Appendix 4-O

Open House Display Boards

Welcome

Crown Mountain Coking Coal Project

Public Open House

May 25, 2016
Causeway Bay Hotel
4:00 - 8:00 pm

NWP Coal Canada Ltd

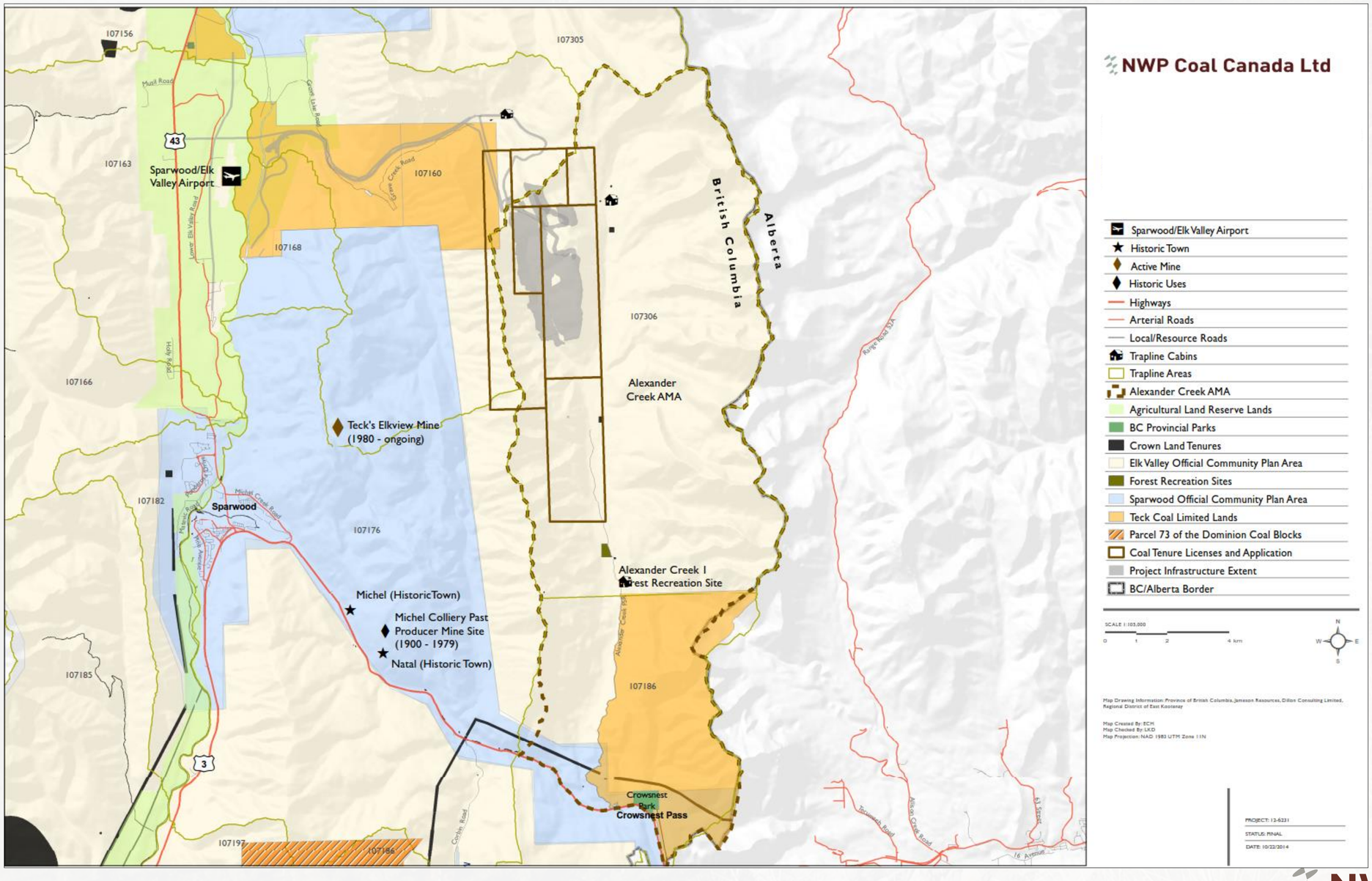
Purpose of the Open House

Why Are We Here Today?

- NWP Coal Canada Ltd. (NWP Coal) is proposing to develop a new open pit metallurgical coal mine in the Elk Valley coal field.
- The proposed Project is subject to review under British Columbia's *Environmental Assessment Act*, as well as the federal *Canadian Environmental Assessment Act*.
- As part of the provincial Application Information Requirements (AIR), NWP Coal, with input from agencies, First Nations, stakeholders and the public, must identify **Valued Components**
- **Valued Components** (VCs) are environmental, economic, social, heritage, and health components that may experience potential effects as a result of the proposed Project
- VCs are outlined in the "Valued Components for Environmental Assessment" document, which details components to be studied and the areas in which the studies would occur

NWP Coal would like to hear your comments and respond to your questions on the Valued Components Document

