NWP Coal Canada Ltd

Chapter 1 - Introduction

Crown Mountain Coking Coal Project
Application for an Environmental Assessment Certificate / Environmental Impact Statement

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1. Introduction

NWP Coal Canada Ltd proposes to develop and operate the Crown Mountain Coking Coal Project (the Project), an open pit steelmaking coal mine located in the Elk Valley coal field of the East Kootenay Region of British Columbia (B.C.). This document is the Environmental Assessment (EA) for the Project and is being submitted to the Impact Assessment Agency of Canada (IAAC) as an Environmental Impact Statement (EIS) pursuant to the Canadian Environmental Assessment Act, 2012 and to the B.C. Environmental Assessment Office (EAO) as an Application for an Environmental Assessment Certificate (Application) pursuant to the provincial Environmental Assessment Act (EAA; 2018).

1.1 Project Proponent

The proponent of the proposed Crown Mountain Coking Coal Project is NWP Coal Canada Ltd (NWP), a Canadian subsidiary of Jameson Resources Limited and Bathurst Resources Limited. NWP is the legal entity that would develop, manage, and operate the proposed Project. NWP is 78% owned by Jameson Resources Limited and 22% by Bathurst Resources Limited. Jameson Resources Limited, an Australia Securities Exchange (ASX) listed company (ASX: JAL), focuses on the exploration and development of coking coal projects in Western Canada. Bathurst Resources Limited is a New Zealand registered, ASX listed company (ASX: BRL) that specializes in coal exploration, development, and production.

1.1.1 Contact Information

For matters pertaining to the information contained within this Application for an Environmental Assessment Certificate/Environmental Impact Statement (Application/EIS), the principal NWP contact is:

Name/Title/Address	Contact Information
Michael Gray President, Crown Mountain Coking Coal Project NWP Coal Canada Ltd PO Box 399 Elkford, B.C. V0B 1H0	Telephone: +1 (855) 922-3851 Email: info@nwpcoal.com Website: https://www.nwpcoal.com

1.1.2 Corporate and Management Structures

1.1.2.1 Proponent

NWP is the proponent progressing development of the Crown Mountain Project. NWP owns 90% of the Project with the remaining 10% owned privately by Mr. Robert Morris, one of the original Project geologists. NWP acquired its 90% equity in the Project from Mr. Morris in 2011 and NWP has an option to acquire Morris's remaining 10% equity and take its ownership to 100% before development of the Project. NWP is a privately held company committed to developing the Project to provide a source of steelmaking coal to meet high demand in global seaborne markets. NWP was incorporated in 2008 as a wholly owned subsidiary of Jameson Resources Limited (Jameson) with the objective of exploring and developing steelmaking coal projects in western Canada. Jameson is publicly traded on the Australian Securities Exchange (ASX: JAL).

Jameson is an independent developer and supplier of raw materials committed to safeguarding the environment and contributing to economic and community prosperity. Jameson brings to NWP a highly experienced board and management team with a track record of successful greenfield steelmaking coal mine development. Jameson's Board and Management have extensive experience in developing projects in close cooperation with Indigenous nations, local communities and with the support of leading steelmakers in Japan, Korea, China and India. In 2018, Bathurst Resources Limited (Bathurst) became a strategic partner via direct investment in NWP. Bathurst currently owns 22% of NWP. Bathurst is publicly traded on the Australian Securities Exchange (ASX: BRL). Bathurst is New Zealand's largest specialist coal company and is committed to sustainable development, where economic growth coincides with respect for conservation and community values. Bathurst brings to NWP hands on knowledge of coal mine operations accustomed to working closely with communities and Indigenous peoples.

NWP is an active member of the Coal Association of Canada. NWP is an active community member in Elkford and Sparwood, B.C. through their respective chambers of Commerce and extensive engagement with local community and businesses.

1.1.2.2 Governance

NWP is governed by a Board of Directors, which includes three nominees from Jameson and one nominee from Bathurst (Table 1.1-1). The Chair of NWP is Nicole Hollows, who is also the Chair of Jameson.

