Regulatory	Aboriginal Engagement	<p>It is anticipated that access to the area for non-aboriginal users will be reduced with the implementation of the project as most access is currently through the main road from Blairmore which will be closed to the general public. Benga further intends to implement policies to discourage employees from fishing and hunting in the area while staying at the construction camp or on duty.</p> <p>An access management plan will be developed with input from Piikani Nation to identify access issues and routes to minimize inconvenience.</p> <p>Noise, dust, light and visual effects are discussed elsewhere in these responses and to summarize, none of these should be significant outside of the mine permit boundary.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for providing feedback on access management on a regular basis.</p>
EIS Review [201]	Access	Piikani Nation requests that Benga discusses, in the Project Update, the effects of increased travel time, travel costs, and access restriction measures on Piikani Nation's access to lands and resources affected by the Project.	Application	Response Regulatory	Access	Benga has provided a Framework for an Access Management Plan in Volume 3, Appendix 7d of the application. This plan will include special considerations for Piikani Nation access requirements. Benga is in the process of developing the framework into a more detailed plan and intends to engage with Piikani Nation in a workshop to gather input and suggestions in the first half of 2018.
EIS Review [316]	Access	Piikani Nation requests that Benga provides further detail on the proposed Aboriginal Access Management Plan, including how Piikani Nation will be consulted on plan development.	Post-Application	Response Agreement	Access	Benga will work with the Piikani Nation to develop the Access Management Plan.
EIS Review [317]	Access / Hunting / Wildlife / Fishing	Piikani Nation requests that Benga develops a plan to manage, mitigate and monitor human disturbance on wildlife. Piikani Nation requests that Benga develops 'No ATV', 'No firearms', 'No recreational vehicles', 'No Fishing', 'No Hunting' and 'No feeding wildlife' policies for staff and contractors.	Post-Application	Response Agreement	Access	Benga will implement appropriate policies for staff and contractors while they are at work and while they are staying in the proposed construction camp. Benga will discuss these policies with the Piikani Nation for their input. Consultant Report # 9 on Wildlife recommends these policies among other mitigation measures.
EIS Review [318]	Access	Benga will implement appropriate policies for staff and contractors while they are at work and while they are staying in the proposed construction camp. Benga will discuss these policies with the Piikani Nation for their input.	Application	Response Regulatory	Land and Resource Use	Benga has provided a Framework for an Access Management Plan in Volume 3, Appendix 7d of the application. This plan will include special considerations for Piikani Nation access requirements. Benga is in the process of developing the framework into a more detailed plan and intends to engage with the Piikani Nation in a workshop to gather input and suggestions in the first half of 2018.
EIS Review [54]	Biodiversity	Piikani Nation requests that Benga samples in the non-sampled ecosite phases within the LSA, as there might be traditional use plants present within the non-sampled areas. The data collected would improve the understanding of the distribution of these species in both the LSA and RSA. A minimum sampling of three plots per ecosite phase should be completed.	Application	Response	Vegetation and Wetlands	This request is outside of the project scope. The current sampling meets the Project requirements.
EIS Review [55]	Biodiversity	Piikani Nation requests that Benga increases the survey intensity (sample size), as 53 detailed survey points is low, particularly for species richness or biodiversity calculations. The proponent should try to meet the goal of five plots per ecosystem stated in its methods.	Application	Response	Vegetation and Wetlands	This request is outside of the project scope. The current survey intensity meets the Project requirements.
EIS Review [56]	Biodiversity	Piikani Nation requests that Benga provides a more detailed explanation of its LSA mapping approach and methods, as the current methods are not clear on how polygons were attributed with ecosite phases codes using Alberta Vegetation Inventory (AVI) data. Providing this information would be beneficial in RSA-level mapping of traditional-use vegetation potential. A QA/QC of the baseline LSA and RSA maps should be provided prior to the application being deemed complete.	Application	Response Regulatory	Vegetation and Wetlands	As requested, a revised description of the Local Study Area mapping approach has been included in the 2016 EIA Volume 5, Consultant Report #8, Section 2.3.1.

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [57]	Biodiversity	Piikani Nation requests that Benga completes a study of all traditional uses of vegetation for both the LSA and RSA and a discussion of effects on Piikani use (direct gathering, cultural and spiritual purposes, habitat loss for cultural species).  The identification of traditional use / TEK vegetation potential was determined for the LSA only. Piikani Nation requests that Benga provides information on TU / TEK vegetation potential for the RSA for the Planned Development Case, including maps. Piikani Nation requests that this information is provided in the anticipated Project Update and prior to the application being deemed complete	Application	Response Agreement Regulatory	Vegetation and Wetlands	Information on traditional uses of vegetation has been included in the TK/TU reports prepared by Piikani Nation and other First Nations. Benga has relied on this information for the environmental assessment of the project. Potential effects to traditional use vegetation will only occur in the Local Study Area.
EIS Review [63]	Biodiversity	Piikani Nation requests that Benga: i) addresses current deficiencies with the cumulative impacts assessment in the upcoming Project Update, including explicit provision of pre- and post-development ecosite phases and reduction in quality; this information is critical both for Project assessment and for discussion of any required biodiversity offsetting programs; and ii) commits in agreement to development of biodiversity-management plan in collaboration with Piikani Nation and other nations of the Blackfoot Confederacy.	Application	Response Agreement Regulatory	Cumulative Effects Assessment	Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing assessment results and management plans on a regular basis.
EIS Review [177]	Biodiversity	Piikani Nation requests that Benga, once the review of the EIA and SEIA is complete, agrees to update the assessment on plant gathering, vegetation and wetlands and resource use based on Piikani Nation's review recommendations including providing the information required to fulfill the EIS Guideline requirements.	Application	Response Regulatory	Aboriginal Engagement	Information on traditional uses of vegetation has been included in the TK/TU reports prepared by Piikani Nation and other First Nations. Benga has relied on this information for the environmental assessment of the project.
EIS Review [178]	Biodiversity	Piikani Nation requests that Benga also includes key cultural species as important to traditional use, and updates either the plant gathering (Section H.4.4.2) or cultural heritage (Section H.4.4.4) sections to assess the effects to, and capture the important role plant species play, in Piikani Nation's culture. Further, Piikani Nation requests that this information is provided prior to the application being deemed complete.	Application	Response Regulatory	Aboriginal Engagement	Benga submitted a revised application in August 2016 with updated information as requested.
EIS Review [229]	Biodiversity	Piikani Nation requests that Benga discusses the availability of vegetation, fish and wildlife species for food, traditional medicinal and cultural purposes in the LSA and RSA in the forthcoming Project Update.	Application	Response Regulatory	Use of TK Information	This is outside of the EIA scope.
EIS Review [274]	Biodiversity	Piikani Nation requests that Benga discusses how Piikani Nation's traditional and cultural preferences for plant species and communities were incorporated into the effects assessment for vegetation and wetlands.	Application	Response	Use of TK Information	The following is an excerpt from Consultant Report #8 in Volume 5 of the Integrated Application, Section 2.3.6:  Vegetation species that have current or historical uses and importance to Aboriginal groups are considered TK resources. TK vegetation resource identification and the TK vegetation resource assessment were performed using the following methodology: <ul style="list-style-type: none"> <li>• compilation of TK vegetation species lists based on the importance of individual species to the Treaty 7 First Nations with traditional lands in the vicinity of The Project. This list was created via:</li> <li>• consultation with Treaty 7 First Nations groups;</li> <li>• review of reports prepared by the Piikani Nation (2015), Kainai Nation (2015), Tsuut'ina Nation (2015), and Siksika Nation (2015);</li> <li>• the TK vegetation list was compared with the results of vegetation and wetland field sampling information collected in 2014;</li> <li>• occurrences of TK vegetation in ecosite phases within the LSA were identified;</li> <li>• TK vegetation and vegetation community information was used to formulate the potential for each ecosite phase to support the TK vegetation resources assessment; and</li> <li>• an impact rating of the Project on TK vegetation was assigned based on the cultural importance of the species, the sensitivity of the species to disturbance and the uniqueness of the species at the local or regional scale.</li> </ul>

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [276]	Biodiversity	Piikani Nation requests that Benga surveys traditional and medicinal plants within the LSA. These surveys should be based on a traditional and medicinal plant lists developed by Piikani Nation. The traditional and medicinal plant surveys should be conducted within the entire LSA. Cultural uses for the traditional and medicinal plants should also be established by Piikani Nation for use in Project Planning including management, mitigation and monitoring. Further, Piikani Nation requests that this information is completed prior to the application being deemed complete.	Application	Response Regulatory	Vegetation and Wetlands	<p>The ecosites where these plants may be located were provided in the 2016 EIA. The assessment of potential effects to vegetation and to the Piikani Nation includes the traditional and medicinal plant lists provided to Benga by Piikani Nation in the TK/TU report.</p> <p>Benga will consider mitigation suggestions proposed by the Piikani Nation regarding traditional and medicinal plants.</p>
EIS Review [278]	Biodiversity	Piikani Nation requests that Benga avoids traditionally used plants and rare plants where possible and where not possible develops with Piikani Nation appropriate mitigation strategies.	Application	Response Agreement	Vegetation and Wetlands	Avoidance for pits and dumps are not an option. Avoidance outside of the footprint is. There are rare plant mitigations in place, and the plants may be transferable to the Piikani Nation for traditional use.
EIS Review [302]	Biodiversity	Piikani Nation requests that Benga discusses how Piikani Nation's traditional and cultural use information and concerns and issues expressed during consultation formed the Project effects to biodiversity.	Application	Response	Use of TK Information	Culturally important species identified in the TK/TU reports and through consultation informed the selection of Valued Components for the wildlife assessment section. The criteria and rationale for the selection of wildlife Valued Components is provided in the Consultant Report #9, Section 3.2.3. The identification of potential effects to Piikani Nation is based on information provided during consultation, such as known Piikani Nation use in the mine permit boundary and the identified Project activities during construction, operations and reclamation phases. The views and perspectives of Piikani Nation were included in the selection of Aboriginal group specific Valued Components, the identification of potential effects, and in the assessment of potential effects on Valued Components. The assessment of potential effects on Aboriginal group specific Valued Components is provided for each Aboriginal group in Sections H.4.
EIS Review [303]	Biodiversity	Piikani Nation requests that Benga develops a Biodiversity Monitoring Plan with a goal to achieve a net positive impact on biodiversity. Further, Piikani Nation requests that Benga includes Piikani Nation in plan development and implementation.	Post-Application	Response Agreement	Biodiversity	<p>Agreed.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing biodiversity monitoring on a regular basis.</p>
EIS Review [76]	Consultation	Piikani Nation requests that Benga completes a cultural impact assessment in order to meet CEAA and community requirements. Further, Piikani Nation requests that this assessment is completed prior to the application being deemed complete.	Application	Response Regulatory	Applicable Legislation and Land Use Plans, Policies	Potential effects of the project to Piikani Nation physical and cultural heritage is provided in the 2016 EIA and is based on information provided by Piikani Nation, results of the Historic Resources Impact Assessment and results of the land and resource use assessment.
EIS Review [77]	Consultation	Piikani Nation requests that Benga works with Piikani Nation community to mitigate Project effects to Piikani Nation's culture based on the findings of the Cultural Impact Assessment.	Post-Application	Response Agreement Regulatory	Applicable Legislation and Land Use Plans, Policies	Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing cultural impacts and mitigations on a regular basis.
EIS Review [78]	Consultation	Piikani Nation requests that Benga clearly describes how the Project will align with all of the strategic objectives and priorities listed in existing land use documents, guidelines and policies, and describes how Aboriginal rights and interests will be considered and accommodated. Further, Piikani Nation requests that this information is provided in the forthcoming Project Update.	Application	Response Regulatory	Land Use Plans and Policies	An assessment of potential effects to Aboriginal rights and interests has been provided in Section H of the 2016 EIA. Benga intends to conform to relevant land use documents, guidelines and policies as required.
EIS Review [84]	Consultation	Piikani Nation requests that Benga describes how TK and Cultural values will be considered in this planning process (accommodation of other rights holders).	Application	Response	Other Disposition holders (Industrial, Agricultural and Recreational Use)	To a large extent these discussions with other rights holders are bilateral in nature. Benga will notify Piikani Nation if any of these discussions lead to project changes that would affect Piikani Nation interests.
EIS Review [91]	Consultation	Piikani Nation requests that Benga provides a description of how TEK will be incorporated into fire prevention and suppression measures and how Piikani Nation will be involved in consultations on Fire Control Planning.	Post-Application	Response Agreement	Fire Control	Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing TEK and fire prevention and suppression on a regular basis.

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [92]	Consultation	Piikani Nation requests that Benga provides a discussion of how the input from the Piikani Specific Study will be considered and used in the updated SEIA.	Application	Response Regulatory	Piikani-specific Study	The Piikani Nation specific Socio-Economic Impact Assessment was discussed in the integrated application in Volume 2 Section H.
EIS Review [120]	Monitoring	Piikani Nation requests that Benga develops a detailed, long-term, community based SEIA monitoring program. The program would analyze programs and policies that are developed to address social and economic concerns for Piikani Nation members. The monitoring would allow for an adaptive management approach to be used, with adjustments being made to programs and policies based on actual performance.	IBA	Response Agreement	Monitoring Programs	Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussion of socio-economic monitoring on a regular basis.
EIS Review [145]	Consultation	Piikani Nation requests that Benga provides Piikani Nation and the regulators with an updated Record of Communication that: i) identifies issues that were raised for each communication effort (if no issues were raised then the entry should reflect "no issues were raised"; ii) updates the Response/Outcomes column of the table to identify the response/outcome, or at a minimum refers to the appropriate entry in the Record where the response/outcome can be found; and iii) identifies if issues raised have been addressed or remain outstanding. Furthermore, Piikani Nation requests that the regulators require this information to be provided prior to deeming the application complete.	Application	Response Regulatory	Environmental Impact Study Guidelines and Objectives	The integrated application includes the Record of Communication in Volume 2, Section H.4
EIS Review [146]	Consultation	Piikani Nation requests that Benga provides a discussion on how input into technical and regulatory matters, as identified in its Consultation Plan, was solicited from Piikani Nation at a level commensurate with that of Benga. Please explain how, in future stages of consultation, additional technical and regulatory issues that might have not received technical input from Piikani Nation (e.g., EIA methods including VC and boundary selection, level of assessment, integration of TK) will be addressed, post application/EIA development and filing, to inform Project planning and management, mitigation and monitoring. Further, Piikani Nation requests that this discussion is provided in the forthcoming Project Update.	Application	Response Agreement Regulatory	Environmental Impact Study Guidelines and Objectives	Prior to submitting the 2016 EIA, Benga provided baseline information, methods, Valued Components, and potential effects to Piikani Nation for input. This information was presented in an open house and via an information package for Piikani Nation.  Benga continues to consult with Piikani Nation regarding proposed mitigation measures and the feedback provided in the Piikani Nation technical report is being incorporated as appropriate.
EIS Review [147]	Consultation	Piikani Nation requests that Benga provides, by biophysical and human assessment component, evidence that information from Piikani Nation's consultation was integrated into the assessment of effects, how this input was considered in Project planning and design and how it is reflected in proposed Project management, mitigation and monitoring. Further, Piikani Nation requests that the regulators require this information prior to deeming the application complete.	Application	Response Regulatory	Environmental Impact Study Guidelines and Objectives	Culturally important species identified in the Piikani Nation TK/TU reports and through consultation informed the selection of Valued Components for the vegetation and wildlife assessment sections. The methods and criteria for the selection of vegetation Valued Components is provided in the Consultant Report #8, Section 2.4.2. The criteria and rationale for the selection of wildlife Valued Components is provided in the Consultant Report #9, Section 3.2.3.  The identification of potential effects to Piikani Nation is based on information provided during Aboriginal consultation, such as known traditional use in the mine permit boundary and the identified Project activities during construction, operations and reclamation phases. The views and perspectives of Piikani Nation were included in the selection of Aboriginal group specific Valued Components, the identification of potential effects, and in the assessment of potential effects on Valued Components were included. The assessment of potential effects on Piikani Nation specific Valued Components is provided in Sections H.4.
EIS Review [148]	Consultation	Piikani Nation requests that Benga provides, on a regular basis, the tracking table referred to in Table 5.1 of Section 5.0 of the Consultation Plan so that it can review it, offer input and track ongoing consultation efforts with regard to issue resolution.	Application	Response Agreement	Environmental Impact Study Guidelines and Objectives	Benga is tracking issues and concerns as required by ACO. The issues identified will be included and provided back to Piikani Nation on a regular basis for review.

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [149]	Consultation	Piikani Nation requests that Benga explains the apparent inconsistencies between Table H.4.2-1 and the Piikani Nation Record of Communication as provided in Appendix 7b.	Application	Response	Environmental Impact Study Guidelines and Objectives	The record of communication in Appendix 7b records all communication including responses. Table H.4.2-1 is a chronology of key consultation activities based on the larger record of communication.
EIS Review [150]	Consultation	Piikani Nation requests that Benga resubmits the EIA with Aboriginal Consultation provided as a distinct section of the EIA and provides the same robustness as that given to Section G Public Engagement including: i) Methods of consultation ii) Lists of issues and questions raised iii) Quantitative (or Qualitative Analysis) of issues/ concern areas iv) Summary of key issues v) Description of how input was incorporated into Project design. Further, Piikani Nation requests that the regulators require this to be done prior to the application being deemed complete.	Application	Response Regulatory	Environmental Impact Study Guidelines and Objectives	The 2016 EIA presents this as a separate section, Section H.
EIS Review [151]	Consultation	Piikani Nation requests that Benga provides a detailed discussion of how issues and concerns from Aboriginal communities in general and Piikani Nation specifically formed: i) identifying local and regional issues of concern; ii) the VCs; iii) the study area boundaries; and iv) potential Project and cumulative impacts. Piikani Nation requests that Benga provides this information for: air quality, visual aesthetics, noise, hydrogeology, hydrology, water quality, aquatic ecology, terrain and soils, vegetation and wetlands, wildlife, land and resource use, historical resources, human health, wildlife health and socio-economics in addition to Aboriginal traditional land use/valued components. Further, Piikani Nation requests that the regulators require this information prior to deeming the application complete.	Application	Response Regulatory	Use of TK Information	Culturally important species identified in the Piikani Nation TK/TU reports and through consultation informed the selection of Valued Components for the vegetation and wildlife assessment sections. The methods and criteria for the selection of vegetation Valued Components is provided in the Consultant Report #8, Section 2.4.2. The criteria and rationale for the selection of wildlife Valued Components is provided in the Consultant Report #9, Section 3.2.3.  The identification of potential effects to Piikani Nation is based on information provided during Aboriginal consultation, such as known traditional use in the mine permit boundary and the identified Project activities during construction, operations and reclamation phases. The views and perspectives of Piikani Nation were included in the selection of Aboriginal group specific Valued Components, the identification of potential effects, and in the assessment of potential effects on Valued Components were included. The assessment of potential effects on Piikani Nation specific Valued Components is provided in Sections H.4.
EIS Review [152]	Consultation	Piikani Nation requests that Benga provides a description of its constraints mapping process (or alternative criteria) and explains how Piikani Nation's land and water use was used to build a constraints layer for traditional and current use.	Application	Response	Use of TK Information	Benga included the information from the TK report in the 2016 EIA, unfortunately, this type of detailed georeferenced information was not provided by Piikani Nation in the public report.
EIS Review [162]	Consultation	Piikani Nation requests that Benga discusses how the landform modelling done for the EIA was formed by TEK. Piikani Nation also requests that Benga discusses how changes to the landscape will affect Piikani Nation's use and enjoyment of the land in and around the Project area.	Application	Response	Use of TK Information	Information from the Piikani Nation TK report has been incorporated into the conceptual Conservation and Reclamation Plan filed with the integrated application in August 2016. Specifically terrain and habitat for traditionally important wildlife and conditions for growing traditionally important vegetation have been considered. As the filed plan is conceptual only, Benga will be developing it further after detailed engineering is completed. Piikani Nation will be extensively consulted on the final plan.
EIS Review [164]	Consultation	Piikani Nation requests that Benga works with Piikani Nation to identify culturally appropriate mitigation measures, flagging at 1000 m for off-site infrastructure (e.g., roads) and seeking protective notations for key sites that can be protected.	Application	Response Agreement	Historical and Cultural Resources	Sites of cultural and sacred importance within 100 m of project activity that are identified by Piikani Nation will be flagged prior to construction. Benga agrees to work with Piikani Nation to identify culturally appropriate mitigation measures and further discuss any issues or concerns regarding any key sites. Benga would like to better understand which key sites are of importance to Piikani Nation that would require further mitigation.

## Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [165]	Consultation	<p>Piikani Nation requests that Benga fulfills the following ToR requirements prior to the application being deemed complete:</p> <ul style="list-style-type: none"> <li>i) provides maps of current uses of traditional resources (it is recommended that this is based on land capability potential for these resources);</li> <li>ii) provides a map clearly indicating land and travel routes;</li> <li>iii) provide a map of culturally important areas, including sites (this can be in a polygon format to protect Piikani Nation's intellectual property);</li> <li>iv) provides a description of use to accompany these maps;</li> <li>v) discusses the availability of vegetation, fish and wildlife species for food, traditional, medicinal and cultural purposes in the identified traditional land and water use areas considering all Project related impacts;</li> <li>vi) discusses access to traditional lands and waters in the Project Area during all stages of the Project broken down by pre-construction, construction, operation, decommissioning and post-reclamation;</li> <li>vii) incorporates Piikani Nation's views on monitoring and reclamation specific to each plan (e.g., water quality, wildlife, reclamation); and</li> <li>viii) describes how TEK and TLU information was integrated into the Project's design and development, technical components of the EIA, the Conservation and Reclamation Plan, monitoring and mitigation plans.</li> </ul>	Application	Response Regulatory	Use of TK Information	A 2016 EIA was filed on August 2016 addressing these issues. Piikani Nation has not provided information regarding location of land and travel routes, location of culturally important areas, or identification of traditional resource areas. The information provided in the Piikani Nation TK report including an overview map was included in the assessment. Piikani Nation views on monitoring and reclamation are included in the application where Piikani Nation provided input. Benga welcomes any additional input.
EIS Review [168]	Consultation	<p>Piikani Nation requests that Benga integrates the information from the Report on Piikani Health and Socio-economic Conditions into the EIA, as Benga indicated this was not done due to timing issues. As well, Piikani Nation requests that Benga explains why information related to land use in this report was not carried over to other sections of the EIA, including a clear indication that the mitigation measures listed in the Piikani Health and Socio-economic Conditions would be implemented.</p>	Application	Response Regulatory	Environmental Assessment – Socio-economic Assessment	Benga has incorporate the Piikani Nation Health and Socio-economic study into the 2016 EIA in Volume 2, Section H.4.3.4.
EIS Review [170]	Consultation	<p>Piikani Nation requests that Benga provides a discussion on the monitoring, or baseline field data collection, that was done for the EIA that included Piikani Nation members. Piikani Nation also requests that Benga discusses how Piikani Nation members will have opportunities to have input into monitoring plans and opportunities to participate in the delivery of monitoring programs for this monitoring plan undertaken during construction, operation and closure and reclamation.</p>	Post-Application	Response	Environmental Assessment – Monitoring	Benga will provide draft management plans and monitoring plans to the Piikani Nation for their review and input.
EIS Review [171]	Consultation	<p>Piikani Nation requests that Benga provides a summary of the changes that have been made to the Project since it was originally proposed that benefits Aboriginal peoples in general and Piikani Nation specifically.</p>	Application	Response	CEAA EIS Guidelines	The Project has evolved significantly since it was originally conceived and the current Project is obviously much improved due to the input from many directions including from the Piikani Nation. To a large extent, there is broad alignment amongst Benga, the regulators, and the aboriginal community that protection of the environment is paramount. Benga has worked intensively to propose a project, represented by the integrated application that meets expectations of all stakeholders and rights holders. Going forward, Benga will continue to consult with Piikani Nation on key management plans and Conservation and Reclamation Plans to ensure that the project implementation benefits from traditional input.

## Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [183]	Consultation	Piikani Nation requests that Benga, in the Project Update, discusses the changes made to the Project design and implementation directly as a result of discussions with Aboriginal groups. Further, Piikani Nation requests that the regulators require this information prior to deeming the application complete.	Application	Response Regulatory	Use of TK Information	The Project has evolved significantly since it was originally conceived and the current Project is obviously much improved due to the input from many directions including from the Piikani Nation. To a large extent, there is broad alignment amongst Benga, the regulators, and the Aboriginal community that protection of the environment is paramount. Benga has worked intensively to propose a project, represented by the integrated application that meets expectations of all stakeholders and rights holders. Going forward, Benga will continue to consult with Piikani Nation on key management plans and Conservation and Reclamation Plans to ensure that the project implementation benefits from traditional input.
EIS Review [184]	Consultation	Piikani Nation requests that Benga, in the Project Update, includes within each discipline, a discussion of how Aboriginal traditional knowledge, including any additional TK collected since the filing of the application, was incorporated into the environmental effects assessment (including baseline conditions and effects analysis for VCs) and then updates the effects analysis of potential adverse impacts on potential or established Aboriginal or Treaty rights and related mitigation measures based on those changes.	Application	Response Regulatory	Use of TK Information	The 2016 EIA includes additional discussion of how TK is incorporated into the assessment in Volume 2, Section H. The Piikani Nation Traditional Land Use report is currently the main source of Piikani Nation TK information. Benga will continue to consult with Piikani Nation as more detailed plans are developed for wildlife management, access management, Conservation and Reclamation Planning and environmental monitoring through the regulatory process and detailed design.
EIS Review [185]	Consultation	Piikani Nation requests that Benga continues to work with Piikani Nation to ensure all issues and concerns raised are documented and responded to and that this information is provided in the update filing for the Project.	Application	Response Regulatory	Aboriginal Engagement	Benga has developed tables that document all of the issues raised by the Piikani Nation and a record of responses from Benga and the Piikani Nations views on the responses. These will continue to form part of the ongoing discussions between the Piikani Nation and Benga.
EIS Review [187]	Consultation	Piikani Nation requests that Benga continues to work with Piikani Nation to document uses and sites in the LSA and RSA, understanding that the information provided will serve to describe baselines and will be used for assessment and mitigation development purposes. Further, Piikani Nation requests that Benga includes any new information in the Project Update.	Application	Response Regulatory	Use of TK Information	Benga has provided base maps and resources to Piikani Nation for the purposes of mapping culturally important sites in the project area and is awaiting the geographic information about these sites so that they can be considered with respect to the project in the detailed engineering phase.
EIS Review [188]	Consultation	Piikani Nation requests that Benga works with Piikani Nation to identify Piikani Nation's commercial and recreational use in the LSA and RSA and includes this information in the Project Update. Further, Piikani Nation requests that the regulators require this information before deeming the application complete.	Application	Response Regulatory	Use of TK Information	Benga has included the Piikani Nation TK/TU report in the application and has used the information it contains as well as information brought forward through consultation in the application.
EIS Review [192]	Consultation	Piikani Nation requests that Benga works with Piikani Nation to fill in any gaps on Piikani Nation land uses and sites for traditional and cultural purposes, including water uses and including for the RSA.	Application	Response Agreement	Use of TK Information	Benga and Piikani Nation have entered into a Relationship Agreement that provides for an ongoing dialogue and cooperation on these issues.
EIS Review [194]	Consultation	Piikani Nation requests that Benga integrates the findings of the Report on Piikani Health and Socio-economic Conditions into the Project Update.	Application	Response Regulatory	Aboriginal Engagement	The Piikani Nation specific Socio-Economic Impact Assessment was discussed in the 2016 EIA in Volume 2 Section H.
EIS Review [206]	Consultation	Piikani Nation requests that Benga works with Piikani Nation to address all identified issues, concerns and proposed mitigations resulting from Piikani Nation's review of the EIS and SEIA and additional work related to TLU	Post-Application	Response Agreement	Aboriginal Engagement	Agreed. Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for issues discussion on a regular basis. Benga is working through all the issues and proposed mitigations resulting from the review of the EIA and TU.

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [208]	Consultation	Piikani Nation requests that Benga reassesses the effects to Piikani Nation, for all VCs (including trapping and fishing), and includes all required information to support its conclusions (i.e., using guidelines/standards, descriptions of effects, levels of uncertainty with regard to effects predictions and all assumptions made in the assessment of effects to Piikani Nation). Further, Piikani Nation requests that assessment is completed prior to deeming the application complete.	Application	Response Regulatory	Aboriginal Engagement	<p>Culturally important species identified in the Piikani Nation TK/TU reports and through consultation informed the selection of Valued Components for the vegetation and wildlife assessment sections. The methods and criteria for the selection of vegetation Valued Components is provided in the Consultant Report #8, Section 2.4.2. The criteria and rationale for the selection of wildlife Valued Components is provided in the Consultant Report #9, Section 3.2.3.</p> <p>The identification of potential effects to Piikani Nation is based on information provided during Aboriginal consultation, such as known traditional use in the mine permit boundary and the identified Project activities during construction, operations and reclamation phases. The views and perspectives of Piikani Nation were included in the selection of Aboriginal group specific Valued Components, the identification of potential effects, and in the assessment of potential effects on Valued Components were included. The assessment of potential effects on Piikani Nation specific Valued Components is provided in Sections H.4.</p>
EIS Review [209]	Consultation	Piikani Nation requests that Benga, in the upcoming Project Update, completes the classification of effects for Socio-economic conditions in Section 4.5.3.	Application	Response Regulatory	Aboriginal Engagement	The Piikani Nation specific Socio-Economic Impact Assessment was discussed in the integrated application in Volume 2 Section H.
EIS Review [211]	Consultation	Piikani Nation requests that Benga provides a discussion on mitigation and follow up measures specific to Piikani Nation's interests, uses and places. Piikani Nation also requests that Benga discusses how Piikani Nation members will have opportunities to have input into monitoring plans and opportunities to participate in the delivery of monitoring programs to be undertaken during construction, operation and closure and reclamation.	Application	Response Agreement	Aboriginal Engagement	Benga has been discussing mitigation and follow up with the Piikani Nation. The Piikani Nation will have the opportunity to review and provide input into monitoring plans throughout the project.
EIS Review [212]	Consultation	Piikani Nation requests that Benga provides a list of all VCs, or key indicators, assessed along with a rationale for selecting or not selecting VCs for any particular assessment discipline. Piikani Nation also requests that Benga includes how each VC selection was made (e.g., regulatory requirement, Aboriginal VC, industry or professional guidance). Piikani Nation requests that the regulators require this information prior to deeming the application complete.	Application	Response Regulatory	Aboriginal Valued Components	<p>Culturally important species identified in the Piikani Nation TK/TU reports and through consultation informed the selection of Valued Components for the vegetation and wildlife assessment sections. The methods and criteria for the selection of vegetation Valued Components is provided in the Consultant Report #8, Section 2.4.2. The criteria and rationale for the selection of wildlife Valued Components is provided in the Consultant Report #9, Section 3.2.3.</p> <p>The identification of potential effects to Piikani Nation is based on information provided during Aboriginal consultation, such as known traditional use in the mine permit boundary and the identified Project activities during construction, operations and reclamation phases. The views and perspectives of Piikani Nation were included in the selection of Aboriginal group specific Valued Components, the identification of potential effects, and in the assessment of potential effects on Valued Components were included. The assessment of potential effects on Piikani Nation specific Valued Components is provided in Sections H.4.</p>
EIS Review [213]	Consultation	Piikani Nation requests that Benga provides a discussion of how Piikani Nation input, through consultation and Project-specific studies, was used in determining Valued Components for each discipline and for determining Aboriginal Valued Components. Piikani Nation requests that Benga provides a rationale for those key resources and uses that were not included as VCs. Further, Piikani Nation requests that this information is provided prior to the application being deemed complete.	Application	Response Regulatory	Aboriginal Valued Components	<p>Culturally important species identified in the Piikani Nation TK/TU reports and through consultation informed the selection of Valued Components for the vegetation and wildlife assessment sections. The methods and criteria for the selection of vegetation Valued Components is provided in the Consultant Report #8, Section 2.4.2. The criteria and rationale for the selection of wildlife Valued Components is provided in the Consultant Report #9, Section 3.2.3.</p> <p>The identification of potential effects to Piikani Nation is based on information provided during Aboriginal consultation, such as known traditional use in the mine permit boundary and the identified Project activities during construction, operations and reclamation phases. The views and perspectives of Piikani Nation were included in the selection of Aboriginal group specific Valued Components, the identification of potential effects, and in the assessment of potential effects on Valued Components were included. The assessment of potential effects on Piikani Nation specific Valued Components is provided in Sections H.4.</p>

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [214]	Consultation	Piikani Nation requests the Benga provides Piikani Nation and the regulators with a comprehensive list of all associated VCs or other associated elements assessed and includes a discussion on: i) the linkage between the Aboriginal Valued Component and the potential Project effect; ii) how Piikani Nation concerns or TK were integrated into the VC or element assessment; and iii) the applicability of the relevant mitigation measures and follow-up programs to the Aboriginal Valued Component.	Application	Response Regulatory	Aboriginal Valued Components	Culturally important species identified in the Piikani Nation TK/TU reports and through consultation informed the selection of Valued Components for the vegetation and wildlife assessment sections. The methods and criteria for the selection of vegetation Valued Components is provided in the Consultant Report #8, Section 2.4.2. The criteria and rationale for the selection of wildlife Valued Components is provided in the Consultant Report #9, Section 3.2.3.  The identification of potential effects to Piikani Nation is based on information provided during Aboriginal consultation, such as known traditional use in the mine permit boundary and the identified Project activities during construction, operations and reclamation phases. The views and perspectives of Piikani Nation were included in the selection of Aboriginal group specific Valued Components, the identification of potential effects, and in the assessment of potential effects on Valued Components were included. The assessment of potential effects on Piikani Nation specific Valued Components is provided in Sections H.4.
EIS Review [215]	Consultation	Piikani Nation requests that Benga includes key resources, uses and places identified by Piikani Nation in Project management, mitigation and monitoring plans. Piikani Nation also requests that Benga consults with Piikani Nation on developing these plans including the provision of opportunities for Piikani Nation members to participate in their implementation.	Post-Application	Response Agreement	Aboriginal Valued Components	A 2016 EIA was filed on August 2016 addressing these issues. Piikani Nation has not provided information regarding location of land and travel routes, location of culturally important areas, or identification of traditional resource areas. The information provided in the Piikani Nation TK report including an overview map was included in the assessment. Piikani Nation views on monitoring and reclamation are included in the application where Piikani Nation provided input. Benga welcomes any additional input.
EIS Review [216]	Consultation	Piikani Nation requests that Benga discusses how Piikani Nation input influenced, if at all, the determination of both the Project's spatial (LSA and RSA) and temporal (i.e., 41 years) boundaries. Piikani Nation also requests that Benga explains how the temporal scale of 41 years ensures that by that time reclamation will have re-established resources for traditional use of those resources. Further, Piikani Nation requests that this information is provided prior to the application being deemed complete.	Application	Response Regulatory	Use of TK Information	The methodology for determining spatial and temporal assessment boundaries for the project studies is described in Volume 1, Section D.2.4.3. The establishment of assessment boundaries for each discipline studied represented a compromise involving limitations such as economic realities and the temporal and spatial scales over which natural systems operate. As such, input from the Piikani Nation was not a significant factor in their determination. The temporal scale of 41 years is comprised of the project life of 24 years plus an estimated time for re-establishment of natural and sustaining ecosystems. Benga is fully responsible for ensuring that reclamation achieves its objectives even if the time required is longer than this estimate.
EIS Review [217]	Consultation	Piikani Nation requests that Benga discusses how Piikani Nation's input influenced, if at all, the determination of the LSA and RSA for the assessment of effects to Aboriginal people. Further, Piikani Nation requests that Benga revises the LSA to include all associated VC LSA's in the Project Update including any additional input that Piikani Nation might have to the LSA and RSA based on TK and TLU information. Furthermore, Piikani Nation requests that the regulators require this information prior to deeming the application complete.	Application	Response Regulatory	Use of TK Information	Input was requested from Piikani Nation about the Project's spatial and temporal boundaries, but feedback regarding boundaries was not received. Figure 3.2-1 in the Piikani Nation TK report identifies areas of use that are all located within the Local Study Area (LSA) selected for the 2016 EIA. The LSA selected is the area of direct disturbance by construction activities such as the open pit mine, coal handling and processing plant, overland conveyor and train load-out facility, and associated infrastructure (e.g., rail system, equipment and explosives storage facilities, fueling station, water management structures, construction camp, coal conveyor and powerline, access roads).
EIS Review [219]	Consultation	Piikani Nation requests that Benga includes a pre-development case and an existing case in the Project Update for the assessment of all disciplines important to Aboriginal peoples.	Application	Response Regulatory	Aboriginal Valued Components	Benga is not able to provide data on a pre-development case which it understands to be the situation that existed on the site prior to the historical mining works.
EIS Review [221]	Consultation	Piikani Nation requests that Benga explains how the mitigation measures selected for each VC met Aboriginal community acceptance during the Project's routine planning or design, construction, operation or abandonment phases. Further, Piikani Nation requests that this information is provided prior to the application being deemed complete.	Post-Application	Response Regulatory	Assessment Approach	Proposed mitigation measures have been provided to the Piikani Nation both through the 2016 EIA and as a separate summary document. Benga will be developing management plans as the project progresses through detailed engineering. These more detailed plans will be discussed with Piikani Nation at the appropriate time.

## Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [223]	Consultation	Piikani Nation requests that Benga resubmits the EIA with the assessment to Traditional Land Use provided as a distinct section of the EIA, using proven methods for the assessment, including a summary of effects in Section E along with all other biophysical and human environment assessments. Further, Piikani Nation requests that the regulators require this be done prior to the application being deemed complete.	Application	Response Regulatory	Assessment Approach for Effects on Aboriginal People	The 2016 EIA does present this as a separate section, Section H.
EIS Review [224]	Consultation	Piikani Nation requests that Benga works with Piikani Nation to undertake a community-led traditional land use study that allows for collecting information to form the assessment requirements and that can therefore lead to evaluating the significance of potential Project effects on Piikani Nation resource use for traditional purposes and cultural heritage. Further, Piikani Nation requests that this information is required; hence determining significance.	Application	Response Agreement Regulatory	Evaluating Significance for Effects on Aboriginal People	Benga has worked with Piikani Nation to scope, conduct and implement a TK/TU study. The TK/TU report was incorporated in the EIA filed in August 2016.
EIS Review [225]	Integration of Traditional and Cultural Use Information	Piikani Nation requests that Benga discusses how Piikani Nation's TEK and traditional use information formed each biophysical and human environment assessment, how it was collected for the RSA, how the information was used by each of the disciplines in their assessment, and how it informed approaches to avoid, mitigate or manage potential impacts to Treaty rights and traditional uses (including monitoring plans). Further, Piikani Nation requests that, for the forthcoming Project Update, each biophysical and human environment assessment considers this information and clearly discusses its integration.	Application	Response / Response Regulatory	Use of TK Information	The 2016 EIA includes additional discussion of how TK is incorporated into the assessment in Volume 2, Section H. The Piikani Nation Traditional Land Use report is currently the main source of Piikani Nation TK information. Benga will continue to consult with Piikani Nation as more detailed plans are developed for wildlife management, access management, Conservation and Reclamation Planning and environmental monitoring through the regulatory process and detailed design.
EIS Review [227]	Consultation	Piikani Nation requests that Benga discusses how issues of concern to Piikani Nation and its traditional and contemporary land uses have been used in Project planning and site selection.	Application	Response Regulatory	Use of TK Information	The 2016 EIA includes additional discussion of how TK is incorporated into the assessment in Volume 2, Section H. The Piikani Nation Traditional Land Use report is currently the main source of Piikani Nation TK information. Benga will continue to consult with Piikani Nation as more detailed plans are developed for wildlife management, access management, Conservation and Reclamation Planning and environmental monitoring through the regulatory process and detailed design. Available TK information will be considered in developing and refining mitigation measures, and will be considered for management and plans.
EIS Review [232]	Consultation	Piikani Nation requests that Benga, in collaboration with Piikani Nation, develops Project-specific triggers and limits for the Project's mitigation, management and monitoring plans that reflect Community TEK and ecological and cultural values.	Post-Application	Response Agreement	Traditional Land Use and Traditional Knowledge Use	Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for providing feedback on mitigations as well as management and monitoring plans on a regular basis.
EIS Review [234]	Consultation	Piikani Nation requests that Benga describes how traditional knowledge from previous studies, such as the Old Man River Dam and the Weasel Valley Water Use Study were considered in the assessment. Further, Piikani Nation requests that this discussion is provided in the upcoming Project Update.	Application	Response Regulatory	Use of TK Information	These previous studies were not specifically used or considered by Benga except insofar as the information was used as reference for the Piikani Nation TK/TU report.
EIS Review [245]	Consultation	Piikani Nation requests that Benga discusses how Piikani Nation's traditional and cultural use information and concerns and issues expressed during consultation formed the Project assessment with regard to effects to visual aesthetics and Piikani Nation's feelings of solitude and remoteness to practice traditional and cultural pursuits in the Project vicinity.	Application	Response	Use of TK Information	Benga has incorporated the traditional and cultural information and concerns raised to date by the Piikani Nation into the EIA. Benga welcomes information about the Piikani Nation's views on concerns and issues surrounding the visual aesthetics.

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [247]	Consultation	Piikani Nation requests that Benga discusses with Piikani Nation strategies to minimize the Project's visible impacts.	Application	Response Agreement	Visual Aesthetics	Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing visible impact management on a regular basis.
EIS Review [257]	Consultation	Piikani Nation requests that Benga develops, in consultation with Piikani Nation, a planned and unplanned event protocol to ensure that the community is informed about events that have the potential to affect traditional land users or the resources upon which they depend.	Post-Application	Response Agreement	Human Health and Safety	Agreed.  Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing planned and unplanned events on a regular basis.
EIS Review [313]	Consultation	Piikani Nation requests that Benga discusses how Piikani Nation's traditional and cultural use information and concerns and issues expressed during consultation formed the land and resource use assessment including how the land and resource use assessment accounted for culturally important big game, game bird and furbearer's species.	Application	Response	Use of TK Information	The following is an excerpt from the Conservation and Reclamation Plan Volume 1 F.1.9:  Elders and technicians provided input on the key issues, themes, observations, wisdom, insights, traditional knowledge and land use through a series of site visits, workshops, meetings, and other communication events. Recommendations and ideas expressed to date by Aboriginal Groups that are relevant to conservation and Conservation and Reclamation Planning include:  <ul style="list-style-type: none"> <li>• protect and harvest lodgepole pines and other plants of interest on a regular and ongoing basis;</li> <li>• make efforts to relocate trees from areas of development for use on the reserves;</li> <li>• protect and monitor water;</li> <li>• impose no-go buffers around sacred sites of 100 m;</li> <li>• maintain habitat for wildlife, including eagles nests;</li> <li>• ensure that effective reclamation involves reforestation of evergreen species to outcompete weeds;</li> <li>• ensure efforts for research focus specifically in areas that have not been disturbed;</li> <li>• provide adequate funding for ongoing project involvement and costs associated with indigenous traditional environmental monitoring and harvesting vegetation throughout the Project;</li> <li>• annual project review with Benga for the life of the Project;</li> <li>• have an emergency preparedness plan in the event of leaks, spills or other disasters to address concerns regarding water quality and species dependent on clean water resources;</li> <li>• ensure new areas of development encompass previously disturbed areas; and</li> <li>• consider socio-economic effects of the proposed Project.</li> </ul> <p>Various traditional land uses objectives were also identified in the reports and incorporated into the conceptual Conservation and Reclamation Plan.</p>
EIS Review [319]	Consultation	Piikani Nation requests that Benga discusses how Piikani Nation's traditional and cultural use information and concerns and issues expressed during consultation formed the socio-economic assessment.	Application	Response	Use of TK Information	Any input that was provided by Piikani Nation during consultation regarding potential impacts to socio-economic conditions was reported in the 2016 EIA. Input related to the identification of effects and proposed mitigation measures was also included (Table H.4.4-4). Concerns and issues related to socio-economic conditions are documented and responded to in the 2016 EIA (Table H.4.4-4).
EIS Review [325]	Consultation	Piikani Nation requests that Benga discusses how Piikani Nation's traditional and cultural use information and concerns and issues expressed during consultation formed the cumulative effects (PDC) assessments for each biophysical and human environment.	Application	Response	Use of TK Information	Existing, approved, and planned projects and activities in the region considered in the assessment are listed in Table D.2.4-2 and are shown relative to Piikani Nation Traditional Territory on Figure H.4.1-2. Local and Regional Study Areas vary in size for each of the Valued Components, as discussed in Section D.2.4-3. The project list provided in Table D.2.4-2 was generated to capture all projects found within the largest RSA (i.e., wildlife RSA). As can be seen on Figure D.2.4-3, most of the disciplines are not affected by other planned projects and consequently the cumulative effects case or the planned development case is the same as the Application Case.

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [1]	Dust and Air	Piikani Nation requests that Benga comments on the representativeness of the background NO <sub>x</sub> , SO <sub>2</sub> , CO, PM <sub>2.5</sub> , and PM <sub>10</sub> levels as taken from the Lethbridge and Nelson Kutenai air quality stations.	Application	Response	Background Air Quality Data	<p>Air contaminant concentrations measured in the region, and considered to reasonably represent background conditions in the Project area, are summarized in Volume 4, Consultant Report #1a, Table 3.1-1. The Devon Coleman station is located within the RSA, with the remaining stations located outside the modelling domain (Figure 2.3-1). The Devon station operated until October 2012. The Castlegar B.C. Zinio Place, Nelson B.C. Kutenai Place and Lethbridge stations are located approximately 195 km southwest, 225 km southwest and 100 km east of the Project, respectively. The Castlegar station is located within the primarily residential area of Castlegar, with air quality influenced by two pulp mills. The Nelson station is in a residential area of Nelson, with no industrial sources nearby. The Lethbridge station is positioned in the northwestern part of the city, surrounded mainly by food and agricultural processing facilities.</p> <p>SO<sub>2</sub> measurements in Castlegar are higher than the two Alberta stations, potentially due to nearby industrial emissions. Maximum daily and 30-day concentrations were 10 times higher than measurements at Lethbridge and Devon Coleman, and both exceed Alberta ambient air quality objectives (AAAQOs). At Lethbridge, the 1-hour maximum O<sub>3</sub> values exceeded the AAAQO of 160 µg/m<sup>3</sup> once in the five year period. This O<sub>3</sub> exceedance occurred in September 2015.</p> <p>No exceedances of either the NO<sub>x</sub> or CO AAAQO were measured in the region. Maximum daily particulate (PM<sub>2.5</sub> and PM<sub>10</sub>) values were high at all stations as the data reported includes measurements during periods of forest fire activity. The exceedances due to fire activity are summarized in Appendix C.</p> <p>The ambient measurements which were used as background values are presented in Table 4.4-1. The Lethbridge air quality monitoring station was chosen based on its proximity to the Project and because it measures most parameters of interest. The Nelson station is expected to be representative of rural concentrations of PM<sub>2.5</sub> and PM<sub>10</sub> distant from the mine location.</p>
EIS Review [2]	Dust and Air	Piikani Nation requests that Benga clarifies whether mine fleet emissions will meet Tier 4 standards at mine commissioning, or if the existing fleet is to be progressively replaced or retrofitted to meet Tier 4 standards.	Application	Response	Mine Fleet Emission Standards	All mining vehicles purchased for the project will meet Tier 4 standards.
EIS Review [4]	Dust and Air	Piikani Nation requests that Benga provides a rationale of its magnitude and significance ratings for air-related parameters. Further, Piikani Nation requests that Benga revises its ratings, adopting a more reasonable approach in line with 'keeping clean areas clean', as was adopted in the Imperial Aspen SAGD Project.	Application	Response Regulatory	Magnitude and Significance Evaluation	The rating system for magnitude is based on common practice used for most air quality studies performed for energy projects in Alberta and Benga has chosen to use this system for ease of understanding and consistency. In the case of PM <sub>2.5</sub> and total suspended particulate (TSP), which are both measurements of particles or dust in the air, concentrations were found to be high within the project area but similar to levels found in the Town of Blairmore near the permit boundary. These concentrations are also found to be temporary as they only occur during the project operation and return to previous levels when mining is complete. Therefore the finding of not significant is justified.
EIS Review [5]	Dust and Air	Piikani Nation requests that Benga clarifies if receptor sites 9, 10, 11 are special receptor sites previously identified by Piikani Nation members as locations of TLU/TK significance.	Application	Response	Piikani Nation Special Receptor Sites	Two of these receptor sites are neighboring landowners and the third is a hypothetical Aboriginal receptor. The Piikani Nation sites are not included as receptors.
EIS Review [8]	Dust and Air	Piikani Nation requests that Benga provides justification for applying a TSP emission factor taken from a dated Environment Australia report, as opposed to the most recent edition of the same report or AP-42 11.9, consistent with estimates for other aspects of fugitive dust emissions.	Application	Response Regulatory	Blasting	<p>The total suspended particulate (TSP) emissions from blasting were calculated using an approach and the equations developed by Environment Australia as they reflect recent practices in blasting (Roy, S., Adhikari G.R., and Singh T.N. 2010. Development of Emission Factors for Quantification of Blasting Dust at Surface Coal Mines. Journal of Environmental Protection).</p> <p>The Roy et al. (2010) equation was used in the current assessment as it includes moisture and blast-hole depth dependences and both of these variables are known for the proposed coal mining operation, presumably leading to a more accurate emission estimate.</p> <p>A more detailed discussion can be found in Consultant Report #1a, Section A.4.1.2 from Volume 4 of the application.</p>

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [9]	Dust and Air	Piikani Nation requests that Benga provides a summary of emission estimate discount factors, along with a scientific rationale for the respective degree of reductions assigned. Piikani Nation requests that this information is provided in the forthcoming Project Update.	Application	Response Regulatory	Emissions Discounting Factor	Volume 4, Consultant Report #1a, Section A4.12 contains a Summary of Emission Reduction Factors in tabular format. This section summarizes the emission reduction factors assumed in modelling in table form for ease of review. It also identifies other factors that could have been applied, or that have been applied in other coal mine modelling exercises, but were not applied in this assessment.
EIS Review [10]	Dust and Air	Piikani Nation requests that Benga explains why it did not consider the potential additive effects of odourants in its assessment of the potential for the Project to result in offsite odours. Piikani Nation requests that Benga assesses the potential additive effects of odourants in the forthcoming Project Update. Further, Piikani Nation requests that this information is provided prior to the application being deemed complete.	Application	Response Regulatory	Odour Assessment	Odour detection potential is discussed in Volume 4, Consultant Report #1a, Section 5.12.2.2 and uses an additive odour approach. In this approach, the sum of the concentration of each constituent divided by the odour detection threshold is determined. A sum greater than one indicates a potential for odour detection. This approach is conservative because it considers only positive synergistic effects, not potential masking effects.  Odour detection thresholds refer to the levels at which half a population can just detect an odour. The assessment indicates that odours may be "detected" near the permit boundary mostly in conjunction with blasting. The levels indicated do not approach a nuisance threshold.
EIS Review [12]	Dust and Air	Piikani Nation requests that Benga provides an assessment of the potential for VOC releases associated with mine fleet fueling operations (and the measures being taken to minimize such emissions), and the type and approximate amounts of trace gas emissions that might be associated with using ammonium nitrate/fuel oil for blasting.	Application	Response Regulatory	Other Gaseous Emissions	Section 5.2 of the Environmental Protection Agency's publication AP-42 provides guidance for the calculation of volatile organic compound (VOC) emissions for refueling of gasoline vehicles. VOC emissions are primarily dependent on fuel Reid vapour pressure which for gasoline is about 9 psi while for diesel it is more commonly 0.3 psi. Using the approach from AP-42, Benga estimates that refueling contribution to VOC is at least an order of magnitude lower than from combustion and therefore not significant to the analysis. Management of VOC emissions from refueling will largely be related to implementing measures to reduce spillage which is a significant contributor to refueling VOC emissions.  Environment Canada (2009)* considers VOC and other trace gas emissions from blasting to be negligible, and particulate emissions from ANFO to be included in those from the rock material shattering.  * Environment Canada (EC). 2009. Pits and Quarries Guidance. <a href="http://www.ec.gc.ca/inrp-npri/default.asp?lang=en&amp;n=A9C1EE34-1#s8_8">http://www.ec.gc.ca/inrp-npri/default.asp?lang=en&amp;n=A9C1EE34-1#s8_8</a>
EIS Review [13]	Dust and Air	Piikani Nation requests that Benga provides additional details on the dust control options it considered, and justification for the proposed dust mitigation measures representing best practice.	Application	Response Regulatory	Dust	Benga has incorporated a number of dust control measures into the Project that result in predicted dust (TSP) at the project boundary to be similar or less than conditions currently within the Town of Blairmore. Some of the mitigations measures include: <ul style="list-style-type: none"> <li>• water is systematically applied to haul roads and to the plant access road to minimize dust using a water truck dedicated to this purpose. An emission control efficiency of 80% during the summer months is expected from this measure;</li> <li>• snow cover is retained on the road as a mitigative measure during the winter months, unless the cover would compromise the safety of vehicle operations. Winter ground is frozen and, since the soil and overburden have elevated moisture contents, there is a reduction of dust emissions at that time;</li> <li>• gravel or crushed rock is used on the haul roads. Gravel is observed to produce less dust than clay and sandy surfaces;</li> <li>• use of a grader to maintain the active surface of the road. This procedure is expected to reduce the effective silt content of the portion of the road where the wheels of the haul trucks travel. The grader blade would tend to move the silt particles to the inactive portion (side) of the road;</li> <li>• the mined areas are reclaimed promptly and backfilled with overburden and soil from prestrip areas and then covered by vegetation, which reduces windblown fugitive dust emissions from the barren land;</li> <li>• trees and bushes will be preserved around mines and plant, effectively trapping dust emissions from mining activities and reducing dust concentrations further from mining activities;</li> <li>• the coal processing plant will be contained within an enclosed area and all coal material handling will be via covered conveyors;</li> <li>• dust generation from transferring coal from the conveyor to the stock pile will be minimized by the use of luffing stackers (those that can lower and raise their boom) which will minimize the drop height and drop time of the coal.</li> </ul>

## Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [15]	Dust and Air	Piikani Nation requests that Benga consults with Piikani Nation as a stakeholder in Benga's dust management plan development and execution, particularly in aspects related to complaint reporting and resolution protocol to address issues related to dust.	Post-Application	Response Agreement Regulatory	Management Plans	<p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for reviewing dust concerns regularly.</p> <p>Specific concerns related to dust may be dealt with through Piikani Nation's input into the monitoring program and the environmental management plans. Benga is beginning to develop monitoring plans and will continue to work with Piikani Nation to identify ways in which community members can contribute to and participate in monitoring. Benga plans to hold a workshop with Piikani Nation 3 to 6 months prior to the start of construction to request further input on the Environmental Management Plans including the Dust Management Plan.</p>
EIS Review [18]	Dust and Air	Piikani Nation requests that Benga clarifies whether mine fleet emissions will meet Tier 4 standards at mine commissioning, or if existing fleet is to be progressively replaced or retrofitted to meet Tier 4 standards. A commitment should be obtained from Benga to purchase the lowest emitting mine vehicles commercially available and to consider possible retrofit NOX emission controls on its large haul trucks.	Application	Response Agreement Regulatory	Mine Fleet Emissions Management	<p>All mining vehicles purchased for the project will meet Tier 4 standards. As technology improves in the future, and better vehicles are available on the market, Benga will purchase lower emission vehicles where mine fleet replacements or additions are required.</p>
EIS Review [20]	Dust and Air	Piikani Nation, as a community that has the potential to be significantly affected by the Project's air quality effects, requests to be consulted in developing, executing, and future modification to the air quality monitoring program. In addition to local air sampling, which should include a follow-up component to verify initial (EIA) emission estimates and emission reduction factors, the community expects such a monitoring program to incorporate background and regional sampling components to collect benchmarking data for reference by future Project applications should Benga decide to expand its operations to access coal resources outside of the current proposed mine permit boundary.	Post-Application	Response Agreement Regulatory	Management Plans	<p>Benga established an air monitoring program in spring 2016, comprised of passive monitoring of SO<sub>2</sub>, NO<sub>x</sub> and O<sub>3</sub> near the proposed plant site. A network of six dustfall monitoring stations was also implemented, one at the plant site and five in other locations in the communities. Initial monitoring results are provided in Consultant Report #1a, Appendix C. Benga commits to developing a more detailed monitoring program when the mine plan is more advanced than it is now. Benga will provide the draft monitoring plan to Piikani Nation before planned start-up for comments and input.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for sharing air monitoring data and for obtaining community input into the air quality monitoring program on a regular basis.</p>
EIS Review [31]	Dust and Air	Piikani Nation requests that Benga: <ul style="list-style-type: none"> <li>i) uses the available existing data from the nearby Coleman climate station (MSC Station No. 3051720) to confirm the regionally estimated precipitation information (mean annual, mean annual, and extreme conditions) for the Project site;</li> <li>ii) provides a justification of using all 18 regional stations, including prairie and BC records, for developing the IDF curve for the Project site, and describes how the resultant IDF curve compares to nearby IDF curves published by Environment Canada; and</li> <li>iii) that this information is provided prior to the application being deemed complete</li> </ul>	Application	Response Regulatory	Air Quality	<p>All of the stations have elevations between 1200 and 1350 m above sea level, which is lower than the average site elevation. Using these stations alone does not describe the conditions at higher elevations. As there is no meteorological station on the project site, it was necessary to extend the radius to further stations to understand the regional mean annual precipitation associated to average site elevation. Even understanding the farthest station are not representative of the site; however, allows to understand the regional context for precipitation. Benga has installed precipitation monitoring equipment on-site to augment regional data.</p>
EIS Review [122]	Dust and Air	Piikani Nation requests that Benga undertakes air quality monitoring in the vicinity of the completed Project during normal operating conditions and 'worst case' operating conditions and shares the monitoring results with Piikani Nation.	Post-Application	Response Agreement	Air Quality Monitoring	<p>Benga established an air monitoring program in spring 2016, comprised of passive monitoring of SO<sub>2</sub>, NO<sub>x</sub> and O<sub>3</sub> near the proposed plant site. A network of six dustfall monitoring stations was also implemented, one at the plant site and five in other locations in the communities. Initial monitoring results are provided in Consultant Report #1a, Appendix C. Benga commits to developing a more detailed monitoring program when the mine plan is more advanced than it is now. Benga will provide the draft monitoring plan to Piikani Nation before planned start-up for comments and input.</p>

## Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [123]	Dust and Air	Piikani Nation requests that Benga effectively presents air monitoring reporting and interpretation results in relation to humans and wildlife to Piikani Nation on a regular basis during construction, operation and closure.	Post-Application	Response Agreement	Air Quality Monitoring	<p>Benga established an air monitoring program in spring 2016, comprised of passive monitoring of SO<sub>2</sub>, NOX and O<sub>3</sub> near the proposed plant site. A network of six dustfall monitoring stations was also implemented, one at the plant site and five in other locations in the communities. Initial monitoring results are provided in Consultant Report #1a, Appendix C. Benga commits to developing a more detailed monitoring program when the mine plan is more advanced than it is now. Benga will provide the draft monitoring plan to Piikani Nation before planned start-up for comments and input.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for sharing air monitoring data regularly with the community.</p>
EIS Review [127]	Dust and Air	Piikani Nation requests that Benga reviews and provides information around odorous emissions expected from the Project that have the potential to affect environmental quality and the quality of cultural and Traditional Land Use, including the synergistic effects of odourants emitted from the Project. Further, Piikani Nation requests that this information is provided in the upcoming Project Update and prior to the application being deemed complete.	Application	Response Regulatory	Odours	<p>Odour detection potential is discussed in Volume 4, Consultant Report #1a, Section 5.12.2.2 and uses an additive odour approach. In this approach, the sum of the concentration of each constituent divided by the odour detection threshold is determined. A sum greater than one indicates a potential for odour detection. This approach is conservative because it considers only positive synergistic effects, not potential masking effects.</p> <p>Odour detection thresholds refer to the levels at which half a population can just detect an odour. The assessment indicates that odours may be "detected" near the permit boundary mostly in conjunction with blasting. The levels indicated do not approach a nuisance threshold.</p>
EIS Review [129]	Dust and Air	Piikani Nation requests that Benga commits to working with the community to develop mitigation measures to reduce the frequency and intensity of odorous emissions.	Application	Response Agreement	Odours	<p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing odour mitigation on a regular basis.</p>
EIS Review [130]	Dust and Air	Piikani Nation requests that Benga commits to establishing a committee that will respectfully receive complaints concerning odours and explore mitigation.	Application; Post-Application	Response Agreement	Odours	<p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for providing feedback on odour mitigations on a regular basis.</p>
EIS Review [154]	Dust and Air	<p>Piikani Nation requests that Benga assesses the effects of the following on Piikani Nation's use of lands and resources and cultural need for areas that are remote and provide solitude:</p> <ul style="list-style-type: none"> <li>i) air quality, including particulate matter (dust), odours (hydrocarbons, reduced sulphur compounds) and human/ecosystem health-related compounds (TSP, PAC and metals);</li> <li>ii) noise; and</li> <li>iii) visibility, including haze and light as well as overall visual aesthetics.</li> </ul> <p>Further, Piikani Nation requests that regulators require that this assessment is done, including management, mitigation and monitoring to reduce the effects on Piikani Nation's use and enjoyment of land and resources, prior to the application being deemed complete.</p>	Application	Response Regulatory	Environmental Assessment – Air Quality, Climate and Noise	<p>Each of these issues is dealt with directly through other EIS Review Requests. In brief, Benga estimates that the conditions at the Permit Boundary will most resemble those of a small town like Blairmore. In fact issues like odour, dust, noise and light are projected to be similar to conditions in Blairmore today. All of these conditions diminish as one moves away from the mine boundary. All of these conditions are temporary for the life of the mine operation and will cease with mining operations.</p>

## Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [235]	Dust and Air	Piikani Nation requests that Benga discusses how Piikani Nation traditional and cultural use information and concerns and issues expressed during consultation informed the air quality assessment.	Application	Response	Use of TK Information	<p>The Air Quality assessment included an aboriginal receptor as part of the air model which was used for the human health risk assessment.</p> <p>During interviews and workshops conducted for the Piikani Nation socio-economic study, concerns were raised about air and water quality and the potential impact the Project may have on the health of people living downwind and downstream (Piikani Nation 2015a, 2015b) (Section H, Table H.3.8-1 and Appendix 7c). Similar observations were made about the ecological connections between wildlife and plants species and human health (Piikani Nation 2015b).</p> <p>These concerns were specifically tested in the Human Health Risk Assessment which is Consultant Report #12 contained in Volume 7 of the integrated application.</p>
EIS Review [237]	Dust and Air	Piikani Nation requests that Benga discusses whether the predicted Project air quality impacts within the air quality LSA and RSA will be minimized based on the principles of "keeping clean areas clean" and "pollution prevention and minimization" and therefore that air quality changes will be "well below" AAQOs. Further, Piikani Nation requests that this information is provided in the forthcoming Project Update.	Application	Response Regulatory	Air Quality	Based on the air modelling done for the application, Benga predicts that Alberta Ambient Air Quality Objectives will be met for all areas outside of the mine permit boundaries. Benga further plans to implement an air monitoring program to verify that the operation meets or exceeds these expectations. Benga will be sharing the results of the air monitoring program with Piikani Nation and will work towards resolving any complaint about air quality during the life of the project.
EIS Review [238]	Dust and Air	Piikani Nation requests that Benga uses BATEA and best practice to minimize odours and dust resulting from Project activities.	Application	Response Agreement	Air Quality	Based on the air modelling done for the application, Benga predicts that Alberta Ambient Air Quality Objectives will be met for all areas outside of the mine permit boundaries. Benga further plans to implement an air monitoring program to verify that the operation meets or exceeds these expectations. Benga will be sharing the results of the air monitoring program with Piikani Nation and will work towards resolving any complaint about air quality during the life of the project.
EIS Review [239]	Dust and Air	Piikani Nation requests that Benga discusses how the reshaping of Grassy Mountain, once the coal is removed, would affect wind or weather patterns in the area and, if there are changes, discusses how these changes might affect traditional users around Grassy Mountain. Further, Piikani Nation requests that this information is provided prior to deeming the application complete.	Application	Response Regulatory	Air Quality	The changes in topography that will result from the mining operation are not on a scale that could affect weather patterns in the area.
EIS Review [240]	Dust and Air	Piikani Nation requests that Benga discusses in the forthcoming Project Update, the burning management strategies to be used to minimize smoke impact in the Project's vicinity.	Post-Application	Response Regulatory	Air Quality	Agreed, a burning management plan will be required and developed. Benga will review a draft with Piikani Nation prior to the first land clearing/burning is started to gather input.
EIS Review [242]	Dust and Air	Piikani Nation requests that Benga provides Project air monitoring results to Piikani Nation as well as a plain-language summary to be shared with the community on an annual basis.	Post-Application	Response Agreement	Air Quality	<p>Agreed.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for sharing air monitoring data regularly on a regular basis.</p>
EIS Review [243]	Dust and Air	Piikani Nation requests that Benga engages with Piikani Nation and seeks its input to develop a Dust Management Plan, Odour Management Plan and Blasting Management Plan, including a notification and complaint protocol for Piikani Nation community members.	Post-Application	Response Agreement	Air Quality	<p>A blasting management plan will be required and developed. Benga will review a draft with Piikani Nation prior to the first land clearing/burning is started to gather input.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing management plans on a regular basis.</p>

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [244]	Dust and Air	Piikani Nation requests that Benga collaborates with Piikani Nation to develop community-based monitoring plans for dust and odour.	Post-Application	Response Agreement	Air Quality	<p>A blasting management plan will be required and developed. Benga will review a draft with Piikani Nation prior to the first land clearing/burning is started to gather input.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing monitoring plans on a regular basis.</p>
EIS Review [41]	Fisheries	<p>Piikani Nation requests that Benga provides, in the anticipated Project Update, for Blairmore and Gold creeks:</p> <ul style="list-style-type: none"> <li>i) quantification of the anticipated fish habitat that will be lost due to the Project Footprint (lost tributaries), considering flows, lost food supply, effect of climate change, and potential contamination;</li> <li>ii) plans or potential options for more equitably dividing flows between the two rivers so that fish habitat in Gold Creek can be sustained under low flow conditions; and</li> <li>iii) details of the Offset, Recovery Plan and Stewardship Program suggested as mitigation in the assessment.</li> </ul>	Application; Post-Application	Response Agreement Regulatory	Fish	<p>A revised Aquatic Ecology report was filed by Benga in January 2017 which includes results from extensive fish and fish habitat research that was conducted in the project area from 2014 to 2017. As a result, more is known today than ever before about these creeks. This section now contains information to describe:</p> <ul style="list-style-type: none"> <li>• the quality, composition, and distribution of fish habitats throughout the mainstem and tributaries of Gold Creek and Blairmore Creek;</li> <li>• barriers to fish passage;</li> <li>• fish presence, distribution and habitat use (including overwintering and spawning) within the study area to characterize fish species composition, distribution and abundance;</li> <li>• the fluvial geomorphology of the creeks, which included a land use change analysis to characterize recent and current conditions of the Blairmore Creek and Gold Creek watersheds to assess the impacts associated with the alteration of flow regimes; and</li> <li>• the baseline hydrology to support the Instream Flow Assessment for the Project, which was designed to evaluate the potential for flow related effects on westslope cutthroat trout and their habitat.</li> </ul> <p>A preliminary offset recovery plan is also included in Appendix A4 of the addendum.</p>
EIS Review [42]	Fisheries	<p>Piikani Nation requests that Benga</p> <ul style="list-style-type: none"> <li>i) consults with regulators (AEP and DFO), WCT experts (perhaps that were involved in the Recovery Plan design), and Piikani Nation to determine the most appropriate mitigation aimed at protecting critical habitat of this threatened species in the Project area; and</li> <li>ii) describes how it addressed or plans to address the requirements of the DFO Habitat Protection Order.</li> </ul>	Post-Application	Response Agreement Regulatory	Fish	<p>Benga are working with the appropriate fish biologist regulators including Fisheries and Oceans Canada (DFO) to develop appropriate mitigations and offsets for the associated watercourses. Although the fish habitat protection order was not issued at the time of the submission of the 2016 EIA (DFO issued it after the 2016 EIA was submitted), Benga have met with DFO on a number of occasions to discuss the impacts of the Protection Order. The fisheries offset plan will be discussed with Piikani Nation as it being developed and before it is finalized.</p>
EIS Review [44]	Fisheries	<p>Piikani Nation requests that Benga provides an assessment of the potential impact to fish and aquatic habitat that might be caused by using explosives in the vicinity of fish-bearing waters – including the types and weights of explosives, and measures taken to ensure that vibration and noise will not disturb aquatic habitat and fish. Further, Piikani Nation requests that this assessment is completed as part of the forthcoming Project Update.</p>	Application	Response Agreement Regulatory	Blasting	<p>The following is an excerpt from the updated Section 6.3.1.1 contained in the January 2017 addendum:</p> <p>The Project intends to use explosives in the process of mining and this has the potential for creating instantaneous pressure changes (i.e., overpressure) greater than 100 kPa (14.5 psi) in the swim bladder of a fish Wright and Hopky (1998). In addition, vibrations from the detonation of explosives may cause damage to incubating eggs. As well, blasts generate both seismic and surface waves (Rayleigh waves). Benga is committed to developing and using a blasting regime that will meet the blasting guidelines contained in Wright and Hopky (1998). Implementation of mitigation actions is expected to effectively manage and reduce the likelihood and extent of direct mortality to westslope cutthroat trout (WSCT) that inhabit both Gold and Blairmore creek watersheds. Thus, no detectable changes in WSCT relative abundance due to blasting activities, proportional to baseline conditions, is expected. Thus, this pathway was determined to have no linkage to effects on WSCT.</p>
EIS Review [156]	Fisheries	<p>Piikani Nation requests that Benga provides a map of existing fish resources of the lakes, rivers, ephemeral waterbodies and other waters that support Aboriginal uses. Piikani Nation also requests that Benga adds a Table (in CR #6, Section 5.1), similar to Table 3, that identifies watercourses or waterbodies of traditional and current use by Aboriginal groups. Further, Piikani Nation requests that Benga supports Piikani Nation collecting additional information on current and future fisheries in the RSA.</p>	Application	Response Agreement	Environmental Assessment – Aquatic Ecology	<p>This request is out of the project scope. Information included in the application meets the requirements for Project evaluation.</p>

## Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [157]	Fisheries	Piikani Nation requests that Benga discuss the significance of any impacts on water quality and implications to aquatic resources (e.g., biota, biodiversity and habitat) and related implications for Piikani Nation's traditional and current use of these resources. Furthermore, Piikani Nation requests that the regulators require this information prior to deeming the application complete.	Application	Response Regulatory	Environmental Assessment – Aquatic Ecology	<p>Benga has developed a water management strategy that facilitates both the management and use of water for the Project with the intent to prevent any impact to water quality and quantity on aquatic resources.</p> <p>The collection of surface runoff water and the management of pit water are required for the removal of total suspended solids (TSS). The main objective is to control TSS levels to meet wastewater guidelines and objectives. Three sedimentation ponds will be located downstream of the active mining areas during the operating life of the mine to receive and treat dewatering flows for TSS prior to release into Blairmore and Gold Creeks. A fourth sedimentation pond will be located in the vicinity of the processing plant to manage storm water runoff from the plants access roads, the clean coal stockpile, the Mine Infrastructure Area and the run-of-mine pad. Water from the sedimentation ponds is intended to be captured and treated (via settling or flocculant, as necessary) prior to being released. Since the source of the water directed to the sedimentation ponds will be from surface runoff and groundwater interception and will not be exposed to the mining process, it will not require further treatment.</p> <p>Based on the results of geology testing it is expected that selenium concentrations will increase in water that percolates through the external (to the pit) waste rock dumps. This particular volume of water will be directed to the selenium management ponds, which have been strategically located to accept water that will be impacted by the external rock disposal areas. These selenium management ponds will collect water with selenium and nitrate concentrations and pump it to specific zones within the mine pit for treatment. Water exiting these zones will be tested and if suitable, be returned to the environment.</p>
EIS Review [267]	Fisheries	Piikani Nation requests that Benga supports collecting culturally important fish and aquatic species information to be included in the Project Update assessment on aquatic resources.	Application	Response Regulatory	Fish	From 2014 to 2016, Benga has conducted field surveys to quantify the fisheries resources on Gold and Blairmore Creeks and has through these studies contributed significantly to the information base available. Findings can be found in the January 2017 Addendum.
EIS Review [269]	Fisheries	Piikani Nation requests that Benga engages Piikani Nation in developing the Project's conceptual Offset, Recovery Plan and Stewardship Program. Further, Piikani Nation requests that Benga considers, in consultation with Piikani Nation, alternative fish offsetting options, if necessary.	Post-Application	Response Agreement	Fish	Benga is discussing with Fisheries and Oceans Canada (DFO) an offset plan to more than compensate for any fish habitat loss due to the project. Benga will consider the Piikani Nation proposal as it advances with these discussions and will consult with Piikani Nation on the fisheries offset plan prior to its finalization.
EIS Review [270]	Fisheries	Piikani Nation requests that Benga engages with Piikani Nation on developing fish habitat, fish abundance and diversity and fish health management, mitigation and monitoring plans with a goal to achieve a net positive impact on aquatic resources (this might include developing community-based monitoring programs).	Post-Application	Response Agreement	Fish	Benga is discussing with Fisheries and Oceans Canada (DFO) an offset plan to more than compensate for any fish habitat loss due to the project. Benga will consider the Piikani Nation proposal as it advances with these discussions and will consult with Piikani Nation on the fisheries offset plan prior to its finalization.
EIS Review [255]	Human Health	Piikani Nation requests that Benga gets input on the Project's Health and Safety Plan and Emergency Response Plan from Piikani Nation and its key service providers to ensure specific issues and concerns of Piikani Nation members are addressed in the Plans.	Post-Application	Response Agreement	Human Health and Safety	<p>Agreed, Benga will provide a draft plan to Piikani Nation for comment and input.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing the health and safety plan on a regular basis.</p>

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [137]	HRA	<p>Piikani Nation requests that Benga works with Piikani Nation to create a Heritage Resources Management Plan, that could include:</p> <ul style="list-style-type: none"> <li>i) Piikani Nation traditional knowledge in modelling for archaeological site potential, as well as site interpretation and significance rating;</li> <li>ii) Piikani Nation members as part of field crews (including training);</li> <li>iii) opportunities for Piikani Nation members to review and comment on proposed mitigations and draft reports;</li> <li>iv) community presentations of results; and</li> <li>v) Piikani Nation protocols for chance encounters of historical resources and associated education and training.</li> </ul> <p>The Plan should include culturally appropriate mitigations in addition to those required by Alberta Culture and Tourism.</p>	Post-Application	Response Agreement	Heritage Resources Management Plan	<p>A presentation of Historic Resources Impact Assessment study results and copies of the reports were provided to Piikani Nation in a meeting on January 23, 2018.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for further discussion related to access to sites, management of chance encounters of historical resources and proposed mitigations on a regular basis.</p> <p>Further discussion related to access to sites, management of chance encounters of historical resources and proposed mitigations between Benga and Piikani Nation are planned in 2018.</p>
EIS Review [138]	HRA	<p>Piikani Nation requests that Benga provides support to the Piikani Nation to review the HRA when it becomes available. The full HRA should also be presented to the Piikani community.</p>	Application	Response Agreement	Full HRIA Not Available for Review	<p>The Historic Resources Impact Assessment is available through Alberta Culture for review, and has been presented to Piikani Nation in a meeting in January 2018.</p>
EIS Review [140]	HRA	<p>Piikani Nation requests that Benga explains how the Piikani Nation and its traditional knowledge will be included in the HRA going forward. Further, Piikani Nation requests that this discussion is provided in the anticipated Project Update.</p>	Application	Response Regulatory	Use of TK Information	<p>Benga has incorporated information provided in the TK/TU report into Part H of the 2016 EIA, and relevant information has also been considered in the heritage resources portion of the 2016 EIA.</p>
EIS Review [304]	HRA	<p>Piikani Nation requests that Benga discusses how Piikani Nation's traditional and cultural use information and concerns and issues expressed during consultation formed the historical resources assessment.</p>	Application	Response	Use of TK Information	<p>The Historical Resources Impact Assessment (HRIA) was conducted in parallel with the Piikani Nation Traditional Use Study. In January 2018, the results of the HRIA were presented to Piikani Nation through a presentation and a copy of the detailed report. Several sites identified through the HRIA hold interest for the Piikani Nation and additional site investigations are planned for summer 2018. Piikani Nation will also be consulted on efforts by Benga to protect certain sites that are of particular significance.</p>
EIS Review [306]	HRA	<p>Piikani Nation requests that Benga develops a process, in consultation with Piikani Nation, to deal with chance-find historical resources during construction and operation.</p>	Post-Application	Response Agreement	Historical and Cultural Resources	<p>A Cultural Site Discovery Contingency Plan will be developed and implemented for culturally important sites in consultation with Piikani Nation.</p>
EIS Review [307]	HRA	<p>Piikani Nation requests that Benga develops work camp policies related to protecting historical resources and provides this information to Piikani Nation.</p>	Post-Application	Response Agreement	Historical and Cultural Resources	<p>Appropriate policies will be put in place by Benga and provided to Piikani Nation for input.</p>
EIS Review [112]	Human Health	<p>When Benga develops its drug and alcohol policy, Piikani Nation requests that Benga gets input from key Piikani Nation service providers to ensure it addresses specific concerns of Piikani Nation members. Once finalized, the policy should be provided to Piikani Nation, and should include information about frequency of testing and the selection process (e.g., random versus scheduled).</p>	IBA	Response Agreement	Health and Emergency Services	<p>Agreed, Benga will provide a draft plan to Piikani Nation for comment and input.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing the drug and alcohol policy on a regular basis.</p>
EIS Review [124]	Human Health	<p>Piikani Nation requests that Benga discusses what measures will be in place to protect and ensure human health of Piikani Nation workers employed at the Project.</p>	Post-Application	Response Agreement	Health and Safety	<p>This level of detail is not required for the 2016 EIA. Occupational Health standards will be developed prior to construction and discussed with Piikani Nation.</p>

## Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [193]	Human Health	Piikani Nation requests that Benga updates the HHRA to include Aboriginal receptors in the RSA and surrounding area.	Application	Response Regulatory	Aboriginal Engagement	<p>Aboriginal receptor characteristics were considered in the Human Health Risk Assessment Study ( Consultant Report #12 Section 6.3) for chronic risk from multi-media exposure since they represent the most sensitive receptor group based on their assumed lifetime exposure in the LSA and RSA, and their assumed higher ingestion rate of country foods (wildlife and local vegetation) than other receptor groups. It was conservatively assumed that the Aboriginal receptor lived at, and harvested food from all the Human Health Risk Assessment receptor locations.</p> <p>The emissions from the Project are not predicted to pose a risk of adverse health effects at the receptor locations outside of the Mine Permit Boundary.</p>
EIS Review [197]	Human Health	Piikani Nation requests that Benga provides a breakdown of residual effects to both the LSA and RSA. Further, Piikani Nation requests that this information is provided in the anticipated Project Update and prior to the application being deemed complete.	Application	Response Regulatory	Aboriginal Engagement	Residual effects for the Piikani Nation are discussed in Section H4.5 of the application which is entitled "Characterization of Residual Effects - Piikani Nation".
EIS Review [198]	Human Health	Piikani Nation requests that Benga provides, in the upcoming Project Update, an effects analysis for each Project phase – construction, operation and reclamation including timing and peak effects predictions.	Application	Response Regulatory	Aboriginal Engagement	Residual effects for the Piikani Nation are discussed in Section H4.5 of the application which is entitled "Characterization of Residual Effects - Piikani Nation".
EIS Review [210]	Human Health	Piikani Nation requests that Benga reassesses the potential cumulative effects to Piikani Nation, for all applicable VCs once the effects assessment in the Project Update is completed, in alignment with Piikani Nation's recommendations contained within this technical review.	Application	Response Regulatory	Aboriginal Engagement	A cumulative effects assessment is provided for Piikani Nation and is included in Volume 2, Section 4.6.
EIS Review [252]	Human Health	Piikani Nation requests that Benga, in the forthcoming Project Update, discusses how the Project HHRA has taken into consideration community concerns on health and wellness; e.g., issues related to drugs, alcohol, mental health and cultural integrity.	Application	Response Regulatory	Human Health and Safety	Social issues such as those listed in this request are out of the scope of the Human Health Risk Assessment which is intended to deal with health effects as a direct result of air or water emissions from the Project.
EIS Review [258]	Human Health	Piikani Nation requests that Benga integrates Piikani Nation into the design and implementation of long-term health monitoring programs associated with the Project, to ensure it considers Traditional Use and TEK.	Post-Application	Response Agreement	Use of TK Information	Benga will consult with Piikani Nation on the various monitoring plans required for the Project.
EIS Review [259]	Human Health	Piikani Nation requests that Benga explains policies and programs to limit the amount of Project- related traffic on highway.	Post-Application	Response Agreement	Human Health and Safety	Benga will be implementing a bussing policy from local centers to reduce the number of vehicles accessing the site. It is estimated that traffic on the highway in the vicinity of the project will increase no more than 2%.
EIS Review [23]	Noise	Piikani Nation requests that Benga supports a community noise complaint process that recognizes audible noise and has a mandate to explore potential mitigation.	Post-Application	Response Agreement	Management Plans	Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for reviewing noise concerns regularly.

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [24]	Noise	Piikani Nation requests that Benga acknowledges the large uncertainties in extending Human values around nuisance noise and noise impact to local wildlife.	Application	Response	Noise	<p>Benga agrees that noise perception varies among individuals and situations and is difficult to predict with certainty.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for reviewing noise concerns regularly.</p> <p>Specific concerns related to noise impacts on humans and wildlife may be dealt with through Piikani Nation's input into the monitoring program and the environmental management plans. Benga is beginning to develop monitoring plans and will continue to work with Piikani Nation to identify ways in which community members can contribute to and participate in monitoring. Benga plans to hold a workshop with Piikani Nation 3 to 6 months prior to the start of construction to request further input on the Environmental Management Plans.</p>
EIS Review [248]	Noise	Piikani Nation requests that Benga discusses how Piikani Nation's traditional and cultural use information and concerns and issues expressed during consultation formed the acoustics assessment.	Application	Response	Use of TK Information	Benga has incorporated the traditional and cultural information and concerns raised to date by the Piikani Nation into the EIA. Benga welcomes information about the Piikani Nation's views on concerns and issues surrounding the acoustics assessment.
EIS Review [249]	Noise	Piikani Nation requests that Benga assesses and discusses whether audible noise from the Project would be expected to create wildlife or traditional land user avoidance or compromise wildlife health and traditional and cultural practices in the Project's LSA and RSA. Further, Piikani Nation requests that this information is provided prior to the application being deemed complete.	Application	Response Regulatory	Noise	As indicated in the 2016 EIA, the audible noise at the mine permit boundary is expected to be in the range of 40 - 45 dBA. This is roughly equivalent to the noise level in a quiet residential neighborhood. The assessment of potential effects to wildlife is considered in Sec E.9.3 of the 2016 EIA. Sensory disturbance is expected to occur to elk, deer, and moose during the operations phase, which will cause them to find more suitable areas surrounding the Project site. Through proper reclamation, wildlife will and do return to reclaimed mine site areas. As the Project goes through progressive reclamation, it is expected that wildlife will return to reclaimed mine site areas.
EIS Review [250]	Noise	Piikani Nation requests that Benga uses BATEA and best practices to minimize noise from the Project and shares this, as well as field-verified modelled noise predictions during construction and operation, with Piikani Nation on an annual basis.	Post-Application	Response Agreement	Noise	<p>Benga has proposed a number of noise mitigation measures that will result in noise levels at the mine permit boundary below Alberta requirements. These noise levels are similar to a quiet residential neighborhood. Mitigations for noise as described in the 2016 EIA include:</p> <ul style="list-style-type: none"> <li>• route the haul trucks along the western slope of the south disposal area such that the south disposal area itself provides noise shielding between the operating equipment and the residential receptors to the east;</li> <li>• install and maintain a 15 m tall earthen berm along the eastern edge of the south disposal area;</li> <li>• blasting to occur only on weekdays during typical day-time hours, minimal blasting during cloud cover, and blasting to be limited to smaller more localized blasts;</li> <li>• Vegetation adjacent to high-activity linear corridors will be retained to reduce the extent of noise and visual sensory disturbances to the extent possible.</li> <li>• Benga is willing to plan blasting activities to avoid conflicts with traditional land and resource use events.</li> </ul> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing noise on a regular basis.</p>
EIS Review [251]	Noise	Piikani Nation requests that Benga, in consultation with Piikani Nation, develops a mechanism for community members to provide any observations or concerns regarding noise from blasting and for Benga to report back on any efforts made to minimize noise-related issues based on community feedback.	Post-Application	Response Agreement	Noise	<p>Agreed.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing noise on a regular basis.</p>

## Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [16]	Visual Effects	Piikani Nation requests that Benga provides additional details on the visibility changes that traditional land users can expect when they are in the Project's vicinity. Further, Piikani Nation requests that this information is provided in the forthcoming Project Update, ideally by conducting a visual impact assessment.	Application	Response Regulatory	Visual Impact	Many mitigative measures have been proposed by Benga to reduce dust and noise at the boundaries of the project. These same measures, including leaving treed buffers around the mine site, creating berms where appropriate, also reduce any visual impact of the project on adjacent lands.
EIS Review [82]	Land Use	Piikani Nation requests that Benga assesses potential Project impacts to other land users and disposition holders (private landowners, oil and gas, the golf course, AltaLink and the Government of Alberta) and describes the integrated resource management initiatives it is currently involved in within the Project area, and lists other regional initiatives it is committed to supporting should the Project be approved. Piikani Nation also requests that this information is provided in the anticipated Project Update.	Application	Response Regulatory	Other Disposition holders (Industrial, Agricultural and Recreational Use)	Benga is committed to engaging with potentially impacted land users and disposition holders as part of ongoing engagement. Benga is committed to ongoing consultation with Piikani Nation and welcomes further discussion with Piikani Nation about resource management initiatives .
EIS Review [222]	Mitigation	Piikani Nation requests that Benga discusses how it will use best available technology economically achievable (BATEA), best practices, continuous improvement, adaptive management and consider community input in design and implementation considerations of mitigation measures of all potential Project effects.	Application	Response	Community Input	Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for providing feedback mitigations on a regular basis.
EIS Review [241]	Other	Piikani Nation requests that Benga develops a Continual Improvement Plan and allows Piikani Nation to review the draft plan for input.	Post-Application	Response Agreement	Air Quality	Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing air quality on a regular basis.
EIS Review [246]	Other	Piikani Nation requests that Benga assesses visual impacts to Piikani Nation land and cultural use in the forthcoming Project Update. Further, Piikani Nation requests that it is consulted to determine important receptor sites for the assessment.	Application	Response Regulatory	Visual Aesthetics	Many mitigative measures have been proposed by Benga to reduce dust and noise at the boundaries of the project. These same measures, including leaving treed buffers around the mine site, creating berms where appropriate, also reduce any visual impact of the project on adjacent lands.
EIS Review [48]	Reclamation	Piikani Nation expects that "All upland soil and subsoils that fall in the proposed disturbance area will be salvaged and stored for reclamation activities". Furthermore, due to a lack of detailed soil descriptions conducted during the baseline assessment, Piikani Nation expects that more detailed soil characterization and monitoring will be conducted ahead of and during soil salvage operations with a discussion of its how this will be done provided in the upcoming Project Update.	Application; Post-Application	Response Agreement Regulatory	Reclamation	As stated in Volume 1, Section F3.4,  Soil surveys were conducted in 2014 - 2015 with soil inspection data obtained at an intensity level as defined in the Alberta Energy Regulator Terms of Reference for the Project. Surface soil characteristics were identified and rated for reclamation suitability as Good, Fair, Poor or Unsuitable. Details of the soil survey and soil suitability maps are included in Consultant Report #7, Figures 3.1-1 to 3.1-3 and 4.1-2 to 4.1-3 (Soil and Terrain).  Reclamation material salvage operations will ensure the salvage of all available upland surface soil.

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [49]	Reclamation	Piikani Nation requests that Benga's mine planners work in direct and close collaboration with its environmental personnel to proactively maximize opportunities for direct placement of surface soils in the conservation and reclamation plan, and that this process is reviewed on a regular basis with Piikani Nation.	Post-Application	Response Agreement	Reclamation	The conservation and Conservation and Reclamation Plan has been updated since this comment was made including much more detailed. It is still a conceptual plan and Benga agrees that Piikani Nation input will be important prior to commencing reclamation and conservation activities.
EIS Review [52]	Reclamation	Piikani Nation requests that Benga makes every effort to make lodgepole pine and other significant plants available for harvest, and not simply do so "when practical", as stated above.	Post-Application	Response Agreement	Plant Harvesting	<p>From Volume 1, Section F3.4: Timber volumes from Crown land will be offered to the two main quota holders, Spray Lakes Sawmills (1980) Ltd. and Crowsnest Forest Products.</p> <p>For private land within the Project Footprint, Piikani Nation and other aboriginal groups have expressed interest in small volumes of timber for poles and rails. Benga will engage Piikani Nation and other interested Aboriginal groups in advance of clearing to identify opportunities to provide timber for this purpose. Any remaining merchantable timber will be offered to quota holders of the adjacent public lands or to other interested parties as per the public lands process.</p> <p>No allocation mechanism has been determined if there are multiple First Nations interested in timber salvage. This can be discussed further when the issue arises.</p>
EIS Review [59]	Reclamation	Piikani Nation requests that Benga describes equivalent capability in the context of ecosite phases and maps each of the assessment scenarios. Further, Piikani Nation requests that this information is provided in the upcoming Project Update.	Application	Response Regulatory	Mitigation and Monitoring	<p>The reclaimed lands will feature regionally compatible landforms and vegetation patterns that are ecologically functional and successional. The goal of the Conservation and Reclamation Plan is to develop lands that are maintenance-free and self-sustaining. The landscape will evolve through seral states of initial revegetation to self-sustaining ecosystems, consisting of mature vegetation communities typical of the Subalpine or Montane Sub Regions of the Rocky Mountain Natural Region (Natural Regions Committee 2006). Specific objectives for this project include:</p> <ul style="list-style-type: none"> <li>• reclamation of the landscape to an equivalent land capability, optimizing the value of watershed, timber, grazing, wildlife habitat, fish habitat, recreation or other resources, taking into account threatened species, public input, and Aboriginal Group Valued Components;</li> <li>• return of forest productivity to equivalent pre-development levels;</li> <li>• return of aesthetic qualities of the landscape;</li> <li>• provision for traditional land use (e.g., gathering, hunting and trapping) as identified through consultation with Aboriginal Groups</li> </ul>
EIS Review [60]	Reclamation	Piikani Nation requests that that only plant species native to the Crowsnest Pass area are used in the Grassy Mountain Coal Project revegetation program, and that seed for revegetation is sourced locally.	Post-Application	Response Agreement	Mitigation and Monitoring	Benga is planning to use plan species from the Crowsnest Pass area for revegetating the site.
EIS Review [153]	Reclamation	Piikani Nation requests that Benga discusses, in its assessment on Piikani Nation, how Piikani Nation's traditional use was considered in the closure landscape.	Application	Response	Use of TK Information	Information from the Piikani Nation TK/TU report has been incorporated into the conceptual Conservation and Reclamation Plan filed with the August 2016 EIA. Specifically terrain and habitat for traditionally important wildlife and conditions for growing traditionally important vegetation have been considered. As the filed plan is conceptual only, Benga will be developing it further after detailed engineering is completed. Piikani Nation will be extensively consulted on the final plan.
EIS Review [200]	Reclamation	Piikani Nation requests that Benga discusses, in the anticipated Project Update, how reclamation will return the disturbed landscape to a pre-development capability for traditional use.	Application	Response Regulatory	Reclamation	<p>The reclaimed lands will feature regionally compatible landforms and vegetation patterns that are ecologically functional and successional. The goal of the Conservation and Reclamation Plan is to develop lands that are maintenance-free and self-sustaining. The landscape will evolve through seral states of initial revegetation to self-sustaining ecosystems, consisting of mature vegetation communities typical of the Subalpine or Montane Sub Regions of the Rocky Mountain Natural Region (Natural Regions Committee 2006). Specific objectives for this project include:</p> <ul style="list-style-type: none"> <li>• reclamation of the landscape to an equivalent land capability, optimizing the value of watershed, timber, grazing, wildlife habitat, fish habitat, recreation or other resources, taking into account threatened species, public input, and Aboriginal Group Valued Components;</li> <li>• return of forest productivity to equivalent pre-development levels;</li> <li>• return of aesthetic qualities of the landscape;</li> <li>• provision for traditional land use (e.g., gathering, hunting and trapping) as identified through consultation with Aboriginal Groups</li> </ul>

## Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [218]	Reclamation	Piikani Nation requests that Benga explains the discrepancy between the temporal scale used in the assessment of effects on Aboriginal people and that of other disciplines. Further, Piikani Nation requests that Benga explains how, even at a temporal scale of 41 years (versus 29 years) reclamation will have re-established resources for traditional use of those resources. Furthermore, Piikani Nation requests that the regulators require this information prior to deeming the application complete.	Application	Response Regulatory	reclamation	Progressive reclamation will commence in year 5 and extend until year 24. The temporal boundaries for the assessment of potential effects to Aboriginal groups are the same as for the rest of the 2016 EIA.
EIS Review [272]	Reclamation	Piikani Nation requests that Benga discusses how Piikani Nation's traditional and cultural knowledge was used in the soil assessment, of particular concern to Piikani Nation is the potential for increased soil erosion adjacent to the Project.	Application	Response	Use of TK Information	Benga will be leaving vegetative buffer zones around the Project which will mitigate against soil erosion at the perimeters. Inside the project, soil stockpiles will be vegetated as soon as possible to minimize erosion and all slopes will be contoured to prevent erosion and slope instability. Benga will be consulting extensively with the Piikani Nation regarding Conservation and Reclamation Planning once detailed engineering is completed to ensure the final landscape after reclamation is designed to prevent any soil erosion issues.
EIS Review [273]	Reclamation	Piikani Nation requests that Benga involves Piikani Nation in any soil erosion monitoring programs for the Project.	Post-Application	Response Agreement	Soils	Benga will provide the Piikani Nation with information on soil erosion monitoring programs for their input.
EIS Review [279]	Reclamation	Piikani Nation requests that Benga implements a program to monitor and control invasive and non- native plant species as well as shares its weed control plan with Piikani Nation.	Post-Application	Response Agreement	Vegetation and Wetlands	Yes, a program to monitor and control invasive and non-native plant species will be put in place. Benga will share the plan with Piikani Nation for review and input.
EIS Review [282]	Reclamation	Piikani Nation requests that Benga discusses how Piikani Nation's traditional and cultural use information and concerns and issues expressed during consultation formed the conceptual reclamation plan.	Post-Application	Response	Use of TK Information	<p>The following is a excerpt from the Conservation and Reclamation Plan Volume 1 F.1.9:</p> <p>Elders and technicians provided input on the key issues, themes, observations, wisdom, insights, traditional knowledge and land use through a series of site visits, workshops, meetings, and other communication events. Recommendations and ideas expressed to date by Aboriginal Groups that are relevant to conservation and Conservation and Reclamation Planning include:</p> <ul style="list-style-type: none"> <li>• protect and harvest lodgepole pines and other plants of interest on a regular and ongoing basis;</li> <li>• make efforts to relocate trees from areas of development for use on the reserves;</li> <li>• protect and monitor water;</li> <li>• impose no-go buffers around sacred sites of 100 m;</li> <li>• maintain habitat for wildlife, including eagles nests;</li> <li>• ensure that effective reclamation involves reforestation of evergreen species to outcompete weeds;</li> <li>• ensure efforts for research focus specifically in areas that have not been disturbed;</li> <li>• provide adequate funding for ongoing project involvement and costs associated with indigenous traditional environmental monitoring and harvesting vegetation throughout the Project;</li> <li>• annual project review with Benga for the life of the Project;</li> <li>• have an emergency preparedness plan in the event of leaks, spills or other disasters to address concerns regarding water quality and species dependent on clean water resources;</li> <li>• ensure new areas of development encompass previously disturbed areas; and</li> <li>• consider socio-economic effects of the proposed Project.</li> </ul> <p>Various traditional land uses objectives were also identified in the reports and incorporated into the conceptual Conservation and Reclamation Plan.</p>
EIS Review [283]	Reclamation	Piikani Nation requests that Benga provides Piikani Nation with a conceptual schedule for reclamation.	Post-Application	Response	Reclamation	Progressive reclamation will commence in year 5 and extend until year 24. The temporal boundaries for the assessment of potential effects to Aboriginal groups are the same as for the rest of the 2016 EIA.

## Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [284]	Reclamation	Piikani Nation requests that Benga discusses how the reclamation plan will restore habitat for Piikani Nation's key cultural species. Further, Piikani Nation requests that this information is provided in the forthcoming Project Update.	Post-Application	Response Regulatory	Reclamation	<p>Progressive reclamation will commence in year 5 and extend until year 24. The temporal boundaries for the assessment of potential effects to Aboriginal groups are the same as for the rest of the 2016 EIA.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing the Conservation and Reclamation Plan on a regular basis.</p>
EIS Review [285]	Reclamation	<p>Piikani Nation requests that Benga discusses of how Traditional Ecological Knowledge and Traditional Land Use information will be incorporated into Project plans including: conservation and reclamation planning, monitoring and mitigation.</p> <p>Piikani Nation requests that Benga develops a conservation and reclamation plan, in collaboration with Piikani Nation, which includes TEK/TLU-based indicators that represent key elements of traditional uses and cultural practices for the Conservation and Reclamation Plan.</p> <p>Piikani Nation requests that the Nation be involved in the monitoring program throughout all Project phases.</p>	Post-Application	Response	Reclamation	<p>Benga has taken account of TK information provided by First Nations to date in its conceptual Conservation and Reclamation Plan. Benga will incorporate TK and TU information provided by the Piikani Nation into the plans as appropriate.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing the Conservation and Reclamation Plan on a regular basis.</p>
EIS Review [26]	Water Management	<p>Piikani Nation requests that Benga:</p> <ul style="list-style-type: none"> <li>i) clearly states hydrogeology assessment scenarios in the context of overall EIA assessment scenarios and alignment with the other aspects of the aquatics assessment (e.g., hydrology, water quality);</li> <li>ii) resolves any discrepancies between LSAs for the various aquatics assessments; or otherwise justifies why the LSAs should cover different areas;</li> <li>iii) differentiates potential effects from existing disturbed landscape and the natural pre-development landscape of significance to traditional use and the Piikani Nation; and</li> <li>iv) provides the above information prior to the application being deemed complete</li> </ul>	Application	Response Regulatory	Study Area Assessment Scenarios	<ul style="list-style-type: none"> <li>i) The 2016 EIA evaluated 2 assessment scenarios being the Baseline Case, which includes existing environmental conditions, existing projects and "approved" activities; and the Application Case, which includes the Baseline Case plus the Project. There are no known proposed projects or activities within the local or regional study area that would act cumulatively with the Project, therefore no planned development case is considered.</li> <li>ii) There is a considerable difference between surface water and ground water local study area criteria which drive differences between the size of the respective local study areas. Surface and ground water study areas are rarely of the same size because ground water is based on aquifers, while surface water is based on watersheds. There are connections; however, that does not mean the study areas need to be the same.</li> <li>iii) Benga is not able to provide baseline data from a period before the historical mining was begun.</li> </ul>
EIS Review [27]	Water Management	<p>Piikani Nation requests that Benga:</p> <ul style="list-style-type: none"> <li>i) incorporates TK and TU information in the hydrogeology assessment for the anticipated Project Update;</li> <li>ii) provides a composite map showing predicted 1 m groundwater contours at particular times during mining and at closure with overlays showing TLU sites or values and other important traditional use features such as medium and high value edible plant areas; and</li> <li>iii) assesses whether or not natural springs and seeps having cultural significance will be affected by the Project or by drawdown and if so proposes mitigation.</li> </ul>	Application	Response Regulatory	Use of TK Information	<ul style="list-style-type: none"> <li>i) The springs identified in the local study area during the field survey are toe springs and are more like seeps than true springs. Also springs and lake at Grassy are all of anthropogenic origin, legacy from the previous mining activities.</li> <li>ii) Contour maps would not be very meaningful considering the topography. Given the depth of the water table, it is unlikely edible plant would rely on ground water.</li> <li>iii) Existing springs, and lakes at Grassy are legacy mine features. Technically they should be considered as a historical disturbance.</li> </ul>
EIS Review [28]	Water Management	<p>Piikani Nation requests that Benga:</p> <ul style="list-style-type: none"> <li>i) provides a final modeling report for review; and</li> <li>ii) ensures that the model output and its predictions will be verified with monitoring performed during Project operations.</li> </ul>	Application	Response Agreement Regulatory	Groundwater Flow Model	The final hydrogeology report was included in the August 2016 revised project application.

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [29]	Water Management	<p>Piikani Nation requests that Benga:</p> <ul style="list-style-type: none"> <li>i) consults with Piikani Nation regarding development of the Project's detailed Groundwater Management Plan and fully engages Piikani Nation in all groundwater monitoring activities;</li> <li>ii) considers a more frequent sampling program to enable ongoing statistical analysis (e.g. tri-annual);</li> <li>iii) develops a Groundwater Management Plan that provides specific rationale for the selection of monitoring well sites, the distance between these sites and the potential sources of water quality effects, and further details on how groundwater monitoring will be integrated with surface water monitoring;</li> <li>iv) justifies a Project-specific groundwater response plan and identifies the proposed process to establish a procedure to notify Piikani Nation if unexpected water quality effects are detected;</li> <li>v) provides annual comprehensive groundwater monitoring reports to Piikani Nation, including raw data collected from groundwater monitoring, and potentially providing more trend analysis graphs of key parameters where effects are being noted; and</li> <li>vi) integrates surface water and groundwater monitoring when and where needed during the Project's life as well as the post-closure period.</li> </ul>	Post-Application	Response Agreement Regulatory	Management Plans	<p>A groundwater monitoring program will be implemented to detect any impacts on shallow groundwater quality resulting from mining operations. Monitoring will focus primarily on areas in the vicinity of the ex-situ rock disposal areas and surge ponds that store captured water from mine waste rock run-off. Further details are presented in Consultant Report #3, Section 7.0 for the groundwater monitoring program and in Consultant Report #5, Section 5.0 – Water Quality. (Consultant Report #3, Section 5.4.3.2, Page 53).</p> <p>The groundwater monitoring program will be reviewed and approved by the regulator prior to the start of operations. Benga is beginning to develop monitoring plans and will continue to work with Piikani Nation to identify ways in which community members can contribute to and participate in monitoring. Benga plans to hold a workshop with Piikani Nation 3 to 6 months prior to the start of construction to request further input on the Environmental Management Plans.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for reviewing groundwater concerns regularly.</p>
EIS Review [30]	Water Management	<p>Piikani Nation requests that Benga uses the available existing data from the WSC station on Gold Creek (WSC Station No. 05AA030) to confirm the estimated streamflows (mean monthly, low, and peak) for Gold and Blaimore creeks for the months with records available on Gold Creek. Further, Piikani Nation requests that this comparison is provided in the forthcoming Project Update prior to the application being deemed complete.</p>	Application	Response Regulatory	Hydrology	<p>To characterize the hydrology in the local study area, three hydrometric gauges were installed along Gold Creek. A mid-watershed gauge at GC-7/H01 operated from September 2013 to August 2014 and again from March to October 2016. Gauges further upstream both operated from May to October 2016. The Water Survey of Canada has gauged flows at Gold Creek near Frank (GC-HWSC) since 1975, typically from April to November (8 months) each year.</p> <p>Long-term synthetic daily flow data series extending from November 1975 to October 2016 (41-year period) were then developed for the three local gauges, based on the regression analysis between daily flows gauged concurrently between each local gauge and the WSC gauge.</p>
EIS Review [32]	Water Management	<p>Piikani Nation requests that Benga provides:</p> <ul style="list-style-type: none"> <li>i) a rationale for using the eight regional meteorological stations to estimate evapotranspiration or evaporation when some of the regional stations are located a significant distance away from the Project site and at much different elevations;</li> <li>ii) confirmation that the estimated evaporation or evapotranspiration results are representative of the Project site by including local climate information from appropriate elevations; and</li> <li>iii) this information in the anticipated Project Update.</li> </ul>	Application	Response Regulatory	Hydrology	<p>There are no available measurements for evaporation on site, thus to estimate evaporation the review of the eight meteorological stations were necessary to understand regional relationships between evaporation (lake, pan, potential and actual). The most important parameters for the estimation of evaporation are short wave solar radiation, temperature, dew point temperature, relative humidity. Some of these parameters are typically correlated with elevation, latitude and longitude. Figure 14 (in the 2016 EIA) shows annual lake evaporation related to longitude, while Figure 15 shows the relationship related to elevation. The correlation between evaporation and elevation is less representative than the correlation between evaporation and longitude. Understanding the region allows to predict local parameters. The values predicted for Grassy Mountain are representative with respect to the region.</p>
EIS Review [33]	Water Management	<p>Piikani Nation requests that Benga provides in the forthcoming Project Update a:</p> <ul style="list-style-type: none"> <li>i) rationale for selecting the hydrological control points along Blaimore and Gold creeks, including a summary of upstream watershed changes and contributions by mine site discharges for each control point;</li> <li>ii) confirmation of the total Project Footprint in Blaimore and Gold creeks watersheds and a summary of the natural watershed areas lost to pit development and other mine-related activities for each watershed;</li> <li>iii) detailed summary of how low (7Q10), peak (1:100-year), and mean annual flows were modelled using the water quality predictive model. The water quality predictive model report described modelling for dry (1:20 year low annual precipitation), average, and wet (1:20 year high annual precipitation) conditions; and</li> <li>iv) description of how precipitation in the form of snow and ice cover on settling ponds or surge ponds is considered in the predictive model.</li> </ul>	Application	Response Regulatory	Hydrology	<p>An updated Hydrology Report is included in the Revised Application dated August 2016. These requests are very detailed and date from the previous version of the report. Benga requests that Piikani Nation refer to the revised report and present any questions or issues after a review of the new material.</p>

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [34]	Water Management	Piikani Nation requests that Benga comments on the level of uncertainty included in the proposed mine-site discharge values, as well as the sensitivity of the values to the results of the modelling used to assess hydrologic impacts to Blairmore and Gold creeks. Further, Piikani Nation requests that this information is provided in the Project Update prior to the application being deemed complete.	Application	Response Regulatory	Water Management	The confidence rating for the assessment was deemed to be moderate. The assessment was based on a good understanding of cause-effect relationships, but estimated monthly flow changes were based on model results that in turn relied on input from regional assessments and hydrological characteristics that are typical of terrain found at the project site.
EIS Review [35]	Water Management	Piikani Nation requests that Benga: i) outlines a contingency plan for the mine-site water releases when sedimentation pond or saturated backfill zone releases do not meet permitted guidelines for TSS; ii) describes the potential downstream hydrologic impacts to Blairmore and Gold creeks if water must be withheld rather than released as planned; and iii) provides this information in the Project Update and prior to the application being deemed complete.	Post-Application	Response Regulatory	Water Management	Water treatment for total suspended solids is very well tested technology and Benga does not anticipate a difficulty achieving required water quality objectives. Any periodic or incident based deviations will be dealt with through the adaptive management process and would include addition of water treatment technologies to ensure consistent water quality is achieved.
EIS Review [36]	Water Management	Piikani Nation requests that Benga provides a plan to augment low flows on Gold Creek, perhaps by intercepting some flows directed to Blairmore Creek, so that no reduced flows occur that can be detrimental to fish or fish habitat.	Post-Application	Response Agreement	Water Management	Benga has developed a revised hydrological model and instream flow needs study to protect fish and fish habitat which was submitted in an addendum in January 2017. The result of this study indicate that there will be some loss of fish habitat due to reduced flows in Gold Creek. Benga is discussing with Fisheries and Oceans Canada (DFO) an offset plan to more than compensate for any habitat loss due to the project. Benga will consider the Piikani Nation proposal as it advances with these discussions and will consult with Piikani Nation on the fisheries offset plan prior to its finalization.
EIS Review [37]	Water Management	Piikani Nation requests that Benga provides in the upcoming Project Update and prior to the application being deemed complete: i) tabulation of the more conservative "reasonable worst case" estimates of all water quality predictions; and ii) a description of contingency plans for providing water to Blairmore and Gold creeks should treatment to reduce contaminants to acceptable levels prove unsuccessful.	Application	Response Regulatory	Water Management	<p>The entire Section E.6 and the related consultant reports have been revised and replaced in January 2017 based on the results of additional field surveys and testing. In the revised analysis, all potential contaminants are within Alberta guidelines except selenium and sulphate for which Benga has proposed site specific guidelines based on actual water chemistry in the creeks.</p> <p>Benga has already proposed to install a water treatment plant when and if treatment of metals in the mine affected water is required. If the selenium treatment does not achieve the required water specifications, there are many options for managing the process to bring the water up to the required standards including recycling, increased retention time, and addition of carbon to help reduce oxygen levels.</p> <p>Since none of the mine affected water is destined for Gold Creek under the water management plan, any delay in treatment will not affect Gold Creek flow rates. The flow rates on Blairmore Creek are calculated to increase as a result of the project. Any delay in treating mine affected water will only reduce Blairmore Creek flows to current levels.</p>
EIS Review [38]	Water Management	Piikani Nation requests that Benga: i) addresses the discrepancy in the reported bulk concentrations of Se in waste rock from Grassy Mountain compared to Elk Valley, considering a peer-reviewed publication that indicates Se levels are very similar between the two areas; and ii) if appropriate, recalculates to correct the estimated water quality conditions in Blairmore and Gold creeks and the Crownsnest River, and to correct calculations in the uptake study modelled Water Quality Objectives for Se (see Request [39]). Further, Piikani Nation requests that this information is provided prior to the application being deemed complete.	Application	Response Regulatory	Water Management	The geochemistry sampling program for selenium consisted of 146 individual samples from seven different coal exploration drill holes that were spatially distributed throughout the proposed pit area. The selenium calculation were based on this actual data from the project site which Benga considers to be more representative than an average number from another location. No recalculation is required. For a more lengthy description of the Geochemical Testing Program, please refer to the 2016 EIA Volume 3, Section 10a.