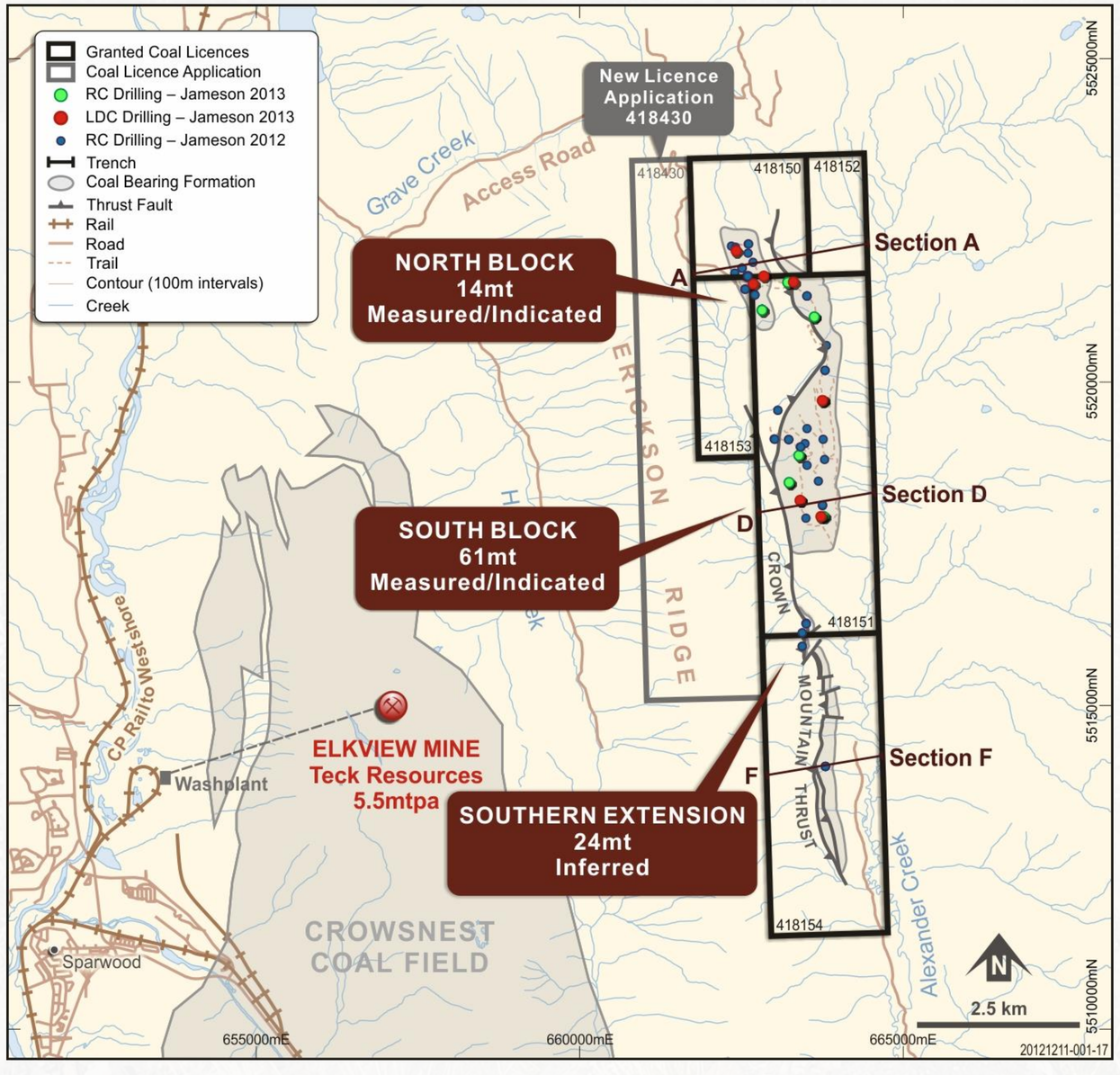
Project Location



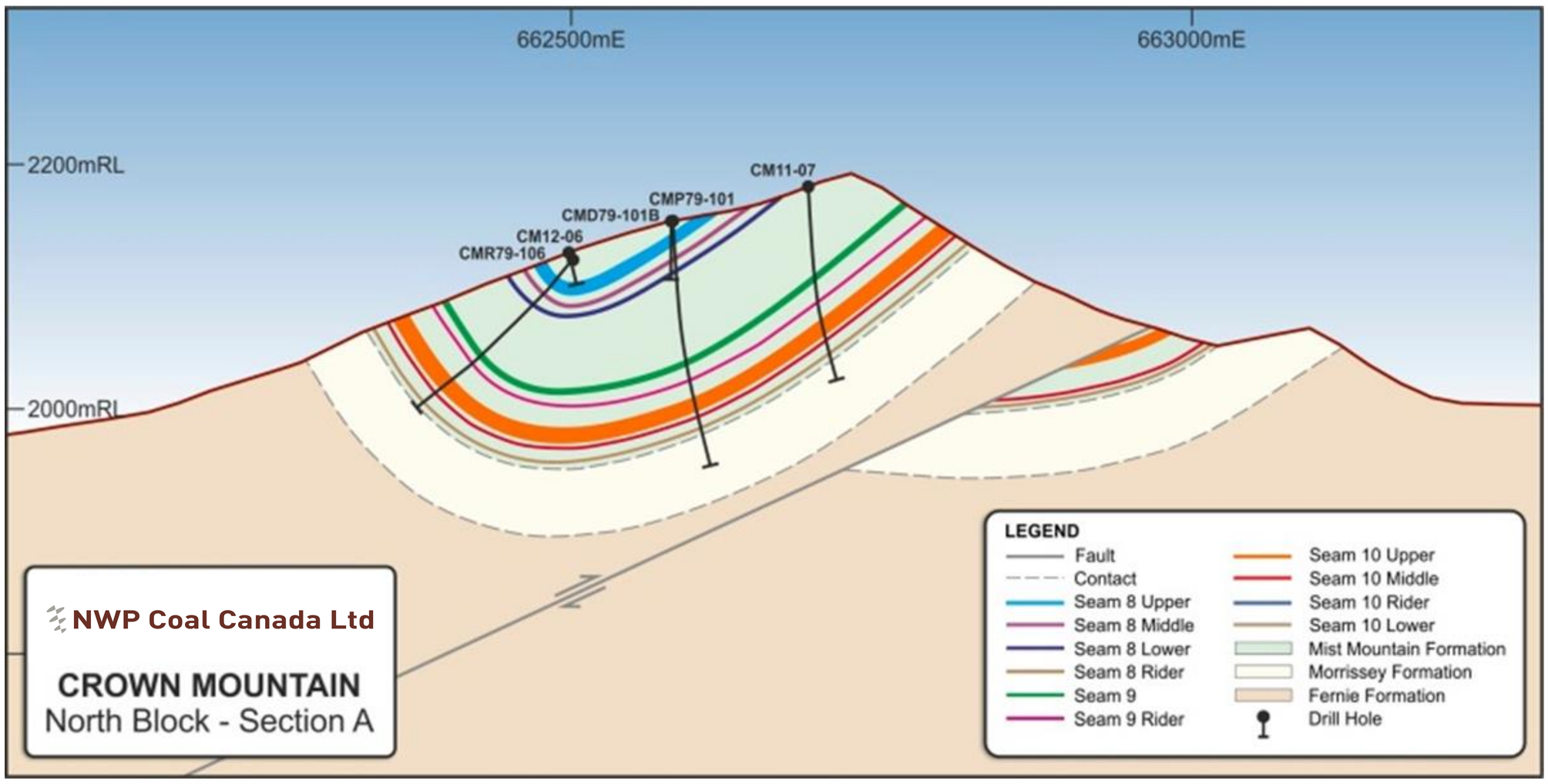
The proposed Project would be located approximately 12 km northeast of Sparwood, British Columbia.