Table 1.1-1: NWP Board of Directors

Name	Role	Affiliation
Nicole Hollows	Chair	Jameson Resources Limited
Joel Nicholls	Director	Jameson Resources Limited
Steve Van Barneveld	Director	Jameson Resources Limited
Russel Middleton	Director	Bathurst Resources Limited

The Managing Director of Jameson, Michael Gray, is seconded to the role of President of NWP reporting to the NWP Board of Directors. The President has overall responsibility for the strategic development of the Project as directed by the Board as well as overseeing the day-to-day management of the NWP's

activities to progress the Project. Mr. Gray is supported by a management team with extensive experience in resource development and a range of contractors and specialist technical consultants.

Jameson and Bathurst, as companies traded on the Australian Securities Exchange, must comply with detailed corporate governance and reporting requirements (ASX Corporate Governance Council, 2019). These requirements describe "the framework of rules, relationships, systems and processes within and by which authority is exercised and controlled within corporations. It encompasses the mechanisms by which companies, and those in control, are held to account"[1]. Jameson's governance framework[2] includes NWP (Figure 1.1-1).

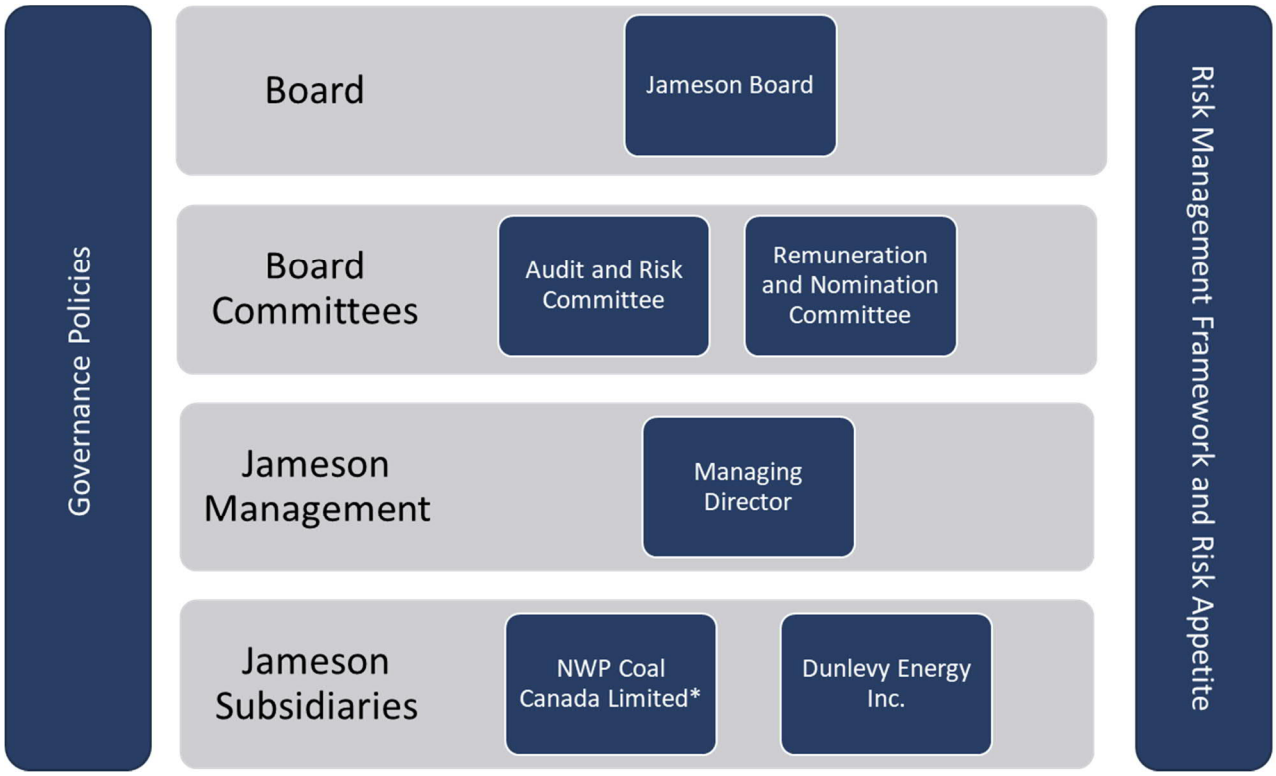


Figure 1.1-1: Jameson's Governance Framework

The Board of NWP operates under a Board Charter (Appendix 1-A) which sets out the functions and responsibilities of the Board and of the management of NWP. The Charter has been implemented by the NWP to:

a) Promote and sustain good corporate governance;
b) Support NWP in achieving its desired culture by working together, being focused, agile and responsible;

[1] Justice Owen in the HIH Royal Commission, The Failure of HIH Insurance Volume 1: A Corporate Collapse and Its Lessons, Commonwealth of Australia, April 2003 at page xxxiv.
[2] 2021 Corporate Governance Statement (https://jamesonresources.com.au/wp-content/uploads/2021/09/JAL-2021-CGS.pdf)

c) Enhance the NWP's performance as a growth-oriented developer focused on delivering sustainable outcomes;
d) Support the NWP's strategic goals of being commercial and focused, growing sustainably and having engaged stakeholders; and
e) Engender confidence in NWP for investors and other stakeholders.

The Board's role is to govern the NWP rather than to manage it. In governing NWP, the directors of the Company (Directors) act in the best interests of NWP as a whole. It is the role of senior management to manage NWP in accordance with the direction and delegations of the Board and it is the responsibility of the Board to oversee the activities of management in carrying out these delegated duties, including, whenever required, challenging management and holding it to account. The Board has established a rigorous reporting framework for senior management to ensure project oversight and to monitor that NWP's policies are implemented in development of the Project. NWP's management structure is outlined in Figure 1.1-2.

The NWP Board has developed and endorsed the following Governance Policies to oversee the company's activities:

- NWP Employee Code of Conduct (Appendix 1-B);
- NWP Risk Management and Internal Control and Compliance Policy (Appendix 1-C);
- NWP Whistleblower Policy (Appendix 1-D);
- NWP Anti-Bribery and Corruption Policy (Appendix 1-E);
- NWP Environmental Policy (Appendix 1-F); and
- NWP Equity, Diversity, and Inclusion Policy (Appendix 1-G).

1.1.2.3 Sustainability

NWP is looking to establish sustainable development and operations where they are a trusted community partner with environmentally responsible operations. NWP will look to foster and maintain enduring relationships based on trust – implementing a range of strategies focused on being socially responsible, opportunities for Indigenous employment, foster diversity and stakeholder engagement. NWP recognises the uncertainties, challenges and opportunities that climate change presents; however, is committed to partnering with customers and supply chains to achieve lower emissions. The advantages of premium coking coals with respect to emissions are also a key environmental consideration as part of the steelmaking process.

NWP represents the next generation of the Canadian Steelmaking Coal Industry. NWP believes it is important to acknowledge the role steelmaking coal, and in turn steel, has in everyday life. NWP is committed to working with customers and supply chains to achieve lower emissions, but steelmaking coal and steel will continue to play an ongoing and critical role in modern society as an integral ingredient in building infrastructure, cars, buses, trucks, clean energy including wind and solar, houses, appliances and high rise apartments that contribute to the improved quality of life in both developed and developing nations.

NWP is seeking to represent the next generation of Canadian steelmaking coal developers (and ultimately producers) who want to ensure that the steelmaking coal that is extracted for use as a vital