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [39]	Water Management	<p>Piikani Nation requests that Benga provides, in the anticipated Project Update and prior to the application being deemed complete:</p> <ul style="list-style-type: none"> <li>i) justification for using the BC MOE Se guideline for comparisons, for bioaccumulation predictions, and for sulphate-based uptake model predictions rather than the CCME guideline that Alberta has adopted;</li> <li>ii) for the bioassays completed by Nautilus, comment on whether growth-dilution might have been a factor when measuring tissue Se and estimating the Enrichment Factors for BLC-water samples given the fast growth that occurred in the test chambers, and comment on whether this influenced the predicted WQOs at given sulphate concentrations;</li> <li>iii) comment on the assumptions inherent in the uptake study and potential variation around the predicted WQOs that might result from uncertainties and application of laboratory results to the field;</li> <li>iv) comment on the level of confidence that Se will remain below concentrations that cause chronic effects to biota, including invertebrates and sensitive life stages of fish (eggs or embryos), especially given uncertainties with Se concentrations in waste rock; and</li> <li>v) a commitment to biomonitoring that includes measuring Se in attached algae (periphyton) and benthic invertebrates in Blairmore and Gold creeks to ensure that fish tissues remain below the chronic tissue residue guideline of 4 µg Se/g.</li> </ul>	Application	Response Agreement Regulatory	Water Management	Since this request was made, the relevant section of the report has been entirely replaced and updated. The request is addressed in detail in the revised submission.
EIS Review [40]	Water Management	<p>Piikani Nation requests that Benga describes its proposed plans for treatment and disposal of domestic wastewater effluent, and confirms that effluent will not be discharged directly or indirectly to local surface waters.</p>	Application	Response Agreement	Water Management	Domestic wastewater will be collected in tanks and trucked offsite to an approved treatment facility.
EIS Review [45]	Water Management	<p>Piikani Nation requests that, for Blairmore and Gold creeks, Benga provides measurements of baseline:</p> <ul style="list-style-type: none"> <li>i) sediment quality parameters (notably Se) in pool or depositional zones in the creeks, within representative reaches and tributaries, for comparison to planned operational monitoring data; and</li> <li>ii) calcite (CaCO<sub>3</sub>) buildup in spawning areas or other non-depositional zones, within representative reaches and tributaries, for comparison to planned operational monitoring data.</li> </ul> <p>Piikani Nation also requests that this information is provided before the application is deemed complete</p>	Application	Response Regulatory	Water Management	<ul style="list-style-type: none"> <li>i) A table of sediment quality parameters including Se can be found in the Application Volume 5, Consultant Report #5, Table 11,</li> <li>ii) The presence of calcite precipitate was not observed in either Gold or Blairmore creeks during characterization of baseline conditions of fish and fish habitat</li> </ul>

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [46]	Water Management	<p>Piikani Nation requests that, for Blairmore and Gold creeks, Benga provides, prior to the application being deemed complete:</p> <p>i) an estimate of the probability of the failure of one or a series of water management dams that would release sediment-laden water downstream to surface waters, including the two creeks and the Crownsnest River;</p> <p>ii) if an unintentional accident like a dam failure occurred as illustrated above, a description of the implications to aquatic biota and the remediation that the company would undertake; and</p> <p>iii) the proposed notification plan, for communicating in a timely manner to Piikani Nation, should an unintentional accident occur.</p>	Application	Response Agreement Regulatory	Accidents	<p>i) Water management dam structures have been over engineered to address large flows (1:200 year event). If a design flood event were to occur, Benga would take pre-emptive steps to release water to avoid a failure. Benga considers the probability of a failure to be very remote.</p> <p>ii) In the event that water is released from one of these ponds, the primary concern would be the impact to the aquatic environment. These could include:</p> <ul style="list-style-type: none"> <li>• water quality including total suspended solids could have harmful effects on aquatic life, including damage to fish gills and interference with feeding and egg incubation;</li> <li>• increase in volume of water that results in flooding and altering of fish habitat;</li> <li>• water quality including the release of selenium contaminated water which may result in adverse effects on water quality, fish and fish habitat;</li> <li>• soils and vegetation could be subject to scour and erosion; would be of short duration and be restricted to the immediate vicinity of the release</li> </ul> <p>Such effects could be of moderate to high magnitude, depending on the size, location and duration of the release. Remediation would be dependent on the situation.</p> <p>iii) Benga has committed to develop a system or set of protocols with Piikani Nation to deal with continued environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum to review concerns related to water management and safety on a regular basis.</p>
EIS Review [53]	Water Management	<p>Piikani Nation requests that Benga provides detailed information on how reclamation will be designed to minimize volumes of contact waters, including surface-water-balance assumptions for reclaimed areas over time and that this information is provided in the anticipated Project Update.</p>	Application	Response Regulatory	Water Management	<p>The details requested are not available at the current project stage of development. Benga will develop more precise Conservation and Reclamation Plans during the detailed engineering phase and will use adaptive management throughout the mine operation to improve those plans. Benga will communicate with Piikani Nation as the Conservation and Reclamation Plans are finalized.</p>
EIS Review [79]	Water Management	<p>Piikani Nation requests that Benga provides a description of the consultation activities undertaken with Piikani Nation regarding surface water and groundwater requirements and Project plans for transferring water rights within the Oldman River Basin, specifically describing how Piikani Nation interests, the water needs of Piikani Nation and TEK incorporated were into the planning related to water transfers. Further, Piikani Nation requests that the regulators require this information prior to deeming the application complete.</p>	Application	Response Regulatory	Old Man River	<p>The information provided by Piikani Nation in the public TK/TU report has been incorporated into the 2016 EIA. Benga is committed to ongoing consultation with Piikani Nation and welcomes further discussion with Piikani Nation about water transfers.</p>
EIS Review [155]	Water Management	<p>Piikani Nation requests that Benga assesses potential impacts to hydrology on Piikani Nation's use of surface water resources in the RSA including any potential impacts to boat access and navigation, sources of potable water and for recreational use by Piikani. Piikani Nation also requests that Benga identifies potential water use conflicts to Piikani Nation and that the Water Management Plan ensures the use of best practices to reduce and recycle surface water use for Project purposes. Further, Piikani Nation requests that this assessment is done, including management, mitigation and monitoring to reduce the effects on Piikani Nation's use and enjoyment of water resources, prior to the application being deemed complete.</p>	Application	Response Regulatory	Environmental Assessment – Hydrology	<p>Benga considers that the impact of the project on surface water resources in the RSA to be negligible and does not foresee water use conflicts with downstream users including the Piikani Nation.</p>
EIS Review [261]	Water Management	<p>Piikani Nation requests that Benga discusses how Piikani Nation's traditional and cultural use information and concerns and issues expressed during consultation formed the hydrogeology, hydrology, surface water quality (e.g., geochemical leaching), and aquatic resources assessments</p>	Application	Response	Use of TK Information	<p>The Piikani Nation Traditional Use report clearly indicates that there is a concern about surface water quality, ground water quality and quantity and protection of aquatic resources - especially fisheries. These concerns are perfectly aligned with Benga and the various regulators overseeing the Project application.</p>

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [262]	Water Management	Piikani Nation requests that Benga provides opportunities for Piikani Nation to provide input into, and opportunities for the community to participate in, the monitoring of any and all groundwater and surface water (including in association with wetlands) monitoring programs (this might include developing community-based monitoring programs).	Post-Application	Response Agreement	Groundwater and Surface Water	<p>A groundwater monitoring program will be implemented to detect any impacts on shallow groundwater quality resulting from mining operations. Monitoring will focus primarily on areas in the vicinity of the ex-situ rock disposal areas and surge ponds that store captured water from mine waste rock run-off. Further details are presented in Consultant Report #3, Section 7.0 for the groundwater monitoring program and in Consultant Report #5, Section 5.0 – Water Quality. (Consultant Report #3, Section 5.4.3.2, Page 53).</p> <p>The groundwater monitoring program will be reviewed and approved by the regulator prior to the start of operations. Benga will also seek Piikani Nation input to the program through a meeting or workshop on the subject.</p> <p>Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing groundwater and surface water monitoring on a regular basis.</p>
EIS Review [265]	Water Management	Piikani Nation requests that Benga discusses the implications to water resources and aquatic biota and the remediation that Benga would undertake if an unintentional accident like a water management dam failure occurred. Further, Piikani Nation requests that this information is provided in the forthcoming Project Update prior to the application being deemed complete.	Application	Response Regulatory	Groundwater and Surface Water	<p>i) Water management dam structures have been over engineered to address large flows (1:200 year event). If a design flood event were to occur, Benga would take pre-emptive steps to release water to avoid a failure. Benga considers the probability of a failure to be very remote.</p> <p>ii) In the event that water is released from one of these ponds, the primary concern would be the impact to the aquatic environment. These could include:</p> <ul style="list-style-type: none"> <li>• WQ including TSS could have harmful effects on aquatic life, including damage to fish gills and interference with feeding and egg incubation;</li> <li>• increase in volume of water that results in flooding and altering of fish habitat;</li> <li>• WQ including the release of selenium contaminated water which may result in adverse effects on water quality, fish and fish habitat;</li> <li>• soils and vegetation could be subject to scour and erosion; would be of short duration and be restricted to the immediate vicinity of the release.</li> </ul> <p>Such effects could be of moderate to high magnitude, depending on the size, location and duration of the release. Remediation would be dependent on the situation.</p> <p>iii) Benga has committed to develop a system or set of protocols with Piikani Nation to deal with environmental communications. Environmental matters can be managed through this communication system. Benga and Piikani Nation have discussed the establishment of a joint committee that will provide a forum for discussing groundwater and surface water on a regular basis.</p>
EIS Review [315]	Water Management	Piikani Nation requests that Benga discusses how Piikani Nation's traditional knowledge, interests, and water rights were incorporated into the planning related to water transfers.	Post-Application	Response	Use of TK Information	The Project will not be extracting water from any existing water body. All water needed for processing of the coal will be obtained from drainage from the site.
EIS Review [280]	Weed management	Piikani Nation requests that Benga avoids using pesticides and herbicides and if chemical use is necessary, uses best practices.	Post-Application	Response Agreement	Vegetation and Wetlands	<p>Weed management will be conducted in accordance with the Weed Control Act. Benga environmental personnel will be trained in weed identification and will complete visual inspections of reclamation, active mining areas, and legacy mining areas prior to mine development for the occurrence of noxious weeds. All weed occurrences are controlled on an 'as needed' basis. Mechanical treatment and herbicide applications are utilized for control. Control methods will be dependent upon factors such as:</p> <ul style="list-style-type: none"> <li>• the type of weed;</li> <li>• the scale of the weed problem; and</li> <li>• the location of the weed problem.</li> </ul> <p>Control methods that require the application of a herbicide will be completed by a licensed weed control specialist (2016 EIA, Vol.1, Sec.F, pgs.81-82).</p>

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [65]	Wildlife	Although Aboriginal groups' information was tabulated, there is no discussion on how this information was used nor if there were specific habitat maps of culturally important wildlife to the Piikani Nation. Piikani Nation requests that Benga provides species-specific WLSA maps and narrative supporting these maps for culturally important wildlife species. Further, Piikani Nation requests that this information is provided in the forthcoming Project Update and prior to the application being deemed complete.	Application	Response Agreement	Study Areas	Wildlife Valued Components were selected based on various criteria including ecological, economic, and First Nation importance. In many cases, federally and provincially listed species at risk were considered to be more vulnerable to anthropogenic developments due their low population sizes, restricted or scarce distributions, and known sensitivities to disturbance. The selected Valued Components served as indicator species to focus the wildlife assessment in accordance with current practice in Alberta and Canada. Many of the excluded species of traditional value to First Nations in the WLSA and WRSA have similar habitat requirements, life histories, and movement patterns to those of wildlife Valued Components that were selected for assessment. For example, Project effects on habitat availability for Columbia spotted frog and western toad were expected to be similar for other species that rely on ponds, streams, and wetlands such as beaver, mink, muskrat, and wandering garter snake. Furthermore, many of the species of traditional value to First Nations that were excluded from assessment are either extirpated from southern Alberta, not known to be present in the Wildlife Local Study Area or Wildlife Regional Study Area, introduced non-native species, or were predicted to not be directly impacted by Project development.
EIS Review [66]	Wildlife	Piikani Nation requests that Benga conducts winter track surveys and reports on results as part of the anticipated Project Update, to provide a better understanding of current wildlife use in the Project area.	Application	Response Agreement	Wildlife	Additional surveys, including a winter track survey and pellet group count were conducted to better characterize current wildlife use. These have been included in the 2016 EIA.
EIS Review [67]	Wildlife	Piikani Nation requests that all animals of cultural significance are subjected to a high-level assessment and that descriptions and mitigation measures are provided. Further, Piikani Nation requests that this information is provided in the upcoming Project Update.	Application	Response Agreement	Wildlife	Culturally important species identified in the Piikani Nation TK/TU reports and through consultation informed the selection of Valued Components for the vegetation and wildlife assessment sections. The methods and criteria for the selection of vegetation Valued Components is provided in the Consultant Report #8, Section 2.4.2. The criteria and rationale for the selection of wildlife Valued Components is provided in the Consultant Report #9, Section 3.2.3.
EIS Review [68]	Wildlife	Piikani Nation requests that Benga, as part of the upcoming Project Update, identify and assess Project effects to SARA-listed species critical habitat.	Application	Response Agreement	Wildlife	This is discussed in the Wildlife Consultant Report #9. COSEWIC has not identified critical habitat for the three of the four SARA-listed species, as such we cannot assess it. Critical habitat for the fourth species - little brown myotis - is partially identified for hibernacula (December 31, 2015 recovery strategy), but Environment Canada goes on to state "As a result of human safety concerns, efforts to minimize bat disturbance, and the difficulty in locating hibernating bats within complex structures, the number of bats using a hibernaculum often cannot be fully counted. In addition, the discovery of one hibernating individual can sometimes indicate the occurrence of more undetected individuals using the hibernaculum." And "swarming (an activity that typically occurs adjacent to or within a hibernaculum) was considered an indicator of a site's use for hibernation" and can be used a potential identifier of critical habitat.
EIS Review [69]	Wildlife	Piikani Nation requests that, prior to the application being deemed complete, Benga conducts a Wildlife Health Assessment given the uncertainty of surface water and multiple pathway exposure to contaminants of concern to Piikani, such as selenium, nitrates and hydrocarbons. Further, Piikani Nation requests that this assessment includes culturally important receptors such as furbearers, ungulates and waterfowl who might be exposed to process waters within the LSA and potentially affected watercourses and waterbodies within the RSA.	Application	Response Agreement	Wildlife	The wildlife assessment that has been completed in Consultant Report #9 on Wildlife meets the requirements of the Terms of Reference for the regulatory application.  A screening wildlife risk assessment is included in Consultant Report #12, Appendix H. This assessment addressed risks associated air, soil, and water exposure pathways at the population level.
EIS Review [70]	Wildlife	Because of the identified Project impacts, Piikani Nation requests that Benga describes quantitatively the loss and deterioration of habitat, wildlife-vehicle collisions, and increased non-Aboriginal hunting pressure on the wildlife populations of species of cultural importance to the Piikani Nation. Further, Piikani Nation requests that this discussion is provided in the forthcoming Project Update.	Application	Response Agreement	Wildlife	Habitat loss, collisions, and hunting pressure are assessed/discussed in the Consultant Report #9 on wildlife. Habitat loss is quantitatively addressed. Changes in collision mortality cannot be quantified due to unknown "normal" mortality in the WLSA and the reasons for such mortality. Due to implementation of mitigation measures not previously in place in the WLSA, collision mortality is expected to decline in the WLSA. Changes in hunting pressure cannot be quantified, but qualitatively will reduce in the WLSA due to implementation of the Access Control Policy and Aboriginal Access Management Plan.

## Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [71]	Wildlife	The Wildlife Assessment provides little information on Project effects for Piikani Nation land users and harvesters, other than as general statements provided during discussion on effects on recreational hunters and licensed trappers. Piikani Nation requests that Benga provides a focused narrative on the impact of the Project on its wildlife harvesting in the upcoming Project Update and prior to the application being deemed complete.	Application	Response Agreement	Wildlife	This was addressed in 2016 EIA Section H. Aboriginal Consultation, Section H.4.4, in which Benga responded to Piikani Nation concerns about wildlife. At the time of 2016 EIA submission, Benga was still waiting for Piikani Nation to recommend mitigations for their concerns.
EIS Review [72]	Wildlife	Piikani Nation requests that Benga assesses the impacts of sensory disturbance (auditory, visual, olfactory) on wildlife and develops mitigation strategies to address the effects of these disturbances. Further, Piikani Nation requests that this assessment is provided in the anticipated Project Update and prior to the application being deemed complete.	Application	Response Agreement	Wildlife	Sensory disturbance is assessed in Consultant Report #9 on wildlife and mitigations have been proposed, including those provided in Section 7.1.3 and 7.1.5 of the Wildlife Consultant Report #9.
EIS Review [73]	Wildlife	There is consultation identified with Alberta Environment and Parks (AEP) throughout the discussion on mitigation and monitoring but not with the Piikani Nation or any First Nation. First Nations consultation is discussed briefly in the Preliminary Wildlife Monitoring Program (7.2) section of the assessment. No details are provided. Piikani Nation requests that specific details are provided on how consultation has been incorporated in the wildlife mitigation and monitoring plan. Piikani Nation requests that Benga consults with Piikani Nation to develop and implement a Wildlife Mitigation and Monitoring Plan.	Post-Application	Response Agreement	Wildlife Mitigation and Monitoring Plan	This comment was made prior to the issuance of the 2016 EIA. Piikani Nation traditional knowledge information, including a TK/TU report, was incorporated in all aspects of the EIA. A conceptual wildlife management plan was included with the 2016 EIA but Benga intends to hold workshops with Piikani Nation on this plan in the first half of 2018 to develop it in more detail.
EIS Review 74	Wildlife	Coal-conveyor mitigation measures (i.e., raising the conveyor or creating wildlife crossings) are described briefly in the Habitat Connectivity and Movement (7.1.4) section of the wildlife assessment. No details were provided and no mention of consultation with Piikani Nation was made. Piikani Nation requests that it is engaged collaboratively on the formation of detailed conveyor mitigation measures.	Post-Application	Response Agreement	Habitat Connectivity and Movement	The Wildlife Mitigation and Monitoring Plan provided in the 2016 EIA is preliminary and will be finalized prior to construction with an opportunity for Piikani Nation to provide input/feedback.
EIS Review 75	Wildlife	Benga provided habitat availability, core habitat, and disturbance permeability statistics for the VCs at the different assessment scenarios at both the WLSA and WRSA levels. Mitigation measures focused on the coal conveyor but the actual mining operations (i.e., pits, waste rock dumps and related infrastructure) might impose constraints on animal movements. Piikani Nation requests that Benga provides additional information on the extraction impacts of coal mining operations on known animal movements in the WLSA and WRSA. Further, Piikani Nation requests that this information is provided in the forthcoming Project Update.	Application	Response Agreement	Habitat Connectivity and Movement	Wildlife mitigation measures described in the Wildlife Consultant Report #9 (Section 7.1) outline mitigations for animal movement across or around some additional mine infrastructure (roads, surface water management ponds). Wildlife are expected to avoid the active mine pits and dumps and mitigations for those features are in the Wildlife Consultant Report #9. Mitigations to ensure movement corridors are maintained around the active mine pits and dumps are also detailed in the Wildlife Consultant Report #9 (Section 7.1.4). Species-specific impacts on movement are also discussed in detail in the Wildlife Consultant Report for each Valued Component (see Change in Movement sections for each Valued Component within Section 5.3, and Section 5.4), with particular reference to the active mine pits, dumps and haul roads.
EIS Review [88]	Wildlife	Piikani Nation requests that Benga provides, in the forthcoming Project Update, sufficient baseline information on the status of culturally significant furbearers traditionally trapped in the Project area, to help Piikani Nation understand the current pressures on traditionally trapped species and implications of the Project effects such as shifts in predator/prey relationships, increased mortality, habitat loss, changes in access, sensory disturbance or reduced habitat effectiveness. Piikani Nation asks that Benga explains how TK was considered and integrated into the assessment and any resultant mitigation measures.	Application	Response Regulatory	Trapping	In the Piikani Nation TK/TU report, no trapping activities were identified. Species identified in the 2016 EIA include deer, elk, moose, grouse, badger, mountain sheep, mountain goat, rabbit, squirrel, black bear, grizzly bear, beaver, badger, owl, elk, gopher, otter, and porcupine for subsistence, medicinal and ceremonial purposes. Benga is currently revising the 2016 EIA including enhancing the description of effects to the species identified by Piikani Nation. Species identified were incorporated into the assessment of potential effects to wildlife.

# Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [89]	Wildlife	Piikani Nation requests that Benga describes, in the forthcoming Project Update, potential effects to culturally significant big game and game bird species occurring in the area to help Piikani Nation understand the current pressures on traditionally hunted species and implications of the Project effects such as increased wildlife mortality, habitat loss, changes in access, sensory disturbance or reduced habitat effectiveness on traditional harvests. Further, Piikani Nation requests that Benga works with the Piikani Nation community to develop culturally appropriate measures to mitigate potential Project effects to Aboriginal hunting and culturally important big game and game bird species.	Application	Response Agreement Regulatory	Hunting	Species identified include deer, elk, moose, grouse, badger, mountain sheep, mountain goat, rabbit, squirrel, black bear, grizzly bear, beaver, badger, owl, elk, gopher, otter, and porcupine for subsistence, medicinal and ceremonial purposes. Benga is currently revising the 2016 EIA including enhancing the description of effects to the species identified by Piikani Nation. Species identified were incorporated into the assessment of potential effects to wildlife.
EIS Review [134]	Wildlife	The Wildlife Assessment is a screening level assessment that is not as detailed as a full Wildlife Health Assessment. Benga is requested to undertake a more detailed Wildlife HealthRisk Assessment (including all exposure pathways) using industry best practices for the Project update and prior to the application being deemed complete.	Application	Response Regulatory	Wildlife Health	The wildlife assessment that has been completed in Consultant Report #9 on Wildlife meets the requirements of the Terms of Reference for the regulatory application.  Habitat loss, collisions, and hunting pressure are assessed/discussed in the Consultant Report #9 on wildlife. Habitat loss is quantitatively addressed. Changes in collision mortality cannot be quantified due to unknown "normal" mortality in the WLSA and the reasons for such mortality. Due to implementation of mitigation measures not previously in place in the WLSA, collision mortality is expected to decline in the WLSA. Changes in hunting pressure cannot be quantified, but qualitatively will reduce in the WLSA due to implementation of the Access Control Policy and Aboriginal Access Management Plan.  A screening wildlife risk assessment is included in Consultant Report #12, Appendix H. This assessment addressed risks associated air, soil, and water exposure pathways at the population level.
EIS Review [135]	Wildlife	Piikani Nation requests that Benga acknowledges the large uncertainties in extending human toxicity to mammals, birds and reptiles and discusses how it proposes to validate the predictions provided in the application. Further, Piikani Nation requests that this information is provided in the upcoming Project Update prior to the application being deemed complete.	Application	Response Regulatory	Toxicology Uncertainty	Toxicity levels for the Wildlife health study are included in Consultant Report #12, Appendix H, Section 4. The Alberta Environment and Parks (2016) wildlife soil and food ingestion guidelines and United States Environmental Protection Agency (US EPA) Ecological Soil Screening Levels (Eco-SSL) (US EPA 2010) were used for the study. The surface water guidelines are protective of fresh water aquatic life and other wildlife receptors. There is no available toxicity guideline for PM <sub>2.5</sub> so for that component only, human exposure data was used which should be conservative.
EIS Review [160]	Wildlife	Piikani Nation requests that Benga also identifies TEK wildlife habitats and documents this for hunting and trapping potential for the LSA and RSA for, including maps. Piikani Nation also requests that Benga explains how traditional species (identified in Table 2.2-1) were used in selecting VCs spatial boundaries. Furthermore, Piikani Nation requests that the regulators require this information prior to deeming the application complete.	Application	Response Regulatory	Environmental Assessment – Wildlife	Potential effects of the project are concentrated within the Local Study Area. The Regional Study Area is identified for conducting a cumulative effects assessment to assess potential interactions between other projects or activities.
EIS Review [161]	Wildlife	Piikani Nation requests that Benga, in the forthcoming Project Update, comments on habitat loss, habitat avoidance, vehicle-wildlife collisions, increased non-Aboriginal hunting pressure and other Project-related impacts on wildlife populations specific to Piikani Nation's traditional use of wildlife both quantitatively and qualitatively.	Application	Response Regulatory	Environmental Assessment – Wildlife	Habitat loss, collisions, and hunting pressure are assessed/discussed in the Consultant Report #9 on wildlife. Habitat loss is quantitatively addressed. Changes in collision mortality cannot be quantified due to unknown "normal" mortality in the WLSA and the reasons for such mortality. Due to implementation of mitigation measures not previously in place in the WLSA, collision mortality is expected to decline in the WLSA. Changes in hunting pressure cannot be quantified, but qualitatively will reduce in the WLSA due to implementation of the Access Control Policy and Aboriginal Access Management Plan.
EIS Review [172]	Wildlife	Piikani Nation requests that Benga revises Section H.4.3.2 to include all effects to Piikani Nation uses, including cultural uses. Further, Piikani Nation requests that these revisions are included in the upcoming Project Update.	Application	Response Regulatory	Aboriginal Engagement	Section H.4.3.2 was revised and resubmitted with the August 2016 EIA and contained all effects to Piikani Nation uses as documented at that time in the Piikani Nation Traditional Use Study.
EIS Review [175]	Wildlife	Piikani Nation requests that Benga, once the review of the EIA and SEIA is complete, agrees to update the assessment on hunting, wildlife and resource use based on Piikani Nation's review recommendations including providing the information required to fulfill the EIS Guideline requirements.	Application	Response Agreement Regulatory	Aboriginal Engagement	The August 2016 EIA, contains Piikani Nation recommendations to that point as documented in the Piikani Nation TK/TU report.

## Piikani Nation Technical Review Issues and Response Table

Number	Piikani Nation Key Concerns	Request	Phase	Category	Piikani Nation Key Concerns (old)	Revised Response
EIS Review [176]	Wildlife	Piikani Nation requests that Benga also includes key cultural species as important to traditional use, and updates either the hunting (Section H.4.4.) or cultural heritage (Section H.4.4.4) sections to assess the effects to, and capture the important role wildlife species play, in Piikani Nation's culture. Further, Piikani Nation requests that this information is provided prior to the application being deemed complete.	Application	Response Regulatory	Aboriginal Engagement	Benga has included key cultural species in the report that were provided in the TK/TU report in the August 2016 EIA.
EIS Review [290]	Wildlife	Piikani Nation requests that Benga, in the upcoming Project Update, discusses mitigation to reduce wildlife interactions with vehicles and equipment as well as infrastructure. Further, Piikani Nation requests that Benga tracks Project-related wildlife mortalities and reports this information to Piikani Nation on an annual basis.	Post-Application	Response Agreement Regulatory	Reclamation	Habitat loss, collisions, and hunting pressure are assessed/discussed in the Consultant Report #9 on wildlife. Habitat loss is quantitatively addressed. Changes in collision mortality cannot be quantified due to unknown "normal" mortality in the WLSA and the reasons for such mortality. Due to implementation of mitigation measures not previously in place in the WLSA, collision mortality is expected to decline in the WLSA. Changes in hunting pressure cannot be quantified, but qualitatively will reduce in the WLSA due to implementation of the Access Control Policy and Aboriginal Access Management Plan.
EIS Review [291]	Wildlife	Piikani Nation requests that Benga discusses how Piikani Nation's traditional and cultural use information (including preferences for wildlife species and biodiversity) and concerns and issues expressed during consultation formed the effects assessment for wildlife assessment	Application	Response	Use of TK Information	Culturally important species identified in the TK/TU reports and through consultation informed the selection of Valued Components for the wildlife assessment section. The criteria and rationale for the selection of wildlife Valued Components is provided in the Consultant Report #9, Section 3.2.3. The identification of potential effects to Piikani Nation is based on information provided during consultation, such as known Piikani Nation use in the mine permit boundary and the identified Project activities during construction, operations and reclamation phases. The views and perspectives of Piikani Nation were included in the selection of Aboriginal group specific Valued Components, the identification of potential effects, and in the assessment of potential effects on Valued Components. The assessment of potential effects on Aboriginal group specific Valued Components is provided for each Aboriginal group in Sections H.4.
EIS Review [293]	Wildlife	Piikani Nation requests that Benga engages Piikani Nation in developing the Project's Wildlife Mitigation and Monitoring Plan.	Post-Application	Response Agreement	Wildlife	Benga commits to working with Piikani on the Wildlife Mitigation and Monitoring Plan. Benga is anticipating a workshop on the subject in the first half of 2018.
EIS Review [296]	Wildlife	Piikani Nation requests that Benga describes quantitatively the loss and deterioration of habitat, wildlife-vehicle collisions, and increased non-Aboriginal hunting pressure on the wildlife populations of species of cultural importance to Piikani Nation. Further, Piikani Nation requests that this information is provided in the upcoming Project Update and prior to the application being deemed complete.	Application	Response Regulatory	Wildlife	Habitat loss, collisions, and hunting pressure are assessed/discussed in the Consultant Report #9 on wildlife. Habitat loss is quantitatively addressed. Changes in collision mortality cannot be quantified due to unknown "normal" mortality in the WLSA and the reasons for such mortality. Due to implementation of mitigation measures not previously in place in the WLSA, collision mortality is expected to decline in the WLSA. Changes in hunting pressure cannot be quantified, but qualitatively will reduce in the WLSA due to implementation of the Access Control Policy and Aboriginal Access Management Plan.
EIS Review [297]	Wildlife	Piikani Nation requests that Benga assesses and provides details on mitigation of sensory disturbance to wildlife. Further, Piikani Nation requests that this information is provided in the upcoming Project Update and prior to the application being deemed complete.	Application	Response Regulatory	Wildlife	Sensory disturbance is assessed in Consultant Report #9 on wildlife and mitigations have been proposed, including these provided in Section 7.1.3 and 7.1.5 of the Wildlife Consultant Report #9.

# **Appendix C: Cumulative Effects Assessment for Siksika Nation**

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# Cumulative effects assessment for Siksika Nation

## **PREPARED FOR**

Siksika Nation and MLT Aikins LLP

## **PREPARED BY**

M. Carlson, K. Berg, T. Dyck, B. Stelfox & J.  
Straker, Integral Ecology Group and  
ALCES Group

November 28, 2018

Project no. JFKBBS-18

## Distribution

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November 28, 2018

Project no.: JFKBBS-18

Siksika Nation, Siksika, AB

MLT Aikins LLP, Calgary, AB

**ATTENTION: Richard Right Hand and Billie Fortier**

**REFERENCE: Cumulative effects assessment for Siksika Nation**

Dear Richard and Billie:

Please find below Integral Ecology Group's final report for an initial assessment of cumulative effects of land development on ecological indicators of cultural importance to the Siksika Nation. We trust this information meets your requirements at this time. Thank you for Integral Ecology Group's involvement in this important work. Should you have any questions or comments about this document, please do not hesitate to contact me at the e-mail address or phone number listed below.

Yours sincerely,

<Original signed by>

Matt Carlson

Ecologist

ALCES Group Ltd. & Integral Ecology Group Ltd.

<contact information removed>

## **SUGGESTED CITATION**

Carlson M, Berg K, Dyck T, Stelfox B, Straker J. 2018. Cumulative effects assessment for Siksika Nation. Prepared for Siksika Nation, Siksika, AB, and MLT Aikins, Calgary, AB. Prepared by Integral Ecology Group, Ltd., Duncan, BC, and the ALCES Group, Calgary, AB.

## **ACKNOWLEDGEMENTS**

We would like to thank the Siksika Nation community members and staff who shared their time and expertise during the meetings for this project. We greatly appreciate the traditional knowledge and observations that were shared to inform this project.

## **LIMITATIONS**

The interpretations and conclusions in the report reflect the understanding of the authors, but do not necessarily provide a comprehensive portrayal of the perspectives of all collaborating community members.

## EXECUTIVE SUMMARY

This report presents an initial assessment of cumulative effects of land development on ecological indicators of cultural importance to Siksika Nation in Alberta. This work employed the ALCES model to examine three issues of cumulative effects:

1. industrial and regulatory activities (including construction of development footprint and land-use zoning such as protected areas) that potentially restrict or exclude land uses by Siksika members;
2. the loss of remaining relatively intact ecosystems within the Siksika traditional territory; and,
3. the effects of current development activities on fish and wildlife on which Siksika traditional land uses depend.

The study was conducted at two scales:

1. the regional study area, to assess impacts near the Siksika Nation reserve; and,
2. the focal study area, which involved a focussed analysis of effects in an area around the proposed Benga Grassy Mountain mine development.

Prior to European settlement, the regional study area's intact ecosystems would have supported abundant fish and wildlife populations of importance to Siksika members. The prairies in the central and eastern portion of the region would have supported species associated with grassland such as elk and mule deer, whereas species associated with forest such as moose would have been more abundant to the west. Since European settlement, almost half of the regional landscape surrounding the Siksika Nation reserve has been converted to farmland and other anthropogenic footprints and larger patches of intact natural land cover are now largely restricted to protected areas. The loss of natural land cover has detrimentally affected fish and wildlife habitat and facilitated increased angling and hunting pressure. Habitat indices that incorporate the consequences of both habitat loss and risk of mortality are estimated to be substantially below natural levels. Elk and mule deer habitat is less than half of pre-industrial levels. These reductions in habitat imply high risk to wildlife and associated traditional land use. The fish index has also declined below its natural condition, mainly due to fragmentation of habitat and increased access for anglers by roads and other footprints, resulting in moderate risk.

Opportunities to fish and hunt are further restricted by inability to access the land for traditional land use due to private ownership, other land tenure (i.e., protected areas), and proximity to non-traditional land use activities. About 80% of the regional study area is estimated to be inaccessible for traditional land use. As a result, opportunity for traditional

land uses (e.g., hunting mule deer and elk) is less than half what would be suggested by habitat alone. These declines in habitat and low accessibility have resulted in reduced fishing and hunting opportunities, and increased the importance for traditional land use of comparatively intact landscapes to the west such as the focal study area.

In the focal study, loss of natural land cover has been lower than in the regional study area but is still substantial with 18% converted to anthropogenic footprint. Much of the eastern portion has been converted to farmland, and elsewhere natural land cover is fragmented by energy sector footprints (pipelines, seismic lines, well sites) and roads that provide access for hunting and angling. As a result, habitat is substantially below natural conditions, placing mule deer and elk, and associated traditional land use at moderate risk. The fish community is also impacted by fragmentation and access to anglers, resulting in moderate risk.

Projected growth in footprint over the next 50 years in the study area is relatively minor, and wildlife risk remained moderate whereas risk to the fish community increased to high in response to climate change (warming). The greatest contributor to footprint expansion during the 50-year simulation was mining, primarily from development of the Grassy Mountain mine. As such, the proposed mining development is projected to contribute to ongoing loss of habitat and associated opportunities for traditional land use, and impacts may be greater if potential impacts of water contamination (e.g., selenium, calcite) were to be considered. As was the case with the regional study area, accessibility of the land for traditional activities is also of concern with an estimated 40% being inaccessible. When inaccessibility is combined with habitat effectiveness, opportunity for hunting elk and mule deer declines to about one quarter of natural, resulting in an assessment of high risk to traditional land use.

Our analysis suggests that Siksika members have experienced a substantial decline in hunting and fishing opportunities in areas close to their reserve, and thus have had these traditional-land-use activities displaced to more remote areas, including to the western focal study area. However, habitat values in this western area are also negatively impacted by land use and are lower overall due to natural conditions (high elevations, lower abundance of grassland) that are less favourable for ungulates. In addition to reduced habitat, accessibility for traditional land use is of concern due to the prevalence of private land and other impediments to traditional land use activities. When accessibility and habitat are both considered, risk to traditional land use is high in both the regional and focal study areas.

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## APPENDICES

- Appendix A Technical methods
- Appendix B Detailed regional results
- Appendix C Wildlife habitat analysis

## 1. INTRODUCTION

This report presents an initial assessment of cumulative effects of land development on ecological indicators of cultural importance to the Siksika Nation in Alberta. The report addresses three issues:

1. industrial and regulatory activities (including construction of development footprint and land-use zoning such as protected areas) that potentially restrict or exclude land uses by Siksika members;
2. the loss of remaining relatively intact ecosystems within the Siksika traditional territory; and,
3. the effects of current development activities on ecosystems and species on which Siksika traditional land uses depend.

## 2. OBJECTIVES AND STUDY AREAS

The objectives of this project were to examine cumulative effects at two scales (Figure 1):

1. the focal study area:

We completed a focussed analysis of effects in an area near the proposed Benga Grassy Mountain mine development, using the Upper Oldman Crowsnest Pass watershed as the study area. The watershed covers almost 6,000 km<sup>2</sup> and is one of 132 Hydrologic Unit Code (HUC) 6 watersheds in Alberta.<sup>1</sup>

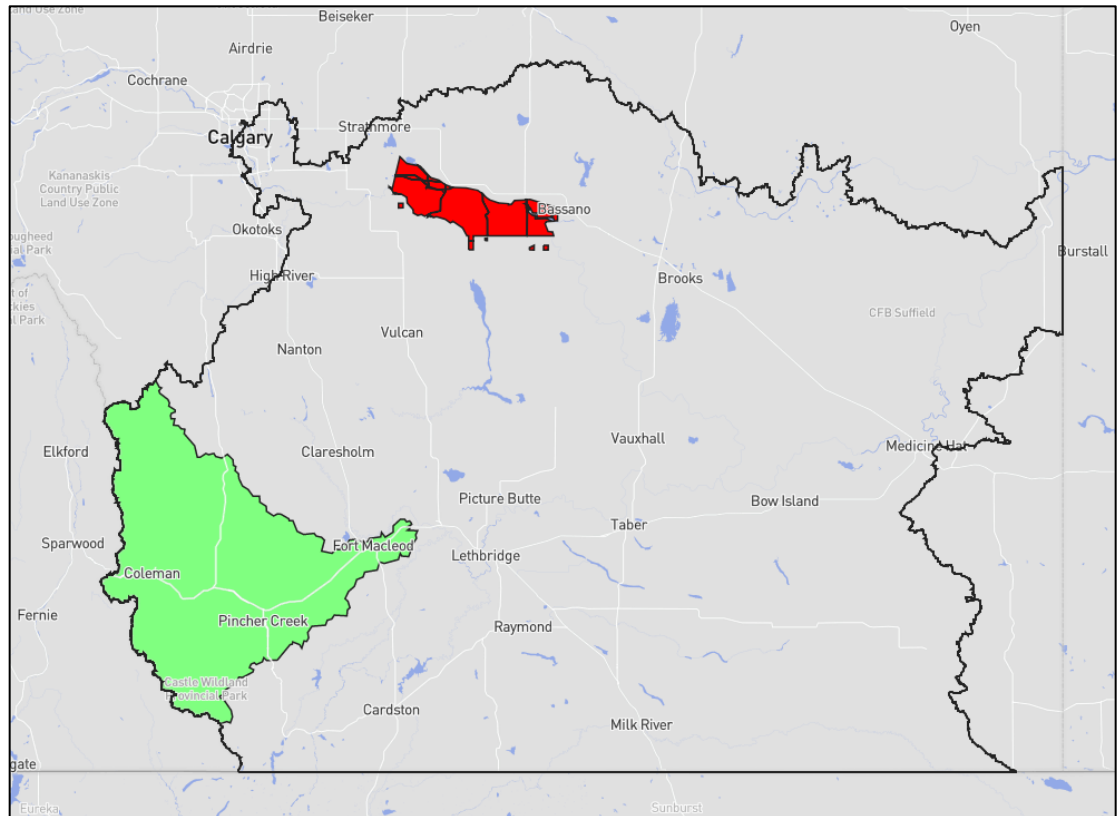
2. the regional study area:

We completed a broad analysis of effects in a large study area that covers approximately 62,904 km<sup>2</sup> and is made up of 14 HUC 6 watersheds. This study area was used to demonstrate regional impacts near the Siksika Nation reserves and a broader region identified by community members as being historically important for traditional land use. Much of the regional study area has been converted to agriculture and other land uses, and exploring

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<sup>1</sup> HUC 6 watersheds are part of a hierarchically structured watershed classification system that ranges from HUC 2 (at the coarsest scale) to HUC 10 (as the finest scale). Watersheds are beneficial units for conservation planning (Schindler and Lee 2010) due to their organizing effect on ecosystems, as a result of hydrological connectivity and biophysical boundaries such as the Continental Divide which forms the western boundary of the watershed. Higher order (i.e., larger) watersheds typically support more biodiversity because they contain a wider range of habitats, whereas smaller watersheds are more sensitive to local disturbance. The Upper Oldman Crowsnest Pass watershed was selected to balance these considerations (i.e., diversity and sensitivity). The watershed contains the proposed mine, but also other land uses that are active in the region including forestry (in the C5 forest management unit), agriculture (in the eastern portion of the basin around Pincher Creek), and some oil and gas development.

cumulative effects at this scale provides the perspective to assess the importance of the relatively less-impacted focal study area. Results for the regional study area are summarized in the main body of the report and described in greater detail in an appendix.



**Figure 1 Study areas and reserves. The focal study area is shown in green within the regional study area, which has a black outline. Siksika Nation reserves are shown in red.**

### 3. METHODS

This project applied the ALCES Online landscape simulation model (A Landscape Cumulative Effects Simulator [[www.alces.ca](http://www.alces.ca)]) to explore the effects of current and future land-use patterns on landscape, wildlife/fish, and TLU indicators in the study areas. ALCES Online is a landscape simulation tool for comprehensive assessment of the cumulative effects of multiple land uses and natural disturbances to ecosystems. ALCES Online has been used by government, First Nations, academic, industrial sectors and non-government organizations to inform land-use planning in multiple Canadian jurisdictions (Alberta, British Columbia, Ontario, Manitoba, Northwest Territories, Saskatchewan) and in India and Australia. The model operates by subjecting a cell-based representation of today's landscape to user-defined scenarios of past and future natural disturbance regimes and human land uses. Methods are summarized here; see Appendix A for more detailed description of the

underlying assumptions of the model.

### 3.1. TIMEFRAMES FOR ANALYSIS

The timeframes used in our analysis differ by study area:

1. The focal study area – we analyzed current conditions for selected indicators, and contrasted these against two other time periods:
  - a. Pre-industrial, or range of natural variation (RNV) – we removed development footprints from the landscape and simulated the fire regime in the absence of suppression to estimate the natural range of variation in forest age and wildlife indicators. These simulations provide reference conditions against which to compare current indicator performance. Greater departure from the simulated RNV entails greater risk to the indicator and associated traditional uses.
  - b. Future forecast – we constructed a 50-year simulation of future landscape changes. The Benga Grassy Mountain mine footprint is relatively large in the focal study area, but there are also impacts from forestry, oil and gas, settlements, and recreation. We forecasted growth in these sectors to assess plausible future cumulative effects. The simulated rate of development was based on information obtained from coal mine environmental assessments, forestry management plans, energy development projections from the Alberta Energy Regulator and National Energy Board, and population projections from the Government of Alberta.
2. The regional study area – for the broader study area, we focussed on the contrast between pre-industrial RNV conditions and current conditions. A forecast simulation was not constructed for this broader study area.

### 3.2. SELECTION OF INDICATORS

We selected the following groups of indicators for assessment:

1. Development footprint and protected areas – direct disturbance of land by industrial/residential development, plus any clear indirect effects of land tenure such as parks with restricted uses.
2. Area of intact landscape/habitat – measuring intact ecosystems provides a way to characterize the proportion of a landscape that is undisturbed and not affected by edge of an anthropogenic (human-caused) feature. Many animal species prefer “core” (non-fragmented) habitat and respond negatively to anthropogenic edge due

to indirect sensory effects (e.g., noise, odours, etc.) or increased mortality. Indigenous land users are also affected by edge effects and will often avoid areas of the landscape that are not intact when practicing certain traditional land uses. For this assessment, ecosystem intactness was calculated with the following two indicators: intact core area, calculated as the total extent of 200 m cells that do not contain footprint or farmland; and intact patch size, calculated as the size of each patch of cells that does not contain footprint or farmland.

3. Wildlife – the treaties and law in Canada recognize and affirm the rights of indigenous people to hunt, fish, and practice their culture. We selected three wildlife species (moose, elk, mule deer) to assess species of hunting importance to Siksika members. For each species, a habitat index was calculated that ranged from 0 (no habitat) to 1 (habitat capable of supporting maximum wildlife density). The status of habitat was interpreted by comparing current habitat to values from RNV simulations. Departure from RNV was interpreted using hazard categories from MacPherson et al. (2014): low risk if index is  $\geq 70\%$  of the natural value; moderate risk if index is 50%-70% of the natural value; high risk if index is 20%-50% of the natural value; and very high risk if index is  $< 20\%$  of the natural value. Although we did not model the response of wildlife populations directly, these hazard categories are used to infer risk of decline in wildlife and associated hunting opportunities.

Calculation of habitat indices integrated the effects of habitat quality, based on land cover and terrain, with the risk of mortality associated with linear footprint density. We refer to the availability of suitable land cover and terrain as potential habitat. Wildlife density may still be low despite the presence of high potential habitat if mortality is high. We use the term effective habitat to refer to habitat that also considers the effect of mortality, especially human-caused mortality. Human-caused mortality is an important driver of wildlife populations that are targeted by hunting; as such, effective habitat can be substantially lower than potential habitat. The wildlife habitat results presented in this report are for effective habitat. To explore the relative magnitude of potential and effective habitat in the analysis, the reader is referred to Appendix C.

The density of linear footprints was used as an indirect measure of the risk of mortality. Linear footprints, including roads, seismic lines, pipelines, and transmission lines, are typically correlated with mortality because they facilitate access by hunters and other predators, as well as collisions with vehicles. For example, although cutblocks and burns in northwestern Ontario were found to be similar with respect to the quality of habitat they provide, moose density was 58% lower in the cutblocks (Rempel et al. 1997). The difference was attributed to hunter

access which was low in the burns due to low road density. The effect of hunting is also illustrated by Elk Island National Park, where elk pellets were found to be more than six times more abundant inside the park than outside the park (Hood and Bayley 2008). Although the stark difference is likely influenced by other factors such as habitat quality and the presence of large carnivores, hunting is also likely to play a role. In general, survival rates of elk tend to be low in areas with high road density due to hunting pressure (Rowland et al. 2004). Linear features such as seismic lines have also been found to increase the risk of predation by other species such as wolves (e.g., McKenzie et al. 2012).

The relationship applied to incorporate the effect of linear footprint density on wildlife is based on professional opinion and assumes that adequate strategies are not in place to address the cumulative effect of multiple sources of mortality including regulated hunting, indigenous hunting, poaching, and collisions with vehicles. Although there is uncertainty with respect to the specifics of the relationship, evidence exists that each of the ungulate species can be negatively affected by human access (see Appendix C for further discussion). Managing this risk requires, in particular, management of hunting pressure. This study does not consider the efficacy of hunting regulations, other than assuming that hunting does not occur within national and provincial parks and ecological reserves. Nor does this study consider whether different types of linear features (e.g., roads versus conventional seismic lines) facilitate different levels of hunter access, but rather treats all types of linear features equally, with the exception that newer seismic lines are assumed to not facilitate hunting. These assumptions imply that the assessment of wildlife habitat represents a worst case associated with the landscape's composition. More detailed analysis that simulates the response of populations (as opposed to just habitat) is needed to explore the efficacy of strategies to manage human-caused mortality (e.g., hunting regulations).

4. Fish – for rationale similar to #3 above, we selected a fish-community index where effects of stressors (climate, linear footprint, stream fragmentation) are analyzed and averaged to yield an index ranging from 0 to 1. Index values correspond to risk levels as follows: >0.9 is low risk; >0.6 to 0.9 is moderate risk; >0.3 to 0.6 is high risk; and ≤0.3 is very high risk. It is important to note that the fish indicator did not assess potential water contamination because the available relationship did not incorporate potential impacts from mining (e.g., selenium, calcite) and implications for human consumption of fish.
5. Traditional land use (TLU) – TLU refers to resource harvest activities (e.g., hunting, trapping, fishing, plant gathering, travelling, etc.) as well as to the particular

connections and uses of the lands and resources related to ceremonies, customs, cultural practices, traditional governance, trade and stories. In collaboration with Siksika members, we developed a TLU accessibility indicator demonstrating the accessibility of the land for traditional land use. Accessibility was based on land ownership, protected areas, proximity to development activities and community member avoidance due to concerns about contamination, safety, and overall negative experience on the land. The TLU accessibility indicator was integrated with two wildlife indicators (mule deer, elk) to assess TLU opportunity relative to natural conditions. The TLU opportunity metric is based on the rationale that capacity to practice TLU in the landscape is affected by the status of wildlife habitat and the ability of community members to access the landscape for the purpose of practicing TLU. The TLU opportunity metric ranges from 0 to 1, with a 1 indicating maximum habitat effectiveness and accessibility for TLU, and a 0 representing no habitat and/or accessibility for TLU.

## 4. RESULTS

A summary of results for the regional study area is presented to show pressures felt by Siksika community members around their reserves and to provide context for why the community is increasingly concerned about relatively less-impacted areas such as the focal study area. More detailed results for the focal study area are then presented. Detailed regional results are presented in Appendix B.

### 4.1. REGIONAL STUDY AREA – SUMMARY

Prior to European settlement, the grassland natural region that makes up a majority of the study area would have supported grassland-associated species such as elk and mule deer, and forest-dwelling species such as moose would have been limited to forested landscapes such as mountain valleys to the west. Natural wildlife and fish populations would have supported traditional land use throughout the region. Since European settlement, however, a substantial transformation has occurred, with almost half of the regional landscape surrounding the Siksika Nation reserves converted to anthropogenic cover types (Figure 2). The largest footprint is farmland, which accounts for 45% (2,848,386 ha) of the study area and 92% of total footprint. The loss of natural land cover and increased hunting and angling pressure has detrimentally affected fish and wildlife habitat,<sup>2</sup> resulting in high risk to elk and mule deer, and moderate risk to the fish community. Relative to pre-industrial conditions, elk

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<sup>2</sup> The habitat metric presented for the three wildlife indicators is defined as “effective habitat,” which refers to the availability of suitable land cover and terrain (i.e., potential habitat) combined with mortality risk facilitated by access via linear footprints (roads, seismic lines, pipelines, transmission lines).

and mule deer habitat has declined by 63% and 54%, respectively, whereas conditions for fish have declined by 23% (Table 1). Moose habitat has increased relative to natural conditions due to conversion of grassland to cropland, but the increase is minor and the study area is still largely unsuitable for moose.

Overall, the declines in elk, mule deer and fish have resulted in reduced opportunities to fish and to hunt on the regional landscape, an issue compounded by limited accessibility for TLU due to private land ownership, non-traditional land use activities, and community member avoidance due to concerns about contamination, safety, and overall negative experiences on the land. It is estimated that 80% of the regional study area is inaccessible for traditional land use due to presence of private land, protected areas, and non-traditional land use activities.<sup>3</sup> When accessibility for TLU is considered, the opportunity for mule deer and elk hunting has declined from natural conditions by 87% and 88%, respectively (Figures 3 and 4). The low opportunity for TLU across much of the regional study area makes the comparatively intact landscapes along the foothills to the west critical for Siksika members to be able to practice TLU activities.

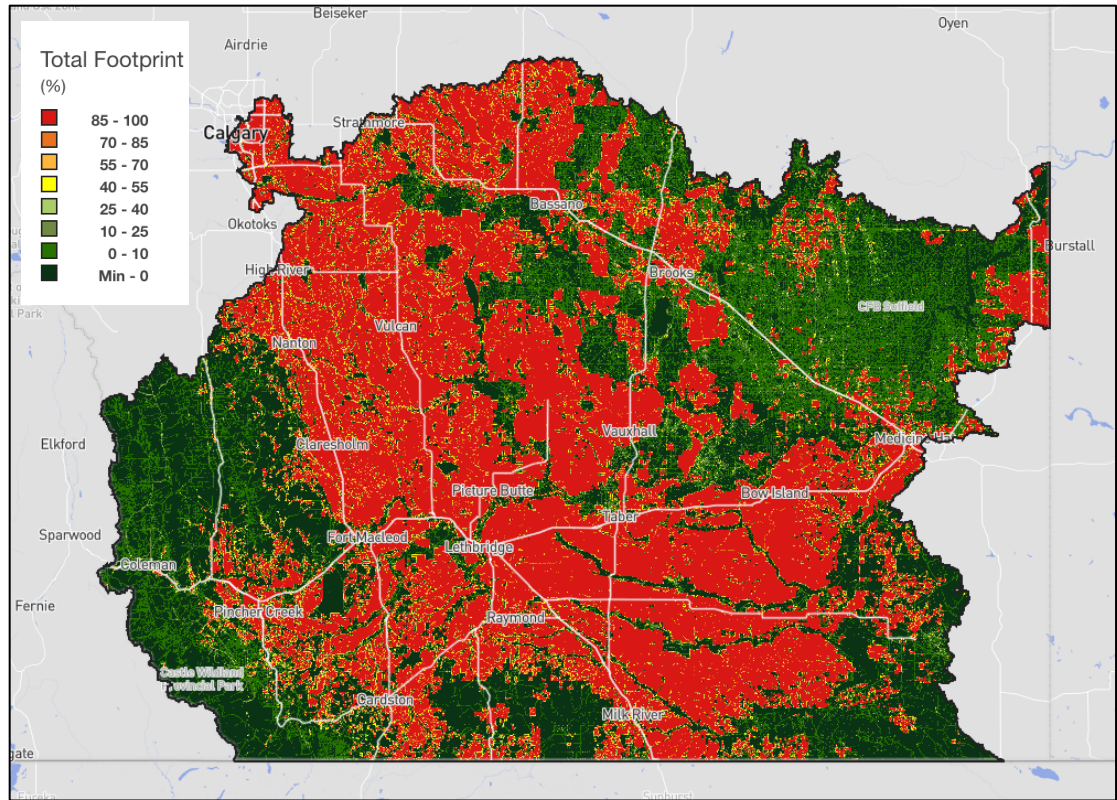
**Table 1. Modelled indicator performance and risk assessment for the regional study area. See section 3.2 or Appendix A for risk categories.**

Indicator	Min. RNV (or 1)	Current estimate	Current decline (%) from min. RNV	Risk level
Moose habitat*	0.02	0.07	-	-
Elk habitat*	0.84	0.31	63	High
Mule deer habitat*	0.84	0.39	54	High
Prairie INFI (fish)	1.00**	0.77	23	Moderate

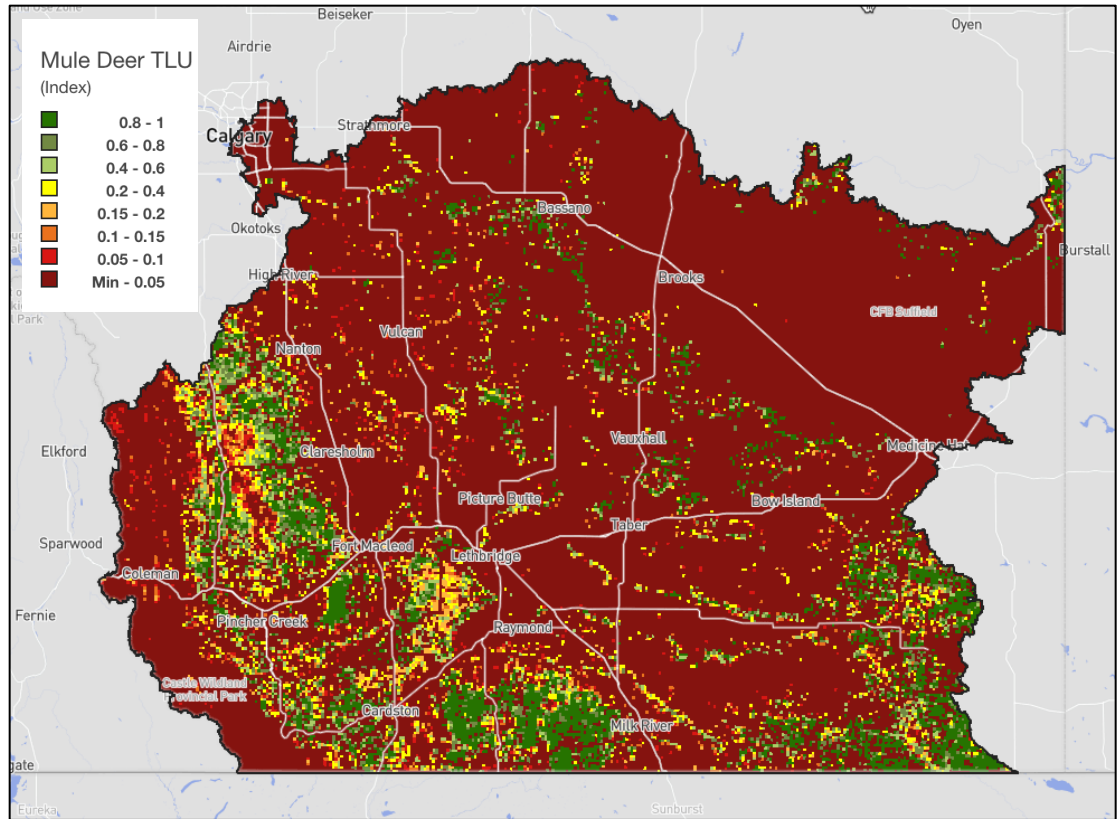
\*Habitat refers to effective habitat, which accounts for availability of suitable land cover and terrain combined with mortality risk associated with linear footprints.