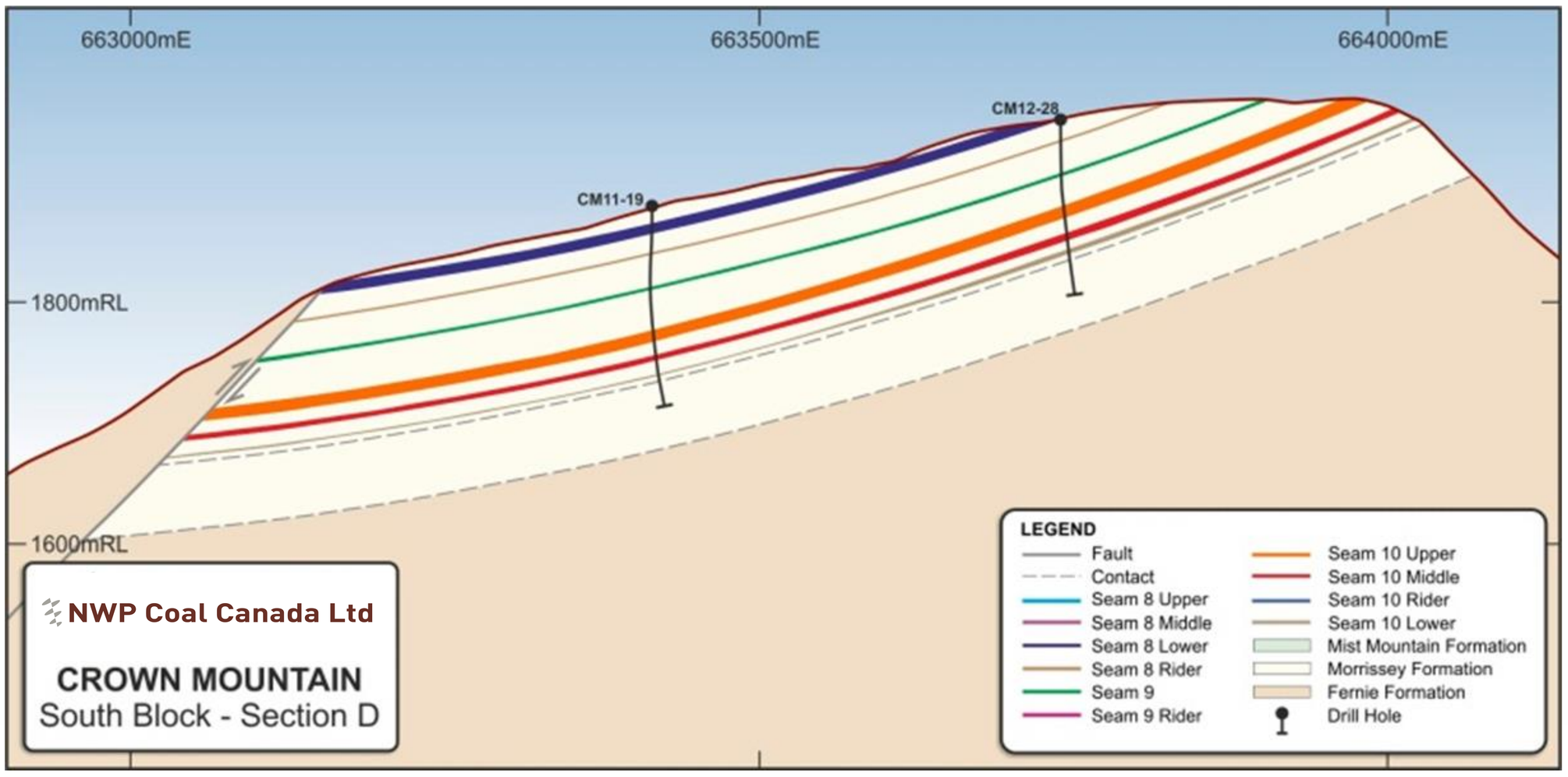
Project Overview

- The proposed Project consists of 5 coal exploration licenses covering a total area of 2,588 ha and one license application (975 ha).
- The anticipated production capacity of the Project is 3.7 million run-of-mine tonnes (M ROMt) per annum (approximately 10,150 tonnes per day [tpd]) for 16 years (not including site decommissioning).
- Run-of-mine coal reserves are estimated at 56 million tonnes, of which 50 million tonnes are proven and 6 million tonnes are probable.
- NWP Coal intends to design and construct a state-of-the-art coal operation utilizing industry best practices in full compliance with all applicable regulations and governing documents, such as, but not limited to, the Area-Based Management Plan known as the Elk Valley Water Quality Plan.
- The estimated capital costs of the proposed Project are $370 million.
- Employment during Project operation is estimated to average approximately 240 hourly full-time positions and 58 salaried staff.