\*\* For INFI, any decline from a value of 1 signifies degrading conditions for the indicator. As a result, the output for this indicator is compared to 1 rather than to mean RNV.

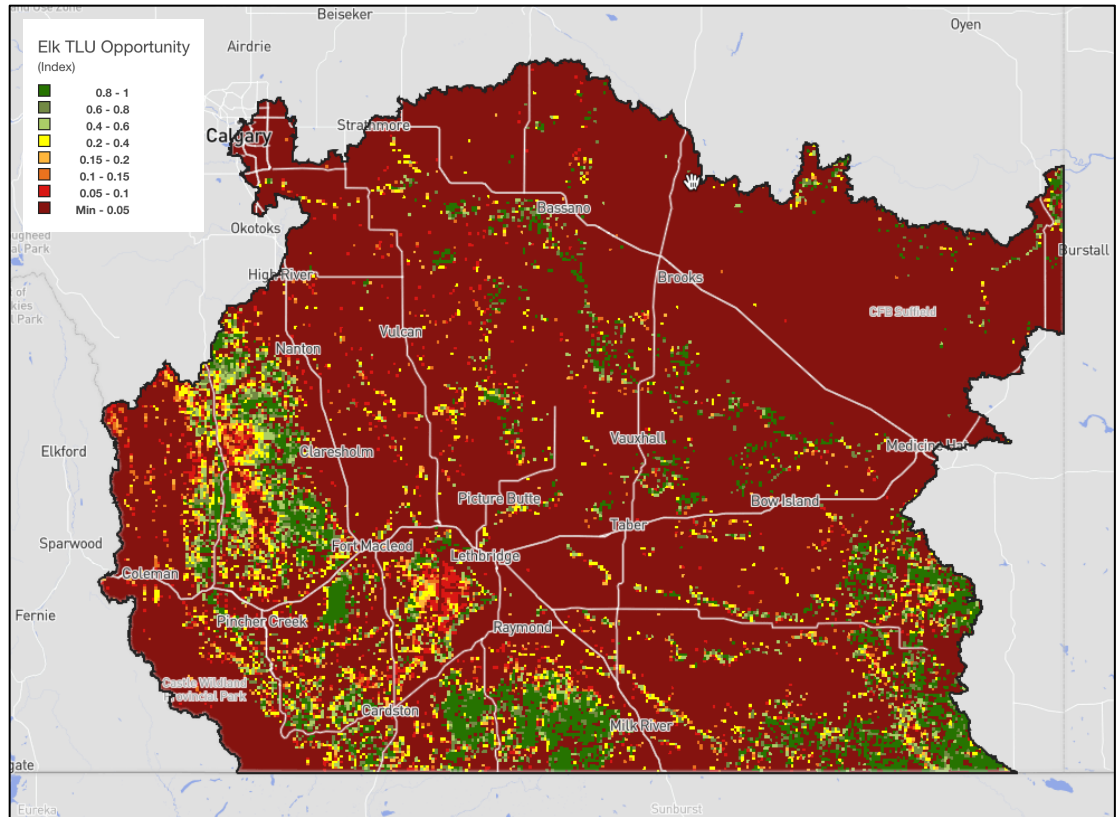
<sup>3</sup> The regional modeling results likely overestimate TLU accessibility because traditional land use depends on numerous factors that have not been numerically considered here. For example, members explained that often gates and restrictions prohibit them from accessing lands that are relatively intact. Further, as regulations increase for recreational activities on surrounding land (e.g., Castle Provincial Park) less regulated but intact crown lands become increasingly busy increasing the competition for resources (e.g., hunting, fishing, and camping spots).



**Figure 2** Current total anthropogenic footprint in the regional study area. Red indicates high intensity footprint while green indicates low intensity footprint. The legend shows the percent of each pixel occupied by footprint features.



**Figure 3 Mule deer TLU opportunity in the regional study area. Based on assumptions that were developed with input from community members. Higher values indicates greater opportunity.**



**Figure 4 Elk TLU opportunity in the regional study area. Based on assumptions that were developed with input from community members. Higher values indicates greater opportunity.**

## 4.2. FOCAL STUDY AREA

With the degradation of natural ecosystems surrounding their reserve, the Siksika community relies on the more intact landscapes to the west, such as areas in the focal study area, to support traditional land use. There too, however, opportunities for traditional land use are impacted by the cumulative effects of land use and other drivers such as climate change. In this section we focus on a 6,000 km<sup>2</sup> landscape to evaluate the current landscape and its fish and wildlife habitat relative to natural conditions, and the potential consequences of land use and climate change over the next 50 years as simulated using ALCES Online.<sup>4</sup>

### 4.2.1. Protected areas and land use footprints

This section presents the various protected areas and anthropogenic footprints that may affect traditional land use in the study area either by restricting access to the land or by altering the capacity of the land to support wildlife. Community members discussed the effect of protected areas and footprints on TLU at a workshop. The discussion informed TLU accessibility and opportunity indicators that are presented later in this section and described in greater detail in the methods appendix (Appendix A).

#### **Restrictive protected areas**

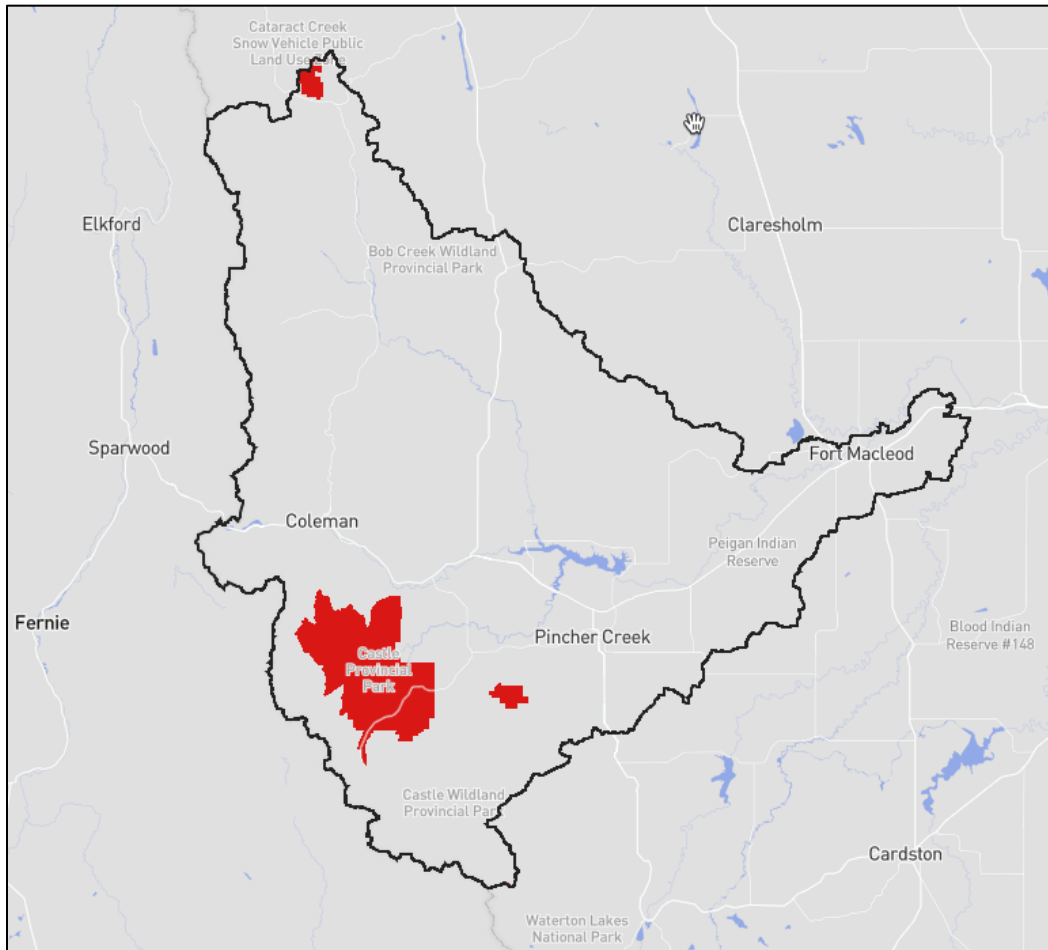
Provincial parks and ecological reserves amount to nearly 5.4% (32,249 ha) (Figure 5).<sup>5</sup> These areas have hunting restrictions that could prevent Siksika members from practicing TLU within portions of their traditional territory. We did not include wildland provincial parks and other natural areas in the study area because it is our understanding that these areas do not have restrictions on hunting.<sup>6</sup>

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<sup>4</sup> The methods used to simulate land use, fire, and climate are described in Appendix A.

<sup>5</sup> Provincial parks in the study area include Beauvais Lake and Castle. Ecological reserves include Plateau Mountain and Westcastle Wetlands.

<sup>6</sup> This research was done with reference to provincial hunting information provided at: <https://www.albertaparks.ca/albertaparksca/visit-our-parks/activities/hunting/#na>

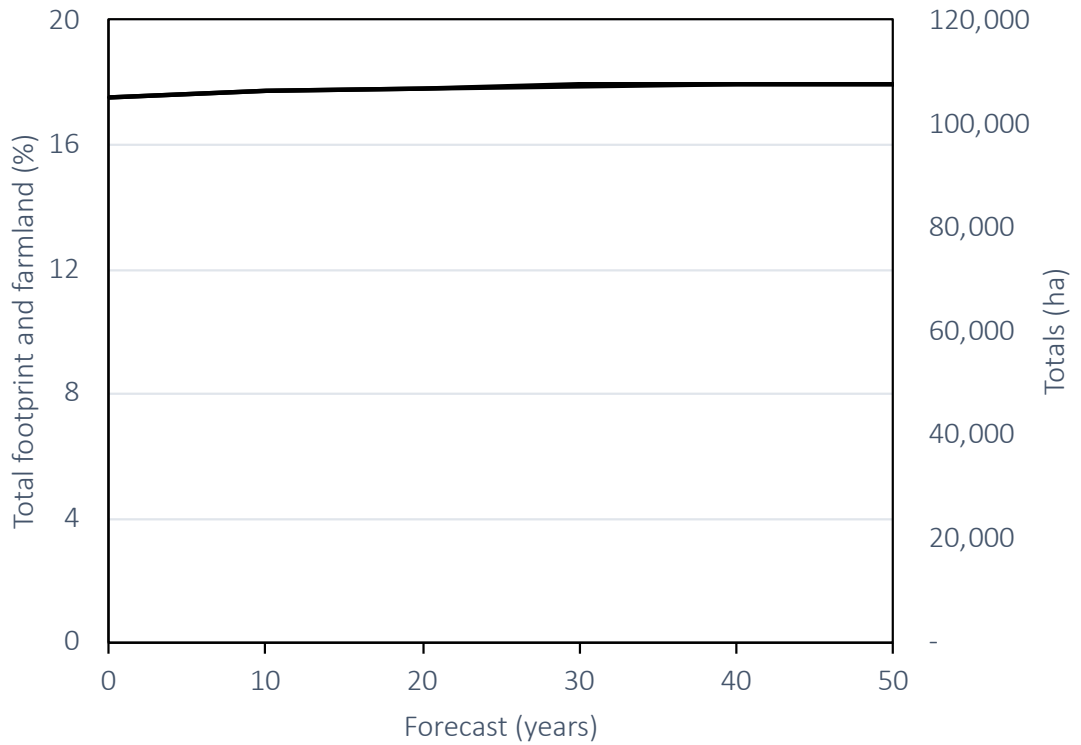


**Figure 5** Locations in the focal study area of restrictive tenure types (i.e., provincial parks and ecological reserves) that may limit hunting opportunities for Siksika members. Red indicates restrictive tenure.

### Footprint types

Land use footprints account for 18% (105,087 ha) of the study area and are projected to increase by around 2,700 ha by the end of the 50-year forecast (Figures 6 and 7). The main contributor to this footprint is agriculture, which currently accounts for 15% (89,568 ha) of the study area and 85% of the total footprint in the study area (Figure 8). Agriculture footprint is projected to remain relatively stable during the 50-year forecast, falling slightly by 246 ha to 83% due to conversion to other land uses such as settlement (Figure 9). The greatest contributor to footprint expansion during the simulation period was from mining, which increased by 1,892 ha primarily from development of the Grassy Mountain mine (Figure 10). Figures 11 through 14 present more minor contributions to footprint from energy,

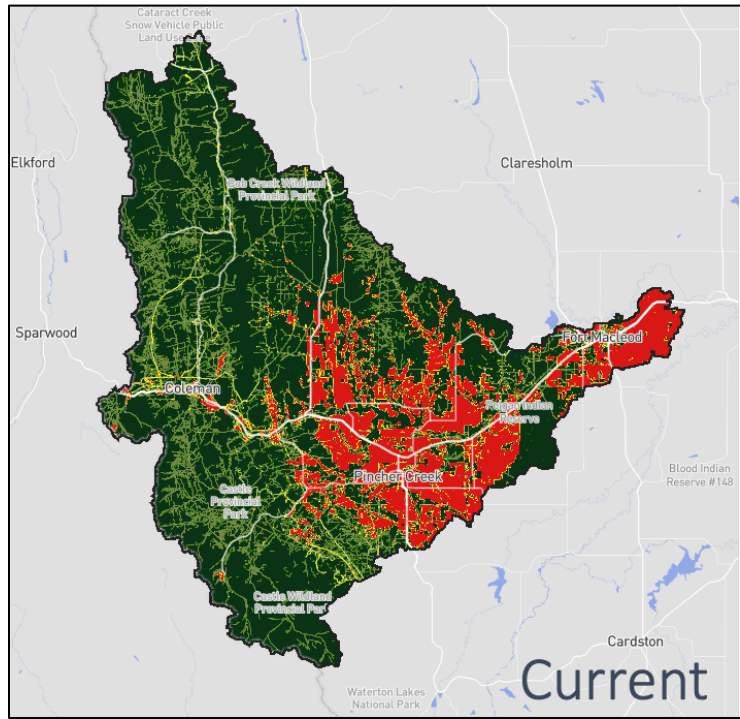
transportation, settlement, and “other footprints,”<sup>7</sup> respectively.<sup>8</sup>



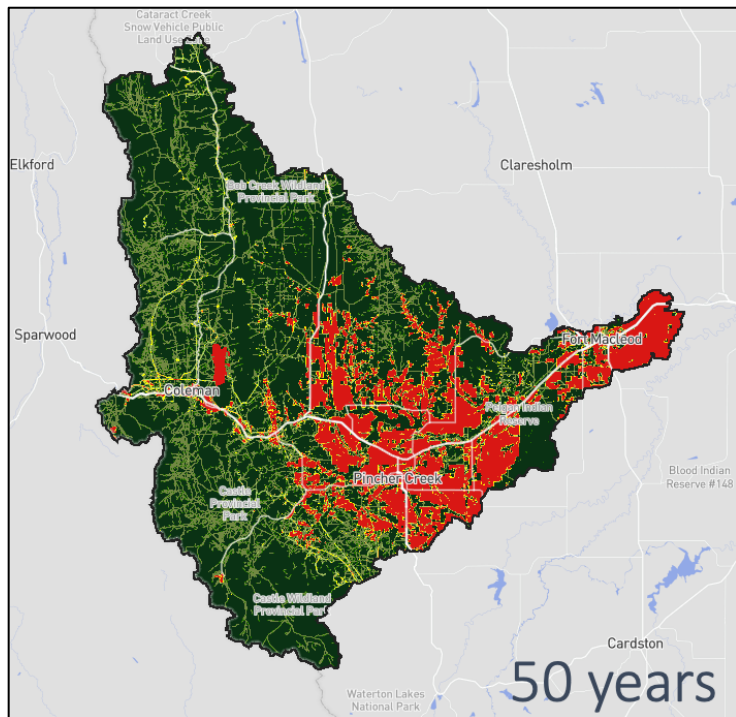
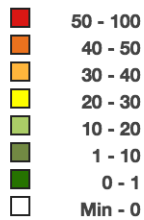
**Figure 6 Current and simulated future footprint in the focal study area. Cutblocks are not included.**

<sup>7</sup> Includes cemeteries, industrial undifferentiated, lagoons, landfills, power generation, powerlines, recreation, and sumps.

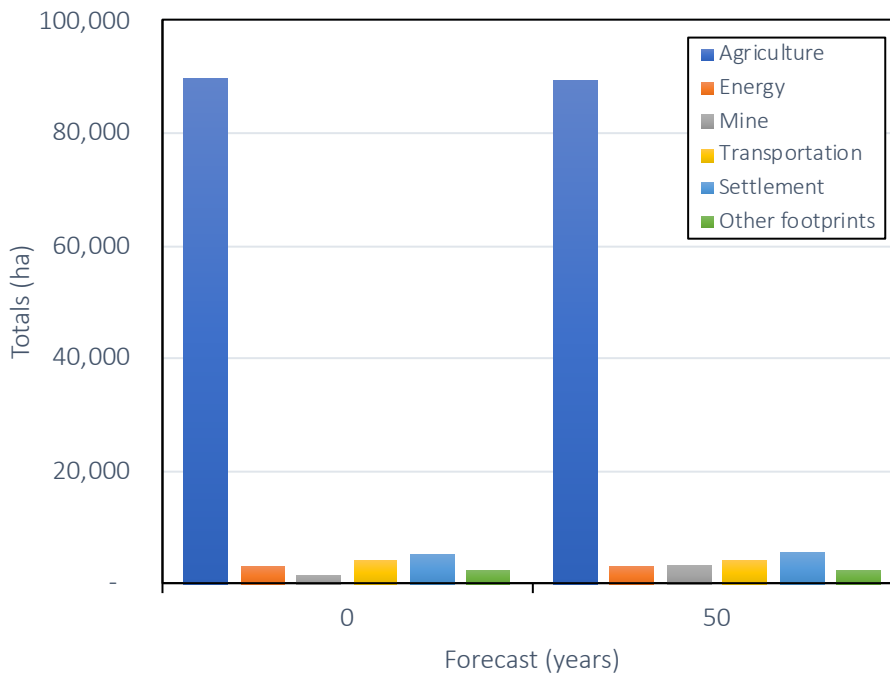
<sup>8</sup> Current and forecast maps are only presented for total footprint (Figure 7) and mining (Figure 10) whereas the other indicators (Figures 11-14) are only represented by a “current” map because their changes through the forecast are minor.



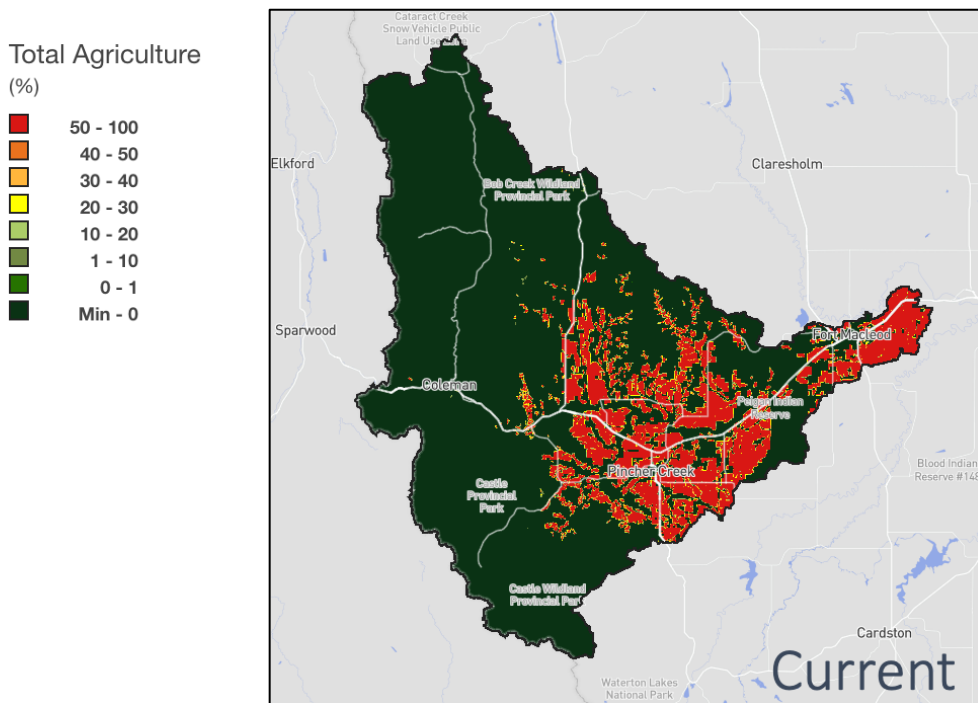
**Total Footprint (%)**



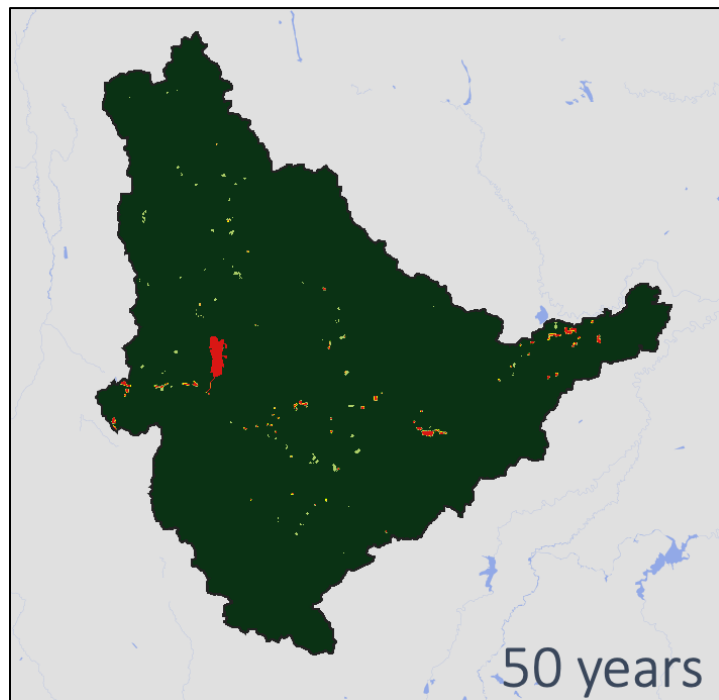
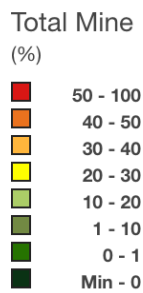
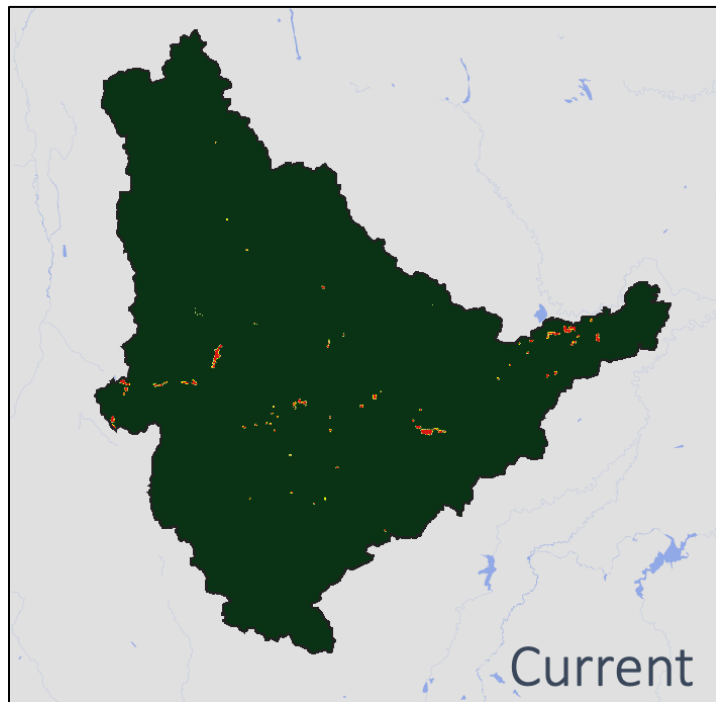
**Figure 7 Current and simulated future development footprint in the focal study area. Red indicates high intensity footprint while green indicates low intensity footprint. The legend shows the proportion of each pixel occupied by footprint features.**



**Figure 8** Current and simulated future footprint by land use in the focal study area.

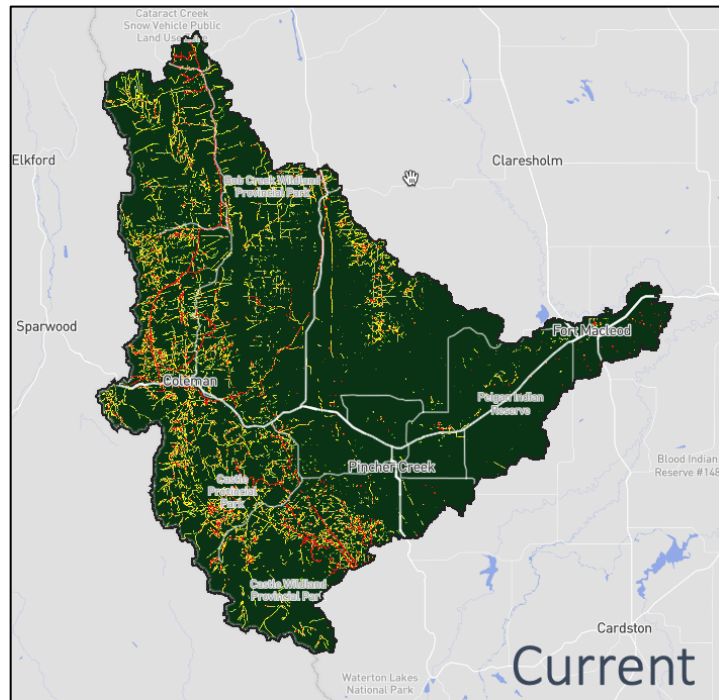
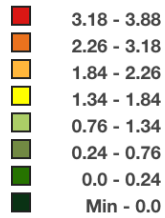


**Figure 9** Current agricultural footprint in the focal study area. Red indicates high intensity footprint while green indicates low intensity footprint.



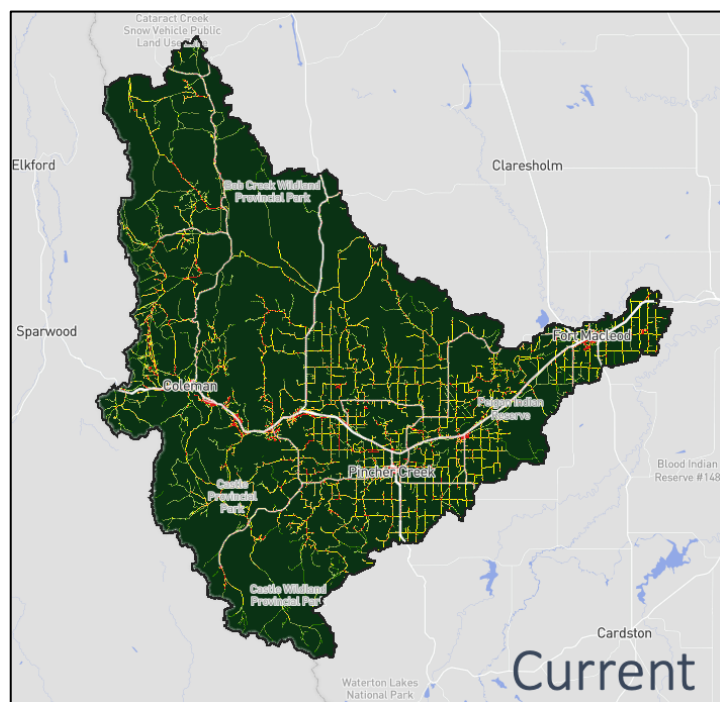
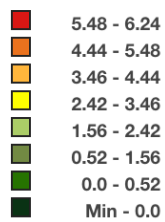
**Figure 10 Current and simulated future mining footprint in the focal study area. Red indicates high intensity footprint while green indicates low intensity footprint. The legend shows the proportion of each pixel occupied by footprint features.**

**Total Energy**  
(%)



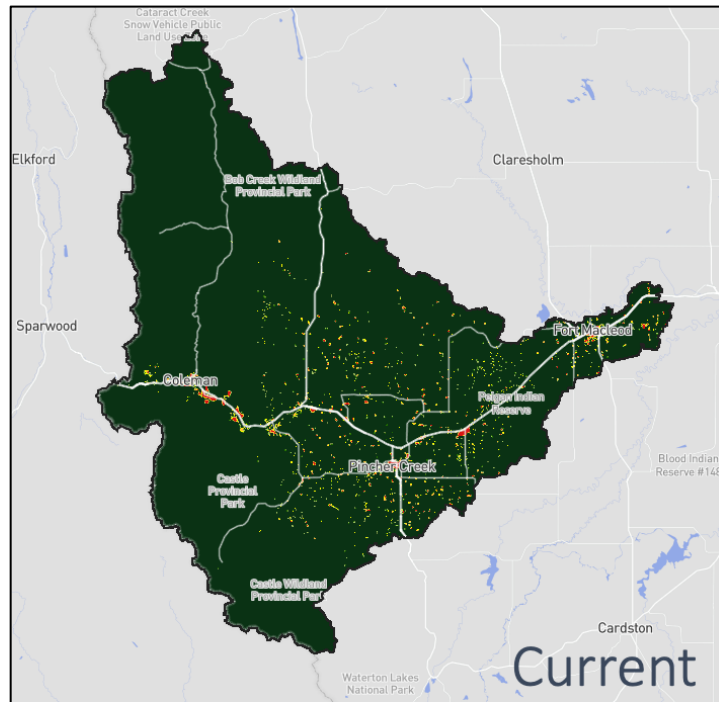
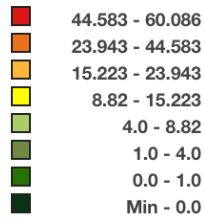
**Figure 11 Current energy footprint in the focal study area. Red indicates high intensity footprint while green indicates low intensity footprint.**

**Total Transportation**  
(%)



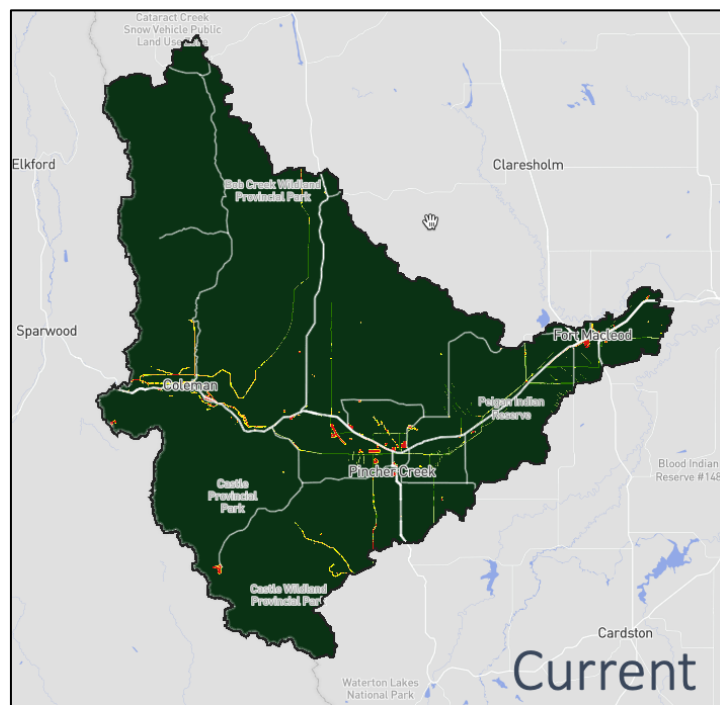
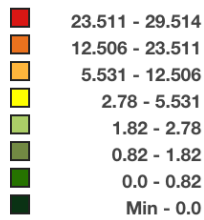
**Figure 12 Current transportation footprint in the focal study area. Red indicates high intensity footprint while green indicates low intensity footprint.**

**Total Settlement**  
(%)



**Figure 13 Current settlement and rural residential footprint in the focal study area. Red indicates high intensity footprint while green indicates low intensity footprint.**

**Other Footprints**  
(%)



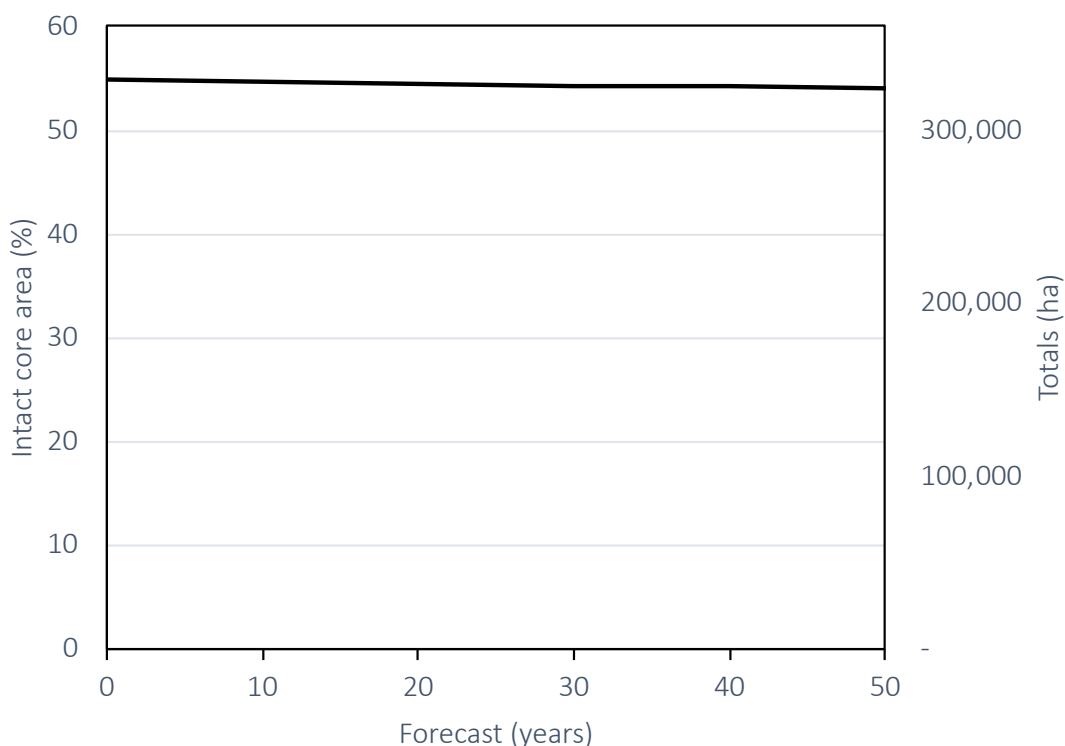
**Figure 14 Other current footprints in the focal study area, including cemeteries, industrial undifferentiated, lagoons, landfills, power generation, powerlines, recreation, and sumps.**

#### 4.2.2. Remaining intact ecosystems

Effects of land disturbance to ecosystems were examined by analyzing impacts to (i) intact core area, and (ii) intact patch size.

##### Intact core area

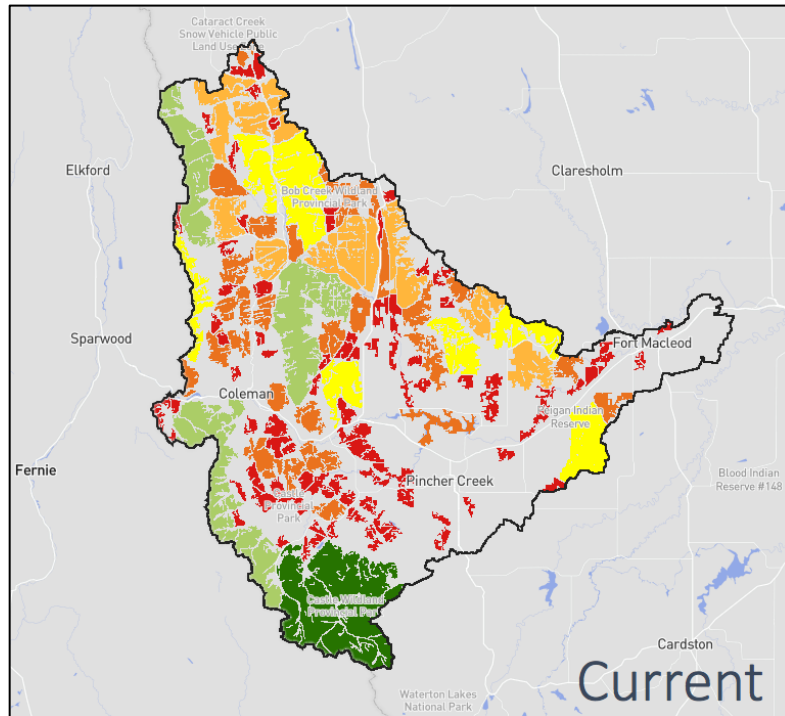
The total extent of 200 m cells that do not contain footprint or farmland (intact core area) is currently around 55% (329,342 ha) of the focal study area. Intact core area declines slightly to 54% (324,372 ha) by the end of the 50-year forecast (Figure 15). Note that there are about 3,926 ha of waterbodies in the study area, which reduces intact core area by about 1% if only the terrestrial land base is considered.



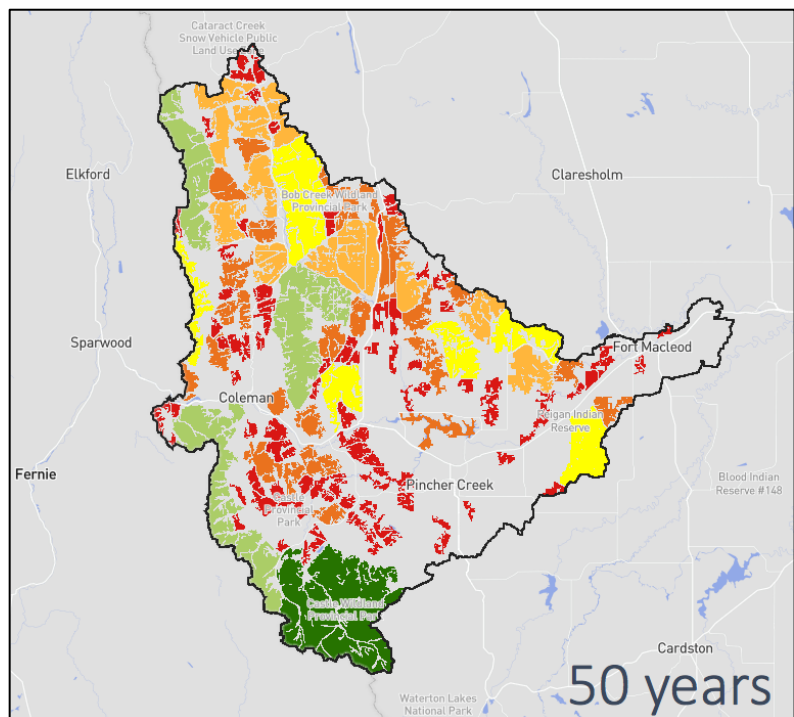
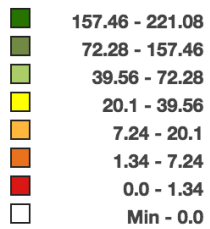
**Figure 15** Current and simulated future coverage of the focal study area by intact patches at least 0.04 km<sup>2</sup> in size.

##### Intact patch size

For the focal study area, results show that average intact patch size across the terrestrial land base (i.e., not including lakes) is currently around 9,131 ha and it is projected to increase negligibly over the 50-year forecast to 9,143 ha (Figures 16). The insensitivity of intact patch size is due to the location of simulated new footprints being concentrated in the eastern portion of the study area where patch size is already low.



**Intact patch size  
(km<sup>2</sup>)**



**Figure 16 Current and simulated future size of intact patches of natural land cover in the focal study area.**

### 4.2.3. Effects to wildlife and fish

Current and simulated future wildlife and fish habitat in the focal study area relative to natural conditions is summarized in Table 2 and discussed below.<sup>9</sup>

**Table 2. Modelled indicator performance and risk assessment for the focal study area. See section 3.2 or Appendix A for risk categories.**

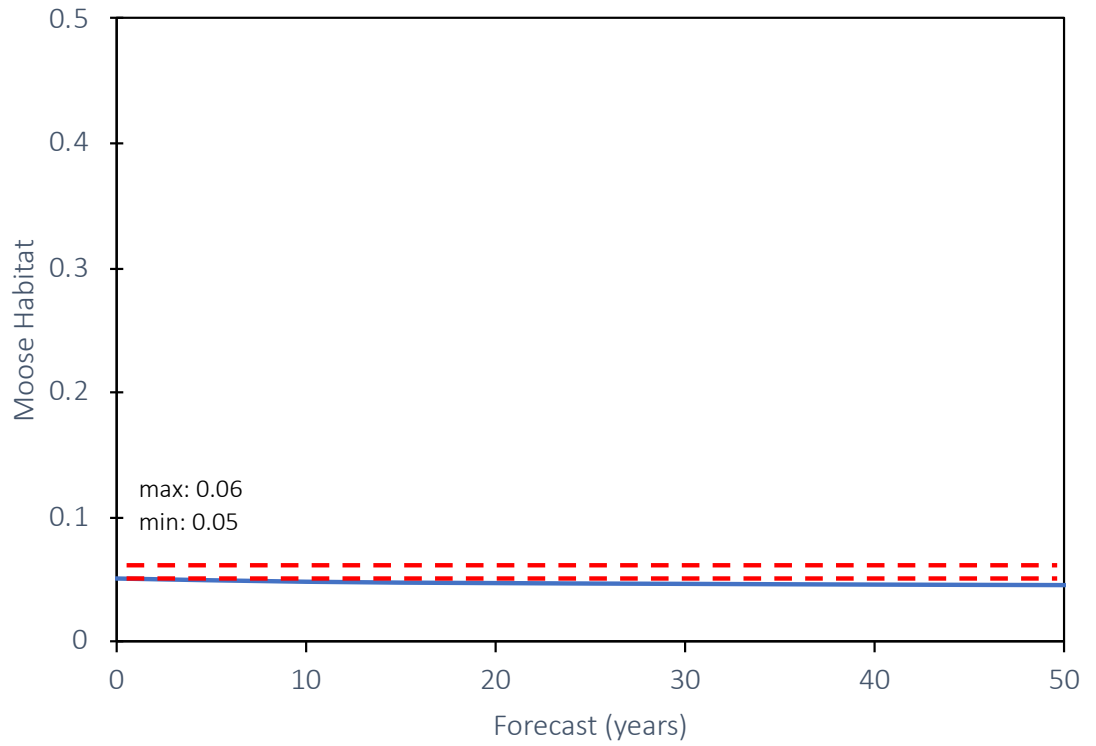
Indicator	Min. RNV (or 1)	Model estimates		% change from min. RNV (or 1)		Risk level
		Current	50 years	Current	50 years	
Moose habitat	0.05	0.05	0.05	-	-	-
Elk habitat	0.42	0.22	0.21	-48	-51	Moderate
Mule deer habitat	0.42	0.25	0.25	-40	-41	Moderate
Foothills/Montane INFI (fish)	1.00*	0.66	0.52	-34	-48	Moderate/High

\* For INFI, any decline from a value of 1 signifies degrading conditions for the indicator. As a result, the output for this indicator is compared to 1 rather than to mean RNV.

#### Moose

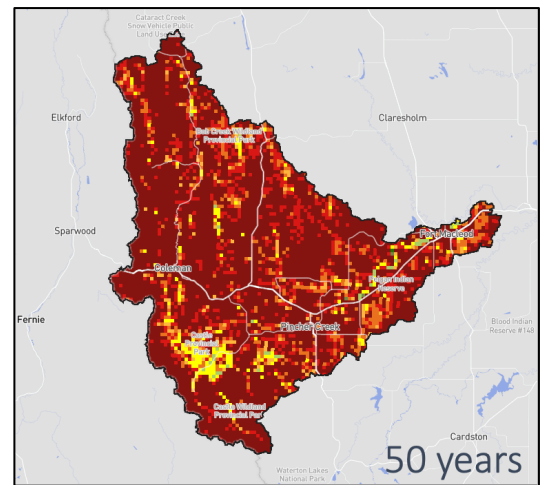
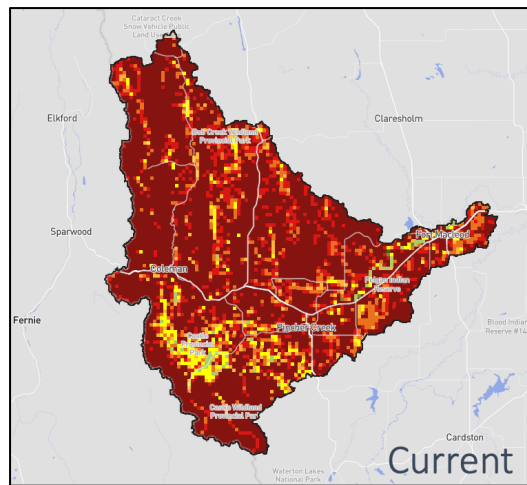
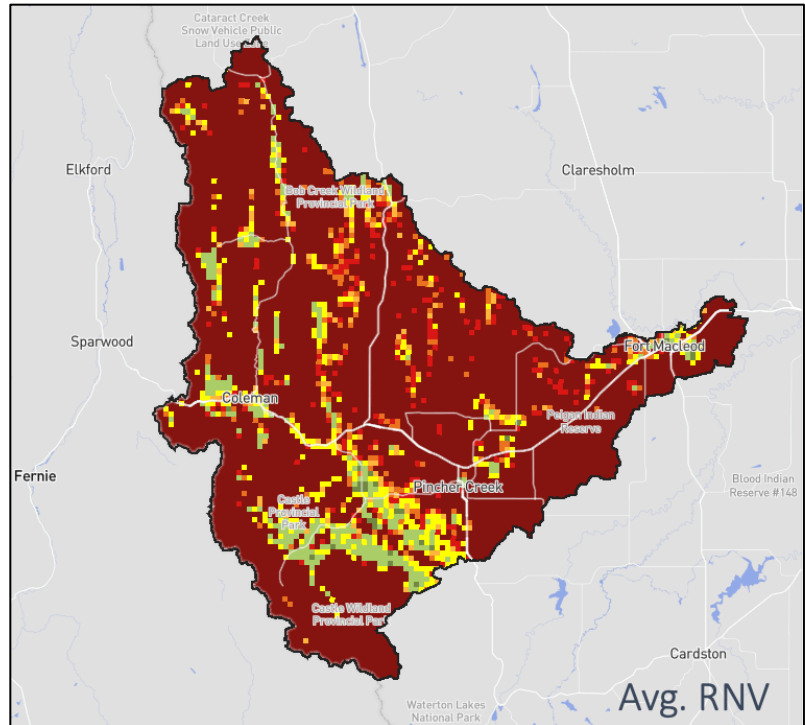
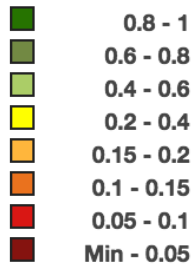
Moose habitat has likely always been low in the study area due to the grassland to the east and high elevation to the west, and habitat remains low today. At the scale of the study area, moose habitat has declined marginally to the lower edge of the RNV. The negative impacts of habitat loss and elevated mortality risk due to access are partially offset by minor increases in habitat in the eastern portion of the study area where grassland has been converted to cropland which provides better forage. However, the best habitat remains lower elevation forests in the parkland and mountain valleys to the west.

<sup>9</sup> The habitat metric presented for the three wildlife indicators is defined as “effective habitat,” which refers to the availability of suitable land cover and terrain (i.e., potential habitat) combined with mortality risk facilitated by access via linear footprints (roads, seismic lines, pipelines, transmission lines).



**Figure 17** Current and simulated future moose habitat in the focal study area (blue line). The red dashed lines identify the estimated range of natural variation as a baseline for comparison.

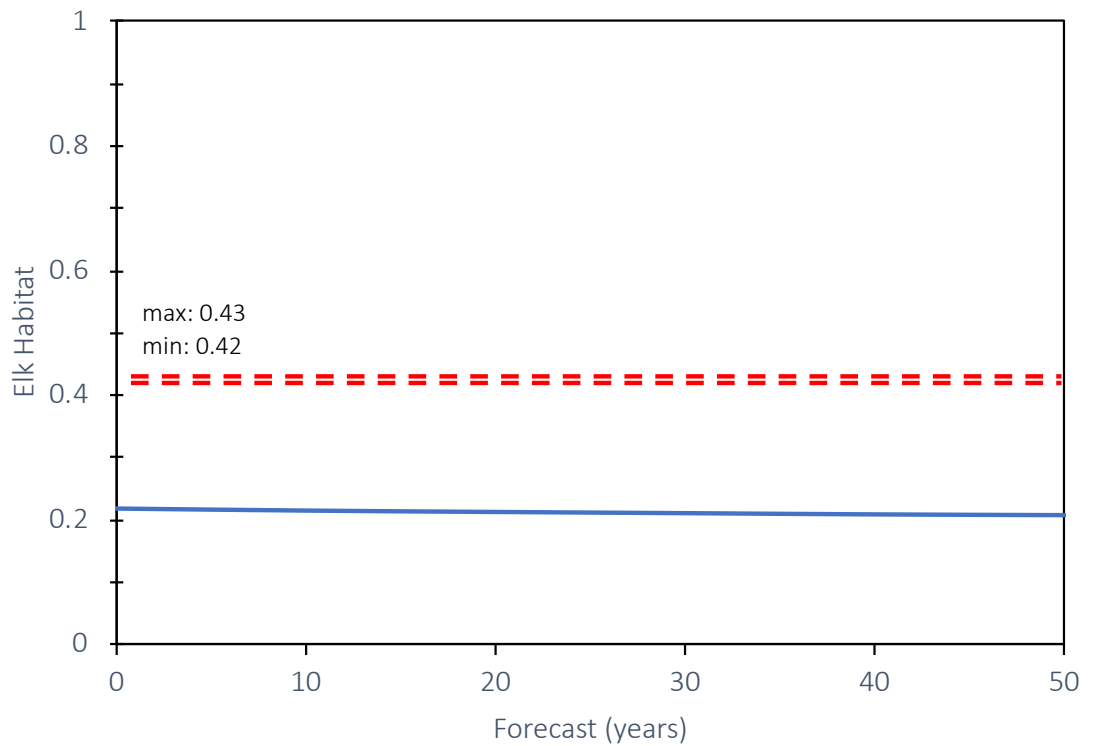
**Moose Habitat  
(Index)**



**Figure 18 Natural, current, and simulated future moose habitat in the focal study area. A value of 1 identifies maximum effectiveness.**

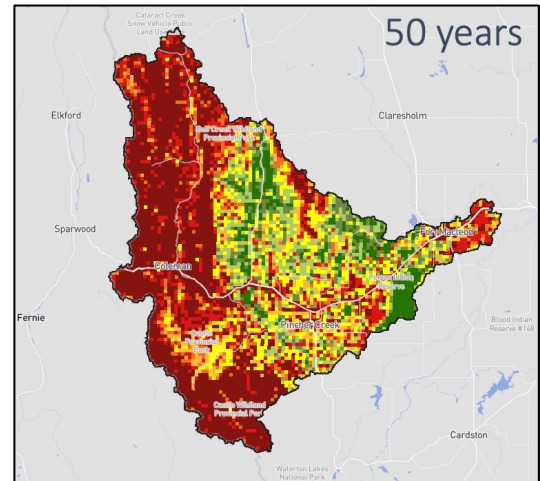
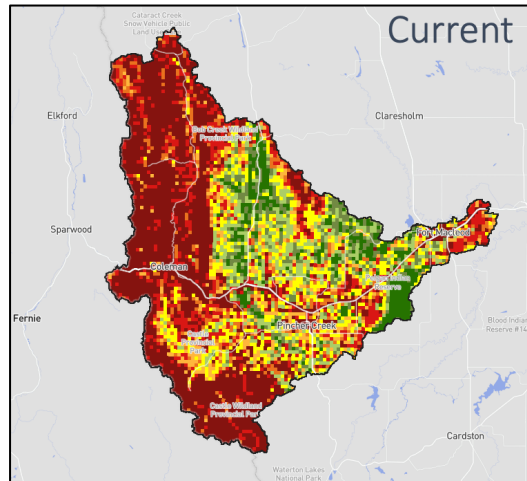
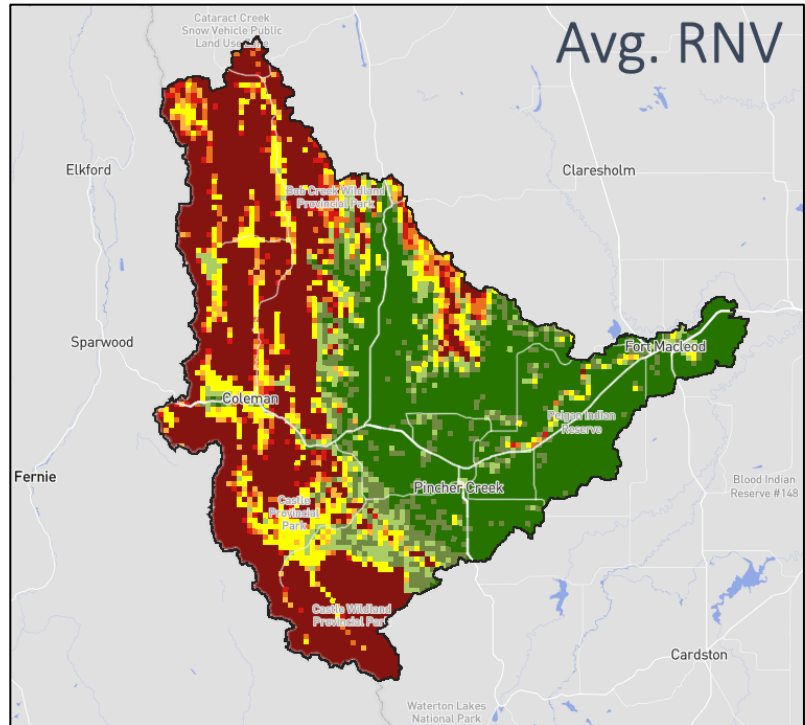
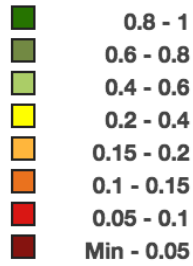
### Elk habitat

Elk habitat has declined by 48% in the focal study area relative to natural conditions (Table 2, Figure 20). This decline corresponds to an assessment of moderate risk to elk and associated hunting opportunities. Elk habitat was likely highest in the grasslands in the eastern portion of the focal study area prior to European settlement (Figure 21), but habitat in this area has since declined due to conversion to agriculture and mortality risk associated with linear footprints. Remaining elk habitat is now focused in remaining grassland with lower linear footprint density. In the forecast, elk habitat dropped slightly to below 50% of natural at the end of the 50-year forecast.