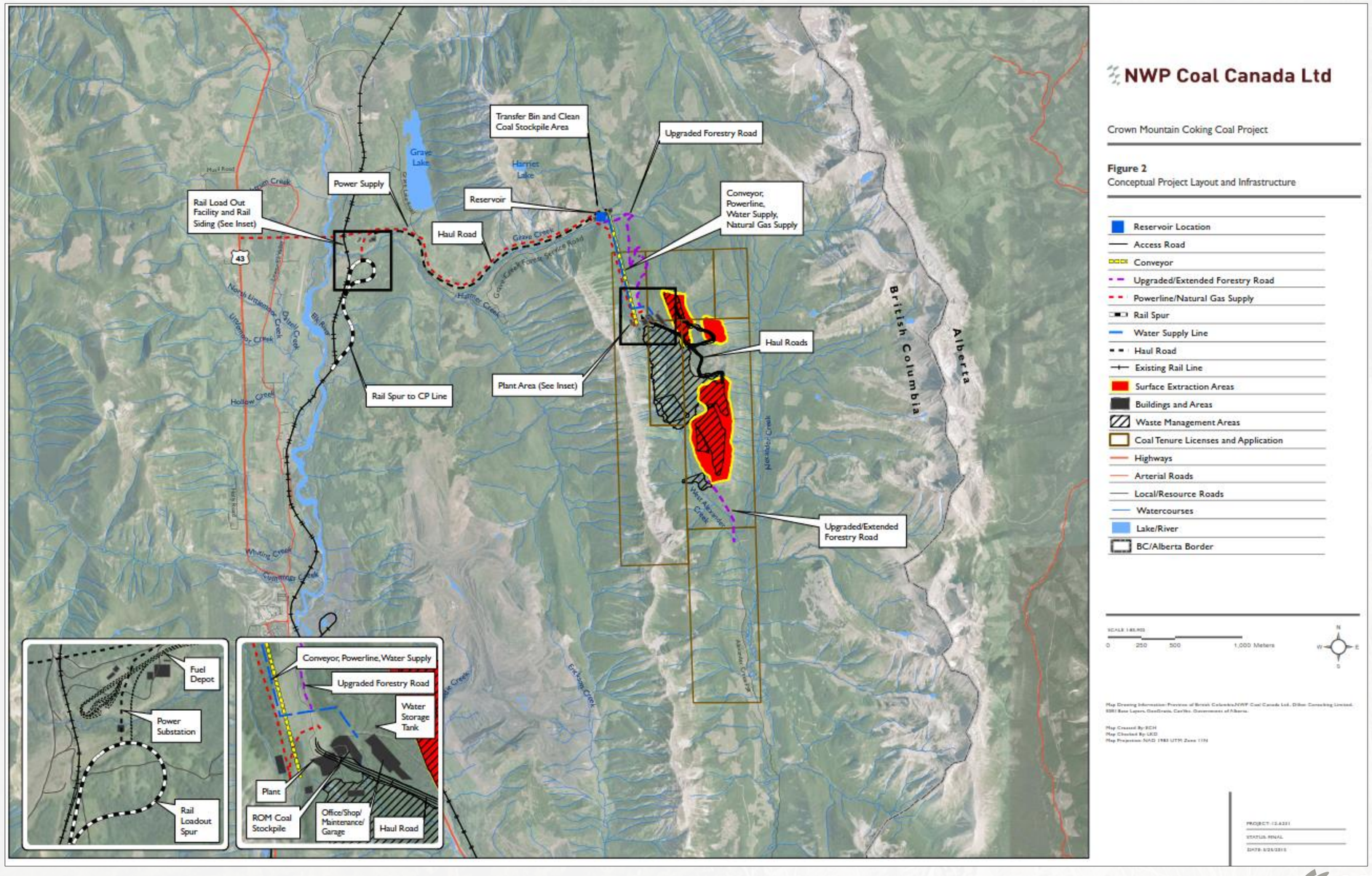


Site Geology





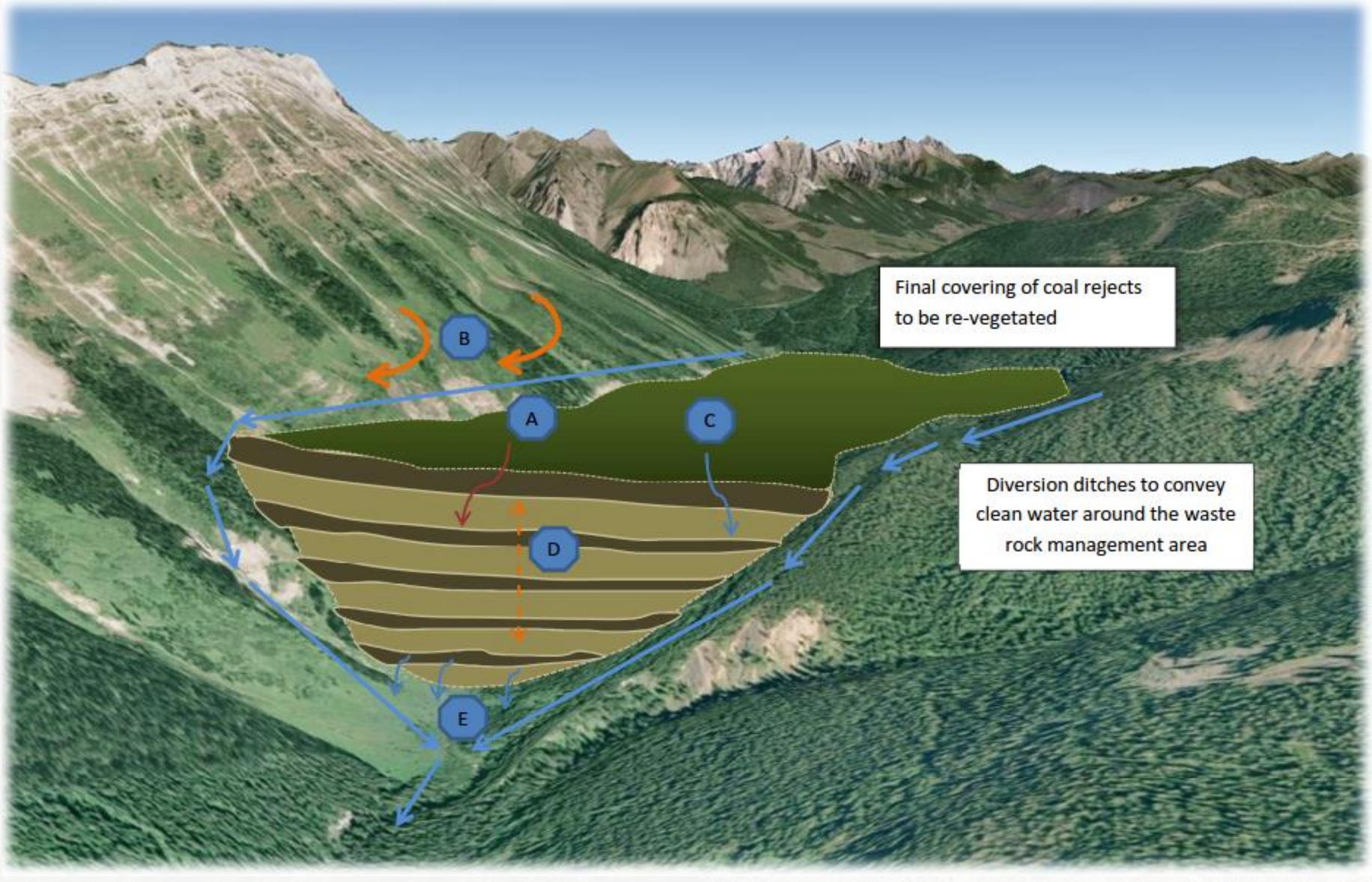
Conceptual Project Layout



Key project components include:

- Surface extraction areas (three pits - north pit, east pit, and south pit);
- Waste rock management areas;
- Plant area (includes raw coal stockpile area, a processing plant, and site support facilities);
- Clean coal transportation route (overland conveyor and haul road);
- Rail load out facility and rail siding (includes various auxiliary facilities such as a guard house; light vehicle wash; drug and alcohol testing/ orientation building; and a small dry)
- Power supply;
- Natural gas supply;
- Explosives storage;
- Fuel storage;
- Sewage treatment; and
- Water supply.

Waste Rock Management – Layered Approach



Conceptual Model:

- Decrease oxygen diffusion (A)
- Placement against valley walls decreases or inhibits oxygen transport into storage area (B)
- Limit water infiltration (C)
- Promote selenium sequestration (D)
- Lower volumes of seepage for management (E)

Coal Rejects

Waste Rock

Valued Components

Valued Components (VCs) serve as the foundation for an environmental assessment and represent aspects of the natural and human environment that are of greatest importance to society and have the potential of being impacted by a proposed project.

The purpose of the **Valued Components for Environmental Assessment** document is to outline proposed VCs that will be evaluated during the environmental assessment and to describe the methods and assessment boundaries that will be used for conducting baseline studies.

The selection of VCs includes:

- Issues scoping;
- Identification of candidate VCs;
- Evaluation of candidate VCs; and
- Selection of VCs.

Selected VCs for the Project include:

Discipline	Valued Component
Air Quality and Climate	• GHG emissions
	• Common air contaminants (CACs)
Noise	• Noise and vibration levels
Aquatic Health	• Benthic Invertebrates
	• Fish Species occurring within the RSA (represented by westslope cutthroat trout, bull trout, burbot, longnose sucker, mountain whitefish, and Kokanee)
	• Amphibians within the RSA (represented by Columbia spotted frog
	• Waterbirds within the RSA (represented by Harlequin duck, Red-winged Blackbird, Spotted Sandpiper, Mallard, and American Dipper)
	• Westslope cutthroat trout
	• Bull trout
	• Kokanee
	• Burbot
	• Mountain whitefish
	• Longnose sucker
Landscapes and Ecosystems	• Avalanche chutes
	• Grassland ecosystems
	• Wetland ecosystems
	• Riparian habitat
	• Old growth and mature forests
Vegetation	• Listed and sensitive plant communities and species
	• Limber pine
	• Whitebark
	• Culturally significant plants and ecosystems

Discipline	Valued Component
Wildlife	• American badger
	• American Dipper
	• At-risk bat species (Little brown bat, Northern myotis, and Eastern red bat)
	• Bighorn sheep
	• Canada lynx
	• Elk
	• Gillette's checkerspot
	• Grizzly bear
	• Migratory birds (Barn Swallow, Olive-sided Flycatcher and Woodpeckers)
	• Moose
	• Northern Goshawk
	• Western toad
	• Wolverine
Archaeological Resources	• Archaeological resources (e.g., materials, sites)
Economy	• Economic Conditions
Socio-economics and Community Health	• Housing and community services and infrastructure
	• Community health and well-being
Land Use and Tenure	• Land use and access
	• Recreation and tourism
Visual Aesthetics	• Visual quality
Human and Terrestrial Wildlife Health Risk Assessments	• People (including local communities, First Nations, and temporary residents at recreation areas)
	• Wildlife

Atmospheric Environment

Selected Valued Components:

- **Greenhouse Gas Emissions (GHGs)**
- **Common Air Contaminants (CACs)**
- **Noise**

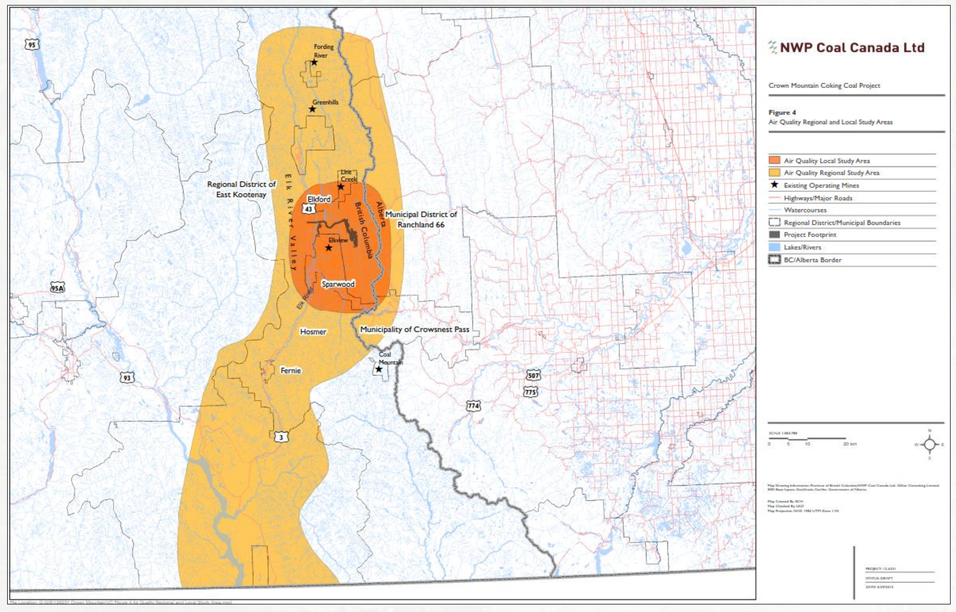
Greenhouse Gas Emissions:

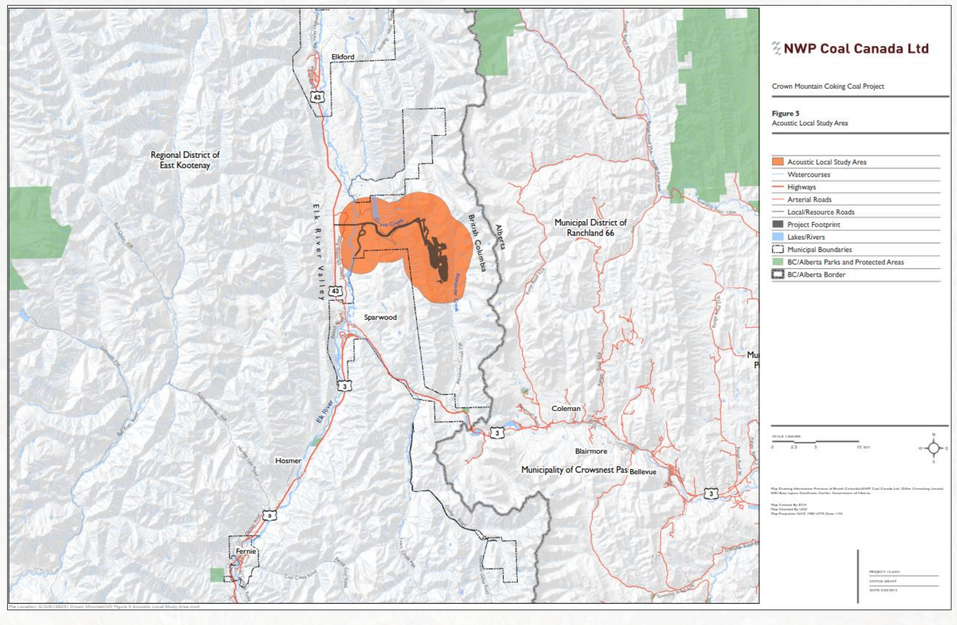
- To be measured through emissions assessments
- Measurement indicators to include GHG emissions and fine particulates
- **Potential impacts:** GHGs and dust may be generated through operation of equipment, roads, mining activities
- **Potential effects** to terrestrial and aquatic environments and human health

Climate station installed for the Project, May 2012

Noise:

- To be evaluated through a baseline noise assessment
- Measurement indicators to include noise and vibration levels at selected receptors
- **Potential impacts:** Project construction and operation may result in increased noise levels
- **Potential effects** include sensory disturbance to noise receptors (e.g., humans, wildlife)





Aquatic Environment – Groundwater and Geochemistry

Intermediate Valued Components:
- Groundwater Quality and Quantity

- **Groundwater quantity and quality are Intermediate Components:**
  - Related to effect pathways of several VCs
  - Changes in quantity and quality to serve as measurement indicators for aquatic health, human and wildlife health, fish, terrestrial ecosystems, and vegetation
  - To be measured through groundwater levels and flow rates, analyte concentrations in groundwater

- **Potential impacts:** Associated with mine dewatering activities and the location of proposed mining areas, waste rock management areas, and mine infrastructure

- **Potential effects:** Changes in groundwater quality/quantity may result in changes to stream flow, impacting surface water quantity and quality

- **Geochemistry is related to several Intermediate Components:**
  - Terrain (terrain type, slope, and aspect)
  - Groundwater
  - Surface water quality
  - Sediment quality

- **Potential impacts:** Changes in the way waste rock, process waste, and geology are exposed to the atmosphere

- **Potential effects:** Changes in the exposure of waste rock, process waste and geology to the atmosphere have the potential to impact groundwater, surface water, and sediment quality. VCs impacted may include:
  - Aquatic health, terrestrial ecosystems (e.g., vegetation, wildlife), and people

Aquatic Environment – Surface Water

Intermediate Valued Components:

- **Surface Water Quantity**
- **Surface Water Quality**

Surface Water Quantity:

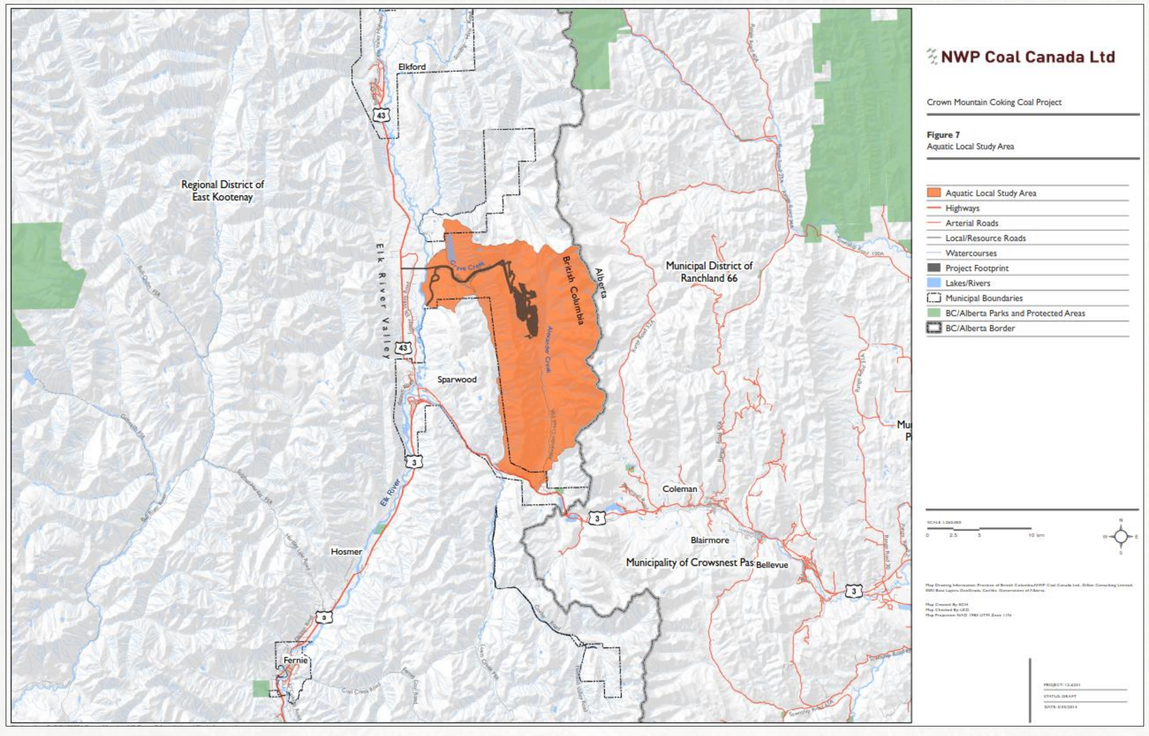
- To be measured through surface water levels and flow rates
- Component that is potentially affected along effects pathways of selected VCs (e.g., aquatic health, fish, terrestrial ecosystems, people)

- **Potential impacts:** Reduction in flow rates and alteration of natural flow regimes associated with water withdrawal
- **Potential effects:** May result in changes in aquatic health such as fish and benthic invertebrates as well as riparian and wetland ecosystems.

Surface Water Quality:

- Component that is potentially affected by Project activities, including water withdrawal and waste rock management
- Changes in water quality may impact selected VCs such as aquatic health, fish, people, and terrestrial environments
- Measured through metal and non-metal concentrations in surface water

- **Potential impacts:** Withdrawal of water from Grave Creek, waste rock management
- **Potential effects:** Water contamination (e.g., metal leaching) and sedimentation in watercourses



NWP Coal will meet the requirements of the Elk Valley Water Quality Management Plan as it develops mitigation measures for the Project and is committed to protecting the aquatic environment over the course of the Project

Aquatic Environment – Aquatic Health

Selected Valued Components:

- **Aquatic Health (benthic invertebrates, fish species within the Regional Study Area, amphibian species, and waterbirds)**

Benthics Invertebrates:

- Benthic invertebrate communities will be used to assess potential changes in water and sediment quality
- **Measurement indicators** include: water quality parameters; benthic invertebrate metrics (e.g., abundance); growth, survival and reproduction; sediment quality; groundwater and surface water statistics; and metal concentrations.