**Figure 19** Current and simulated future elk habitat index in the focal study area (blue line). The red dashed lines identify the estimated range of natural variation as a baseline for comparison.

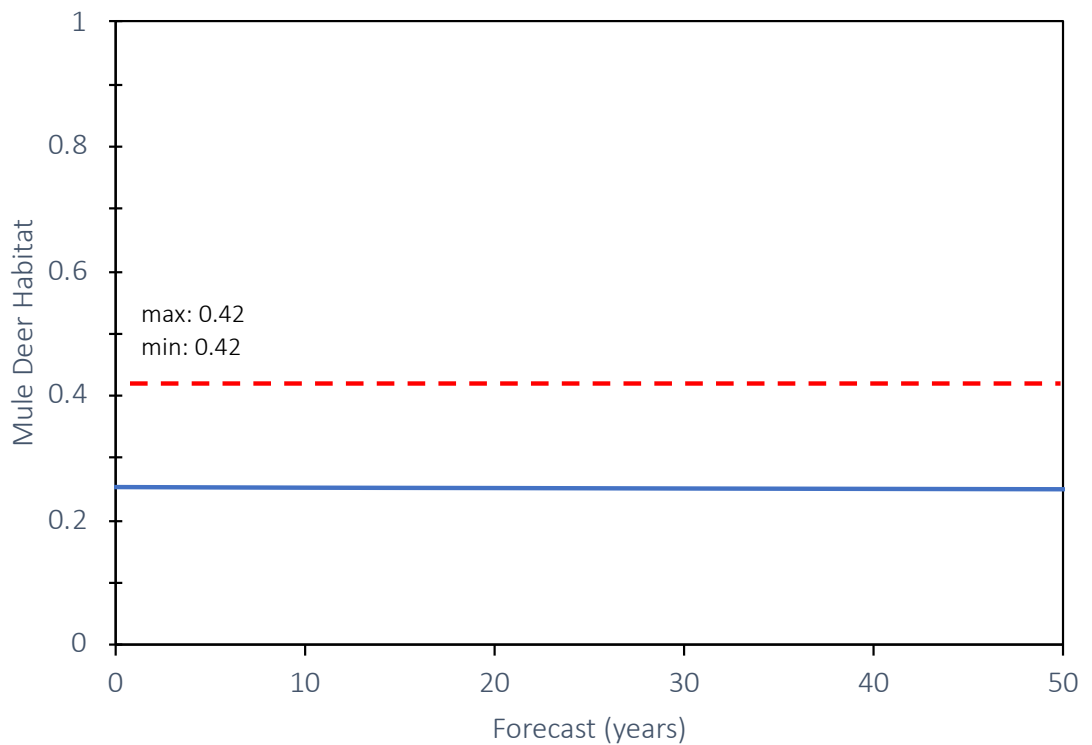
**Elk habitat  
(Index)**



**Figure 20** Natural, current, and simulated future elk habitat in the focal study area. A value of 1 identifies maximum effectiveness.

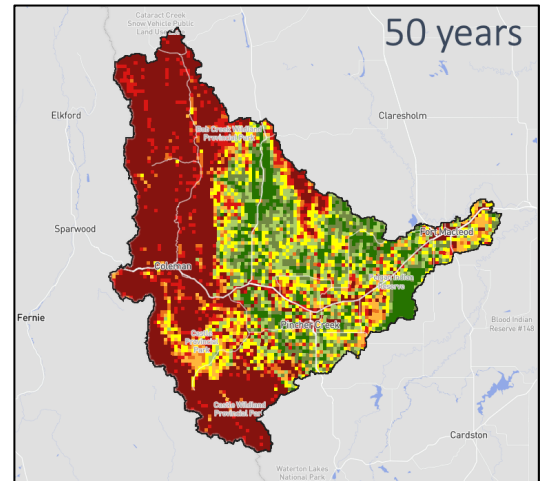
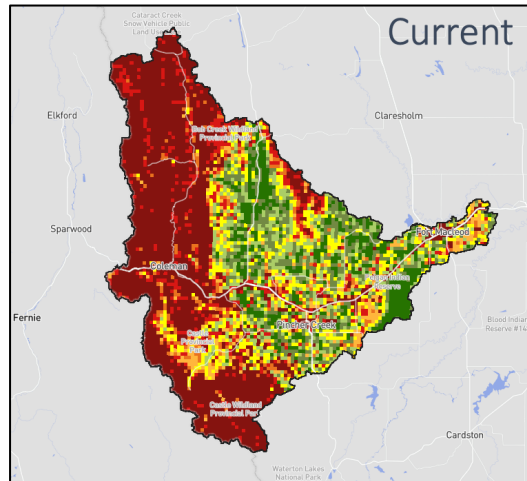
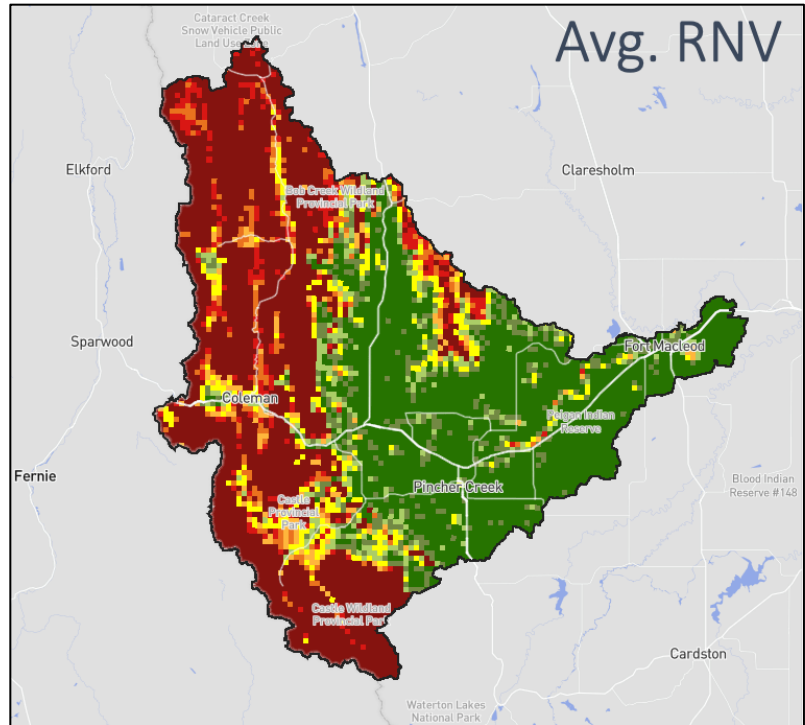
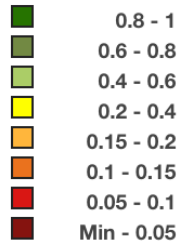
### Mule deer habitat

Mule deer habitat has declined by 40% relative to natural conditions in the focal study area (Table 2, Figure 22). This decline corresponds to an assessment of moderate risk to mule deer and associated hunting opportunities. Under natural conditions, suitable mule deer habitat was focused in the eastern portion of the study area but this area has since undergone a decline in habitat due to conversion to farmland and linear footprints that facilitate human access (Figure 23). Remaining elk habitat is now focused in remaining grassland as well as pasture with lower linear footprint density. In the forecast, mule deer habitat decreased only slightly over time to 41% of natural at the end of the 50-year forecast.



**Figure 21** Current and simulated future mule deer habitat index in the focal study area (blue line). The red dashed line identifies the estimated range of natural variation as a baseline for comparison.

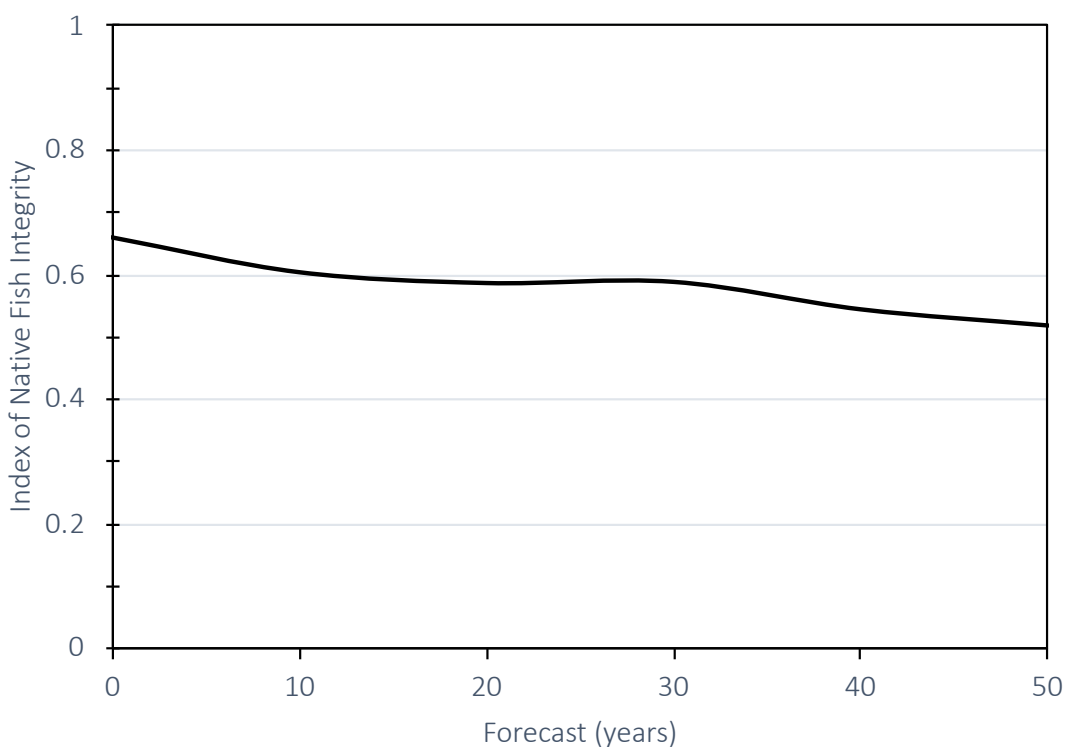
Mule deer habitat  
(Index)



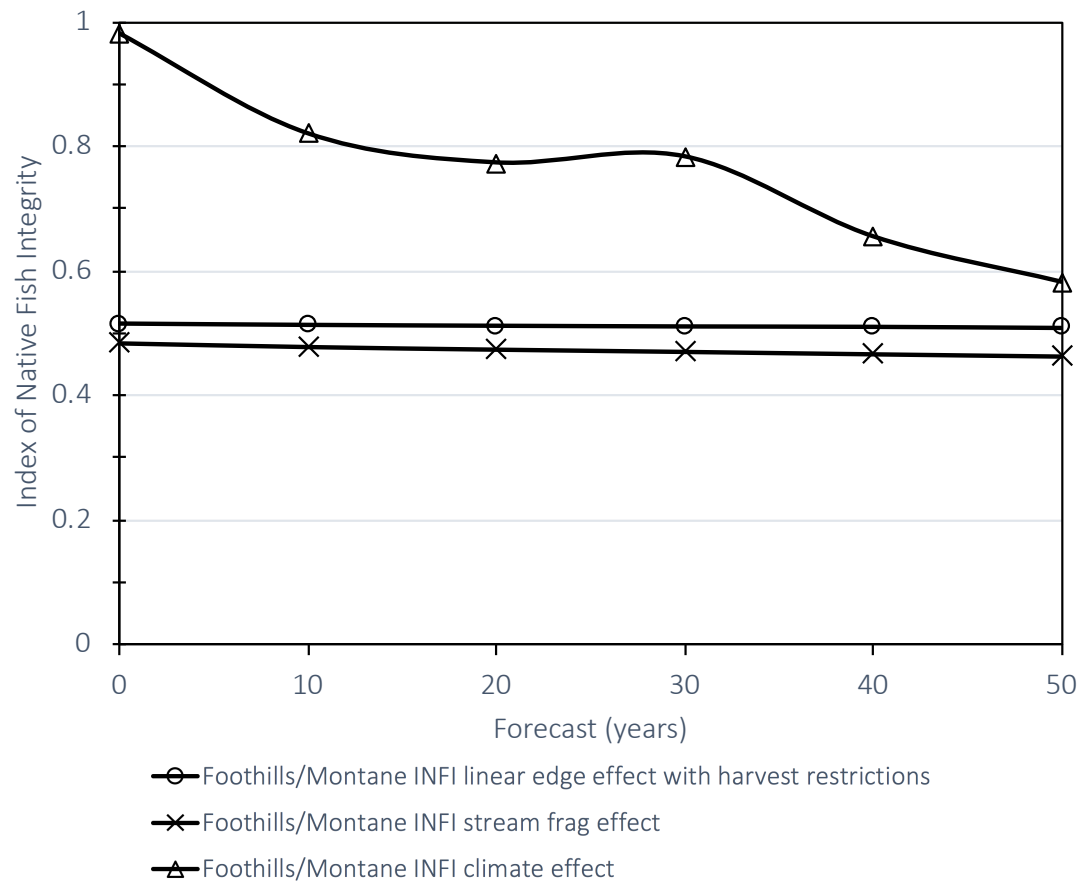
**Figure 22** Natural, current, and simulated future mule deer habitat in the focal study area. A value of 1 identifies maximum effectiveness.

### Index of Native Fish Integrity (INFI)

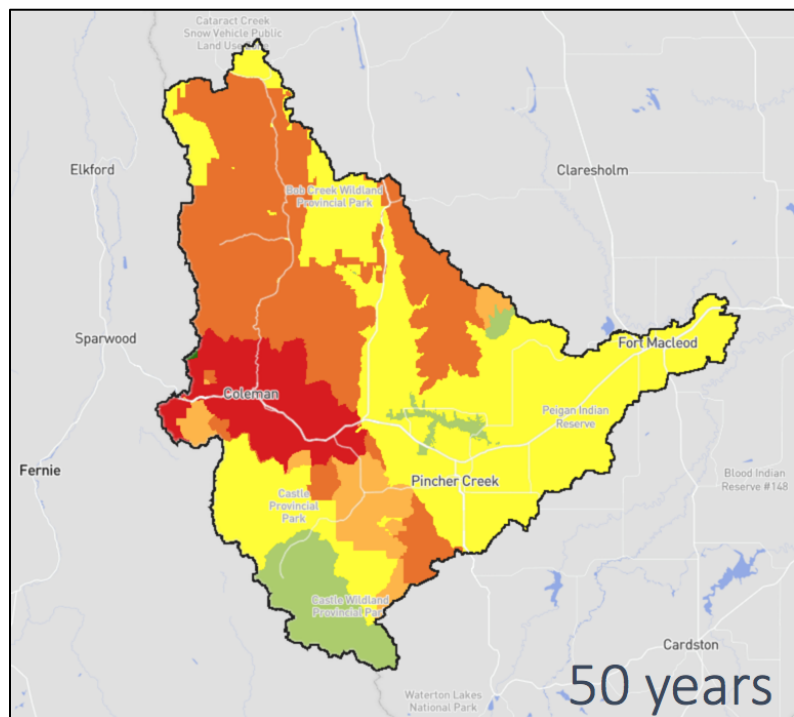
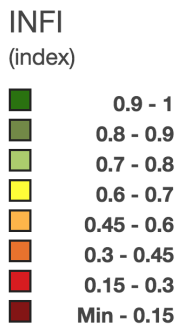
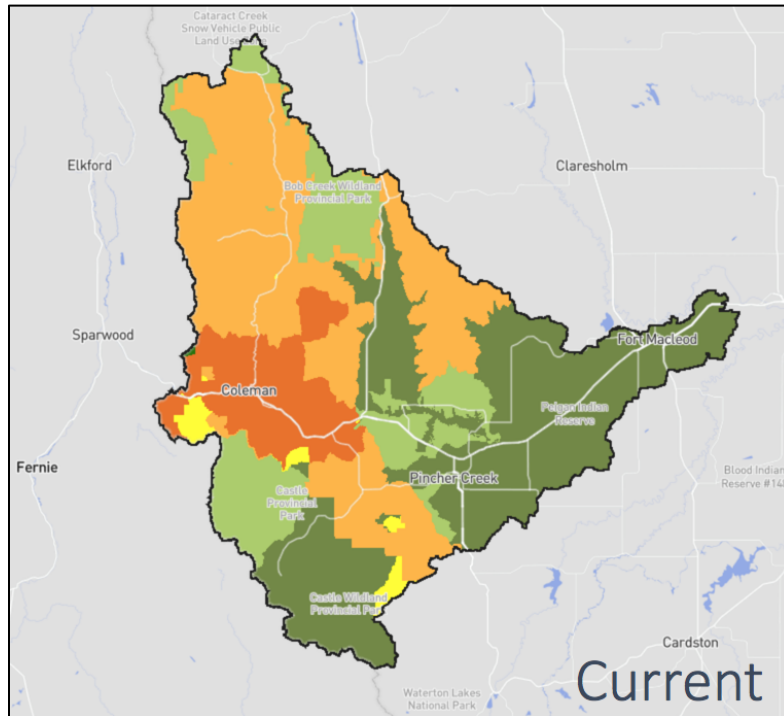
The fish community index (INFI) is projected to fall from a current value of 0.66 (a 34% decline from RNV) to 0.52 (a 48% decline from RNV) (Table 2, Figure 24), suggesting a shift from moderate to high risk over the next five decades. INFI was calculated as the average value across three effects: linear edge, stream fragmentation, and climate. Currently, linear edge and stream fragmentation levels are consistent with high risk, whereas climate is consistent with low risk (Figure 25). During the simulation, however, rising temperature causes the climate effect to elevate to moderate and overall risk to increase to high. Current and simulated future INFI values for watersheds are illustrated in Figure 26. Lower risk watersheds are concentrated in the prairie portion of the watershed, where fishing pressure is likely limited by private land and fish habitat is dominated by rivers that are less susceptible to fragmentation by culverts, and in the southern portion of the watershed where footprint is lower due to protection.



**Figure 23** Current and simulated future index of native fish community integrity in the focal study area.



**Figure 24** The effect of stressors on INFI in the focal study area. Lower values indicate greater impact.



**Figure 25 Current and simulated future index of native fish community integrity (INFI) in the focal study area. Higher values (i.e., greener colours) indicate lower risk.**

#### 4.2.4. Effects to traditional land use

Effects to traditional land use were examined by analyzing impacts to three indicators:

1. accessibility for traditional land use;
2. mule deer TLU opportunity; and,
3. elk TLU opportunity.

Results by indicator are discussed below.

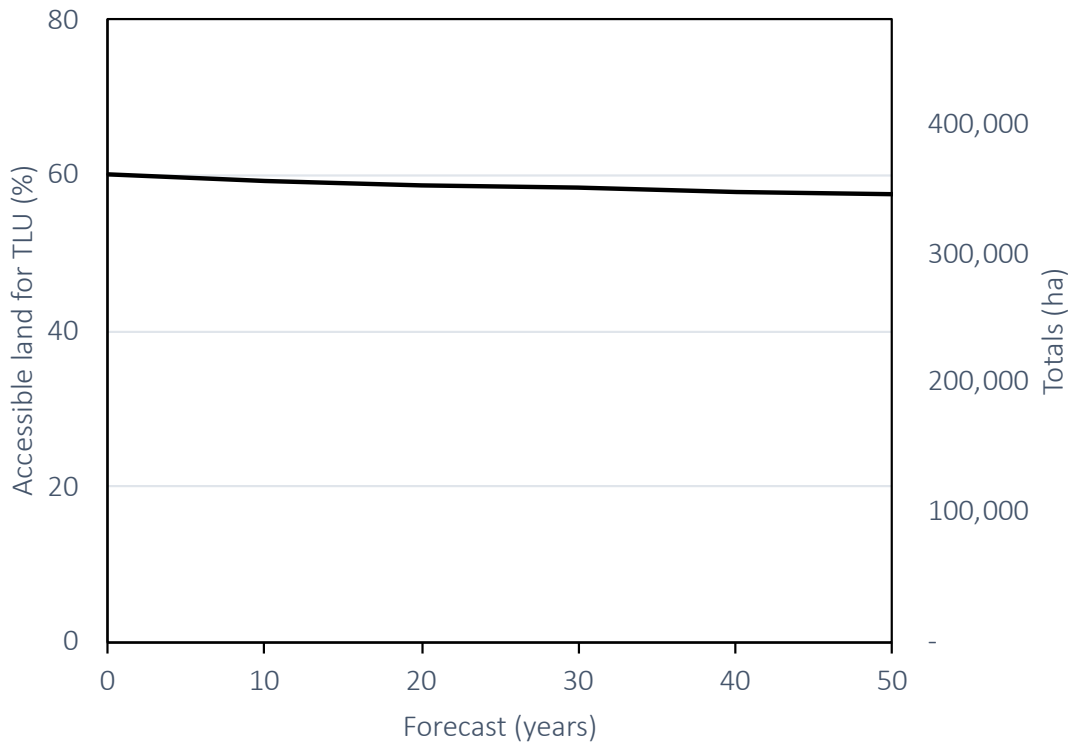
Note that the results presented are likely an overestimation (i.e., optimistic view) of actual conditions for TLU accessibility and opportunity. For instance, from a land use standpoint, harvesting activities do not necessarily occur where there is accessible and suitable habitat, but rather depend on numerous logistical and cultural factors that have not been numerically considered here. Some of the factors that have not been integrated in the modeling include distance from home, ease of access, gates and restrictions that prohibit access,<sup>10</sup> familiarity and knowledge of location, cultural history in the area, competition for resources (e.g., hunting, fishing, and camping sites), among others. As an example, there may be locations that have suitable habitat but are not valuable for hunting because they are too far from home and in unfamiliar locations. Hunting in remote locations requires commitment of increased time and resources that some members cannot afford, and success in unfamiliar locations is not guaranteed. The result of the combination of these factors is that not all of the habitat that is modeled as suitable/accessible in this study necessarily presents a good TLU opportunity for community members.

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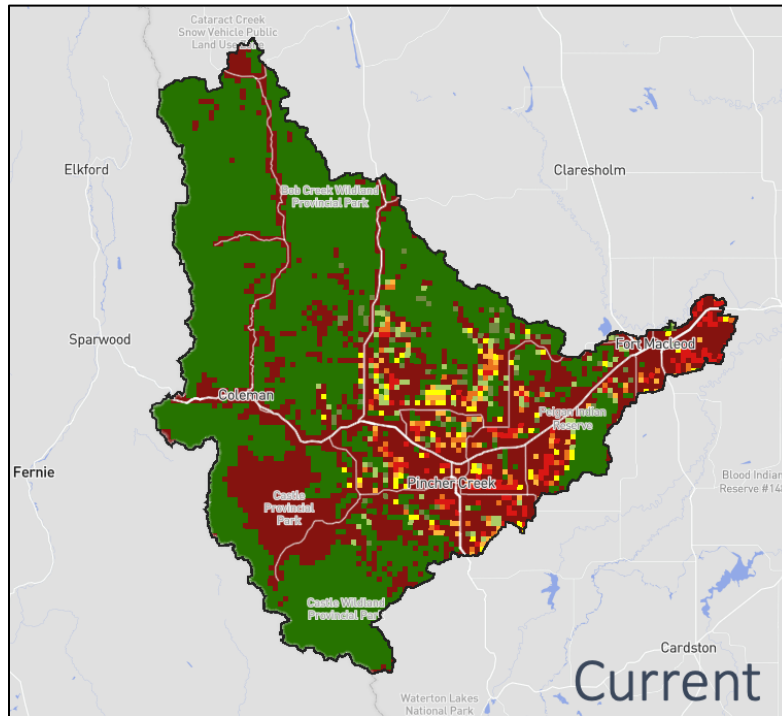
<sup>10</sup> Community members described two specific access points (the Shell plant and Birdseye Ranch) that have been gated in recent years, cutting off access to a large land use zone and associated network of roads.

### Accessibility for traditional land use

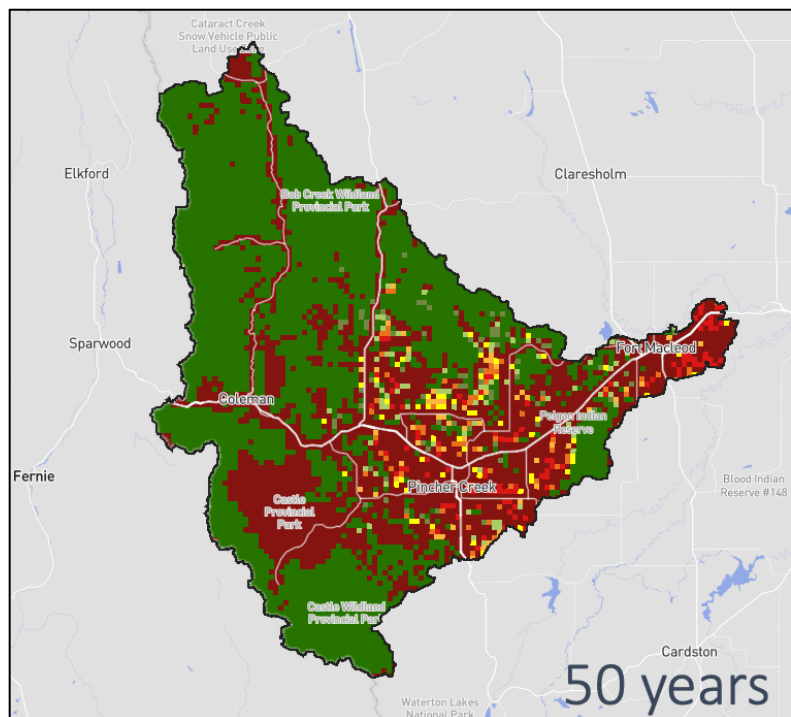
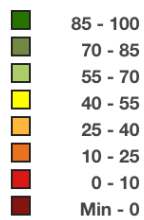
The amount of land that is currently accessible for traditional land use is estimated to equal 60% (359,998 ha) of the focal study area (Figure 27). This area declines slightly to 58% (345,453 ha) by the end of the 50-year forecast. Current and simulated future values are illustrated in Figure 28. Throughout the simulation, much of the accessible land for TLU occurs in the western foothills and mountains.



**Figure 26** Percent of the focal study area that is accessible for traditional land use. Based on assumptions that were developed with input from community members.



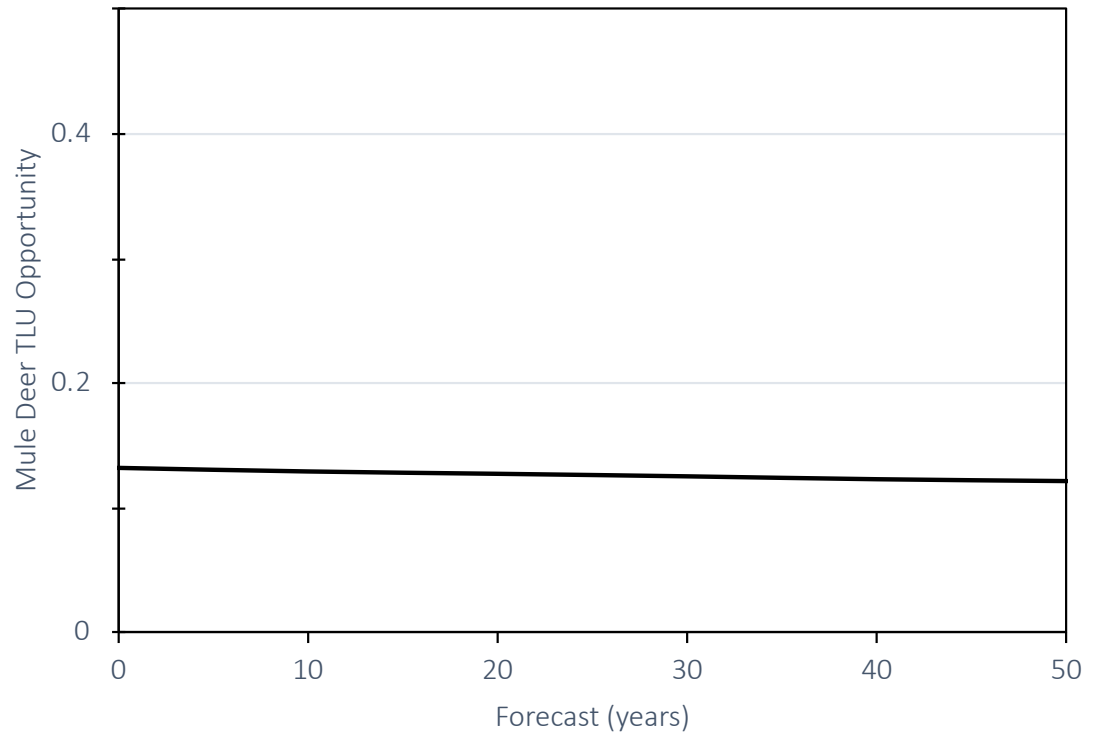
TLU accessibility (%)



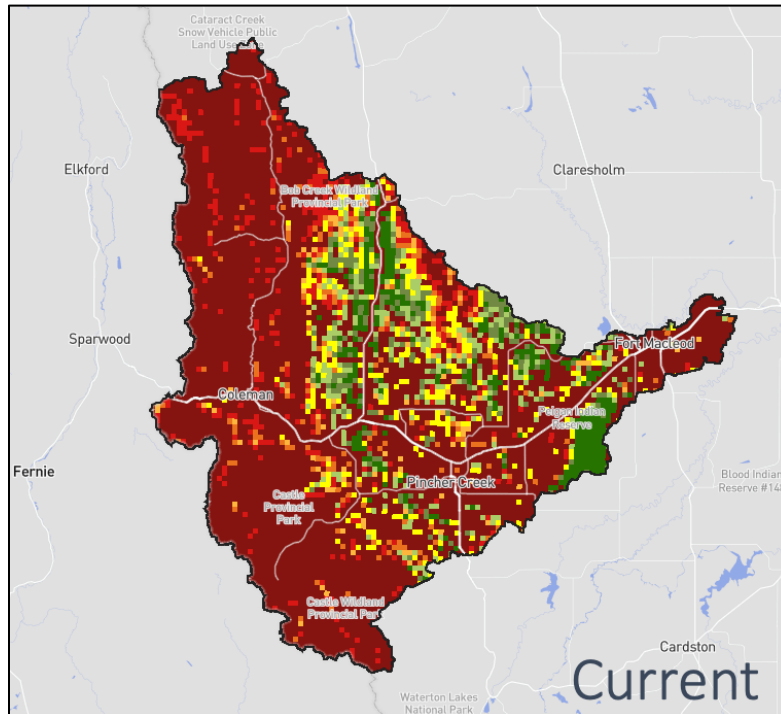
**Figure 27 Current and simulated future accessibility for traditional land use in the focal study area. Based on assumptions that were developed with input from community members. Higher values indicate greater accessibility.**

### Mule deer TLU opportunity

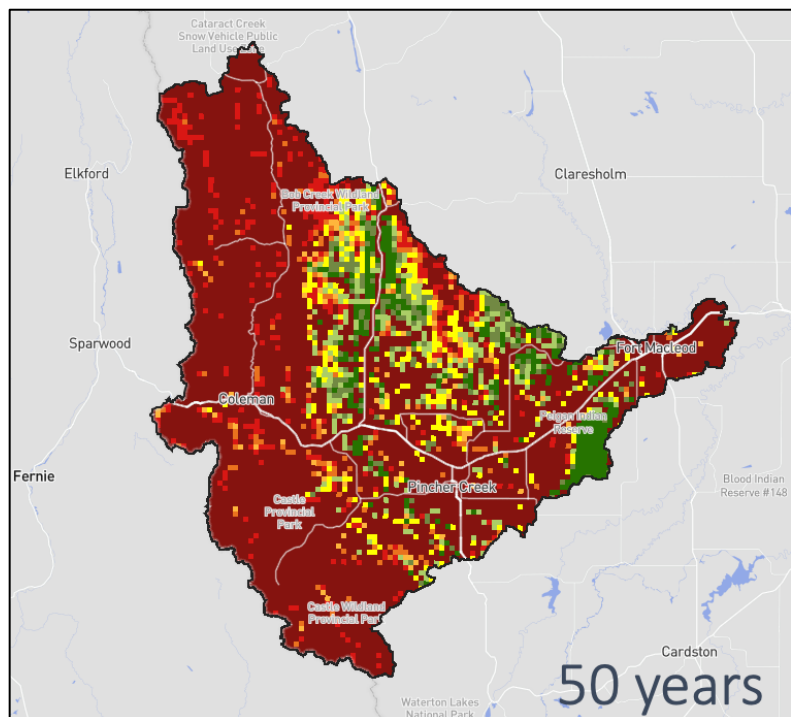
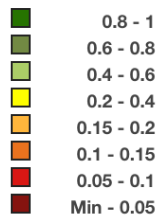
Current mule deer TLU opportunity (0.13) in the focal study area is about 48% lower than current mule deer effective habitat (0.25) presented in section 4.2.3 (see Figure 22). By the end of the forecast, mule deer TLU opportunity is projected to decline by about 7% due to expansion of development activities (Figures 29 and 30).



**Figure 28 Current and simulated future mule deer traditional land use opportunity in the focal study area. Based on assumptions that were developed with input from community members.**



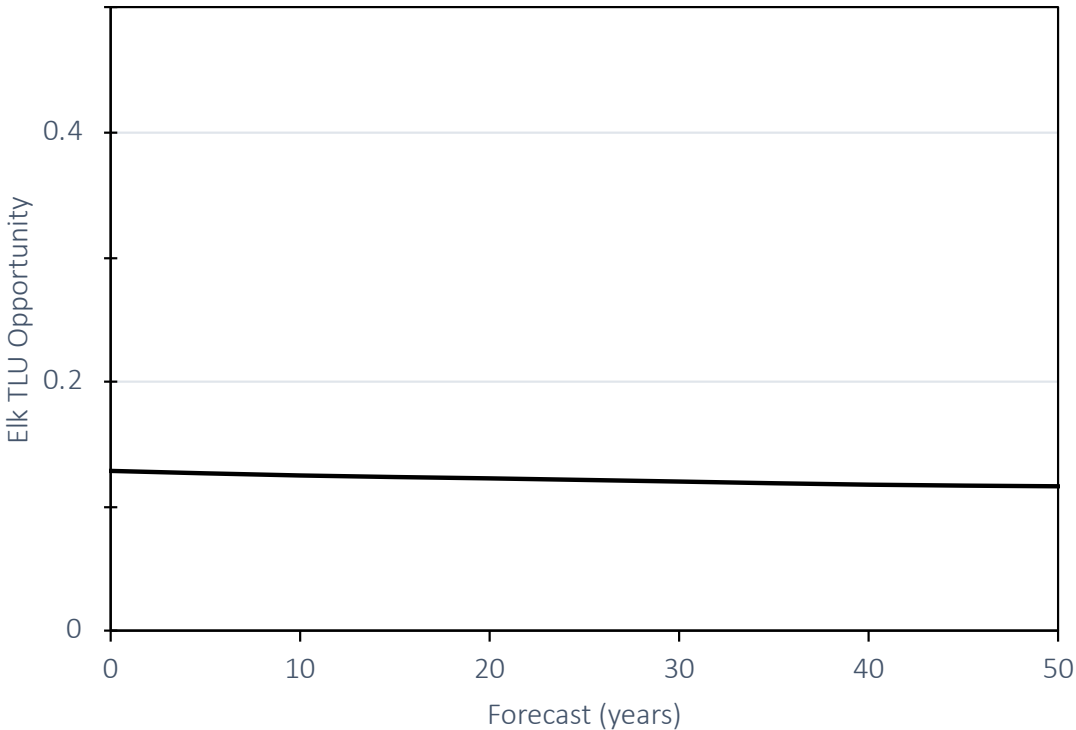
Mule Deer TLU (Index)



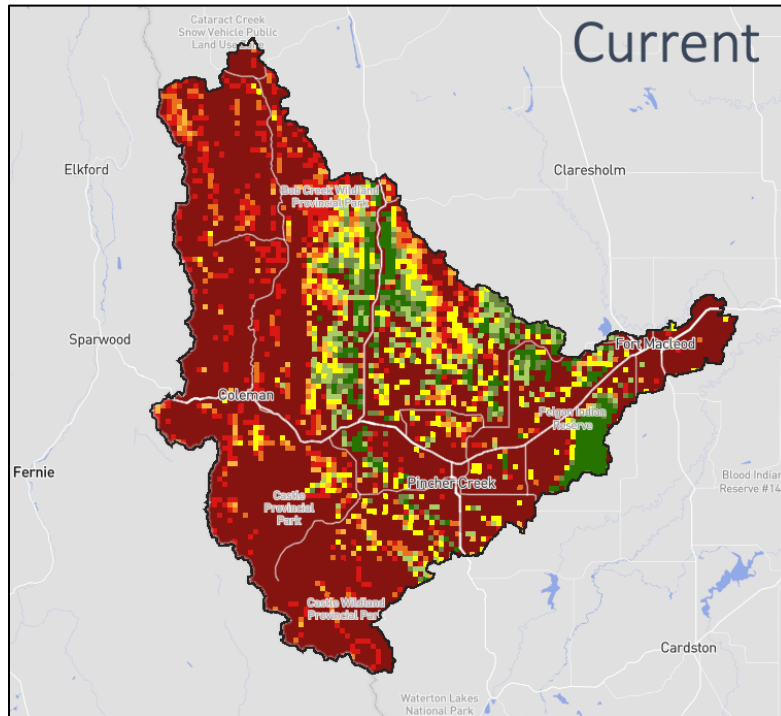
**Figure 29 Current and simulated future mule deer TLU opportunity in the focal study area. Based on assumptions that were developed with input from community members. Higher values indicate greater opportunity.**

**Elk TLU opportunity**

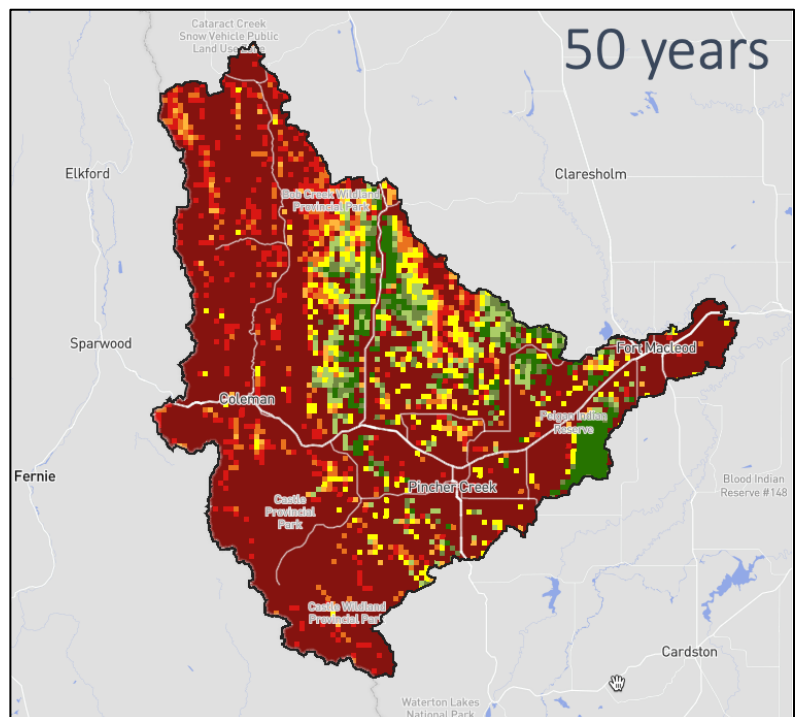
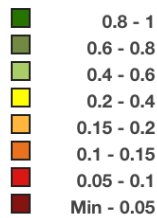
Current elk TLU opportunity (0.13) in the focal study area is about 41% lower than current elk effective habitat (0.22) presented in section 4.2.3 (see Figure 20). By the end of the forecast, elk TLU opportunity is projected to decline by around 10% due to expansion of development activities (Figures 31 and 32).



**Figure 30 Current and simulated future elk traditional land use opportunity in the focal study area. Based on assumptions that were developed with input from community members.**



Elk TLU Opportunity  
(Index)



**Figure 31 Current and simulated future elk TLU opportunity in the focal study area. Based on assumptions that were developed with input from community members. Higher values indicate greater opportunity.**

## 5. SUMMARY

The majority of the regional landscape surrounding the Siksika Nation reserve has been converted to anthropogenic cover types, primarily farmland. The loss of natural land cover and high linear footprint densities have detrimentally affected fish and wildlife, resulting in moderate risk to the fish community and high risk to elk and mule deer. Accessibility of the land for traditional activities is also of concern, with only 20% of the land estimated to be accessible. These impacts have resulted in substantially reduced opportunities for Siksika members to fish and to hunt in the region, which has made the comparatively intact landscapes to the west important for traditional land use.

In the focal study area, loss of natural land cover has been lower but is still substantial, and much of the remaining natural land cover is fragmented by energy sector footprints and roads that provide access for hunting and angling. As a result, habitat is substantially below natural conditions, placing mule deer and elk, and associated traditional land use at moderate risk. The fish community is also impacted by fragmentation and access to anglers, resulting in moderate risk which increased to high over the next 50 years in response to warming. The analysis identifies risk to wildlife of not addressing the cumulative effect of habitat quality, climate change, and multiple sources of mortality including regulated hunting, indigenous hunting, poaching, and vehicle collisions. The extent to which wildlife populations are actually at risk requires more detailed analysis to assess the response of wildlife populations to multiple sources of mortality under current and alternative wildlife management strategies.

Although simulated footprint growth for the next five decades is relatively minor at the scale of the focal study area, the Grassy Mountain mine accounts for the majority of projected footprint growth in the watershed. The mine would contribute to ongoing loss of habitat and associated opportunities for traditional land use, and impacts may be greater if consequences of water contamination (e.g., selenium, calcite) were to be considered. Any further decline in opportunities for traditional land use may be of concern given that risk to traditional land use is already assessed as high.

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- Rowland, M.M., M.J. Wisdom, B.K. Johnson, and M.A. Penninger. 2004. Effects of roads on elk: implications for management in forested ecosystems. *Transactions of the 69<sup>th</sup> North American Wildlife and Natural Resources Conference*: 491-508.

## **APPENDIX A: TECHNICAL METHODS**

**APPENDIX A: SIKSIKA NATION CUMULATIVE EFFECTS ASSESSMENT  
TECHNICAL METHODS**

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## 1. INTRODUCTION

ALCES Online is a web-based simulator for exploring the consequences of past and potential future land use and natural disturbance trajectories to a wide range of environmental and socioeconomic indicators. The document describes assumptions used to prepare simulations that assess cumulative effects for the focal and regional study areas. Two types of simulations were completed: RNV simulations approximate landscape composition and forest age dynamics in the absence of resource development and post-European settlements. The forecast simulation explores potential future changes over the next 50 years in the presence of continued resource development in the focal study area.

Application of the ALCES Online toolkit required: a) estimation of preindustrial and current landscape composition; b) simulation of a plausible future land use scenario that incorporates the suite of land uses operating in the region; c) simulation of natural fire dynamics in the absence of land use; and d) application of indicator relationships to simulated landscape dynamics to assess and potential future consequences to environmental indicators relative to natural conditions. Each of these components of the analysis is now described in turn.

## 2. STUDY AREAS

The analysis explored the cumulative effect of land use on ecological indicators of cultural importance. Cumulative effects were assessed at two spatial scales: 1) the Regional Study Area, which refers to a 62,904 km<sup>2</sup> landscape in southern Alberta within which the Siksika Nation reserves are located as well as regional landscapes that are important for traditional use; and 2) the Focal Study Area, which refers to Upper Oldman River – Crownsnest Pass watershed covering 5,966 km<sup>2</sup>, within which the Grassy Mountain coal mining project is located. Assessing cumulative effects at the scale of the Regional Study Area explores land-use pressures that have affected opportunities to practice traditional land uses near the reserves and that have increased the importance of relatively less impacted areas such as the focal study area. Assessing cumulative effects at the scale of the Focal Study Area provides a more focussed analysis of effects near the mine.

Forecast and RNV simulations were completed for the Focal Study Area to compare current and potential future response of ecological indicators to natural condition. For the Regional Study Area, RNV simulations were completed to compare current indicator status to natural condition.

## 3. CURRENT AND PREINDUSTRIAL LANDSCAPE COMPOSITION

Forecast and RNV simulations tracked land use and landscape composition at the scale of 200

m and 1000 m cells,<sup>11</sup> respectively. Each cell's composition is multivariate, tracking the proportion of the cell belonging to a range of natural and anthropogenic cover types.

The current composition of the study area, including natural and anthropogenic cover types (Table A-1), was based on the integration of multiple land cover products including the ABMI Wall-to-Wall Land Cover Inventory and Human Footprint Data<sup>12</sup>, Grassland Vegetation Inventory<sup>13</sup>, Combined Wetlands Inventory, AltaLis Hydrography, and numerous additional footprint inventories from Open Street Map, AltaLIS, CanVec, Alberta Energy Regulator, Alberta Environment and Parks, National Rail Network, ESRI Basemap, Trans Canada Trail, QuadSquad, HikeAlberta, and municipalities (e.g., City of Edmonton, City of Calgary, City of Grande Prairie). An additional land cover dataset was prepared from which all anthropogenic features were removed to estimate preindustrial landscape composition. The removal of anthropogenic features resulted in some areas for which natural land cover was undefined. These areas were classified using a pre-settlement base layer developed by the Alberta Tomorrow Foundation. The pre-settlement base layer classifies the province into three pre-settlement types (forest, wetland, and grassland<sup>14</sup>) based on landcover and soils data. Preindustrial wetland extent was estimated using the combined wetlands inventory.

**Table A-1. Natural and anthropogenic cover types used to define Alberta's landscape composition.**

Name	Type
Forest Coniferous	Terrestrial Landscape
Forest Deciduous	Terrestrial Landscape
Forest Mixed	Terrestrial Landscape
Grassland	Terrestrial Landscape
Shrubland	Terrestrial Landscape
Exposed Land	Terrestrial Landscape
Rock Rubble	Terrestrial Landscape
Snow Ice	Terrestrial Landscape
Wetland Total	Terrestrial Landscape
Water Lentic	Aquatic Landscape
Water Lotic	Aquatic Landscape
Agriculture Crops	Agricultural Landscape
Agriculture Pasture	Agricultural Landscape
Airport	Footprint

<sup>11</sup> Larger cells were used for the RNV simulations to reduce the computational load required to complete multiple simulations each of which span 400 years. Increasing the cell size to 1000 m was deemed acceptable because the simulated fires tend to exceed 1 km<sup>2</sup> in size. Smaller cells (i.e., 200 m) were used for the land use forecast because land use footprint tend to be smaller in size than fires.

<sup>12</sup> <http://www.abmi.ca/home/data-analytics/da-top/da-product-overview/GIS-Human-Footprint-Land-Cover-Data/Land-Cover.html>

<sup>13</sup> <http://www.albertapcf.org/native-prairie-inventories/gvi>

<sup>14</sup> Forest and wetland classes from the pre-settlement base layer were reclassified into the more detailed ABMI forest (deciduous, coniferous, mixed) and wetland (treed, shrub, herbaceous) classes based on the dominant forest and wetland class within each ALUF planning region.

Name	Type
Cemetaries	Footprint
Feedlots	Footprint
Industrial	Footprint
Lagoons	Footprint
Landfill	Footprint
Major Road	Footprint
Mine Coal	Footprint
Mine Oilsands	Footprint
Mine Peat	Footprint
Mine Pits	Footprint
Minor Road	Footprint
CBM Well	Footprint
Gas Well	Footprint
Oil Well	Footprint
Other Well	Footprint
Water Well	Footprint
Pipelines	Footprint
Rail	Footprint
Recreation	Footprint
Rural Settlement	Footprint
Seismic Lines	Footprint
Sump	Footprint
Urban	Footprint
Towers	Footprint
Trails	Footprint
Trail/Winter Road	Footprint
Water Anthropogenic	Footprint

The current age (i.e., time since disturbance) of forested landscapes was derived from a Canadian forest age dataset (Pan et al. 2011), corrected to incorporate more detailed age information from ABMI cutblock, Government of Alberta wildfire data, and the Grassland Vegetation Inventory. The cutblock and fire datasets superseded the Canadian forest age dataset due to their higher resolution (disturbance polygons of various sizes as opposed to the Canadian forest age dataset's 1 km<sup>2</sup> resolution). Age of cutblock or fire polygons was based on the year of disturbance .

#### 4. FOCAL STUDY AREA FORECAST SIMULATION

Simulation of future land use in the focal study area required derivation of development trajectories for each influential land use in the study area, including energy, forestry, human settlements, mining, and transportation, as well as fire. In addition to the rate of development, assumptions were required regarding the intensity and spatial distribution of associated footprints. Assumptions governing the simulation of future land use and natural

disturbance are now described.

#### 4.1. HYDROCARBON SECTOR FORECAST ASSUMPTIONS

The rate of oil and gas<sup>15</sup> well completions during the first decade of the simulation was based on projections developed by AER for 2018 to 2027 (AER 2018). After 2027, completion rates are assumed to continue at the 2027 rate from the AER projection because longer term projections for Alberta suggest that the rate of hydrocarbon development over the period is expected to remain relatively stable. Under the NEB<sup>16</sup>'s (2017) reference case, gas well completions (across types) is projected to increase from 935 in 2027 to 1061 in 2040 (13% increase) and conventional light oil production is projected to increase from 341.97 thousand barrels per day to 421.23 thousand barrels per day (23% increase).

The conventional oil and conventional gas well completion projections from AER are by Petroleum Services Association of Canada (PSAC) region. PSAC regions AB1 and AB2 overlap with the study area. Projections for these regions were adjusted (i.e., reduced) based on the proportion of each PSAC region's oil and gas wells that occur within the study area.<sup>17</sup> The location of new oil and gas wells was based on the location of existing oil and gas wells, respectively.<sup>18</sup>

Exploration wells and seismic line footprint was created based on the relative abundance of these features and wells on the current landscape. Exploratory wells were created at a rate of 0.14 exploratory wells per development well (i.e., productive oil and gas wells), which is the ratio between exploratory and development wells drilled in western Canada over the past decade (CAPP Statistical Handbook). Seismic line footprint area was created at a rate 1.22 times that of well footprint area, based on the relative abundance of seismic and well footprint in Alberta.<sup>19</sup> Pipelines were created as needed to link development wells to the existing pipeline network. Roads were created as needed to link all wells to the existing road network.

For all well types, completions were assumed to occur within 5 km of existing wells of that type, with higher likelihood of completions in closer proximity to the wells. Each well pad is

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<sup>15</sup> Shale gas wells were not included in the simulation because the study area accounts for a negligible portion of the provincial shale deposit.

<sup>16</sup> AER (2018) was used instead of NEB (2017) as the source for the projected rate of well completions because it provides greater spatial detail (by PSAC region instead of provincial) and greater detail on well type.

<sup>17</sup> The study area accounts for 0.84% and 0.08% of the Petrowell Oil Unityb footprint in PSAC AB1 and AB2, respectively; and 9.36% and 0.00% of the Petrowell Gas Unityb footprint in PSAC AB1 and AB2, respectively.

<sup>18</sup> The location of existing wells was used instead of a hydrocarbon deposit layer (Mossop and Shetsen 1994) to inform the location of future wells because existing wells in the study area do not tend to occur within hydrocarbon deposit polygons.

<sup>19</sup> The ratio between seismic and well footprint in the study area is much higher (6.90) than it is in Alberta (1.22). The ratio for Alberta was used to avoid possible exaggeration of future seismic line development.

assumed to house one well cover 1 ha. Seismic footprint was simulated to occur within 10 km of new well completions, with higher likelihood of completions in closer proximity to new wells. The intensity of seismic footprint (i.e., simulated footprint per cell) was based on current seismic footprint pattern in the study area (average and maximum seismic footprint coverage per cell of 2% and 12%, respectively).

With the exception of recent seismic lines, energy sector footprints were considered permanent in the context of a 50 year simulation. Seismic lines built within the past decade were assumed to be low impact and had a lifespan of 20 years. Older seismic lines were assumed to be permanent, based on a retrospective study of 35 year old seismic lines in northern Alberta that found over 90% of the disturbance to remain in a disturbed state (Lee and Boutin 2006). Seismic lines did not persist in farmland and grassland, and pipeline right of ways did not persist in farmland.

#### **4.2. COAL FORECAST ASSUMPTIONS**

New footprint at the Grassy Mountain mine included pits, rock disposal areas, topsoil storage areas, ponds, ditches, coal handling and processing plant infrastructure, a covered conveyor/access road/powerline right of way, a railway loop, and a proposed golf course area identified in the environmental assessment for the Grassy Mountain Coal Project (Riversdale Resources 2016). The proposed project is to be developed over the next 23 years. Development of the handling and processing plant infrastructure, ponds and ditches, railway loop, right of way, and topsoil storage occurred in the first decade of the simulation. Development of pits and rock disposal areas was spread across the next 23 years, with growth occurring outwards towards the perimeter of the pit and disposal area polygons.

Reclamation of coal footprint was not simulated. This is a conservative approach that likely exaggerates the impact of mining on wildlife, because reclamation is likely to improve wildlife habitat. Reclamation was not included because realistic reclamation of coal footprint was beyond the scope of the analysis, especially reclamation of coal mine footprint existing at the start of the simulation. To explore the sensitivity of wildlife indicators to coal mine reclamation, a simulation was completed that reclaimed new (i.e., simulated) coal mine footprint 20 years after the coal footprint was created. Coal mine footprint was reclaimed to shrubland, given that reclaimed mine footprint is likely to remain at an early successional stage by the end of the 50-year simulation. Reclamation had only a minor effect on wildlife habitat at the scale of the focal study area; elk and mule deer habitat increased by 0.37% and 0.04%, respectively, compared to a simulation that did not incorporate reclamation of simulated mining footprint.

### 4.3. FORESTRY FORECAST ASSUMPTIONS

Forest harvest area was based on planned harvest area for each forest management unit (FMU) occurring in the study area (C5(176), C5(179), and C5(181)). Planned coniferous harvest was simulated, and any deciduous and mixedwood harvest was assumed to be incidental. Planned harvest area for the first four decades was as projected under the preferred forest management scenario (The Forest Corp. 2006). The preferred forest management scenario from the timber supply analysis calls for harvest at 120% of coniferous AAC the first 2 decades to reduce susceptibility to mountain pine beetle, and then a reduction to 90% of coniferous AAC thereafter. Harvest in the first 2 decades is focused on FMU's C5 (176) and C5 (179) where pine is more abundant. Timber harvest in the fifth decade equaled the average of the third and fourth decades (i.e., following the reduction to 90% AAC). Planned harvest area was adjusted (i.e., reduced) based on the proportion of the FMU's total coniferous forest occurring within the study area. The spatial distribution of harvest was proportional to each FMU's planned harvest intensity (i.e., planned harvest area per total forest area) and was also influenced by forest age (oldest first). To be eligible for harvest, forest was required to be older than the minimum harvest age for coniferous forest (90 years) (Forestry Corp 2006). The size of harvest patches was based on the size of forest patches harvested in the study area between 2000 and 2009 according to harvest data from ABMI. Forest recovered to the pre-harvest forest type, with no regeneration lag. Roads were developed as required to link harvest patches to the road network. Inblock roads were assumed to regenerate with cutblocks, and were therefore not simulated.

### 4.4. URBAN AND RURAL RESIDENTIAL FORECAST ASSUMPTIONS

Settlement footprint was simulated to grow at the rate of population growth according to the medium population growth projection from Alberta Government for the period of 2016 to 2041.<sup>20</sup> The population projection was extended out to 2065 by assuming constant population growth after 2041.<sup>21</sup> Population projections were available by census division (CD). The rate of population growth used in the simulation was the mean population growth rate across CD's occurring in the study area, weighted based on the current area of settlement footprint in each CD. Simulated rural settlement footprint took the form of acreages<sup>22</sup> located within 1 km of existing rural settlement development. Simulated urban footprint occurred at the periphery of existing settlements. For both rural and urban settlement footprint, the relative likelihood of development was proportional to the patch size of existing developments (i.e.,

<sup>20</sup> <http://finance.alberta.ca/aboutalberta/population-projections/index.html>

<sup>21</sup> Constant as opposed to exponential population growth was assumed because the population projection for the period of 2016 to 2041 exhibited linear growth.

<sup>22</sup> The size of individual rural residential footprints equaled the current average size of rural residential footprint per cell (7692 m<sup>2</sup>).

higher likelihood of development adjacent to larger existing developments). Roads were developed as needed to link acreages to the road network. Settlement footprint was excluded from protected areas.

#### **4.5. AGGREGATE FORECAST ASSUMPTIONS**

It was assumed that the primary reason for aggregate mining in the study area is road building. As such, the development of new aggregate pits was tied to the rate at which road footprint was created during the simulation. Aggregate pit footprint was created at a rate 33% that of new road footprint, based on the ratio between aggregate pit and road footprint in the study area today. The size of each new pit equaled the average size of pits existing in the study area today. Pits were located in aggregate deposits (Alberta Geological Survey 2009) located adjacent to new road footprint.

#### **4.6. AGRICULTURE FORECAST ASSUMPTIONS**

Agricultural land did not expand during the forecast. Census divisions that overlap with the study area have exhibited a decline in farmland in recent years.

#### **4.7. FIRE FORECAST ASSUMPTIONS**

The simulated fire rate was  $0.06\% \times 2.5 = 0.15\%$  for the first 2 decades and  $0.06\% \times 2.76 = 0.17\%$  for the last 3 decades of the simulation. The historical rate for the Southern Cordillera homogenous fire regime zone (within which the study area is located) is  $0.06\%/year$  (Boulanger et al. 2014). The predicted increases in fire rate relative to historical for the 2011-2040 and 2041-2070 periods is 2.5 and 2.7, respectively, under climate scenario RCP2.6 (Boulanger pers. comm.). Fire was assumed to burn forest and shrub cover types. Fire location was stochastic but influenced by relative burn probabilities as per fire selection ratios by forest cover and age class (Bernier et al. 2016). Fire selection ratios were only available for forest types (deciduous, coniferous, mixedwood); shrubland was assumed to have the same relative burn probability as young deciduous forest, the forest category exhibiting the lowest fire selection ratio. Burns were distributed across size classes based on the size class distribution of fires according to Alberta's historical wildfire data.

### **5. RANGE OF NATURAL VARIABILITY (RNV) SIMULATIONS**

RNV simulations were prepared for both the focal and regional study areas. For each study area, five simulations of the stochastic fire regime were completed, each spanning 400 years. Fire was assumed to burn forest and shrub cover types.

Pre-suppression fire rate and size class distribution was based on research completed for the C5 FMU, which covers much of the forested portion of the study areas (Rogeau 2005). The

average natural fire return interval, by natural subregion, was estimated to be 116 years for the Subalpine and 92 years for the Montane natural subregions. The relatively small area of the Alpine natural subregion located in the study areas is assumed to have the same return intervals as the Subalpine.

The natural fire rate was simulated as a stochastic process in order to approximate the effect of a variable fire regime on forest age and related indicators. The stochastic fire regime was simulated as random draws from a lognormal distribution, a distribution well suited for characterizing variable fire regimes (Armstrong 1999). The standard deviation in burn area was derived from the coefficient of variation in natural burn area estimated for northeastern Alberta (2.843; Armstrong 1999). Mean and standard deviation of the natural logarithm of annual burn area was then derived from the mean and standard deviation of burn area, and applied to generate random draws from the lognormal distribution. The maximum burn rate was truncated at 50% when drawing from the lognormal distribution, based on an assumption that it is unlikely that more than half of the region's forest would burn in any year.

Fire location was stochastic but influenced by relative burn probabilities as per fire selection ratios by forest cover and age class (Bernier et al. 2016). Fire selection ratios were only available for forest types (deciduous, coniferous, mixedwood); shrubland was assumed to have the same relative burn probability as young deciduous forest, the forest category exhibiting the lowest fire selection ratio. The fire size class distribution was based on an estimate of natural fire sizes in the C5 FMU (Rogeau 2005).

Forest age was initialized at 106 years across all cells, the average forest age expected in the Upper Oldman Crowsnest Pass in the presence of assumed overall average burn rate. The first 300 years of a 400 year simulation was used to initialize the spatial distribution in forest age to a pattern consistent with the assumed natural fire regime. The last 100 years of a 400 year simulation were used to estimate the range of natural variability in forest age and related indicators. Forest age was reported at 10-year intervals, creating 9 maps of forest age for each preindustrial simulation.

Fire was not simulated in the Parkland and Grassland portion of the study area.

Presettlement fire behaviour in Parkland ecosystems is poorly understood, but it is thought that the Parkland was dominated by grassland due to grazing by Bison and frequent burning (Stockdale 2011). Bailey and Anderson (1980) estimate that brush cover was less than 10% in the Parkland region in the early 20th century. The location of what little forest did exist was likely stable, confined to wetter and cooler areas such as riparian areas and slopes with northerly and easterly aspects (Stockdale 2011). Given that grassland likely dominated the Parkland region prior to settlement, the presettlement landscape was estimated by assuming

that forest was limited to within 200 m cells that either contain permanent water (river, stream, or lake) or have aspects between 70 and 90%. This results in forest coverage of 8.2% in the Parkland portion of the regional study area. Fire is not simulated within forests located in the Parkland because the forest is assumed to have been at low risk of fire because of its wet and relatively fragmented location.

## 6. INDICATORS

The following indicators were assessed to explore the cumulative effect of land use on opportunity to practice traditional land use:

1. Development footprint – the taking up of land by development was assessed as direct disturbance of land by industrial, settlement, and agricultural footprint and associated infrastructure.
2. Intact landscapes – natural land undisturbed by development. Cells (200 m) without any type of development or settlement footprint were considered intact.
3. Wildlife – moose, elk, and mule deer habitat indices were assessed to explore the response of species that are important for hunting.
4. Fish – a fish habitat index was assessed to explore cumulative effects to the fish community.
5. Traditional Land Use – accessibility for traditional land use was calculated and combined with wildlife indicators to assess TLU opportunity.

### 6.1. DEVELOPMENT FOOTPRINT

Total development footprint included the full set of anthropogenic features tracked in the simulations: energy sector footprints (wells, seismic lines, pipelines); settlement footprints (residential); mining footprints (coal mines and gravel pits); agricultural footprints (pasture and cropland); and other footprints (cemeteries, undifferentiated industrial, lagoons, landfills, power generation stations, powerlines, recreational footprint, and sumps).

### 6.2. INTACT LANDSCAPES

Intact core area was calculated as the total extent of cells that do not contain footprint or farmland. Intact patch size was calculated as the size of each patch of cells that does not contain footprint or farmland.

### 6.3. WILDLIFE HABITAT

Wildlife habitat indices (moose, elk, mule deer) were calculated for the current landscape, the

simulated future landscape, and the simulated natural landscape. Risk to wildlife was assessed based on change in habitat relative to natural conditions. Risk levels were based on hazard categories from MacPherson et al. (2014): low risk if index is  $\geq 70\%$  of the natural value; moderate risk if index is 50%-70% of the natural value; high risk if index is 20%-50% of the natural value; and very high risk if index is  $< 20\%$  of the natural value.

The habitat indices incorporate both potential and effective habitat. Potential habitat refers to the availability (and quality) of suitable land cover and terrain, and is calculated by applying coefficients (0.00 to 1.00 where 0 reflects no habitat value and 1.00 reflects maximum value) to maps of natural and anthropogenic cover types, elevation, and slope. Effective habitat modifies potential habitat to incorporate the negative impact of linear features through elevated hunting, predation, road-kill, and noise displacement, etc. These mortality risks are incorporated through a relationships with linear footprint density outside of protected areas, due to the importance of linear footprints for providing access for hunting. Linear footprints that are included in the analysis are roads, truck trails, pipelines, powerlines, rail, and conventional seismic lines. Conventional seismic lines are older cutlines that, due to their width, persist through time and are used for vehicular access. Conventional seismic lines are assumed to be those created at least 10 years ago. New seismic lines are assumed to be created using low impact methods that are intended to avoid the creation of cutlines that can be used for vehicular access.

The underlying methodology deployed when calculating habitat was developed by a joint ALCES Group and Alberta Fish and Wildlife Division (AFWD) discussion about how to best define potential and effective habitat for wildlife species. Coefficients were developed by Dr. Brad Stelfox and Shawn Wasel (ALCES Group) and discussed with AFWD wildlife biologists.<sup>23</sup> The coefficients reflect a suite of input data sources that include: literature review (both published and unpublished); comparison to historical wildlife populations from aerial surveys at the scale of WMUs; comparison to historical wildlife harvest data at the scale of WMUs; discussions with government, academic and industrial biologists; qualitative ranking of habitat and footprint types based on a general delphi approach within ALCES Group; and where possible, input from hunters of First Nation communities.

Coefficients for each species are now described.

### 6.3.1. Moose

Coefficients are applied to cover types (Table A-2), forest age (Table A-3), and terrain

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<sup>23</sup> AFWD is in the process of building a set of AFWD endorsed coefficients for each wildlife species and this process is likely to take a few years to complete.

variables (Tables A-4 and A-5) to calculate a moose potential habitat index ranging from 0 (no habitat) to 1 (habitat capable of supporting maximum wildlife density). Moose effective habitat is calculated by multiplying potential habitat by a modifier that is based on the length of linear footprint (Table A-6).

**Table A-2. Coefficients for various landscape and footprint types associated with the moose habitat index.**

Landscape and footprint type	Habitat value
Coniferous forest	0.80
Deciduous forest	1.00
Mixedwood forest	1.00
Shrubland	0.70
Grassland	0.00
Rock, Ice, Exposed	0.00
Wetland	1.00
Lentic riparian	0.50
Lotic	0.45
Cropland	0.15
Pasture	0.00
Tracks	1.00
Recreation features	0.60
Wellsites	0.20
Pipelines	0.40
Transmission lines	0.20
Other footprints	0.00

**Table A-3. Habitat modifiers for forest ages associated with the moose habitat index.**

Forest Age	Habitat modifier
0-20	1.00
21-40	0.90
41-60	0.70
61-80	0.50
81-100	0.30
101-120	0.50
121-140	0.50
141-160	0.50
161-180	0.65
>180	0.80

**Table A-4. Slope habitat modifiers for the moose habitat index.**

Slope	Habitat modifier
0.0	1.00
2.5	0.95
5.0	0.90
7.5	0.85
10.0	0.80
12.5	0.40
15.0	0.00
17.5	0.00
20.0	0.00
22.5	0.00
25.0	0.00

**Table A-5. Elevation habitat modifiers for the moose habitat index.**

Elevation	Habitat modifier
1300	1.00
1470	0.97
1640	0.92
1810	0.90
1980	0.80
2150	0.55
2320	0.30
2490	0.00
2660	0.00
2830	0.00
3000	0.00

**Table A-6. Linear footprint length modifiers for the moose habitat index.**

Linear footprint (km/km <sup>2</sup> )	Habitat modifier	
	With hunting	Without hunting <sup>24</sup>
0.0	1.00	1.00
0.4	0.96	1.00
0.8	0.92	1.00
1.2	0.87	1.00
1.6	0.69	1.00
2.0	0.46	1.00
2.4	0.30	1.00
2.8	0.15	1.00
3.2	0.09	1.00
3.6	0.05	1.00
4.0	0.00	1.00

<sup>24</sup> Hunting is assumed to not occur in national and provincial parks and ecological reserves.

### 6.3.2. Elk

Coefficients are applied to cover types (Table A-7), forest age (Table A-8), and terrain variables (Tables A-9 and A-10) to calculate an potential habitat index ranging from 0 (no habitat) to 1 (habitat capable of supporting maximum wildlife density). Elk effective habitat is calculated by multiplying potential habitat by a modifier that is based on the length of linear footprint (Table A-11).

**Table A-7. Coefficients for various landscape and footprint types associated with the elk habitat index.**

Landscape and footprint type	Habitat value
Coniferous forest	0.35
Deciduous forest	0.90
Mixedwood forest	1.00
Shrubland	0.35
Grassland	1.00
Rock, Ice, Exposed	0.00
Wetland	0.02
Lentic riparian	0.00
Lotic	0.65
Cropland	0.075
Pasture	0.20
Tracks	1.00
Recreation features	0.20
Wellsites	0.20
Pipelines	0.20
Other footprints	0.00
Coniferous forest	0.35

**Table A-8. Habitat modifiers for forest ages associated with the elk habitat index.**

Forest Age	Habitat modifier
0-20	1.00
21-40	0.90
41-60	0.70
61-80	0.50
81-100	0.40
101-120	0.40
121-140	0.40
141-160	0.50
161-180	0.60
>180	0.70

**Table A-9. Slope habitat modifiers for the elk habitat index.**

Slope	Habitat modifier
0.0	1.00
2.5	1.00
5.0	1.00
7.5	1.00
10.0	1.00
12.5	0.85
15.0	0.57
17.5	0.33
20.0	0.00
22.5	0.00
25.0	0.00

**Table A-10. Elevation habitat modifiers for the elk habitat index.**

Elevation	Habitat modifier
1300	1.00
1470	1.00
1640	1.00
1810	1.00
1980	1.00
2150	1.00
2320	0.85
2490	0.64
2660	0.34
2830	0.12
3000	0.00

**Table A-11. Linear footprint length modifiers for the elk habitat index.**

Linear footprint (km/km <sup>2</sup> )	Habitat modifier	
	With hunting	Without hunting <sup>25</sup>
0.0	1.00	1.00
0.4	0.96	1.00
0.8	0.92	1.00
1.2	0.87	1.00
1.6	0.69	1.00
2.0	0.46	1.00
2.4	0.30	1.00
2.8	0.15	1.00
3.2	0.09	1.00
3.6	0.05	1.00
4.0	0.00	1.00

<sup>25</sup> Hunting is assumed to not occur in national and provincial parks and ecological reserves.

### 6.3.3. Mule Deer

Coefficients are applied to cover types (Table A-12) and terrain variables (Tables A-13 and A-14) to calculate a mule deer potential habitat index ranging from 0 (no habitat) to 1 (habitat capable of supporting maximum wildlife density). Mule deer effective habitat is calculated by multiplying potential habitat by a modifier that is based on the length of linear footprint (Table A-15).

**Table A-12. Coefficients for various landscape and footprint types associated with the mule deer habitat index.**

Landscape and footprint type	Habitat value
Coniferous forest	0.15
Deciduous forest	1.00
Mixedwood forest	0.90
Shrubland	0.20
Grassland	1.00
Rock	0.00
Ice, Exposed	0.00
Wetland	0.00
Lentic riparian	0.10
Lotic Water	0.50
Cropland	0.175
Pasture	0.85
Powerlines	0.20
Urban	0.05
Tracks	1.00
Recreation features	0.20
Wellsites	0.10
Pipelines	0.20
Other Footprints	0.00

**Table A-13. Slope habitat modifiers for the mule deer habitat index.**

Slope	Habitat modifier
0.0	1.00
2.5	1.00
5.0	1.00
7.5	1.00
10.0	1.00
12.5	0.85
15.0	0.57
17.5	0.33
20.0	0.00
22.5	0.00
25.0	0.00

**Table A-14. Elevation habitat modifiers for the mule deer habitat index.**

Elevation	Habitat modifier
1300	1.00
1470	1.00
1640	1.00
1810	0.85
1980	0.80
2150	0.72
2320	0.62
2490	0.42
2660	0.35
2830	0.00
3000	0.00

**Table A-15. Linear footprint length modifiers for the mule deer habitat index.**

Linear footprint (km/km <sup>2</sup> )	Habitat modifier	
	With hunting	Without hunting <sup>26</sup>
0.0	1.00	1.00
0.4	0.96	1.00
0.8	0.92	1.00
1.2	0.87	1.00
1.6	0.69	1.00
2.0	0.46	1.00
2.4	0.30	1.00
2.8	0.15	1.00
3.2	0.09	1.00
3.6	0.05	1.00
4.0	0.00	1.00

#### 6.3.4. Index of native fish integrity

The index of native fish integrity (INFI) conveys changes in abundance and composition of fish species with a value ranging from 0 (highly disturbed community) to 1 (undisturbed community). An INFI value greater than 0.9 indicates low (acceptable) disturbance, between 0.6 and 0.9 indicates moderate (unacceptable) disturbance, between 0.3 and 0.6 indicates high (serious) disturbance, and below 0.3 indicates very high risk (severe disturbance) (Sullivan 2009). INFI response to simulated landscapes is estimated using relationships with access density<sup>27</sup>, watershed discontinuity, and climate developed for the Foothills/Montane and Prairie natural regions from expert opinion (Sullivan 2009). The various INFI relationships

<sup>26</sup> Hunting is assumed to not occur in national and provincial parks and ecological reserves.

<sup>27</sup> Two versions of the relationship between access density (i.e., roads, seismic lines, trails) and INFI are provided by Sullivan (2009): restricted access and unrestricted access. Restricted access was applied to the following zones based on the assumption that motorized access is more limited: national and provincial parks, wildland areas, natural areas, and public land use zones. The relationship that assumes unrestricted access was applied elsewhere.

used are presented in Tables A-12, A-13, and A-14. Although an INFI relationship with water quality was also available (Table A-15), it was not included because it did not incorporate potential contaminants from industrial development such as mining. INFI performance was tracked at the scale of hydro watersheds. INFI relationships developed for the foothills and montane (Sullivan 2009) were applied in the montane portion of the study area, whereas INFI relationships developed for the prairies (Sullivan 2009) were applied to the grassland and parkland portion of the study area.

**Table A-12 Relationship between INFI and stream fragmentation.**

INFI	Stream Fragmentation (%)	
	Foothills	Prairie
1	0	0
0.95	1	20
0.75	20	30
0.45	30	100
0.15	50	na
0	100	na

**Table A-13 Relationship between INFI and temperature.**

INFI	Change in temperature (C) <sup>28</sup>	
	Foothills	Prairie
1	0	0
0.95	2.5	
0.75	4	1
0.45	5	5
0.15	6	8

**Table A-14 Relationship between INFI and linear edge density (assuming restricted access).**

INFI	Linear edge (km/km <sup>2</sup> ) with unrestricted access	
	Foothills	Prairie
1	0	0
0.95	1	1
0.75	2	5
0.45	3	na
0.15	5	na

**Table A-15 Relationship between INFI and the water quality index (WQI).**

INFI	WQI

<sup>28</sup> Change in annual average temperature was relative to the average temperature during the first half of the 20<sup>th</sup> century. The climate forecast applied the RCP 4.5 emission scenario.

	Foothills	Prairie
1	1	1
0.95	0.33	0.5
0.75	0.2	0.33
0.45	0.125	0.25
0.15	0.1	0.125

To permit calculations of INFI watershed discontinuity was also calculated, as described below.

### Stream crossings and watershed discontinuity

Stream crossings with the potential to impede fish movement were assumed to occur at the intersection of roads and permanent and indefinite streams<sup>29</sup> because culverts are likely to be utilized. In contrast, bridges instead of culverts were assumed to be used where roads intersect with rivers, and recurring streams were assumed to be non-fish bearing. Stream crossing density was assessed for each HUC8 level watershed as the number of road crossings per km of permanent/indefinite stream. Stream crossings increased during simulations in response to expansion of the road network, in proportion with the existing density of crossings per km of road in a watershed.

Culverts can become impassable by fish over time due to effects such as blockage and scouring. Fifty percent of culverts were assumed to be hanging based on the findings of a study of culverts in northeastern Alberta (Park et al. 2008). By blocking fish movement, an impassable (i.e., hanging) culvert renders upstream habitat inaccessible. Stream fragmentation due to impassable culverts was assessed using a relationship between the density of impassable culverts (#/stream km) and the percent of stream habitat lost, as derived from actual and simulated stream crossings for the Christina, Calling, Swan, and Notikiwin watersheds in northern Alberta (Michael Sullivan, pers. comm.). The data from the northern watersheds were summarized using the equation  $y = 1.6445x^{0.7381}$  ( $R^2=0.939$ ), where  $y$  is the proportion of stream habitat lost and  $x$  is the number of impassable culverts per km of stream.

## 6.4. TRADITIONAL LAND USE

We used participatory principles for developing and examining the TLU accessibility and potential indicators for the Siksika Nation. We worked with ten community knowledge holders (e.g., elders and hunters) with a specific interest and experience using the land to

<sup>29</sup> Indefinite refers to a perennial or intermittent stream whose channel cannot be clearly distinguished due to vegetation or high water. Because such streams may be permanent (i.e., perennial), they may be fish bearing and culverts may be used at crossings.

practice activities such as hunting (e.g., deer, moose, elk), fishing, and other TLU activities (e.g., harvesting medicinal plants, picking berries, conducting ceremonies). We engaged knowledge holders for guidance to broadly identify: (i) how members use the land; and, (ii) what are the challenges that members face when accessing and using the land. This approach helped us to understand “lived experience” from the perspective of community members and to ensure that our interpretations were relevant, useful and meaningful to Siksika Nation members. The following points of community input provided the basis for developing the TLU indicators.

- Community members expressed that the conversion of TLU suitable crown lands to private property and other restricted land uses (e.g., parks, ecological reserves) is the primary driver of decreased access to TLU suitable lands. We were unable to obtain a land ownership data layer and instead used cropland and cultivated pasture to indicate the presence of private land. This likely underestimates the extent of private land.
- Community members conveyed that they do not hunt or fish in national parks, provincial parks, and ecological reserves, so these areas were deemed inaccessible for traditional land use.
- Community members conveyed that they do not hunt or fish in close proximity (~500 m) to well sites. Based on this input, land cover within 500 m<sup>30</sup> of well sites and other industrial sites (coal mines, industrial features, power generation sites) were excluded from traditional land use. It was also assumed that hunting and fishing does not occur within 500 m of settlements, rural residence, and other features (major highways, recreational features like golf courses, cemeteries, landfills, airports) that are used frequently by humans for non-TLU activities.
- Agricultural land within the Siksika Nation reserves was accessible for TLU, but land in proximity to footprints was excluded following the rules described above.

Drawing from community input, a TLU accessibility indicator was developed to reflect the cumulative effects of land development on their access to TLU suitable lands. Overall, TLU accessibility was based on land ownership, protection, proximity to non-traditional land use activities and community member avoidance due to concerns about contamination, safety, and overall negative experience on the land.

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<sup>30</sup> To approximate a 500 m buffer, 1000 m cells with any of the listed footprint types were assumed to be inaccessible. The rationale is that a footprint within a 1000 m cell will be, on average, 500 m from the edge of the cell. This assumption was required because 1000 m cells were used for the calculation of wildlife habitat. Community members also conveyed that they do not hunt adjacent (~100 m) to all roads. This buffer was not implemented because it is small relative to the cell size used during wildlife modeling (1000 m).

TLU accessibility was applied to wildlife effective habitat to assess TLU opportunity. The TLU opportunity metric is based on the rationale that capacity to practice TLU in the landscape is affected by the availability of wildlife habitat and the ability of community members to access the landscape for the purpose of practicing TLU. The TLU opportunity metric ranges from 0 to 1, with a 1 indicating maximum habitat effectiveness and accessibility for TLU, and a 0 representing no habitat and/or accessibility for TLU.

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## **APPENDIX B: DETAILED REGIONAL RESULTS**

## APPENDIX B: DETAILED REGIONAL RESULTS

The results presented below are the detailed version associated with the summary of results for the regional study area presented in section 4.1 above. For ease of referencing, we have repeated Figure 1 and Table 1 below as Figure B-1 and Table B-1.

### 1. PROTECTED AREAS AND LAND USE FOOTPRINTS

This section presents the various protected areas and land uses that may affect traditional land use in the regional study area either by restricting access to the land or by altering the capacity of the land to support wildlife. Community members discussed the effect of protected areas and footprints on TLU at a workshop. The discussion informed TLU accessibility and opportunity indicators that are presented later in this section and described in greater detail in the methods appendix (Appendix A).

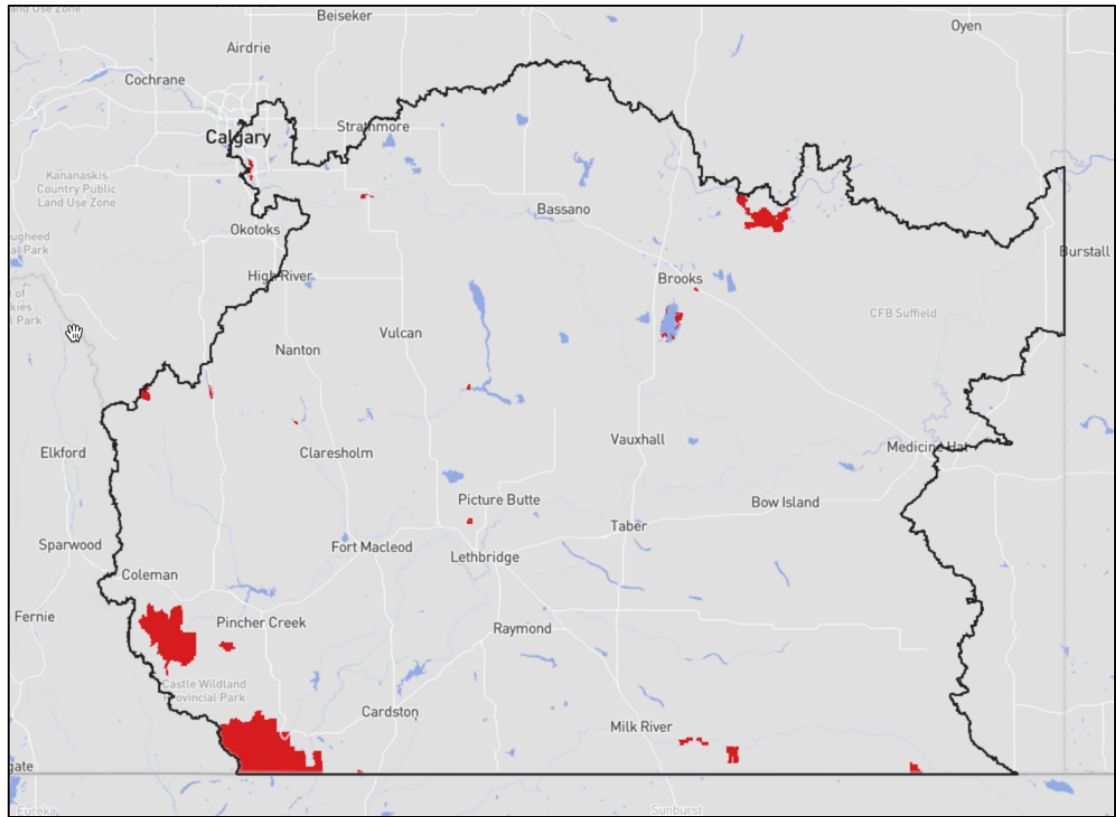
#### Restrictive protective areas

Restrictions on land use in the regional study area are related to national parks, provincial parks, and ecological reserves, amounting to 3% (91,826 ha) of the regional study area (Figure B-1).<sup>31</sup> These areas have various harvesting restrictions that prevent Siksika members from practicing TLU within portions of their traditional territory. We did not include wildland provincial parks and other natural areas in the study area because it is our understanding that these areas do not have restrictions on hunting.<sup>32</sup>

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<sup>31</sup> National parks in the study area include: Waterton Lakes. Provincial parks in the study area include: Castle, Police Outpost, Beauvais Lake, Woolford, Park Lake, Chain Lakes, Willow Creek, Little Bow, Wyndham-Carseland, Fish Creek, Tillebrook Trans-Canada Campsite, Kinbrook Island, Dinosaur, Writing on Stone, Castle. Ecological reserves include Plateau Mountain, West Castle Wetland, Kennedy Coulee. There are no wilderness areas in the regional study area as defined by Alberta Parks: <https://www.albertaparks.ca/albertaparksca/library/land-reference-manual/parks-by-class/?id=Wilderness%20Area>.

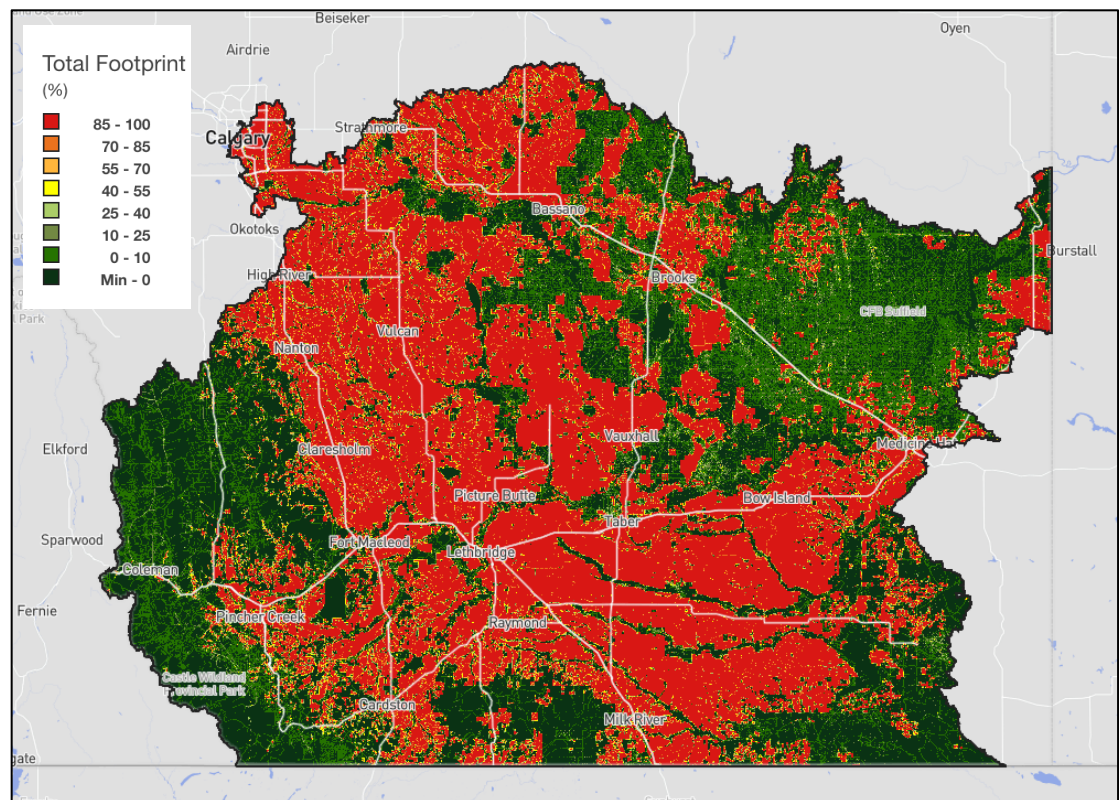
<sup>32</sup> This research was done with reference to provincial hunting information provided at: <https://www.albertaparks.ca/albertaparksca/visit-our-parks/activities/hunting/#na>



**Figure B-1** Locations in the regional study area of the restrictive tenure types (i.e., national parks, provincial parks, ecological reserves) that may limit hunting opportunities for Siksika members. Red indicates restrictive tenure.

### Footprint types

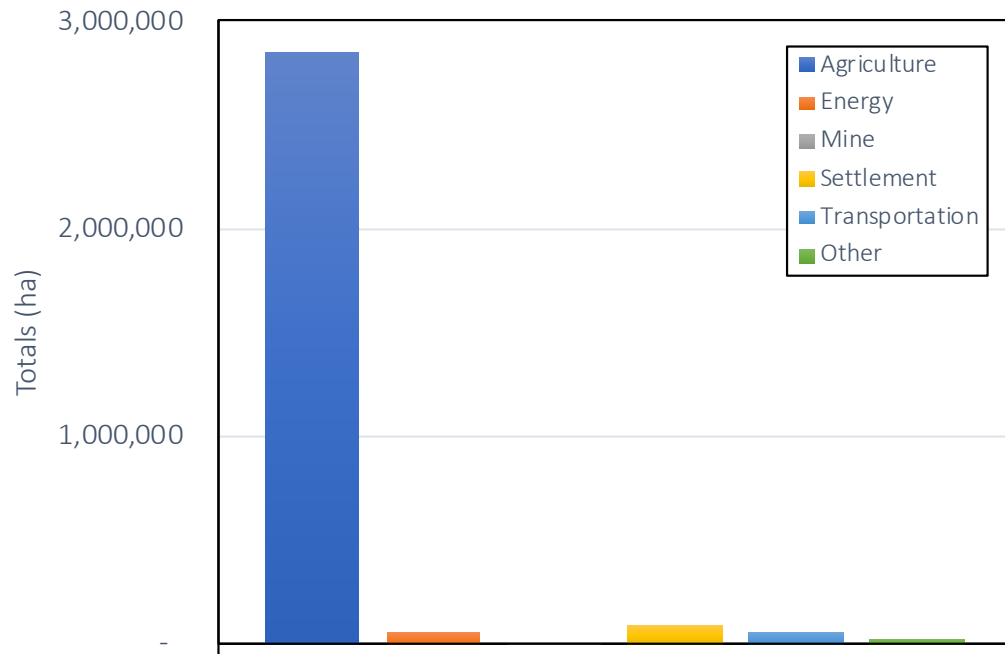
Total footprint in the regional study area involves a variety of non-natural (anthropogenic) activities<sup>33</sup> and amounts to 49% (3,087,672 ha) of the study area (Figure B-2). The relative contributions of six land use types are displayed in Figure B-3. The main contributor to total footprint is farmland, which occurs throughout the study area and accounts for 45% (2,848,386 ha) of the study area and 92% of total footprint in the study area (Figure B-4). Figures B-5 through B-9 present the more minor contributions to non-natural footprint for energy, mining, transportation, settlement, and “other footprints,”<sup>34</sup> respectively.



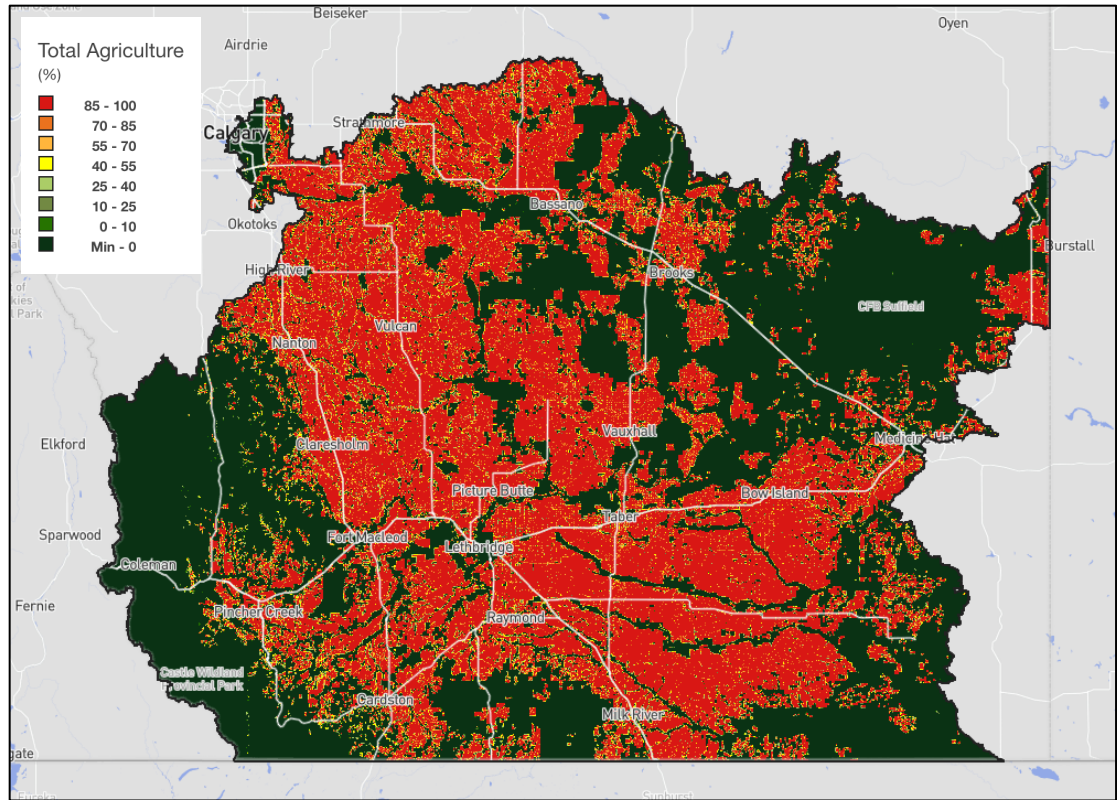
**Figure B-2 Current total anthropogenic footprint in the regional study area. Red indicates high intensity footprint while green indicates low intensity footprint. The legend shows the proportion of each pixel occupied by footprint features.**

<sup>33</sup> Direct footprint construction activities include: agricultural crops and pasture, airports, cemeteries, feedlots, industrial features, lagoons and other water features, landfills, major and minor roads, mining, oil and gas wells, pipelines, power-generation facilities, powerlines, rail lines, recreational features, urban and rural settlements, seismic lines, and trails and winter roads. The dataset is based on disturbance layers from the Alberta Biodiversity Monitoring Institute and 2015 AltaLIS data.

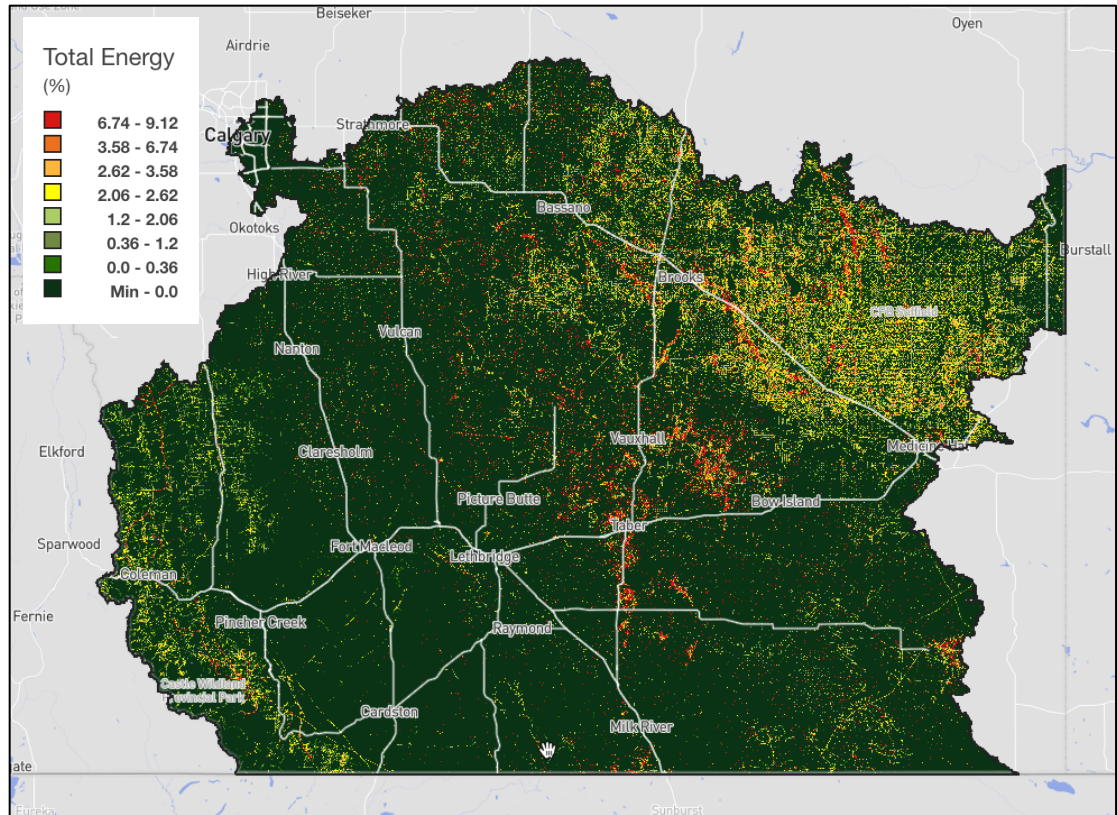
<sup>34</sup> Includes cemeteries, industrial undifferentiated, lagoons, landfills, power generation, powerlines, recreation, and sumps.



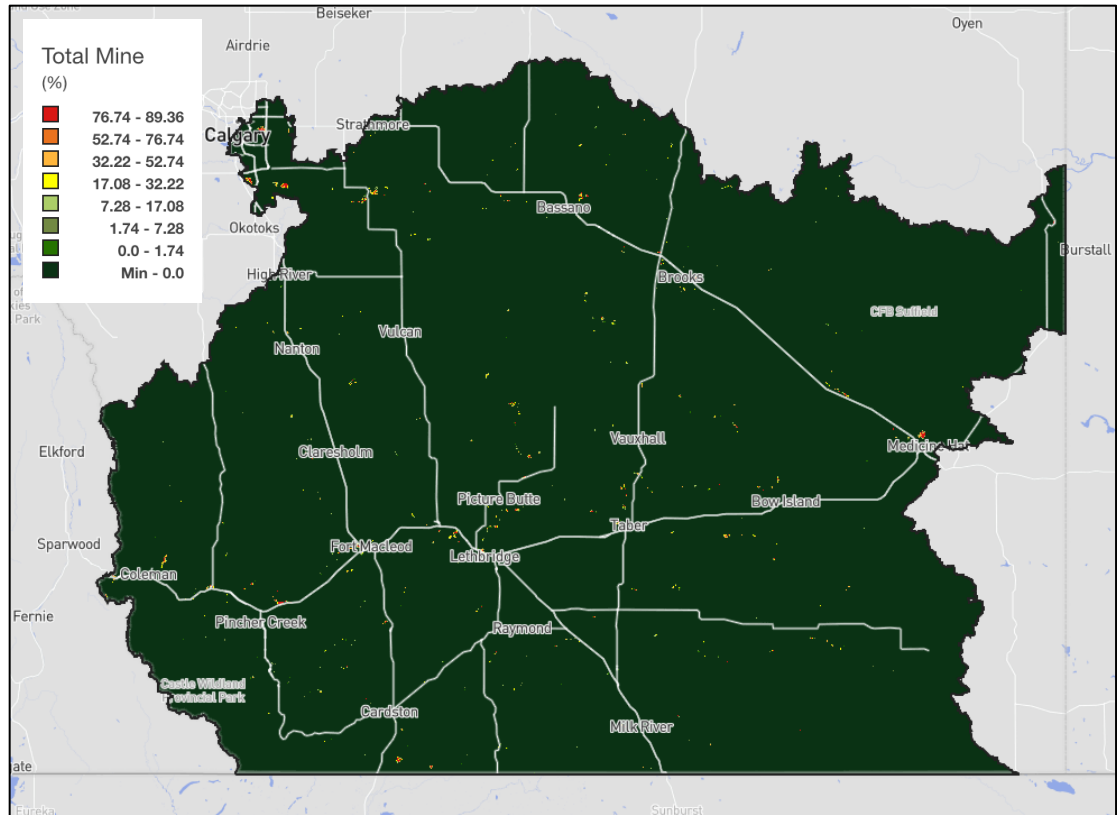
**Figure B-3 Current development footprint by land use type in the regional study area.**



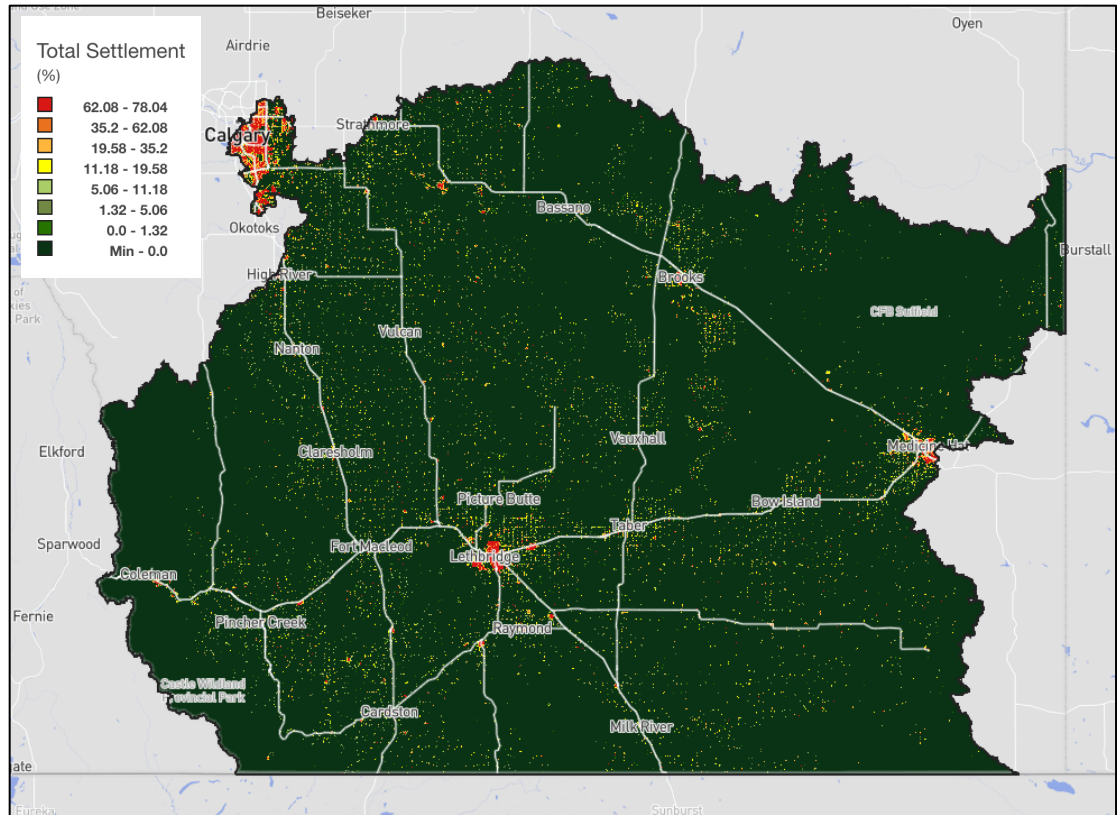
**Figure B-4 Current agricultural footprint in the regional study area. Red indicates high intensity footprint while green indicates low intensity footprint. The legend shows the percent of each pixel occupied by footprint features.**



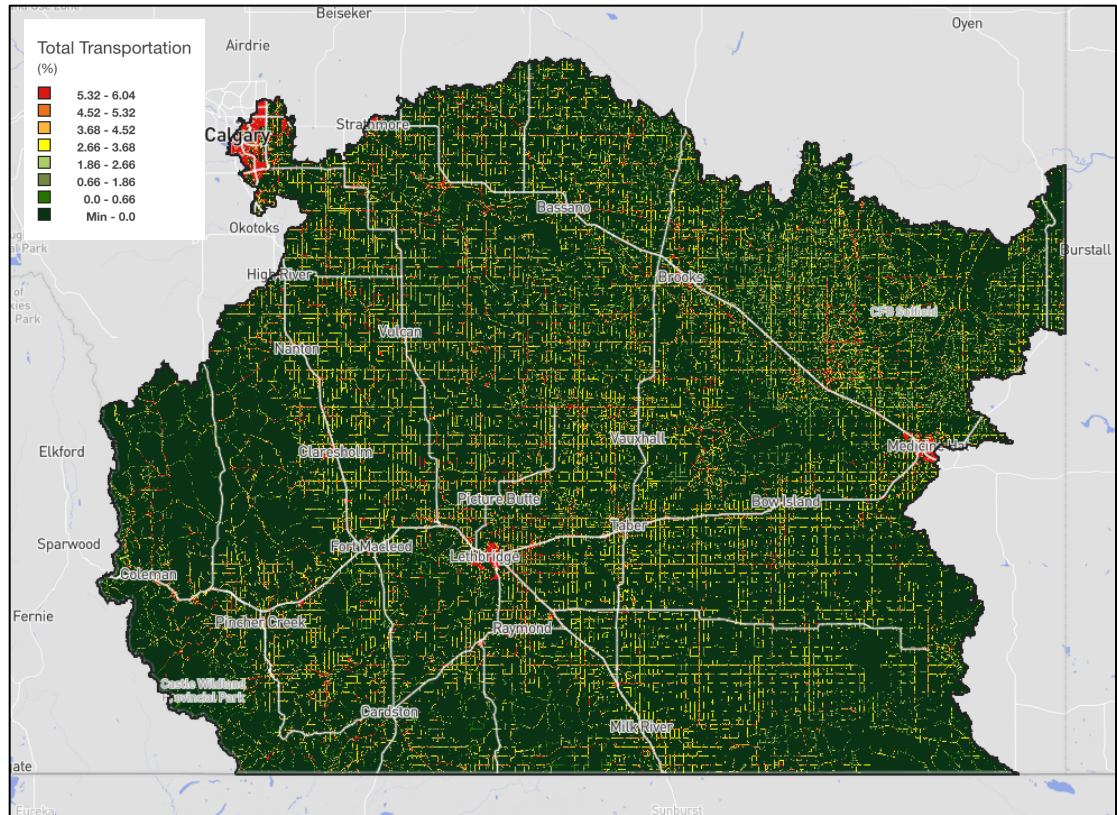
**Figure B-5 Current energy footprint in the regional study area. Red indicates high intensity footprint while green indicates low intensity footprint. The legend shows the percent of each pixel occupied by footprint features.**



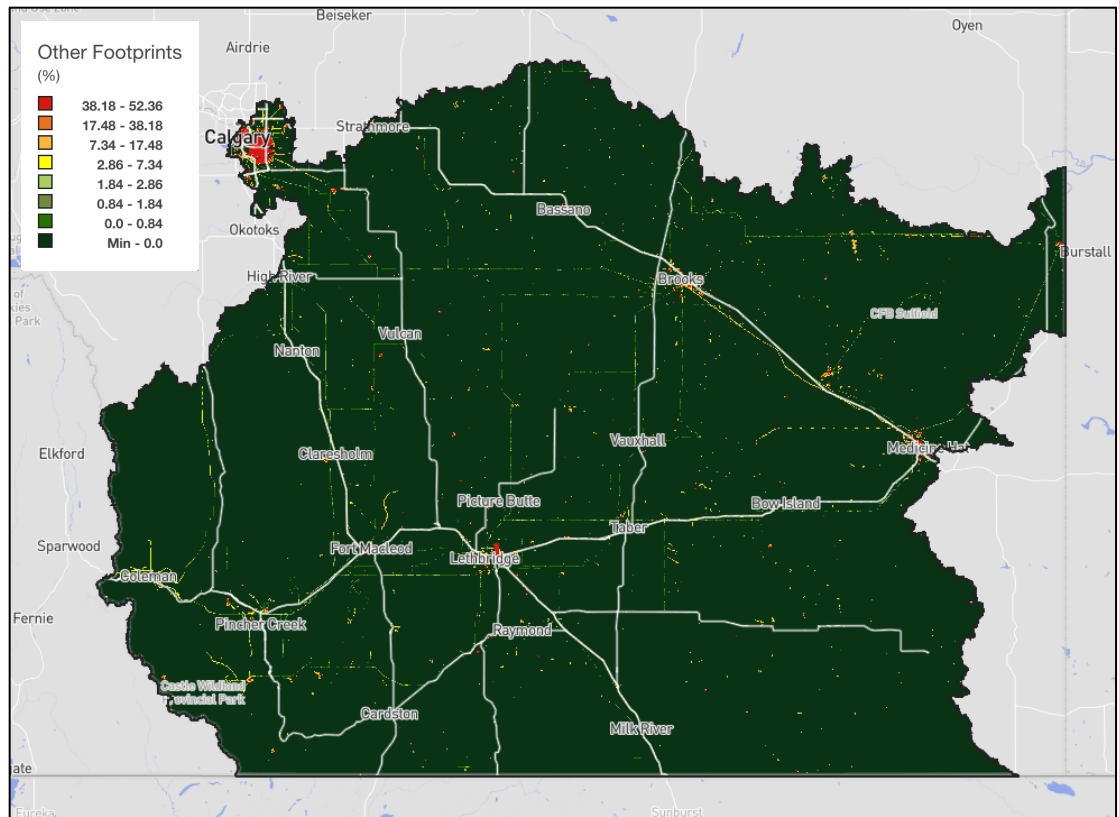
**Figure B-6 Current mining footprint in the regional study area. Red indicates high intensity footprint while green indicates low intensity footprint. The legend shows the percent of each pixel occupied by footprint features.**



**Figure B-7 Current settlement and rural residential footprint in the regional study area. Red indicates high intensity footprint while green indicates low intensity footprint. The legend shows the percent of each pixel occupied by footprint features.**



**Figure B-8 Current transportation footprint in the regional study area. Red indicates high intensity footprint while green indicates low intensity footprint. The legend shows the percent of each pixel occupied by footprint features.**



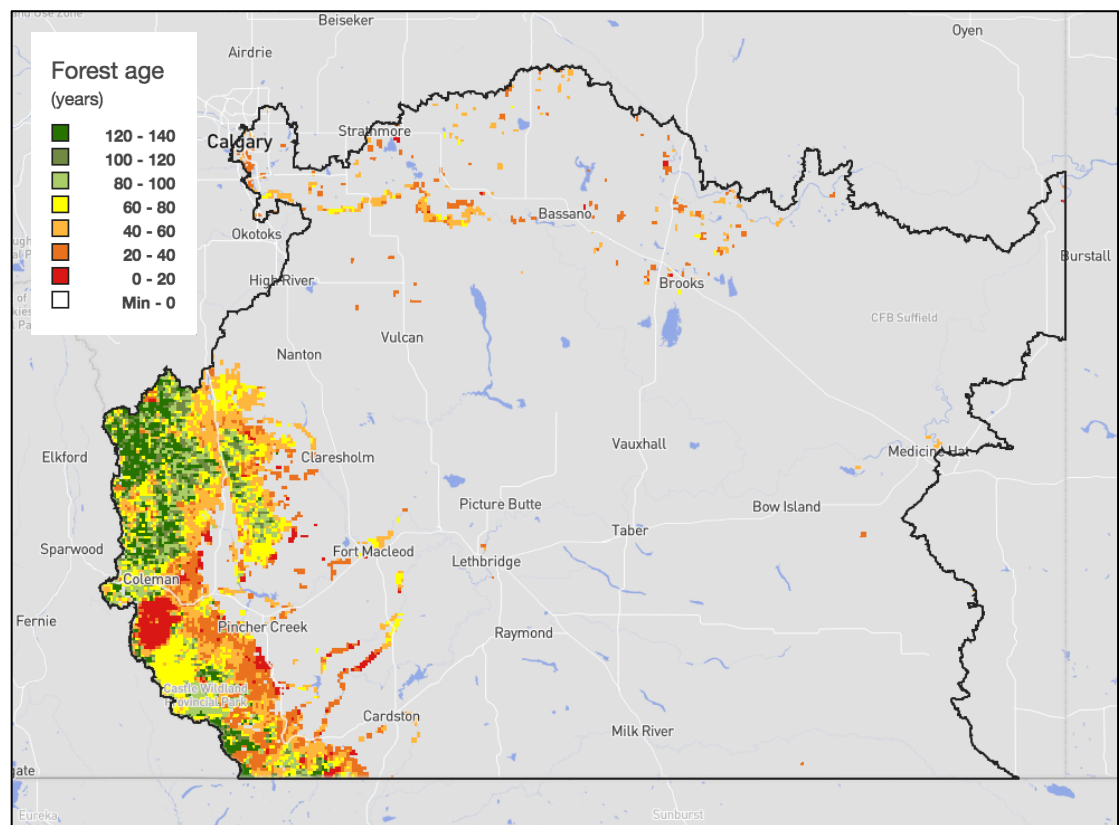
**Figure B-9 Other current footprints in the regional study area, including cemeteries, industrial undifferentiated, lagoons, landfills, power generation, powerlines, recreation, and sumps. Red indicates high intensity footprint while green indicates low intensity footprint. The legend shows the percent of each pixel occupied by footprint features.**

## 2. REMAINING INTACT ECOSYSTEMS

Effects of land disturbance to ecosystems were examined by analyzing impacts to (i) forest age, (ii) intact core area, and (iii) intact patch size.