- **Potential impacts:** Changes in the aquatic environment related to waste rock management and the removal or alteration of surface water environments
- **Potential effects:** Reduced complexity of benthic invertebrate communities, adverse effects to fish, reduced water quality

Waterbirds:

- Representative species include Harlequin Duck, Red-winged Blackbird, Spotted Sandpiper, and Mallard
- **Measurement indicators** to include: water quality parameters (which incorporates assessment of air, groundwater, and surface water)

- **Potential impacts:** Elevated levels of selenium in water resources as a result of site development
- **Potential effects:** Increased selenium in surface water may impact aquatic prey which is consumed by waterbirds, resulting in impacts to waterbird species

Amphibians:

- Amphibians within the RSA to be represented by Columbia spotted frog
- **Measurement indicators** to include: water quality parameters, sediment quality, amphibian presence/not detected, and metal concentrations in tissues

- **Potential impacts:** Changes in water quality/quantity and sediment quality as a result of Project activities
- **Potential effects:** Changes in amphibian habitat or amphibian populations (e.g., impacts to reproductive success)

Fish Species:

- All fish species that occur within the RSA, represented by: Westslope cutthroat trout; bull trout; burbot; longnose sucker; mountain whitefish; and kokanee
- **Measurement indicators** include: water quality parameters; sediment quality; habitat quality and quantity; fish population matrices; fish growth, survival, and reproduction; and metal concentrations in fish

- **Potential impacts:** Changes to surface water quality and quantity (e.g., increased levels of selenium associated with waste rock management)
- **Potential effects:** Impacts may result in changes in fish reproduction

Aquatic Environment – Fish

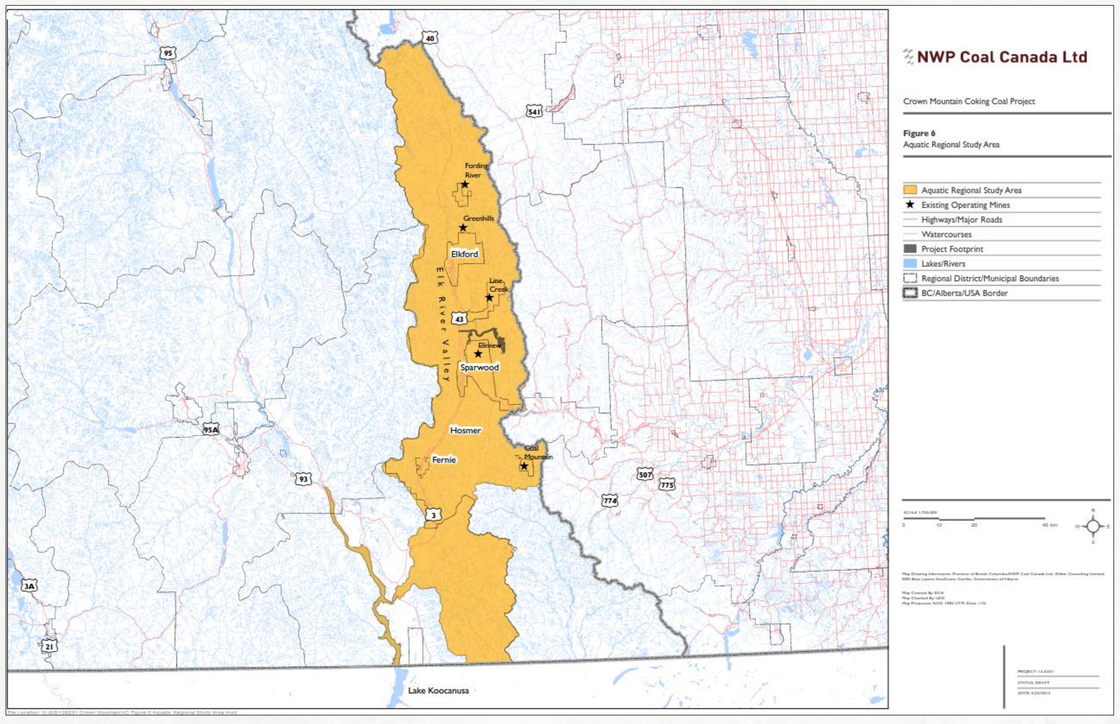
Selected Valued Components:

- **Fish species:**
  - Westslope cutthroat trout
  - Bull trout
  - Kokanee
  - Mountain whitefish
  - Longnose sucker

- **Measurement indicators:** Fish presence/not detected as compared to baseline studies, habitat quality and quantity, water quality parameters, and fish population metrics

- **Potential impacts:** Changes to fish habitat as a result of removal of habitat (e.g., West Alexander Creek), changes in surface water quality and quantity (e.g., in-stream flow changes as a result of water withdrawal, increased levels of selenium associated with waste rock management)

- **Potential effects:** Reduction of productive capacity of watercourses for fish, loss of habitat (e.g., West Alexander Creek), changes in water quality and quantity, exposure to deleterious substances

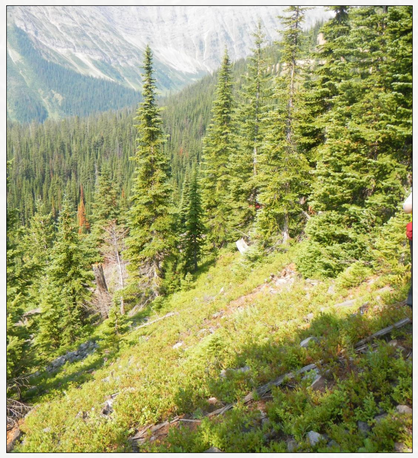


Terrestrial Environment – Ecosystems and Vegetation

Selected Valued Components:

- **Avalanche Chutes**
- **Grassland Ecosystems**
- **Wetland Ecosystems**
- **Riparian Habitat**
- **Old Growth and Mature Forests**

- **Potential impacts** to these VCs to be measured through:
  - Ecosystem abundance and distribution;
  - Compositional changes (e.g., species richness)
- **Potential effects:** Removal and/or fragmentation of ecosystems, resulting in changes



Selected Valued Components:

- **Listed and Sensitive Plant Communities and Species**
- **Limber Pine**
- **Whitebark Pine**
- **Culturally Significant Plants and Ecosystems**

- **Measurement indicators** to include:
  - Community and ecosystem abundance and distribution relative to baseline
  - Community changes measured through species richness, rare species, invasive plant presence
  - Habitat availability and distribution
  - Known occurrence and abundance
  - Whitebark pine health

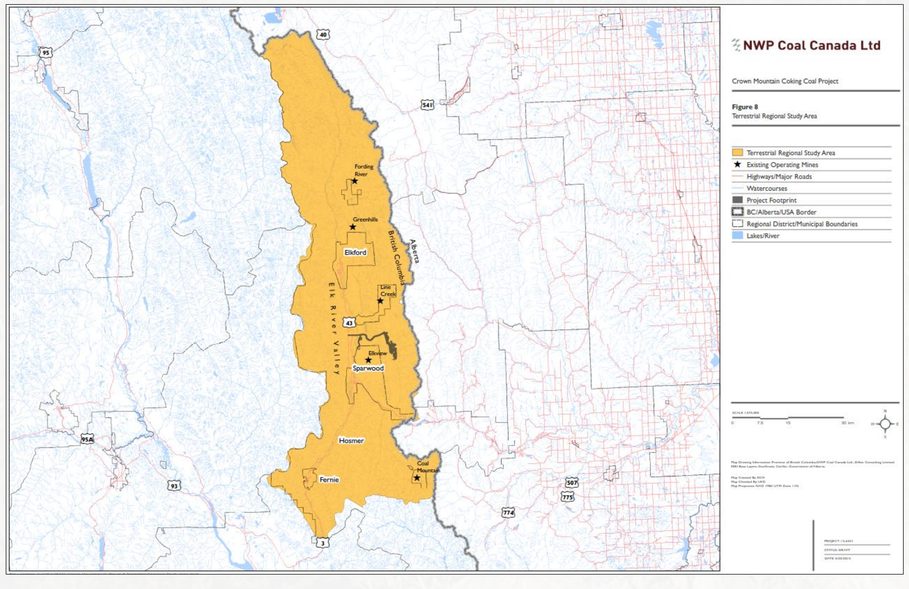
- **Potential impacts:** Vegetation removal associated with site development, alteration of drainage patterns, introduction of invasive species
- **Potential effects:** May result in structural and functional changes to plant communities