### Forest age

For the regional study area, the current average forest age in the Rocky Mountain portion of the study area (where most forest occurs) is 80 years, which is slightly lower than the mean across RNV simulations (83 years). The current distribution of forest age across the study area is shown in Figure B-10.



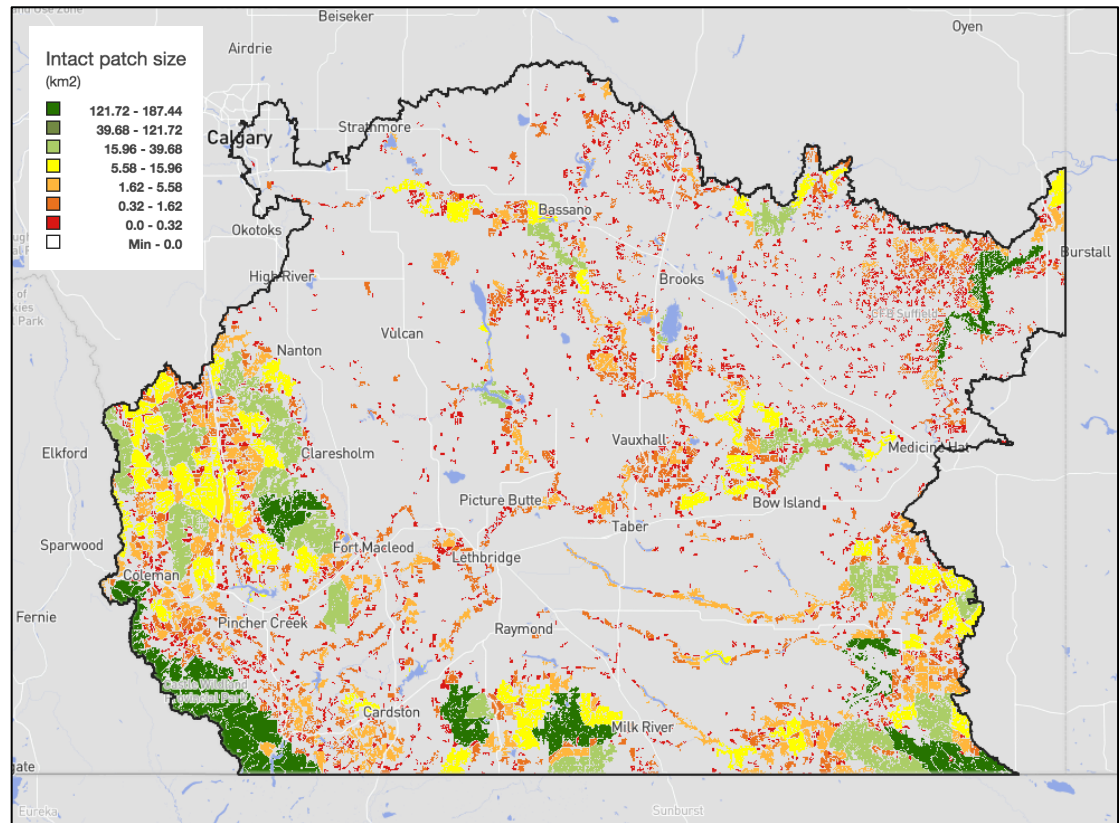
**Figure B-10 Current forest age in the regional study area. The oldest age category (120-140) includes forest older than 140 years. Transparent cells indicate the absence of forest.**

### Intact core area

There is currently only about 28.7% (1,803,202 ha) of the study area that is intact (i.e., 200 m cells that do not contain footprint or farmland). Of this area, a portion (134,881 ha) is comprised of waterbodies, leaving only about 27% of the study area intact if only the terrestrial land base is considered. Much of the intact area occurs in the western portion of the study area, which is characterized by foothills and mountains and includes a large protected area (i.e., Waterton Lakes National Park).

### Intact patch size

Average intact patch size across the terrestrial land base of the regional study area (i.e., not including lakes) is about 9,224 ha (Figure B-11). Larger patches of intact land cover are generally limited to mountainous and protected areas to the west as well as several large registered natural areas to the south.<sup>35</sup>



**Figure B-11 Current intact patches of natural land cover in the regional study area. Green indicates large intact patch sizes, red indicates small sizes, and clear indicates the absence of intact patches.**

<sup>35</sup> Natural areas in the southern portion of the study include Ross Lake, Twin River Heritage Rangeland, Milk River, and Onefour Heritage Rangeland

### 3. EFFECTS TO WILDLIFE AND FISH

Cumulative effects to wildlife and fish were examined by analyzing impacts to four animal indicators (i.e., animal species or groups of animals) that are culturally important to the Siksika people:

1. moose;
2. elk;
3. mule deer; and,
4. fish.

Results of the analyses and a risk assessment are summarized in Table B-1. Results by indicator are discussed below.

**Table B-1. Modelled indicator performance and risk assessment. See section 3.2 or Appendix A for risk categories.**

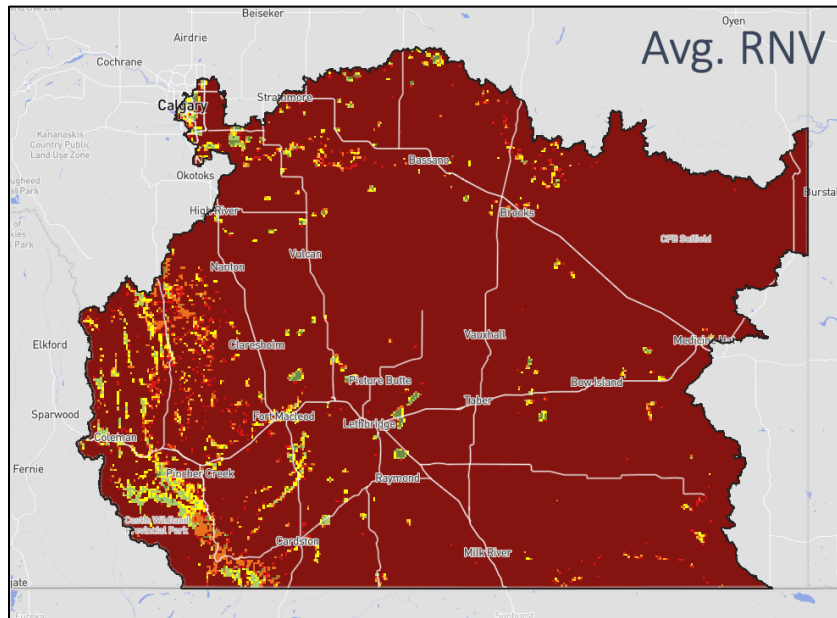
Indicator	Min. RNV (or 1)	Current estimate	Current decline (%) from min. RNV	Risk level
Moose habitat*	0.02	0.07	-	-
Elk habitat*	0.84	0.31	63	High
Mule deer habitat*	0.84	0.39	54	High
INFI (fish)	1.00**	0.77	23	Moderate
INFI linear edge effect with harvest restrictions	1.00**	0.71	29	Moderate
INFI stream frag effect	1.00**	0.70	30	Moderate
INFI climate effect	1.00**	0.91	9	Low

\* Habitat refers to effective habitat, which accounts for availability of suitable land cover and terrain combined with mortality risk associated with linear footprints.

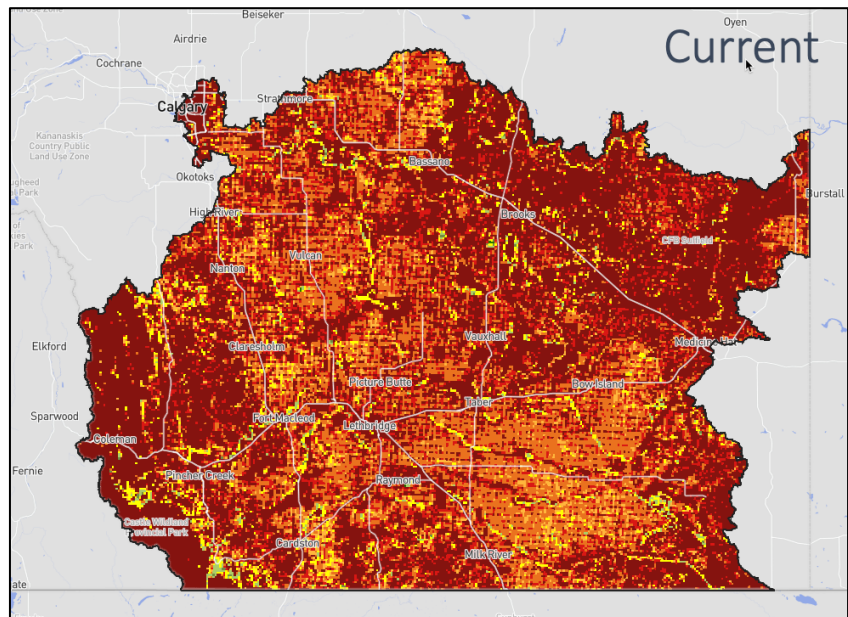
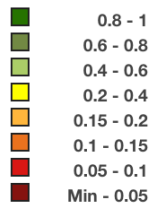
\*\* For INFI, any decline from a value of 1 signifies degrading conditions for the indicator. As a result, the output for this indicator is compared to 1 rather than to mean RNV.

## **Moose**

Prior to industrial development, the majority of the regional study area was grassland and thus unsuitable for moose, with the exception of relatively small pockets of forest, such as mountain valleys in the western portion of the study area (Figure B-12). In subsequent decades, moose habitat in the study area has increased relative to natural conditions (Table B-1), largely driven by the conversion of grassland to cropland, which has a slightly higher value to moose. The value of cropland is still low relative to the preferred forest habitat, however, and linear access is high in the agricultural portion of the landscape. Therefore, although moose habitat is higher than the estimated natural level in the agricultural area, moose habitat is still very low. The best moose habitat likely remains the forested mountain valleys to the west, where habitat has declined relative to natural due to habitat loss and mortality risk associated with access. Overall, effective moose habitat in study area is low.



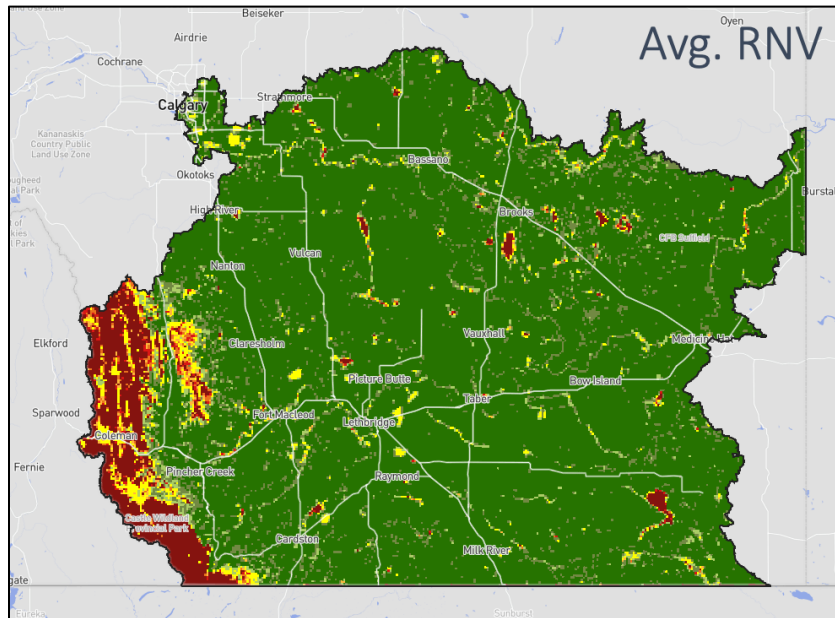
**Moose habitat (Index)**



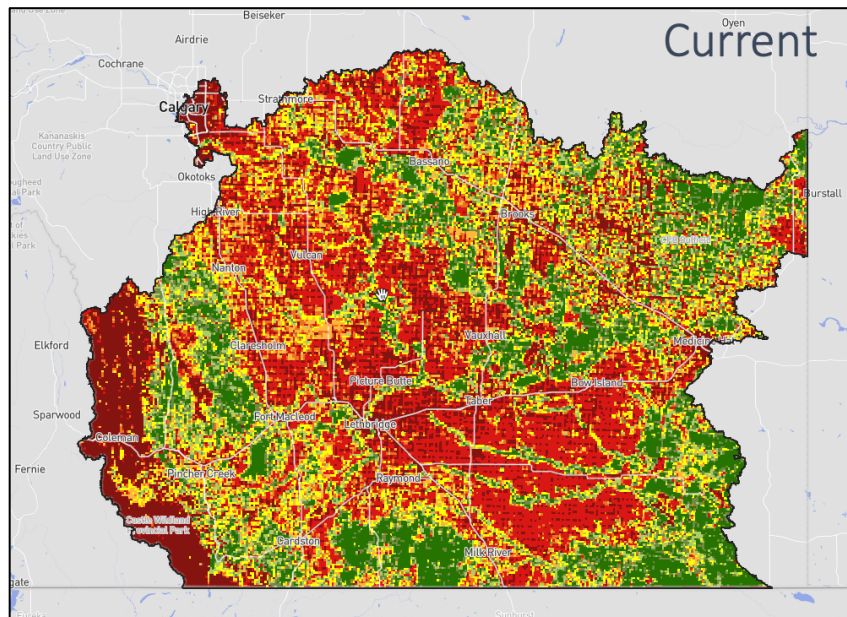
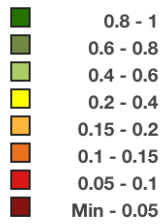
**Figure B-12 Natural and current moose habitat in the regional study area. A value of 1 identifies maximum effectiveness.**

### **Elk habitat**

Elk habitat has declined by an estimated 63% relative to natural conditions in the regional study area (Table B-1). Elk habitat was likely highest in grasslands occurring in the central and eastern (i.e., Prairie) portion of the regional study area prior to industrial development (Figure B-13). Elk habitat has since declined substantially due to agricultural conversion and high linear footprint densities and associated access for hunting. This decline corresponds to an assessment of high risk to elk and to associated hunting opportunities. Remaining elk habitat occurs primarily in protected areas where linear footprint density and hunter access are low.



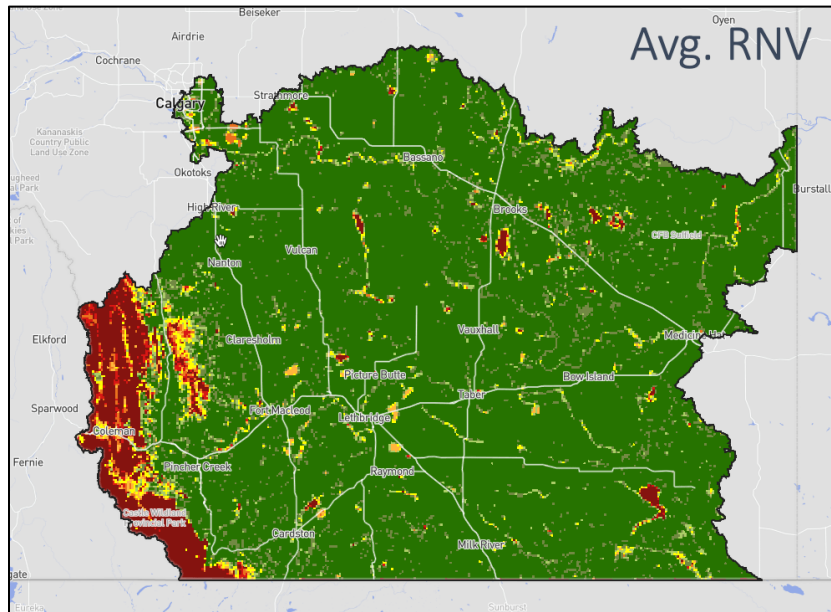
**Elk habitat (Index)**



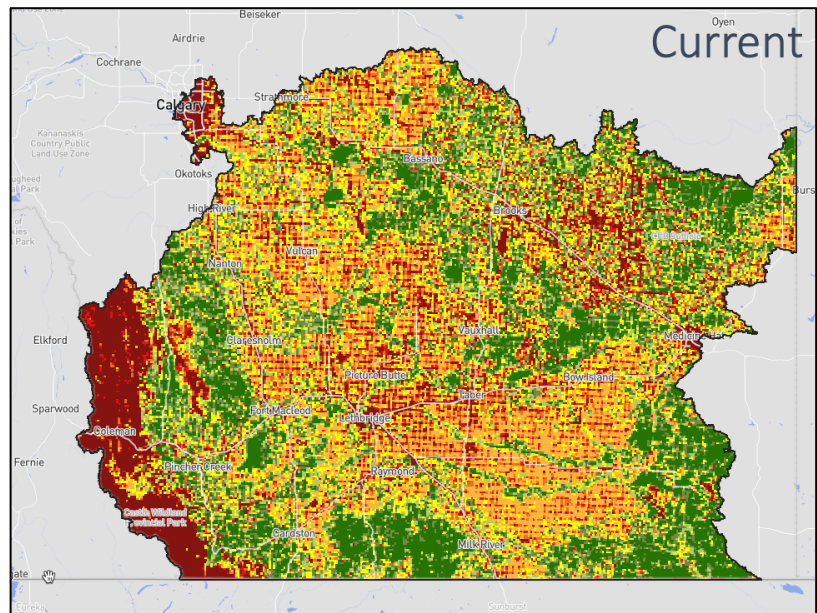
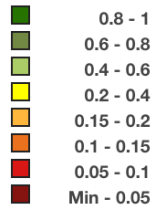
**Figure B-13 Natural and current elk habitat in the regional study area. A value of 1 identifies maximum effectiveness.**

### **Mule deer habitat**

Mule deer habitat has declined by 54% relative to natural conditions in the regional study area (Table B-1). Under natural conditions, suitable mule deer habitat was highest in the central and eastern (i.e., Prairie) portion of the regional study area due to the availability of grassland. Habitat has since undergone significant declines due agricultural conversion and high linear footprint densities that facilitate hunter access (Figure B-14). This decline corresponds to an assessment of high risk to mule deer and to associated hunting opportunities. Remaining habitat occurs primarily in protected areas and other pockets where linear footprint density are low.



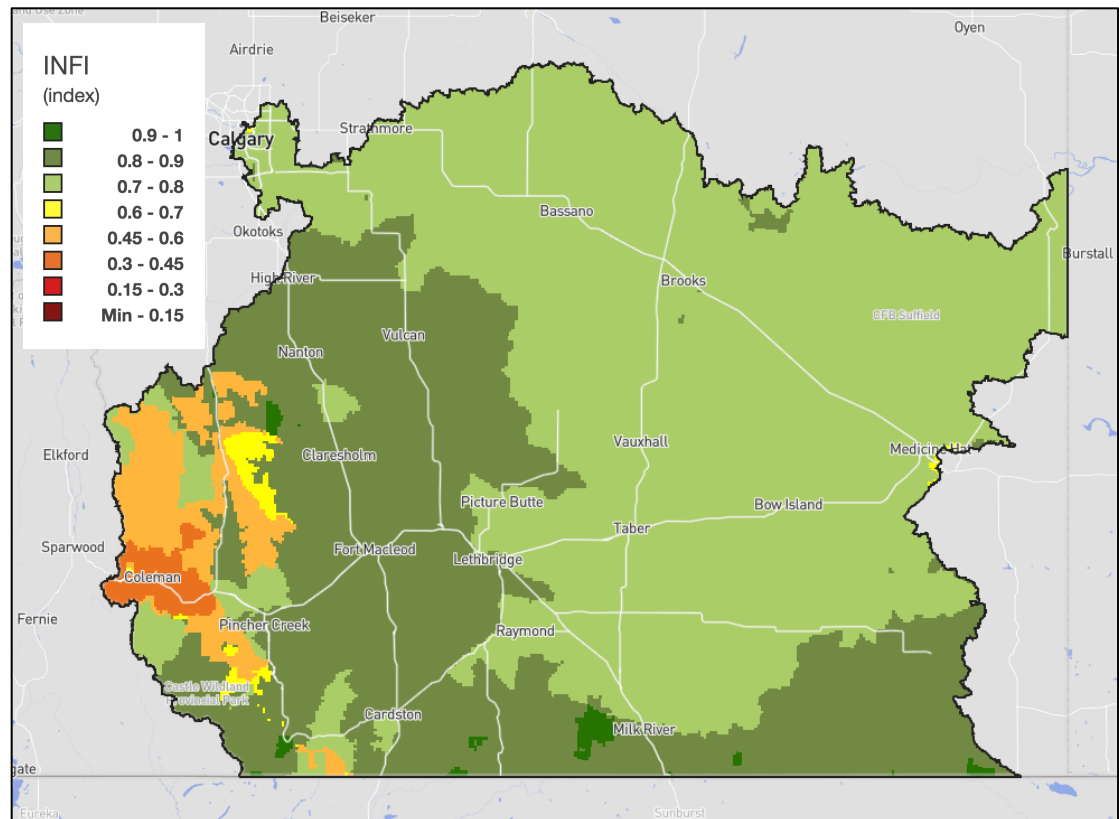
Mule deer habitat (Index)



**Figure B-14 Natural and current mule deer habitat in the regional study area. A value of 1 identifies maximum effectiveness.**

### Index of Native Fish Integrity (INFI)

The average current value of INFI in the regional study area is approximately 0.77, which is a 23% decline in the index from pre-contact conditions (Table B-1) and suggests moderate risk to the fish community. INFI was calculated as the average value across three effects: linear edge, stream fragmentation, and climate. The levels of linear edge and stream fragmentation effects are consistent with moderate risk whereas the level of climate effects suggests low risk (Table B-1). Current INFI values for watersheds are illustrated in Figure B-15. Risk is higher to the west due to higher sensitivity in montane areas to fishing pressure (due to more crown land and therefore greater fishing access) and stream fragmentation (due to greater abundance of streams where culverts are used for crossings, as opposed to rivers where bridges are typically used).



**Figure B-15 Current Index of Native Fish Integrity (INFI) values by watershed for the regional study area. Higher values (i.e., greener colours) indicate lower risk.**

## 4. EFFECTS TO TRADITIONAL LAND USE

Effects to traditional land use were examined by analyzing impacts to three indicators:

4. accessibility for traditional land use;
5. mule deer TLU opportunity; and,
6. elk TLU opportunity.

Results by indicator are discussed below.

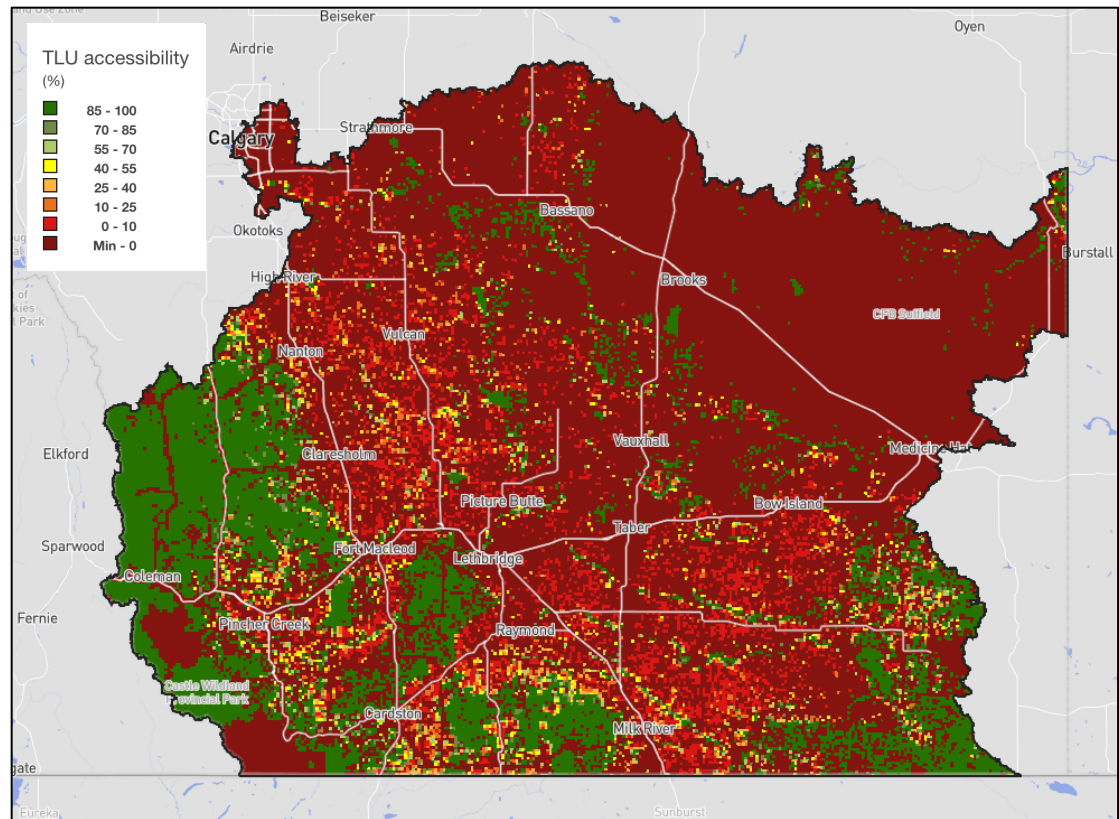
Note that the results presented are likely an overestimation (i.e., optimistic view) of actual conditions for TLU accessibility and opportunity. For instance, from a land use standpoint, harvesting activities do not necessarily occur where there is accessible and suitable habitat, but rather depend on numerous logistical and cultural factors that have not been numerically considered here. Some of the factors that have not been integrated in the modeling include distance from home, ease of access, gates and restrictions that prohibit access,<sup>36</sup> familiarity and knowledge of location, cultural history in the area, competition for resources (e.g., hunting, fishing, and camping sites), among others. As an example, there may be locations that have suitable habitat but are not valuable for hunting because they are too far from home and in unfamiliar locations. Hunting in remote locations requires commitment of increased time and resources that some members cannot afford, and success in unfamiliar locations is not guaranteed. The result of the combination of these factors is that not all of the habitat that is modeled as suitable/accessible in this study necessarily presents a good TLU opportunity for community members.

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<sup>36</sup> Community members described two specific access points (the Shell plant and Birdseye Ranch) that have been gated in recent years, cutting off access to a large land use zone and associated network of roads.

### Accessibility for traditional land use

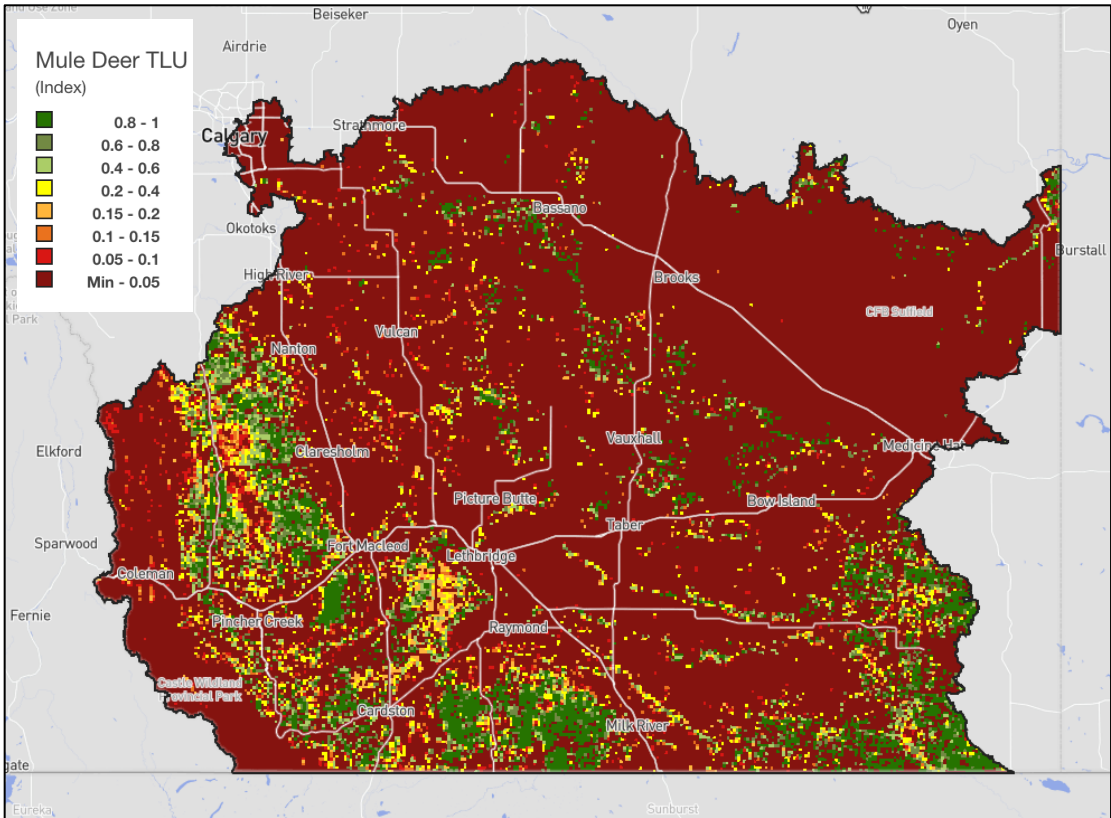
There is currently about 20% (1,285,848 ha) of the study area that is accessible for traditional land use (Figure B-16). Of this area, a large portion (134,881 ha) is comprised of waterbodies, leaving only about 18% of the study area available for land use if only the terrestrial land base is considered. Much of the accessible area occurs in the western foothills and mountains as well as in the Siksika Nation reserve.



**Figure B-16 Accessibility for traditional land use in the regional study area. Based on assumptions that were developed with input from community members. Higher values indicates greater accessibility.**

**Mule deer TLU opportunity**

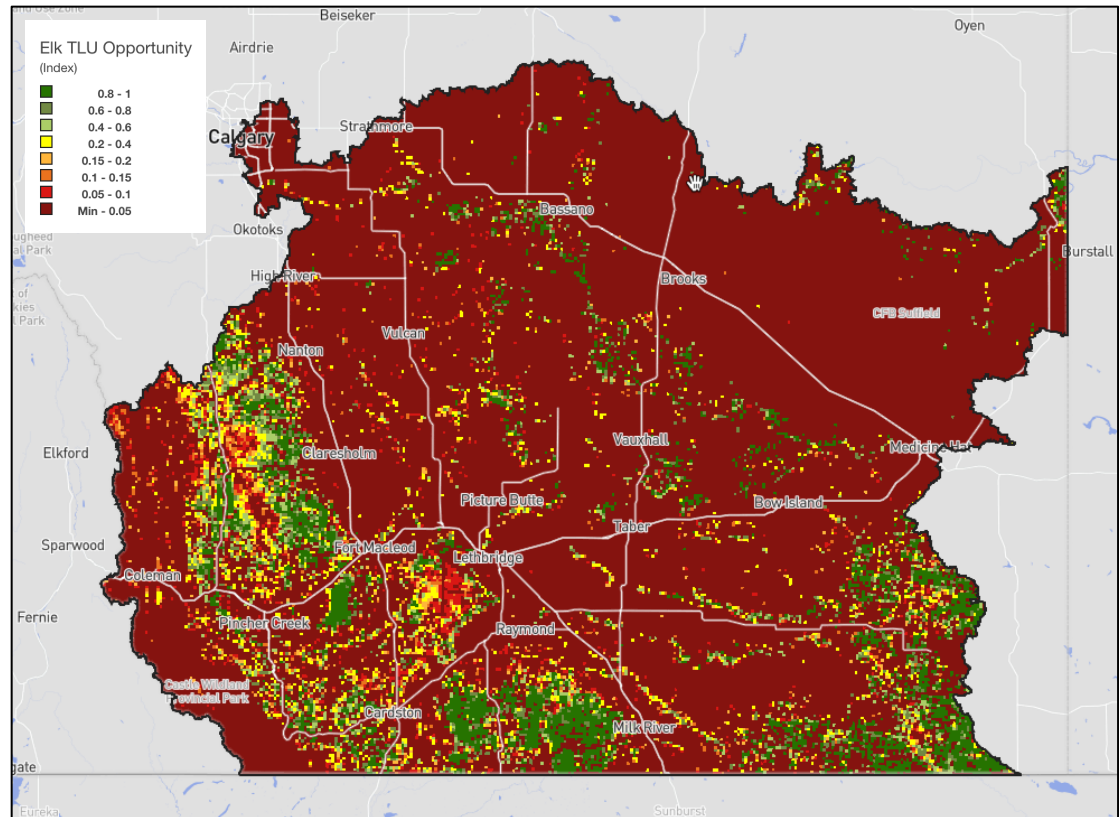
Current average mule deer TLU opportunity (0.11) in the regional study area is around 87% lower than natural conditions (i.e., min. RNV) and 72% lower than current effective habitat (0.39) presented for mule deer in section 3 of this appendix (see Table B-1). This indicates that there is limited opportunity for mule deer hunting in the regional study area due to land ownership, protected areas, and proximity to non-traditional land use activities. Mule deer TLU opportunity is highest in the foothills to the west and in the Siksika Nation reserve (Figure B-17).



**Figure B-17 Mule deer TLU opportunity in the regional study area. Based on assumptions that were developed with input from community members. Higher values indicates greater opportunity.**

### Elk TLU opportunity

Current average elk TLU opportunity (0.10) in the regional study area is around 88% lower than natural conditions (i.e., min. RNV) and 68% lower than current average effective habitat (0.31) presented for elk in section 3 of this appendix (see Table B-1). This indicates that there is limited elk hunting opportunity in the regional study area due to land ownership, protected areas, and proximity to non-traditional land use activities. Elk TLU opportunity is highest in the foothills to the west and in the Siksika Nation reserve (Figure B-18).



**Figure B-18 Elk TLU opportunity in the regional study area. Based on assumptions that were developed with input from community members. Higher values indicates greater opportunity.**

## **APPENDIX C: WILDLIFE HABITAT ANALYSIS**

## APPENDIX C: WILDLIFE HABITAT ANALYSIS OF EFFECTIVE AND POTENTIAL HABITAT

The wildlife habitat metrics analysed in this project integrated the consequence of habitat quality, based on land cover and terrain, with the risk of mortality associated with linear footprint density. We refer to the availability of suitable land cover and terrain as potential habitat. Wildlife density may still be low despite the presence of high potential habitat if sources of mortality are high. We use the term effective habitat to refer to habitat that also considers the effect of mortality, especially human-caused mortality. Human-caused mortality is an important driver of wildlife populations that are targeted by hunting; as such, effective habitat can be substantially lower than potential habitat. The wildlife habitat results presented in the main body of the report reflect effective habitat. In this appendix, we present potential as well as effective habitat to demonstrate their relative magnitude in the assessment. Results for the focal study area are presented first, followed by results for the regional study area.

### 1. FOCAL STUDY AREA

Due to conversion of land to agriculture, potential elk habitat is assessed to be below natural conditions, and high linear disturbance density causes still lower levels for effective habitat. The same is true for mule deer habitat, although the departure of potential habitat from natural condition is less severe because tame pasture is a preferred habitat for that species. Potential habitat is above natural for moose because conversion of grassland to crops has provided improved forage; potential habitat is still low, however, due to the scarcity of preferred habitat (forest) and effective habitat is lower due to high linear disturbance density. Results for each wildlife indicator (moose, elk, mule deer) are presented below.

**Table C-1. Comparison of current estimates for potential and effective habitat for three wildlife indicators in the focal study area.**

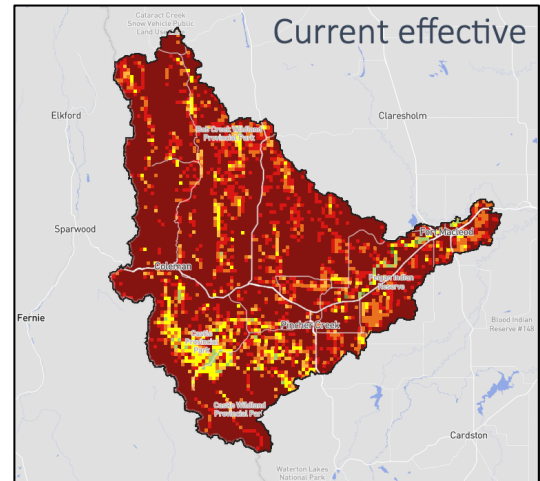
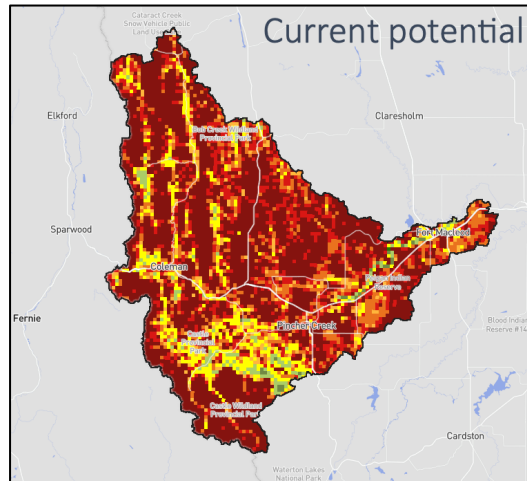
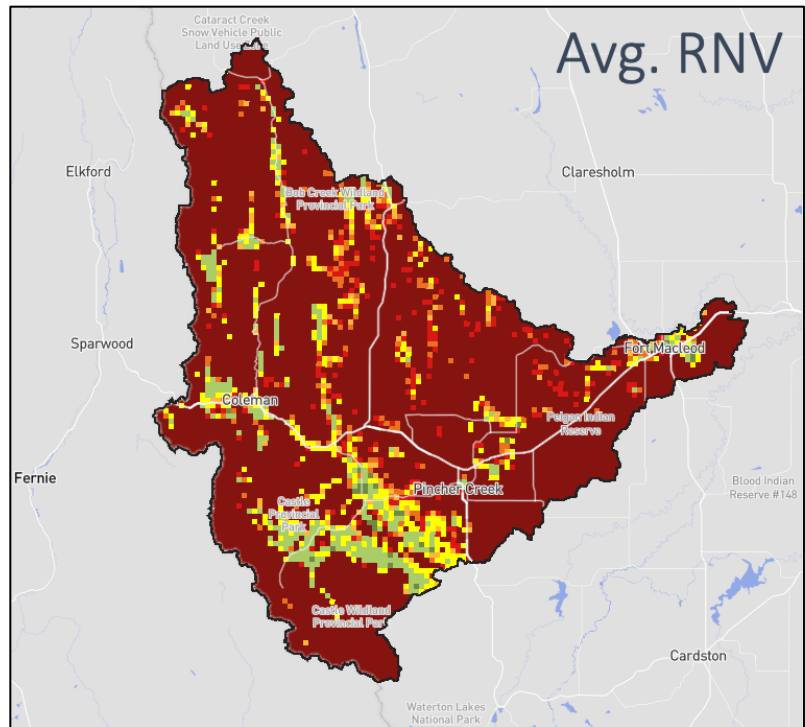
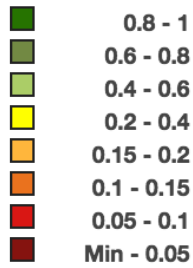
Indicator	Min RNV	Model estimates (current, future)		% change from min RNV (current, future)	
		Effective habitat	Potential habitat	Effective habitat	Potential habitat
Moose habitat	0.05	0.05, 0.05	0.08, 0.07	-5, -14	+56, +41
Elk habitat	0.42	0.22, 0.21	0.29, 0.28	-48, -51	-30, -33
Mule deer habitat	0.42	0.25, 0.25	0.35, 0.35	-40, -41	-17, -17

#### 1.1. MOOSE

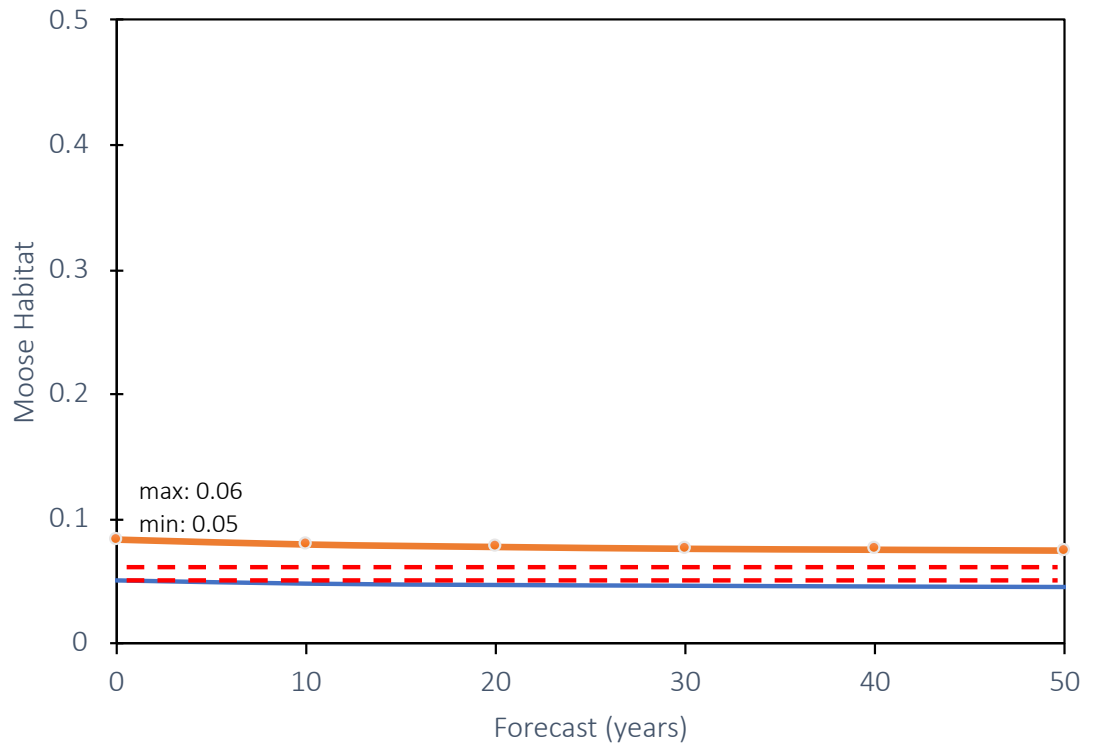
Potential moose habitat has increased relative to natural conditions due to conversion of

grassland to cropland, which has a slightly higher value to moose than grassland (Table C-1, Figure C-1). This increase, however, is minor and the study area is still has low suitability for moose. Effective habitat is less than potential habitat due to high linear disturbance density.

**Moose Habitat  
(Index)**



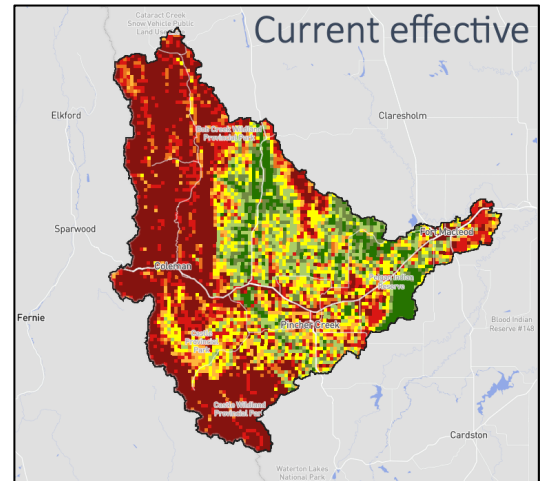
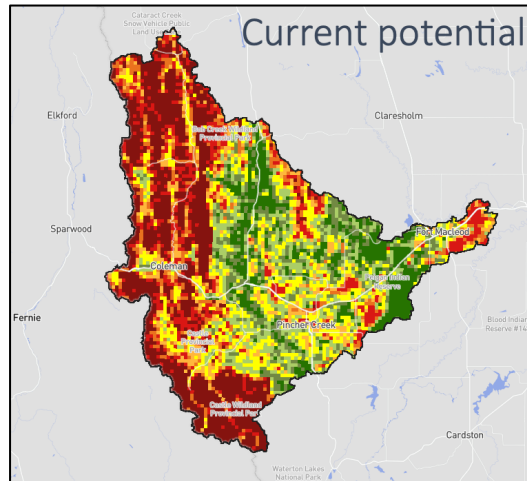
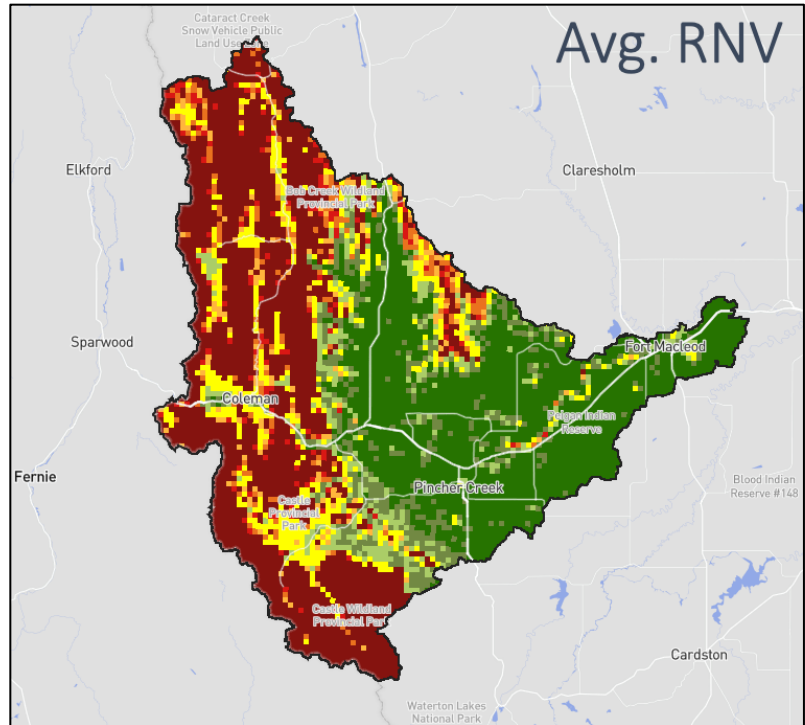
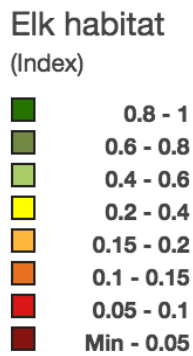
**Figure C-1 Natural moose habitat (top) compared to current potential habitat (bottom left) and effective habitat (bottom right) in the focal study area. Potential habitat accounts for availability of preferred land cover and terrain, whereas effective habitat also incorporates that impact of access. A value of 1 identifies maximum effectiveness.**



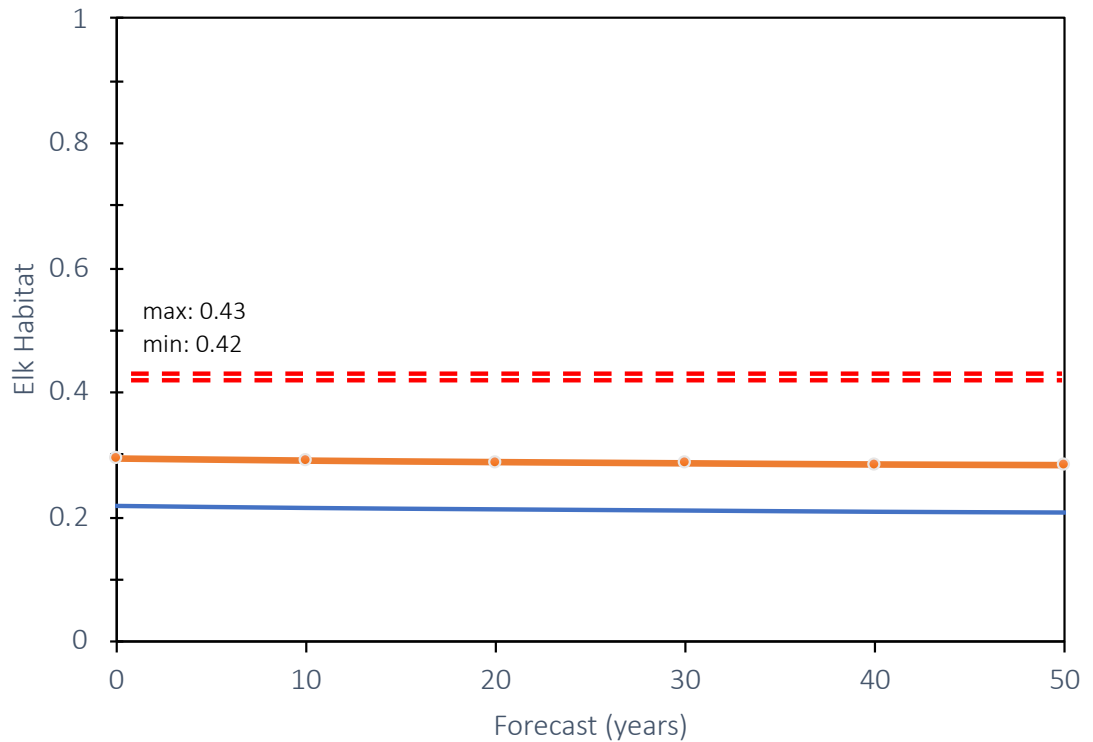
**Figure C-2** Current and simulated future moose effective habitat in the focal study area (blue line). As a baseline for comparison, the red dashed lines identify the estimated range of natural variation. The orange line identifies potential habitat based on suitable land cover and terrain, but not incorporating the impact of linear features. The difference between the orange and blue line represents the negative effects (e.g., hunting, predators, vehicular collisions) facilitated by access via linear footprints.

## 1.2. ELK

Elk effective habitat has currently declined by 48% relative to natural conditions, whereas elk potential habitat has declined by 30% relative to natural conditions (Table C-1, Figure C-3). In the forecast, elk potential and effective habitat both decreased slightly due to increased footprint. Elk effective habitat dropped below 50% of natural at the end of the 50-year forecast.



**Figure C-3 Natural elk habitat (top) compared to current potential habitat (bottom left) and effective habitat (bottom right) in the focal study area. Potential habitat accounts for availability of preferred land cover and terrain, whereas effective habitat also incorporates that impact of access. A value of 1 identifies maximum effectiveness.**

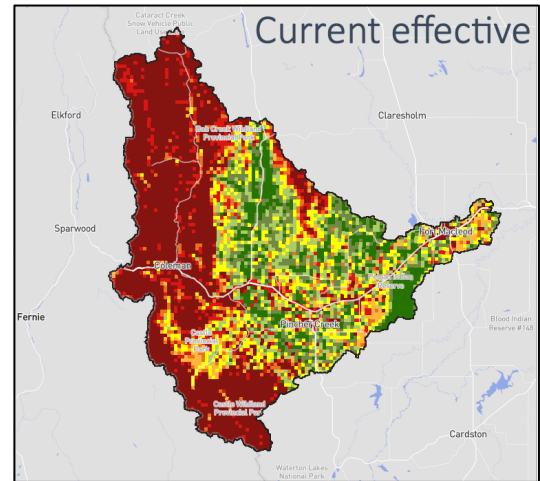
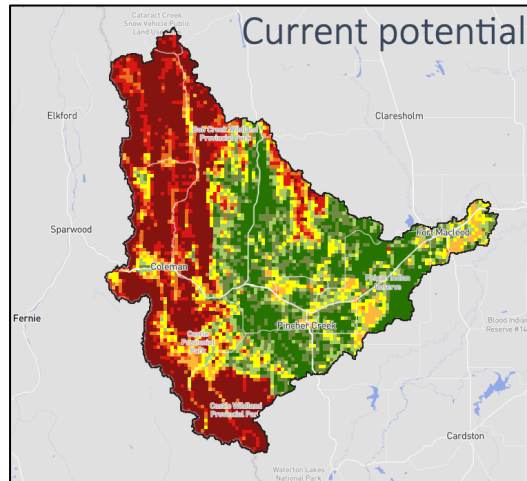
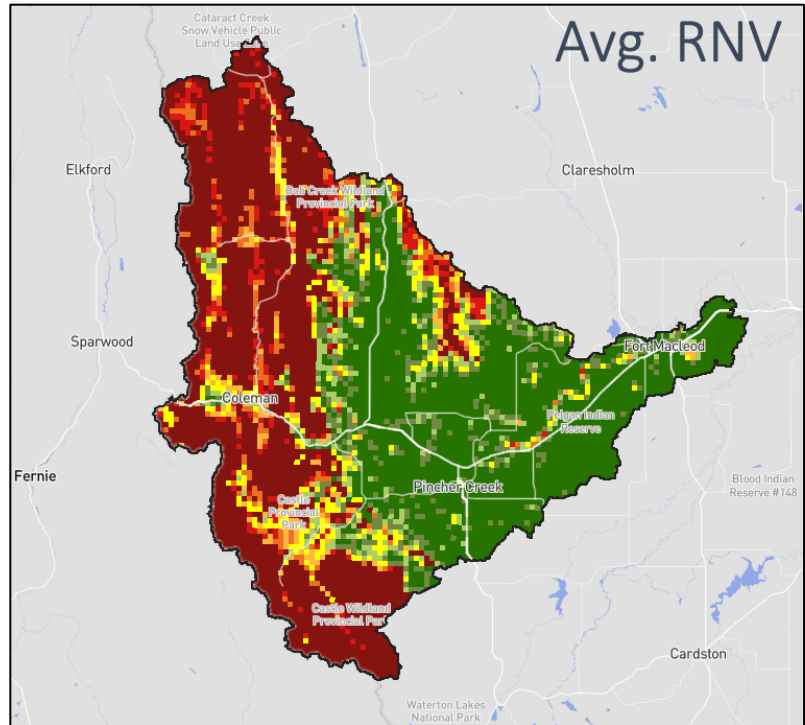
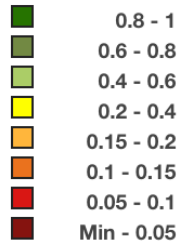


**Figure C-4** Current and simulated future elk effective habitat in the focal study area (blue line). As a baseline for comparison, the red dashed lines identify the estimated range of natural variation. The orange line identifies potential habitat based on suitable land cover and terrain, but not incorporating the impact of linear features. The difference between the orange and blue line represents the negative effects (e.g., hunting, predators, vehicular collisions) facilitated by access via linear footprints.