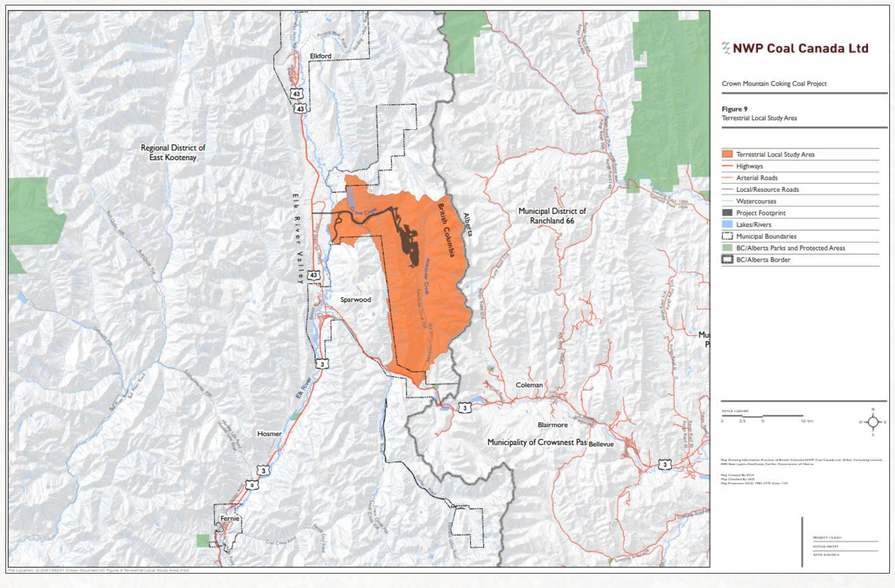
Terrestrial Environment – Wildlife

Selected Valued Components:

- **American Badger**
- **American Dipper**
- **At-risk Bat Species**
- **Bighorn Sheep**
- **Canada Lynx**
- **Elk**
- **Gillette's Checkerspot**
- **Grizzly Bear**
- **Migratory Birds**
- **Moose**
- **Northern Goshawk**
- **Western Toad**
- **Wolverine**

- **Measurement indicators include:**
  - Habitat availability and distribution relative to baseline (e.g., changes in the available habitat and distribution of habitat for this species)
  - Known occurrence and abundance (e.g., changes to the number of documented occurrences relative to baseline, changes to individual populations)
- **Potential impacts:** Indirect and direct impacts may occur as a result of Project development and operations activities
- **Potential effects:** Sensory disturbance, wildlife mortalities, habitat fragmentation, changes in wildlife use of the area and predation associated with alteration in habitat structure and availability





Archaeological Resources

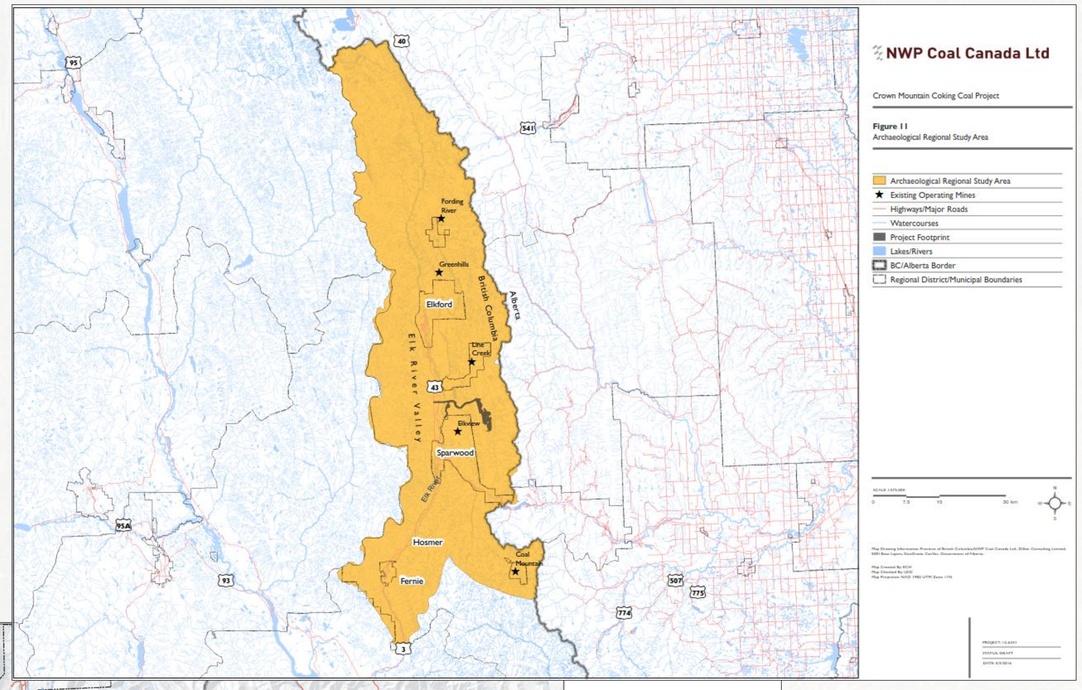
Background:

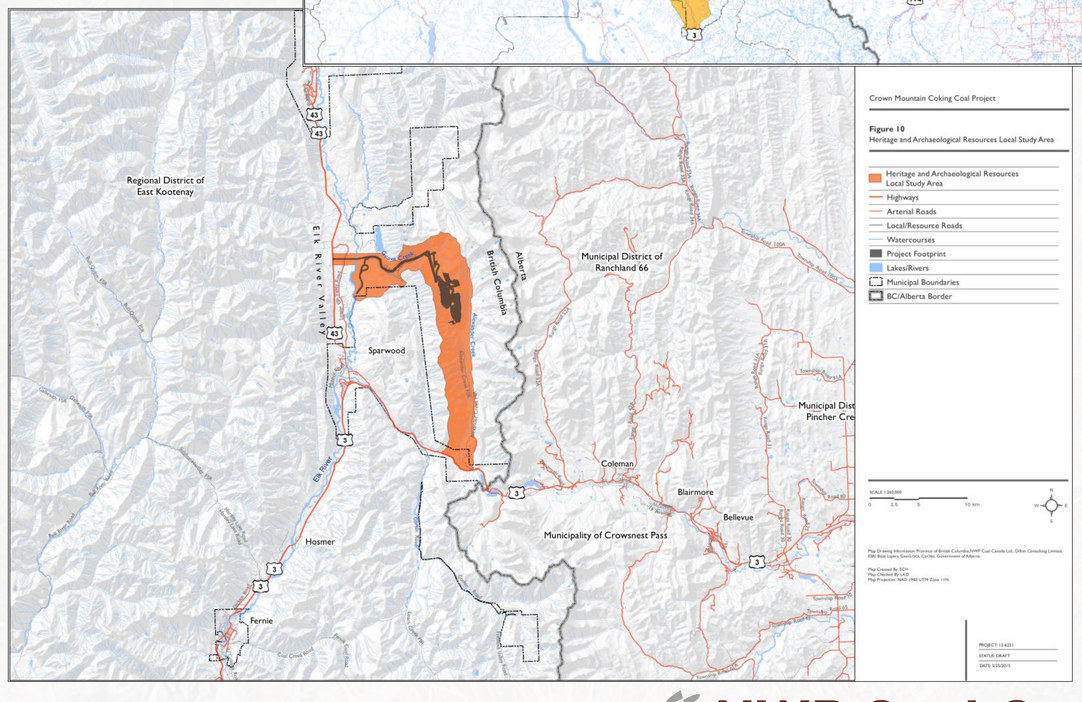
- The Project is located within the asserted traditional territory of the Ktunaxa Nation
- The Elk River Valley has been historically used by local Aboriginal Groups
- Heritage resources and archaeological sites are know to occur in the vicinity of the Project

- **Measurement Indicators:** Presence, number, type, significance, and location of resources

- **Potential effects:** Archaeological resources may be uncovered or disturbed during the Project as a result of ground disturbance during construction.

- Cultural and heritage sites are protected by the provincial *Heritage Conservation Act* (1996)





Social and Economic Environment

Selected Valued Components:
- Economic Conditions
- Housing, Community Services and Infrastructure
- Community Health and Well-being

Economic Conditions

- **Measurement Indicators:**
  - Opportunities for training and skills development
  - Employment opportunities generated by the Project
  - Income generation
  - Revenue generation
  - Generation of business for local enterprises
  - Local and provincial government revenue

- **Potential effects:**
  - Increased local demand for labour
  - Opportunities for local businesses
  - Opportunities for capacity building with the Ktunaxa Nation

Housing, Community Services and Infrastructure

- **Measurement Indicators:**
  - Housing supply and demand
  - Community services (e.g., education and emergency services)
  - Infrastructure (e.g., water/wastewater, transportation infrastructure)
  - Population demographics

- **Potential effects:**
  - Increased demand for housing
  - Increased demand for local services (e.g., community centres, emergency services

Community Health and Well-Being

- **Measurement Indicators:**
  - Various health indicators (e.g., drug /alcohol abuse, shift work schedules, worker conditions)
  - Public safety (e.g., health and safety related to the Project site or in vicinity, crime rates)

- **Potential effects:**
  - Changes in crime rates
  - Current worker schedules and conditions

Land Use and Access, Recreation and Tourism, and Visual Quality

Selected Valued Components:
- Land Use and Access
- Recreation and Tourism
- Visual Quality

Land Use and Access

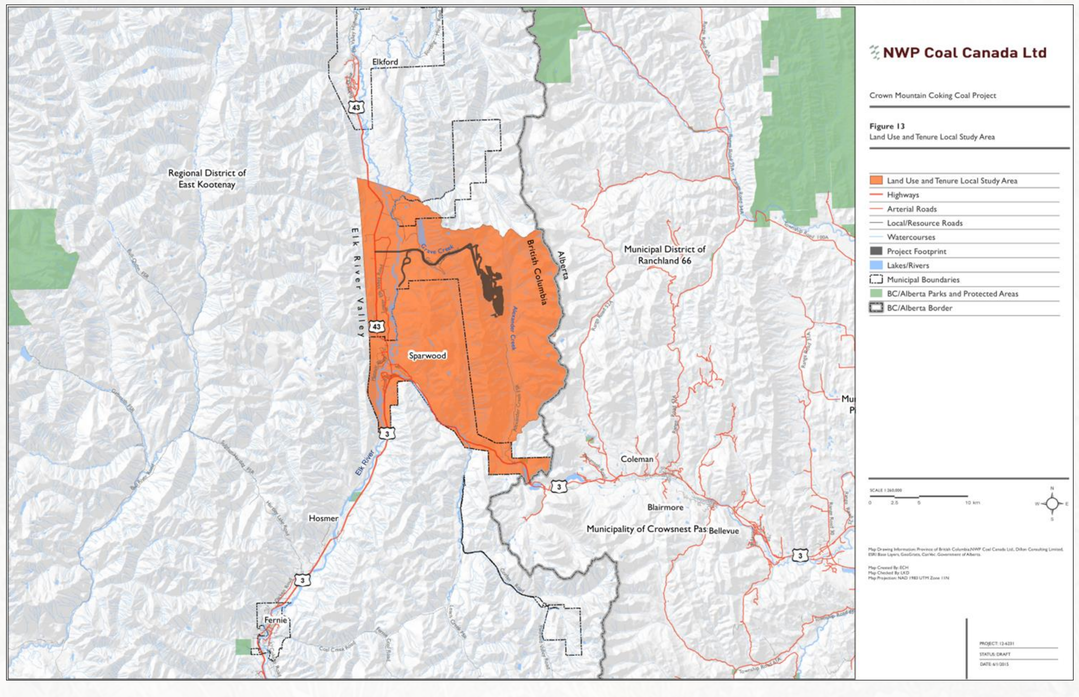
- **Measurement indicators** include: Implementation and consistency of land use designation; implementation and use of land use policies; access to resource harvesting areas for recreation purposes; and quality of recreational and tourism experience
- **Potential impacts**: The Project has the potential to change access to existing land base as well as result in the addition of Project components to the landscape (e.g., haul roads, mine infrastructure)
- **Potential effects**: Changes in the land base may restrict access to areas used for recreational or tourism purposes, as well as for resources harvesting and extraction (e.g., forestry)

Recreation and Tourism

- **Measurement indicators** include: Recreational use (e.g., hunting, ATV trails, fishing, hiking); noise and air quality; quality of recreational and tourism experiences
- **Potential impacts**: Community use of the existing land base may change as a result of Project construction and operation as well as the restriction of areas used for recreation (e.g., restricted access to ensure public safety)
- **Potential effects:** Changes in existing land use and access to the land base

Visual Quality

- **Measurement include**: View corridors; visual quality, including changes to air quality (e.g., dust generation through mining and vehicle traffic)
- **Potential impacts**: The Project is located in an area that is used for recreational purposes and thus the Project may result in localized changes to the visual landscape during construction and operation (e.g., addition of mine infrastructure to the landscape, pit areas)
- **Potential effects**: Changes to visual aesthetics for backcountry recreational users well as view corridors in the Grave Creek and Alexander Creek



Human and Terrestrial Wildlife Health Risk Assessment

Selected Valued Components:

- People (local communities, First Nations, temporary residents at recreation areas)

- Wildlife

Measurement Indicators:

- Hazard Quotients (will be determined based on intermediate components and other measurement indicators)
- Incremental Lifetime Cancer Risk (human health)

Key Data Inputs:

- Surface water
- Sediment quality
- Groundwater quality
- Air quality
- Contaminant levels in vegetation (including country foods) and tissues (e.g., fish, amphibians)

Approach:

- Species to be part of the health risk assessment (RA) include, but are not limited to, selected birds, ungulates, bats, and furbearers
- Approach for risk assessment (RA) will be finalized in association with regulators and the RA will follow established provincial and federal protocols
- Information from local communities, trappers, and guide outfitters is expected to be import source of information for the RA

Consultation and Engagement Activities

Activities To Date:

- On-going engagement with the public
- Meetings and discussions with the Ktunaxa Nation Council
- Meetings with local municipalities (e.g., Sparwood Committee of the Whole, Fernie Committee of the Whole, Elkford Town Council)
- Meetings and discussions with provincial and federal regulators

Involvement with Elk Valley Initiatives:

- Active member of the Elk Valley Cumulative Effects Management Framework Working Group
- Sponsorship of the elk migration radio collar study led by the Sparwood & District Fish & Wildlife Association
- Collection of fur-bearer hair samples to support the Ministry of Forests, Lands and Natural Resource Operations' DNA study

Meaningful engagement is important - NWP is committed to continually working with interested parties as the Project moves forward.