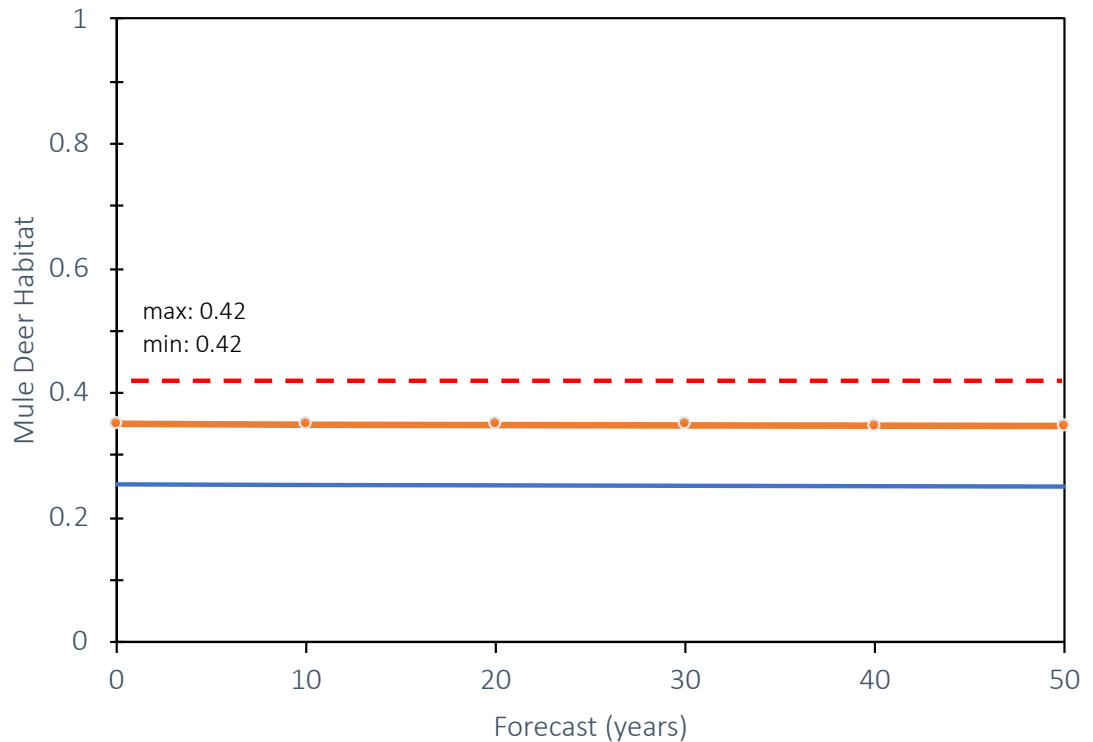
### 1.3. MULE DEER

Mule deer effective habitat has currently declined by 40% relative to natural conditions, whereas mule deer potential habitat declined by 17% relative to natural conditions (Table C-1, Figure C-5). During the forecast, mule deer potential and effective habitat declined only slightly by the end of the 50-year forecast (Figure C-6).

Mule deer habitat  
(Index)



**Figure C-5 Natural mule deer habitat (top) compared to current potential habitat (bottom left) and effective habitat (bottom right) in the focal study area. Potential habitat accounts for availability of preferred land cover and terrain, whereas effective habitat also incorporates that impact of access. A value of 1 identifies maximum effectiveness.**



**Figure C-6 Current and simulated future mule deer effective habitat in the focal study area (blue line). As a baseline for comparison, the red dashed line identifies the estimated range of natural variation. The orange line identifies potential habitat based on suitable land cover and terrain, but not incorporating the impact of linear features. The difference between the orange and blue line represents the negative effects (e.g., hunting, predators, vehicular collisions) facilitated by access via linear footprints.**

## 2. REGIONAL STUDY AREA

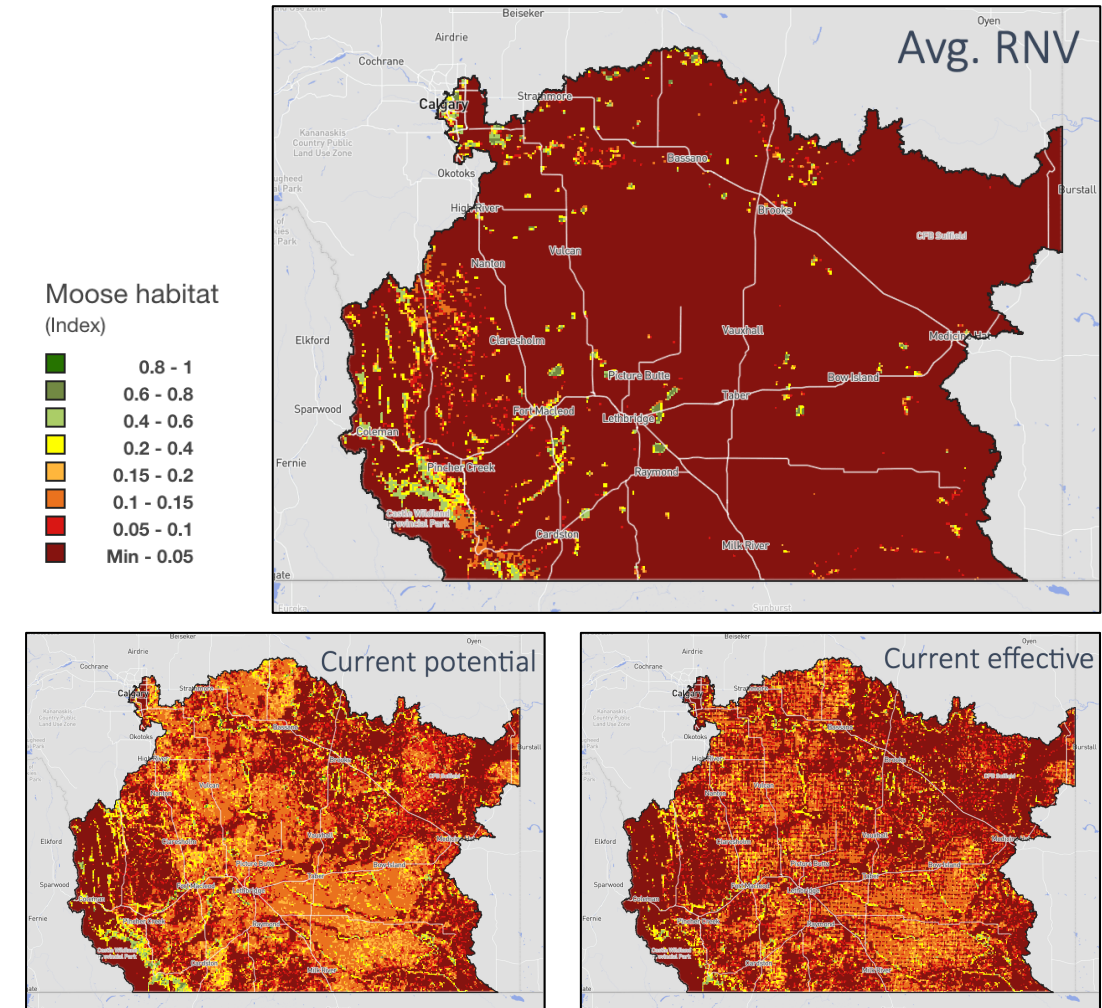
In the regional study area, where conversion to farmland is substantially higher than in the focal study area, potential habitat is assessed to be below natural conditions (except for moose), and high linear disturbance density causes still lower levels for effective habitat. Results for each wildlife indicator (moose, elk, mule deer) are presented below.

**Table C-2. Comparison of current estimates for potential and effective habitat for three wildlife indicators.**

Indicator	Min RNV	Model estimates (current)		% change from min RNV (current)	
		Effective habitat	Potential habitat	Effective habitat	Potential habitat
Moose habitat	0.02	0.07	0.10	-	-
Elk habitat	0.84	0.31	0.43	-63	-49
Mule deer habitat	0.84	0.39	0.55	-54	-35

## 2.1. MOOSE

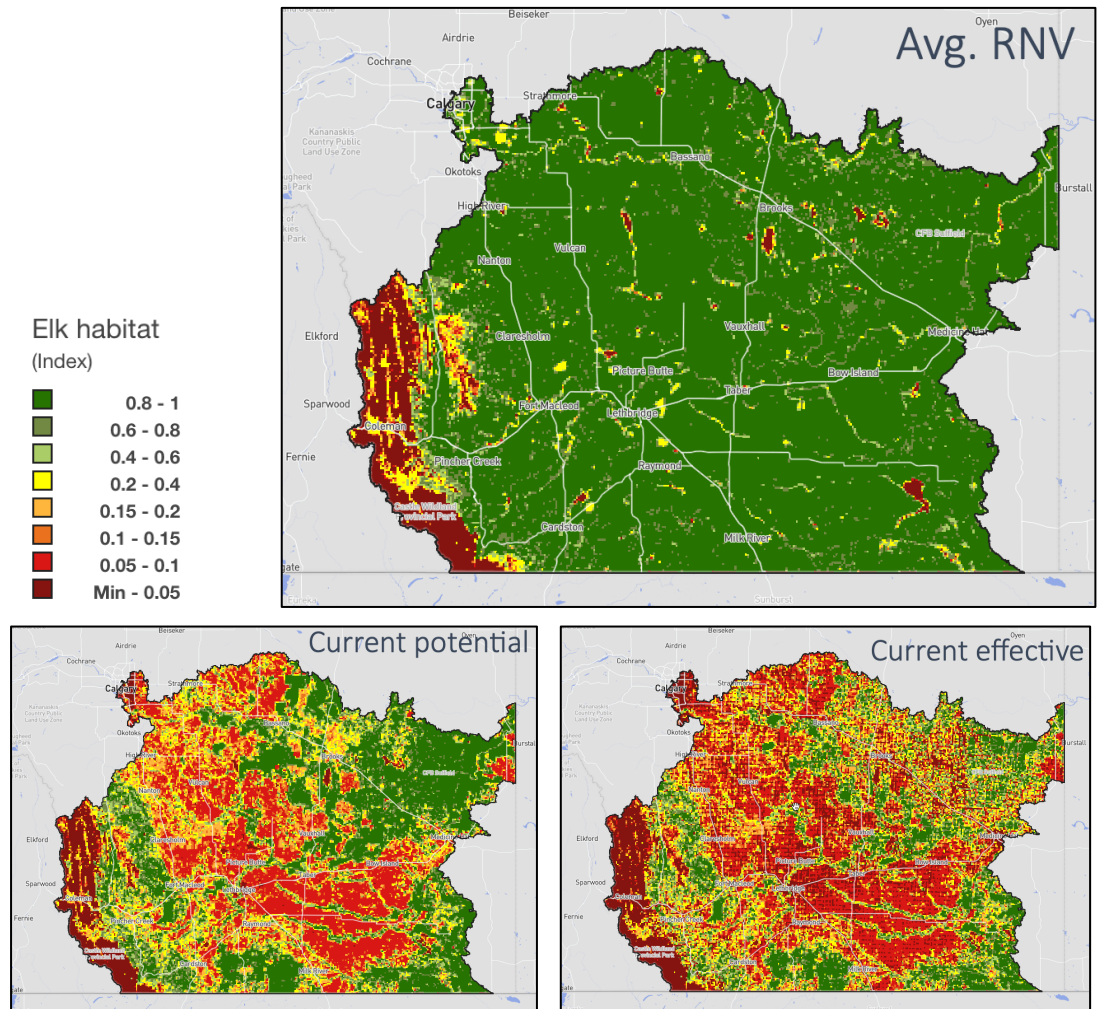
Potential moose habitat has increased relative to natural conditions due to conversion of grassland to cropland, which has a slightly higher value to moose than grassland (Table C-2, Figure C-7). This increase, however, is minor and the study area is still largely unsuitable for moose. Effective moose habitat is lower than potential habitat due to high density of linear footprint.



**Figure C-7 Natural moose habitat (top) compared to current potential habitat (bottom left) and effective habitat (bottom right) in the regional study area. Potential habitat accounts for availability of preferred land cover and terrain, whereas effective habitat also incorporates that impact of access. A value of 1 identifies maximum effectiveness.**

## 2.2. ELK

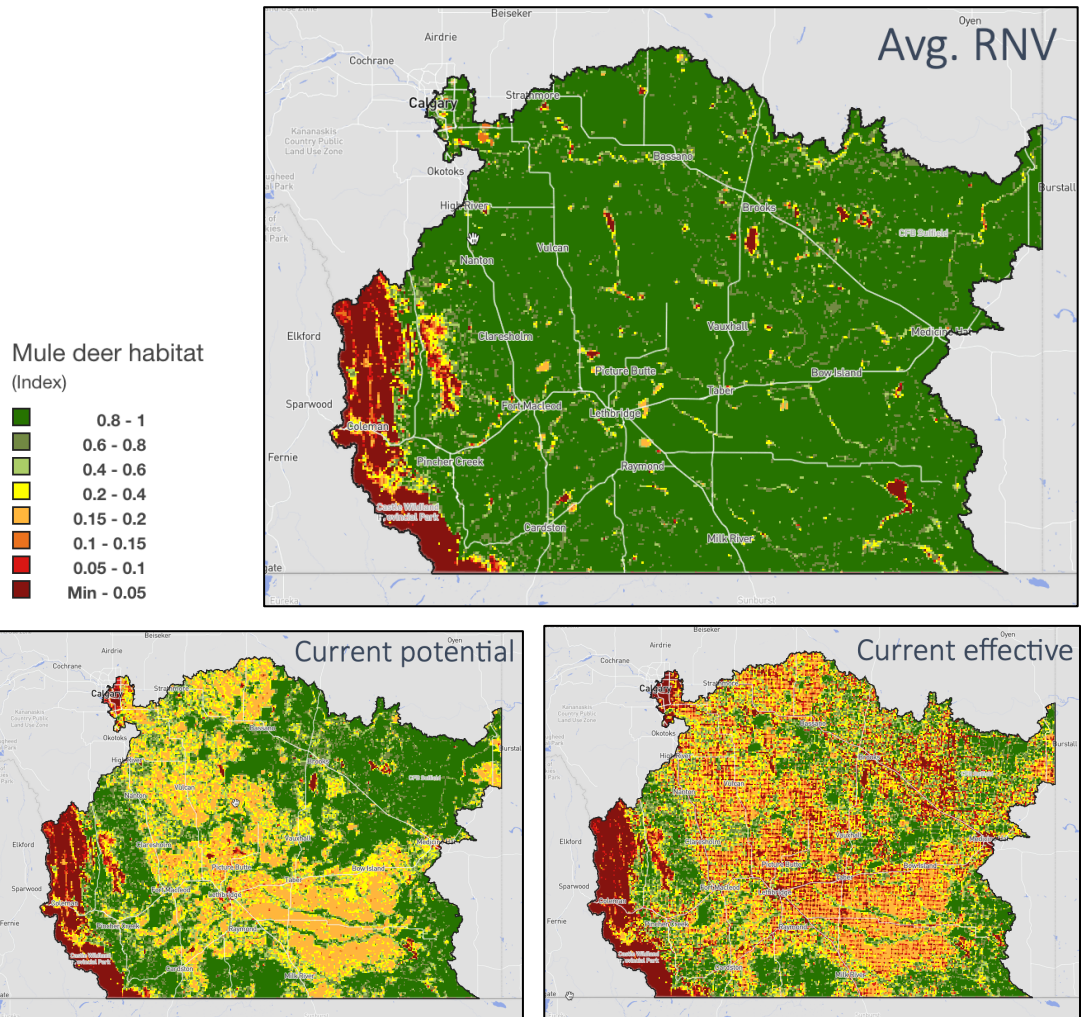
Potential elk habitat has declined by an estimated 49% relative to natural conditions largely due to conversion of grassland to agriculture. Effective elk habitat is lower than potential due to high density of linear footprint (Table C-2, Figure C-8).



**Figure C-8 Natural elk habitat (top) compared to current potential habitat (bottom left) and effective habitat (bottom right) in the regional study area. Potential habitat accounts for availability of preferred land cover and terrain, whereas effective habitat also incorporates that impact of access. A value of 1 identifies maximum effectiveness.**

### 2.3. MULE DEER

Effective mule deer habitat has declined by 54% relative to natural conditions, whereas mule deer potential habitat has remained at natural conditions (Table C-2, Figure C-9).



**Figure C-9 Natural mule deer habitat (top) compared to current potential habitat (bottom left) and effective habitat (bottom right) in the regional study area. Potential habitat accounts for availability of preferred land cover and terrain, whereas effective habitat also incorporates that impact of access. A value of 1 identifies maximum effectiveness.**

### 3. DISCUSSION

The large difference between effective and potential habitat identifies linear features to be an important risk to ungulates due to human-caused mortality that they facilitate. More detailed analysis that simulates the response of populations (as opposed to just habitat) is needed to explore the effectiveness of strategies to manage human-caused mortality. Another area for further investigation is the relative contribution of various types of linear features to risk of

wildlife mortality. However, as discussed below, identification of access as an important risk factor is consistent with evidence from elsewhere.

A key concern of biologists managing sustainable populations of wildlife relates to the concept of “access” and how increased access can directly or indirectly increase mortality of wildlife species or reduce the amount and/or quality of habitat available to wildlife. In a most general sense, access refers to those linear and curvilinear man-made (anthropogenic) features that increase the ability of humans or predators to gain “access” to or travel through areas proximal to wildlife populations or their habitat.

Examples of linear features that can provide increased access include:

1. Access roads and in-block roads associated with the forest sector
2. Access roads to wellsites (energy sector)
3. Seismic lines, pipelines, and transmission lines of the energy sector
4. Municipal or private roads that provide access to rural residences
5. Recreation trail network intended for hiking, biking, horseback riding.

Examples of access that can have negative effects on wildlife populations include:

1. Direct mortality of wildlife populations from vehicular collisions
2. Direct mortality of wildlife populations from hunters who gain easy access to wildlife populations by using linear features (roads, seismic lines, transmission lines, pipelines,) with various modes of transportation (walking, driving, OHVs, horses, snowmobiles)
3. Direct mortality of wildlife populations from natural predators that benefit from improved travel efficiency and prey capture rates by using linear features
4. Loss of wildlife habitat quality or use because of displacement caused by excessive noise, smell or sight associated with human and industrial activities along linear features

It should be noted that the edges of linear features can also convey habitat benefits to wildlife species where man-made features improve thermal, concealment and forage conditions. These improved habitat conditions are negated, however, if the associated linear features contribute to elevated mortality rates that prevent populations from achieving the densities that can be supported by the improved habitat.

Because many hunters prefer to hunt along and in habitat adjacent to linear features (access), and these regions often experience elevated mortality rates to wildlife, there can emerge a view that wildlife populations have experienced a regional collapse. While this may be the

case, it is also possible that wildlife populations can exhibit two distinctly different density patterns, with densities high in low access regions and densities low in high access regions. Habitat with high levels of linear features (access) can operate as mortality sinks for regional wildlife populations due to high levels of hunting and vehicular mortality. Conversely, areas of good habitat distant from linear features can act as source populations that replenish those depleted from mortality sinks. However, as the density of linear features increases, habitat distant from linear features declines, with the implication that regional population decline can occur as source populations become insufficient to replenish animals depleted from mortality sinks.

Examples of mitigation strategies that are available to address adverse effects of access to wildlife populations include:

1. Establishment of a network of provincial, national parks and sanctuaries where hunting is prohibited. These areas provide refugia for wildlife and act as source areas for repopulating adjacent areas where mortality rates may be higher.
2. In a sense, Alberta's hunting "constraint" regulations (number of available tags, when and where one can harvest) reflect the basic understanding that hunters with extensive "access" to the regional landscape of a wildlife species can, if unregulated, create a combined mortality rate that is excessive relative to population objectives. The greater the extent to which the hunting community can access wildlife habitat with vehicles (including OHVs), the greater the need for regulatory constraints.
3. Road sanctuary buffers on selected roads. These buffers are generally applied to roads where hunting is prohibited within 365 m of the road right of way.
4. Prohibition of some forms of transportation (such as OHVs) along selected linear features (roads, seismic lines) during defined times of the day or week.
5. Integrated landscape management strategies that seek to reduce the quantity of linear footprint that is needed to extract natural resources.

Alberta biologists (Ministry of Environment and Parks) regularly prepare provincial and regional wildlife plans to assist in the sustainable management of hunted species. A review of the management plans related to deer (white-tailed, mule), elk, moose, caribou and bighorn sheep include historic examples where increased density of linear features (and hence access by motorists and hunters) have presumably caused elevated mortality rates that have in turn lead to reductions in wildlife populations. A few examples below highlight the complex relationship between access features, hunting opportunities, and responses of wildlife populations.

#### **Wildlife and Linear Edge in Alberta**

Numerous studies in Alberta have suggested that motorized use of linear features (roads, seismic lines, pipelines) can have negative effects on wildlife species (e.g., Frair et al. 2008, Quinn and Chernoff 2010, Ciuti et al. 2012, Hebblewhite and Merrill 2008, Muhly et al. 2013, Gaines et al. 2003, Farr et al. 2017). The nature of the relationship between road density and wildlife is altered by whether the population is being harvested by hunters, and by the dynamics of the predator community.

A study by Frair et al (2008) showed that elk mortality increased with increasing road densities and reduced availability of refugia (habitat >1 km from roads). Whereas a road density threshold of 1.6 km/km<sup>2</sup> generally reflected a level of landscape fragmentation that precluded refugia, significant adverse effects to elk were detected at road densities as low as 0.5 km/km<sup>2</sup>. In this study ~90% of cow elk home ranges occurred in habitat with road densities less than 0.5 km/km<sup>2</sup>.

#### **Elk Island National Park (EINP)**

Linear edge may not adversely affect wildlife as shown in landscapes where hunting is low or absent. For example, EINP (no hunting but moderate densities of roads) generally supports relatively high densities of elk and moose compared to adjacent Blackfoot Grazing Reserve where road use is prohibited but hunting is allowed. Areas adjacent to EINP and BGR with similar habitat but with roads and hunting generally have no or lower populations of elk and moose.

#### **Reduced moose populations in the logged boreal landscape**

Although logging can improve the quality of habitat for both moose and elk (through increases in browse and herbaceous forage), it is common to observe (through aerial surveys) populations declining following the construction of new access roads into areas where active logging is occurring. The hunting community is keenly aware of newly constructed roads and opportunistically use these new access routes to hunt areas that were previously difficult to access.

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# **Appendix D: Siksika Traditional Use Study Report #4**

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# Siksika Traditional Use Study Report #4

## Grassy Mountain Coal Mine

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Crowsnest Mountain



Our Lady of Lourdes, France

## 1.0 Context

This document is the report of a Traditional Use Study (TUS) by the Siksika Consultation Office (SCO) and the Elders of the Siksika Horn Society (sHorns) regarding the Grassy Mountain Metallurgical Coal Mine Project (the project) proposed for development by Benga Mining Ltd. (the company) based on field work undertaken by the SCO in July, 2018.

The Horns are Siksika traditional knowledge keepers who act as advisors to the SCO on Siksika traditional use of lands and waters in our Traditional Territory. The SCO operates under the authority of the Siksika Nation Chief and Council (Siksika Nation). Siksika Nation's traditional use rights within our Traditional Territory are

protected by Section 35 of the Constitution of Canada.

## 2.0 Background

Our sites in the Crowsnest Pass region proximate to Crowsnest Mountain, and the ceremonial, medicinal, spiritual, hunting and burial sites at Grassy Mountain have been in continuous, intensive use for millennia (see Figures 1-4). That use was briefly interrupted in the last century as a consequence of non-Native settlers barring our access to them, supported more recently by sharp dealing on the part of the Government of Alberta. Notwithstanding that brief interlude in our use, our interest in and spiritual ties to the lands at Grassy Mountain remain undiminished to this day. Our ceremonies — especially the sacred Thunder pipe ceremony held at Grassy Mountain for millennia — tie us to the mountain. This was made clear in our Interim TUS report submitted to the company, entitled *Riversdale Grassy Mountain Proposed Metallurgical Coal Mine Interim TUS Assessment and Report, March, 2015*.

There are sacred plants and traditional use medicines growing on the Grassy Mountain project site that must be protected, as well as ceremonial paints referred to as ochres. The area has been used by our hunters for at least as long; there is abundant evidence of that use in the archeological finds and sites at the project location.

### Extinguishment of Traditional Use rights and lands for Traditional Use

If one extrapolates the current trend of industrial development in Alberta into the future, at some point Siksika will have no practical traditional use rights or sites remaining in our Territory — meaning possible extinguishment of our Blackfoot culture. This trend is inconsistent with Section 35 of the Constitution of Canada, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) which the Government of Canada has committed to adopting, and, Siksika's understanding of the spirit of Treaty 7. This trend must be redirected so that Siksika's traditional use of the lands and waters in its Traditional Territory are assured into the long-term. Industrial development must be compatible with, and accommodate, our traditional use rights and ceremonial, spiritual, hunting and burial sites.

This therefore is a paramount concern of ours: the Grassy Mountain project plans to continue the diminution of our traditional culture by irreversibly destroying our spiritual and ceremonial use sites on the Mountain from which we worship at Crowsnest Mountain. Traditional Blackfoot spirituality is the fabric that binds our culture and people together.

### Spirituality not localized

It is inaccurate to view our traditional use and spirituality as confined to small, circumscribed sites identified by non-Native archeologists, containing artifacts,



and given a site number. Small circumscribed sites such as those, found in the project's archeological report (HRIA) give a sense that everything outside of the defined sites is barren and unrelated to our traditional use and spirituality, so can be impacted or destroyed with impunity by industrial development.

On the contrary, those sites are alive for us still and are connected to each other and to us. They cannot be steered around or between like pylons without substantive impacts to our use. At Grassy Mountain, they form a single ceremonial and spiritual complex central to our self-identity and existence that we have been denied access to by non-Native settlers for more than a century.

Our Elders are clear that the sites identified in the project archeological report are part of a single, roughly crescent-shaped ceremonial and spiritual complex that comprises principally the Gold Creek and Blairmore Creek valleys and benches, and the saddle of land connecting those between Grassy Mountain and Grassy Mountain South (see Figure 6; other of our sites along the Crowsnest River are related, but separate). This ceremonial and spiritual complex includes locations where we have and will worship at Crowsnest Mountain — especially our sacred Thunder Pipe ceremony — where our youth have engaged in Vision Quests, for millennia and where our dead have been buried.

This spiritual complex at Grassy Mountain has profound spiritual importance to us notwithstanding the gap in our use since the arrival of non-Native settlers. It should be protected with the same or greater authority as the rusting and comparatively recent Greenhill mine workings nearby, that are valued highly and protected by the Province of Alberta (see Figure 7; Greenhill HRV value 1,2,3).

## 2.0 Impacts

### Comparability

Crowsnest Mountain, located adjacent to Grassy Mountain, is one of the most sacred sites to Siksika within our entire Territory. It is there that the Thunder Pipe was given to us by Thunder before he was forced out by Crow to live at Chief Mountain. The Thunder Pipe ceremony has been held at Grassy Mountain for millennia, when the first thunder is heard each year. The Thunder pipe is perhaps the greatest of all Blackfoot pipes.

We made this clear in our interim Traditional Use report titled *Riversdale Grassy Mountain Proposed Metallurgical Coal Mine Interim TUS Assessment and Report, March 3, 2015*. In the report Crowsnest Mountain is assimilated to the *Sanctuary of Our Lady of Lourdes, France* (see Figure 4). This assimilation may help Christian people to understand the profound spiritual importance to us of the Crowsnest Mountain and the distance Siksika members will travel as pilgrims to worship there (see Figure 3). The Sanctuary of Our Lady of Lourdes is one of the most important sites in the world for Roman Catholic Christian pilgrims. The same level of commitment to faith is true of Siksika traditional members, for the Crowsnest Mountain and our ceremonial and spiritual sites at Grassy Mountain.

All sites in the spiritual complex on Grassy Mountain were in continuous, regular

Figure 1.

Siksika ceremonial and spiritual sites at Grassy Mountain located on Crown lands and private lands owned by Benga are proposed to be irreversibly destroyed by the project.

They comprise a spiritual complex at Grassy Mountain, identified in a project archeological report by Bison Archeological in 2015. SCO was only provided a copy of the Bison report in late 2017, after repeated requests of both the company and Alberta Heritage.

West-facing toward Crowsnest Mountain (the origin of the sacred Thunder pipe) Siksika spiritual sites dating to 8,000-9,500 years ago.

There has been no archeological work of these project lands, where the company proposes to store water. The lands are largely flat or gently sloping and expected to be part of a major spiritual complex in uninterrupted use by our people for 8,000 to 9,500 years, until non-Native settlers arrived a little over a century ago.

A Siksika burial site marked in the Bison report as a cairn (DkPo-7) is likely only one of many burials at Grassy that will be substantially impacted or destroyed by the project.

Seasonal camp sites along the Crowsnest River dating to 8,000-9,500 years also require protection.

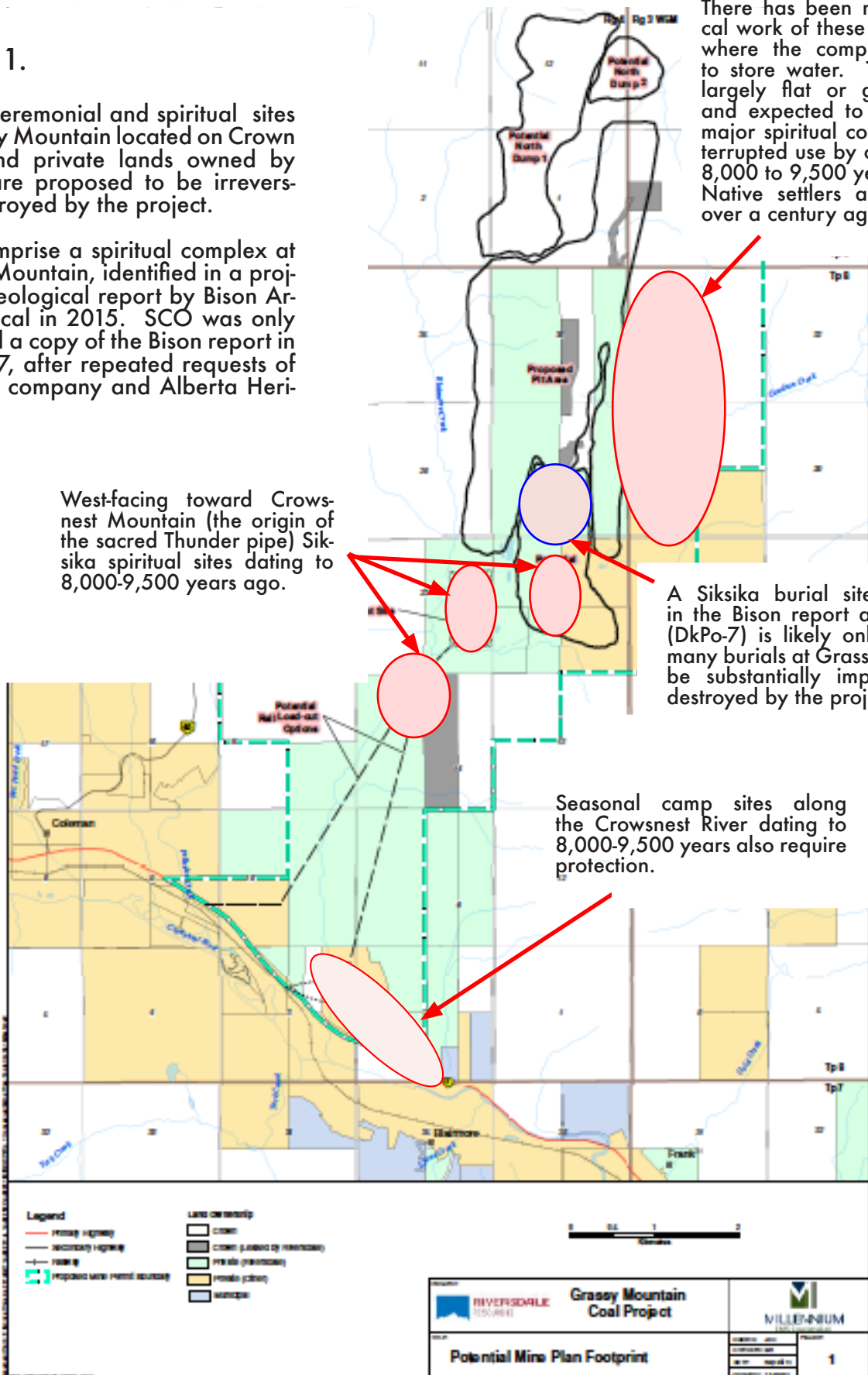


Figure 2.

Siksika use of the Southern Gate (Crowsnest Pass) and Crowsnest Mountain spiritual sites continued uninterrupted for at least 8,000-9,500 years, until non-Blackfoot settlers began to deny us access to them.

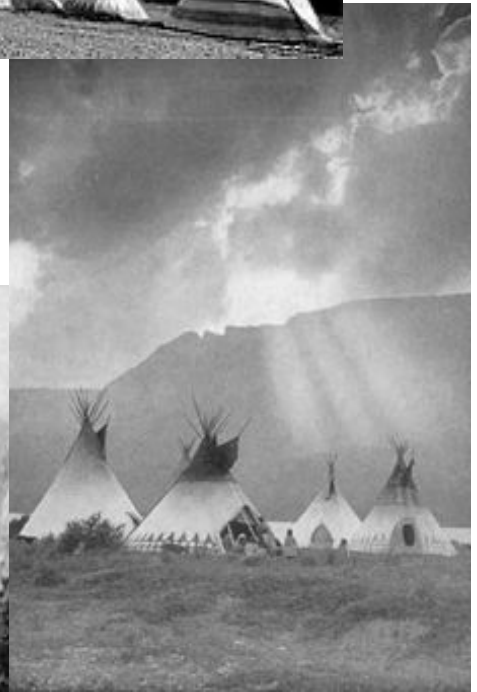
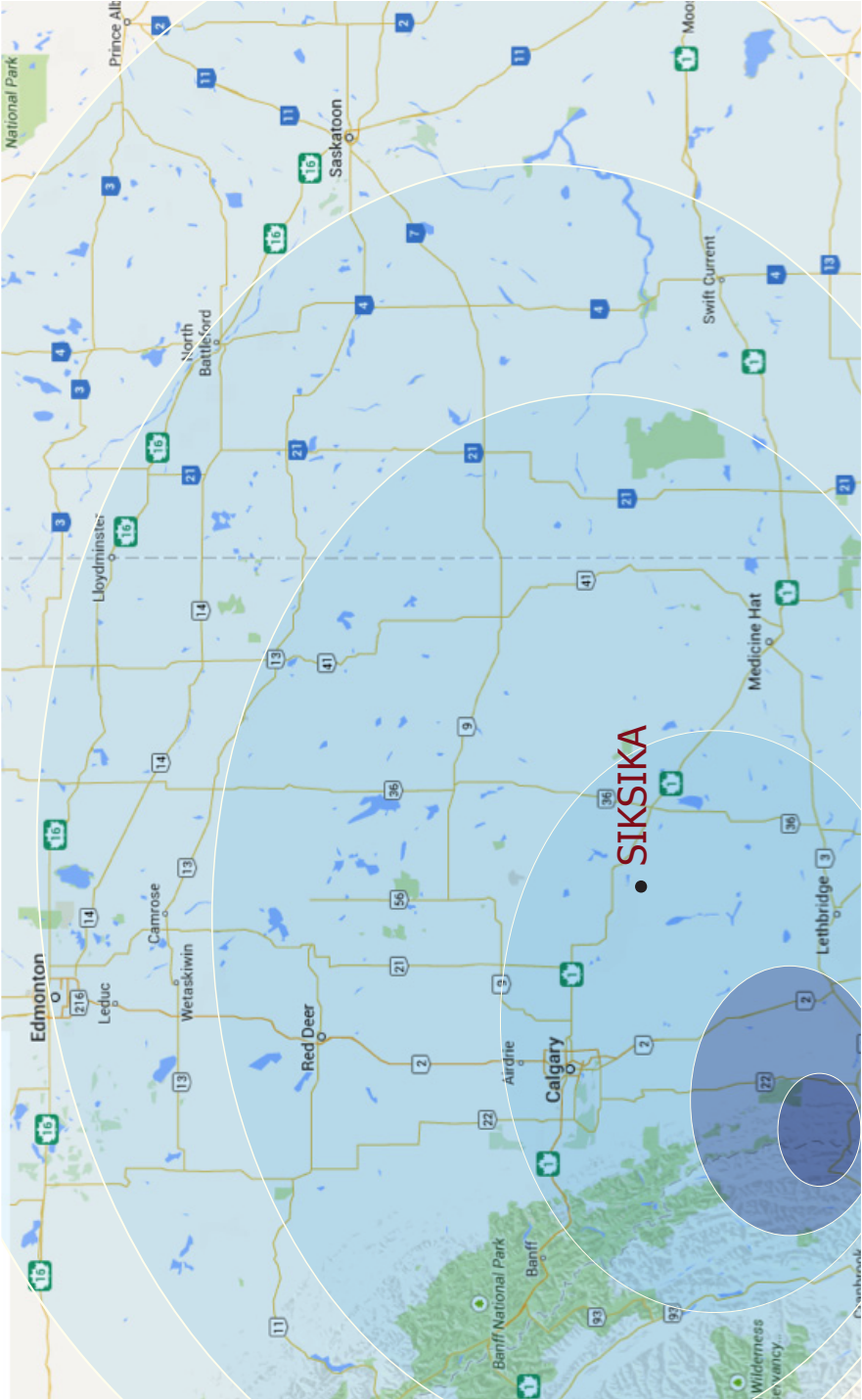


Figure 3.

The draw of Crowsnest Mountain and the Crowsnest region for our Members making an annual pilgrimage to worship at the first thunder of the year, extends well past Siksika to include all our territory in Canada.



## Figure 4.

Crowsnest Mountain is roughly equivalent to traditional Blackfoot as the Sanctuary of Our Lady of Lourdes, France is to Roman Catholic Christians. Lourdes receives about 8,000,000 pilgrims annually. This importance was made clear in previous TUS reports.



Crowsnest Mountain.



Sanctuary of Our Lady of Lourdes,  
France.

use by Siksika members for no less than 8,000 to 9,500 years, up until about the beginning of the 20th century. At that point, we were recovering from outbreaks of disease in our communities brought upon us by non-Natives such as smallpox. Concurrently, non-Native settlers began to claim our lands for themselves and restrict access to our sites at Grassy Mountain, which continues to this day.

It is incorrect to understand our limited use of Grassy Mountain in the last century as a lack of interest, desire or right on our part to continue our traditions there and to access our sites located on the proposed project lands.

### Similar Situations and Outcomes

Some examples of how similar traditional use and spiritual sites in Alberta and Yukon have been approached and protected by governments may be useful to better understand the importance of the Grassy Mountain spiritual complex and what precedents exist in Western Canada to shape its future use and how it should be protected.

The Grassy Mountain spiritual complex is believed to be the oldest Blackfoot spiritual site in Alberta. It is older by many millennia than our medicine wheels at Majorville and Sundial Butte (which origins date to about 5,200 years ago). The Majorville medicine wheel is protected by Alberta Heritage legislation. Like Majorville, the Grassy Mountain spiritual site has been in continuous use for 8,000 to 9,500 years. All three — Majorville, Sundial Butte and Grassy Mountain are living spiritual sites to us.

Grassy Mountain is also comparable in importance to the Carcross/Tagish First Nation's Yukon glacier site, which is about 7,500 years old, and has been submitted by Canada for designation as a UNESCO world heritage site (<http://www.cbc.ca/news/canada/north/yukon-ice-patches-unesco-nomination-1.4459595>).

Another analogous Blackfoot site is one located at Healy Bridge in Southern Alberta near the Kainai reserve. At Healy Bridge a cluster of Blackfoot spiritual sites were found by archeologists, that were understood by Kainai Elders to comprise one spiritual center. A power line company proposed to construct a new power line through the site. The site was protected by Alberta at the insistence of the Kainai Elders, requiring the company to construct the new power line around the site. At Grassy Mountain, the ceremonial and spiritual complex must be protected similarly; this may require adapting the design and operation of the mine to go around our spiritual sites and permit us to continue using it into the long-term future, following a process of meaningful consultation between the company and Siksika.

### Incorrect HRV values

It is extraordinarily sociocentric and unacceptable that the Alberta Crown classifies the Greenhill mine workings, a pile of rusted old metal less than 100 years old, as a possible world heritage site deserving of an Alberta Historic Resource Value (HRV) of 1, 2 or 3 giving it protection under provincial law, while our ceremonial and spiritual complex site at Grassy mountain, dating back ten millennia and in continuous use until non-Native settlers arrived, is identified as Unprotected



(HRV-4).

### Burial Sites

A stone cairn found in the proposed south pit area of the project (DkPo-07) is of particular concern. We have buried our dead on high ground for millennia, some interred and some laid on the ground. More study needs to be done to locate other burial sites within about one kilometre of the cairn.

Worth pointing out again is that DkPo-07 is not a waymarker as some have suggested. Our protocol for these sites is to leave them alone and stay away from them. There are spirits there that must not be disturbed.

### Plants: Medicinal and Ceremonial

There are a number of sacred, medicinal and ceremonial plants growing in the microclimate of Gold Creek and elsewhere at Grassy Mountain which need protection from the project but were omitted from the project Environmental Impact Assessment (EIA). We are aware they grow there but have not located them yet, because they only bloom at certain times of the year. Once located, a plan for their protection can be developed through a formal consultation process with the company.

The most recent TUS study identified yellow ochre at our sites near the golf course. No further impacts to this sacred paint source should be permitted.

### Wildlife

Our concern is for all animals living on the mountain. There is abundant evidence of a variety of animals living there, drinking from the springs that run down the side of the mountain and eating and resting in protected areas nearby. The lagoons holding runoff from the mountain and effluent from the mine pit should be fenced so that animals big and small do not drink from them. Alternative clean water drinking spots for those animals should be created for them nearby.

### Water

The Gold Creek microclimate must be preserved because it is rich with harvestable medicinal and ceremonial plants central to our traditions. We would normally assume that the watershed protection measures included in the project design are sufficient and appropriate to protect Gold Creek and its microclimate; but we are not convinced that no water will empty into Gold Creek from the mine, as the company states. Given the fracturing and faulting of the base rock on the Grassy Mountain site and glacial till overburden, it seems extremely unlikely to us that water will not seep through faults and fissures in the walls and benches

Figure 5.

Grassy Mountain Land Ownership and Location of Proposed Surface Dispositions

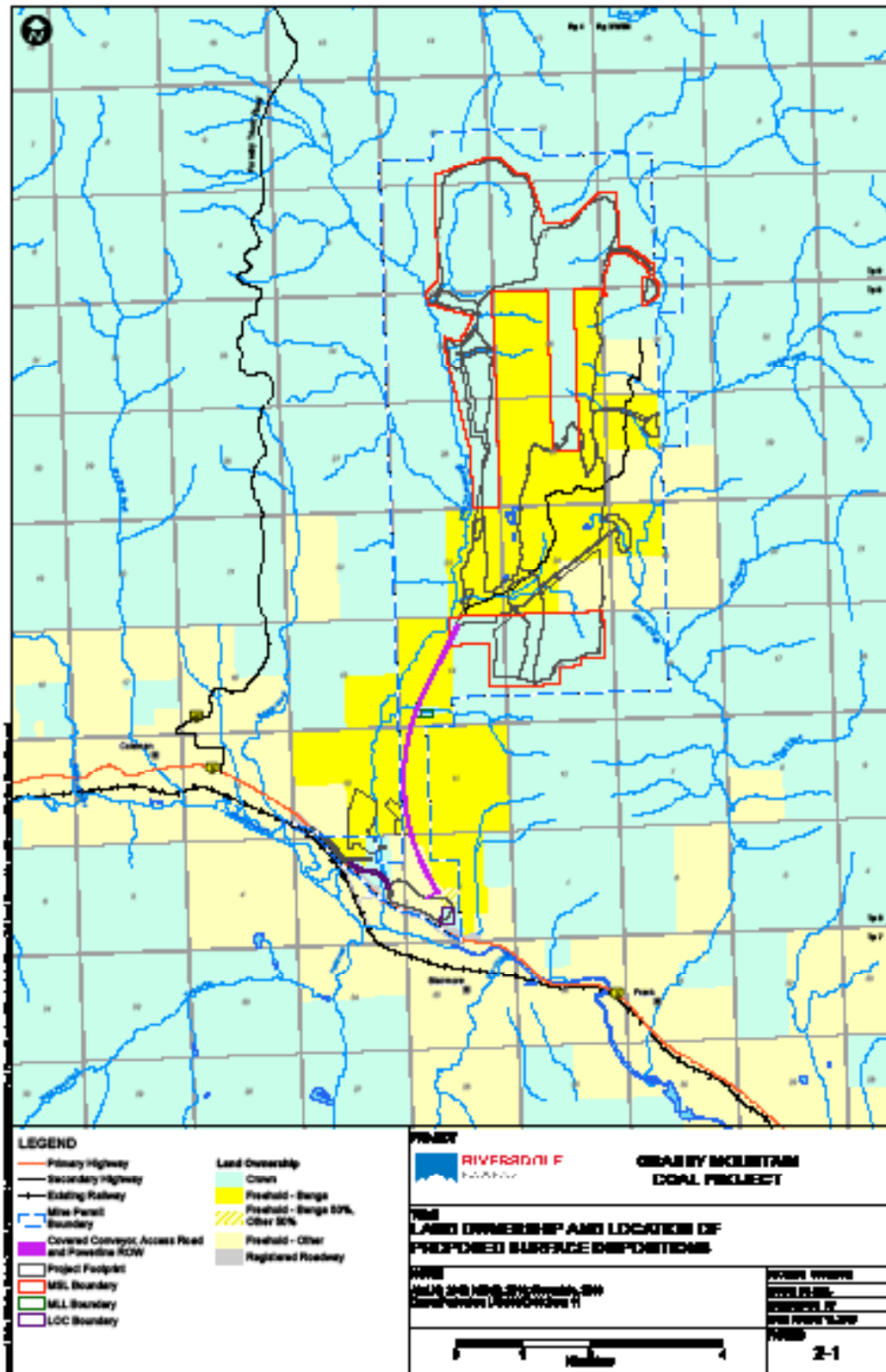
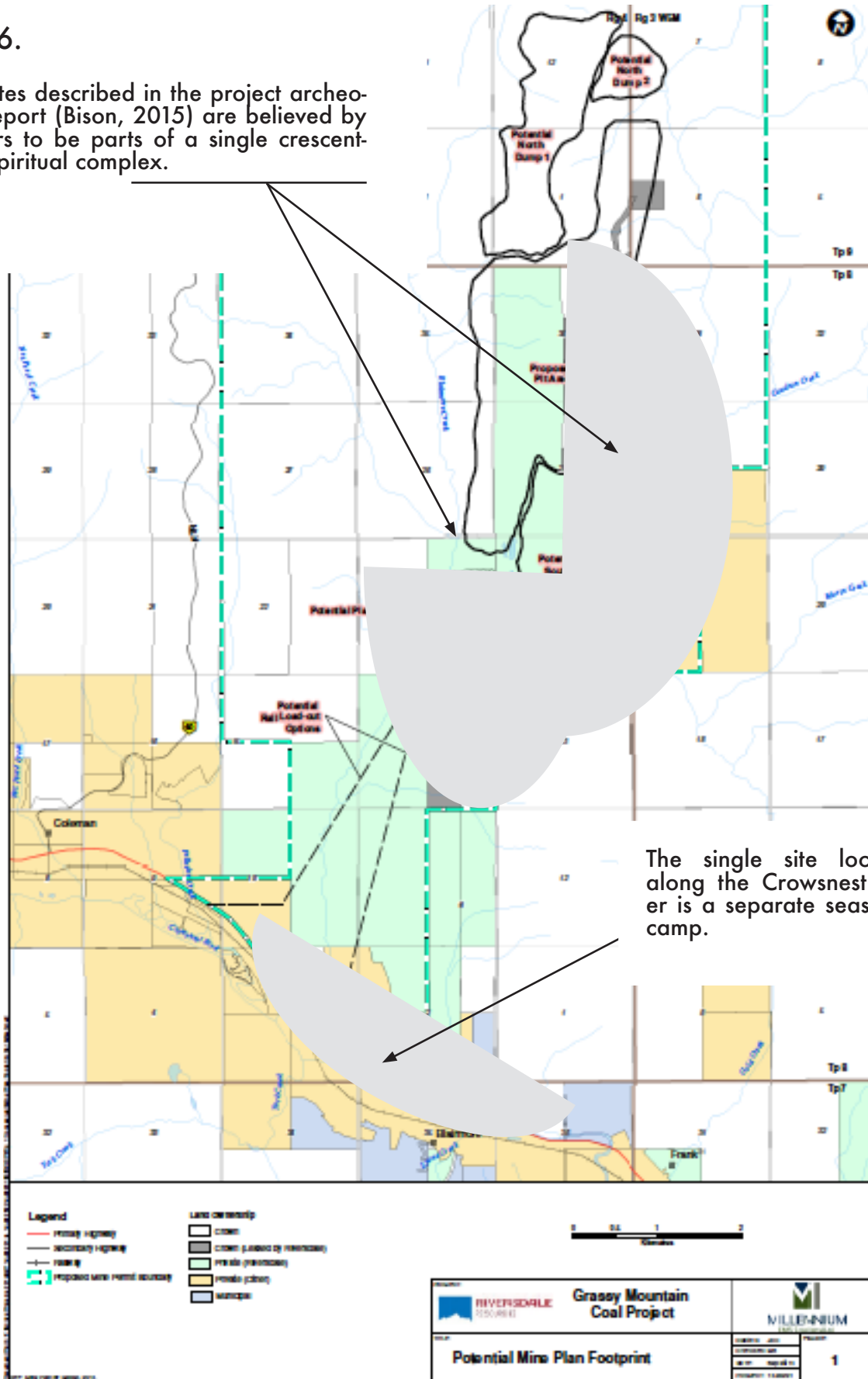


Figure 6.

Siksika sites described in the project archeological report (Bison, 2015) are believed by our Elders to be parts of a single crescent-shaped spiritual complex.



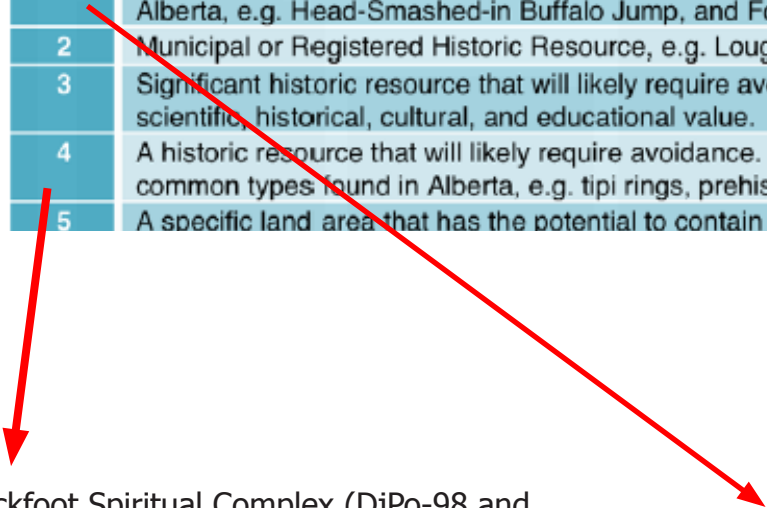
The single site located along the Crow'snest River is a separate seasonal camp.



Figure 7.

In what seems to us to be extraordinarily sociocentric, the rusting 100 +/- year old Grassy Mountain structures of the Greenhill mine have received an Alberta Heritage Resource Value (HRV) of 1,2,3 meaning it is protected and could in time become a world heritage site; yet a Siksika ceremonial and spiritual complex that has been in continuous use for 8,000 to 9,500 years – notwithstanding a brief period recently when our access to our sites was barred by non-Native settlers – has received an HRV of 4 and is threatened to be destroyed by the project.

HRV	Historic Resource Value Definition (HRMB 2014)
1	World Heritage Sites & historic resources owned and protected by the Government of Alberta, e.g. Head-Smashed-in Buffalo Jump, and Fort Calgary.
2	Municipal or Registered Historic Resource, e.g. Lougheed Residence.
3	Significant historic resource that will likely require avoidance. Significant in terms of their scientific, historical, cultural, and educational value.
4	A historic resource that will likely require avoidance. These sites are typically the most common types found in Alberta, e.g. tipi rings, prehistoric campsites, farmsteads, etc.
5	A specific land area that has the potential to contain an undiscovered historic resource.



Blackfoot Spiritual Complex (DjPo-98 and others connected to it).

**Greenhill Mine Complex (DjPo-38)**



- Recovered 2,038 artifacts.
- Preliminary assessment suggests three cultural components:
  1. Early Prehistoric (9,600 – 8,600 B.P.)
  2. Middle Prehistoric (2,500 – 1,350 B.P.)
  3. Late Prehistoric (1,350 – 250 B.P.)
- Will be impact by the Coal Handling Processing Plant.
- An excavation of 120 square metres will be recommended.
- Radiocarbon dating.



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of the open pit mine, downslope into the Gold or Blairmore creek water system. Water seepage through the faulted rocks of the mountain will not be caught in the lagoons on the surface around the mine pit, or in the bottom of the pit itself until the mine pit bottom is lower than Gold or Blairmore creeks.

Even a small spill of contaminated water from the mine would be a disaster for those two sensitive water bodies, and for our traditional use of the creek bottoms and the plants and medicines growing nearby as well as the fish in the creek.

## 4.0 What needs to be done soon

The following steps are necessary to protect our traditional use and sites at Grassy Mountain:

i) a funded process of meaningful Consultation between the company acting on behalf of the Crown and Siksika needs to be undertaken and seen to completion that seeks to identify ways to avoidance and/or mitigate impacts to Siksika traditional use sites and rights, and measures to accommodate and/or compensate for unavoidable impacts, while ensuring the future use by Siksika members of our ceremonial and spiritual complex at Grassy Mountain.