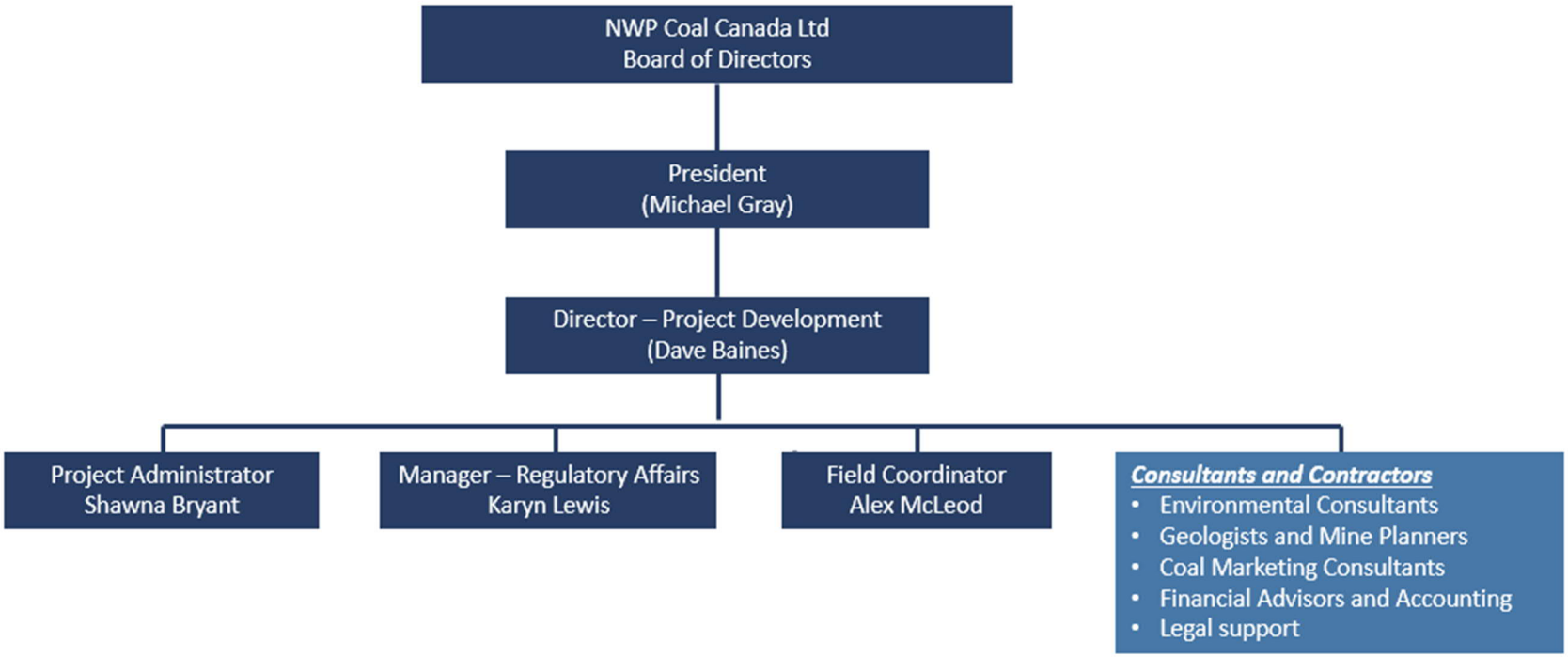


Figure 1.1-2: NWP Coal Canada Ltd Management Structure

ingredient in the steelmaking process, is done so in a considered, sustainable manner that places great emphasis on the environmental and social implications of everything that we do. Sustainability is at the core of NWP's purpose in the development of the Project. NWP puts the health and safety of its employees and contractors first and commits to sustainably manage their environmental impact, foster inclusion and diversity, and engage with local communities to ensure they are a valued long term community partner. At the local community level, NWP views and manages sustainability through close engagement with stakeholders, being open and transparent about how they operate and will seek to manage risks to minimise environmental, social and cultural impacts.

NWP also believes that supporting local communities and Indigenous groups through education and providing opportunities for employment and economic development will be valuable as they move closer to construction and operation of the Project.

1.1.2.4 Environment

Respect for the environment is a core value to NWP, a non-negotiable. Good environmental management involves NWP identifying and controlling their environmental risks across all phases of their business from exploration through to development, operation, and closure. A copy of NWP's Environmental Policy is provided in Appendix 1-F.

Prior to starting construction of the Project, NWP will develop a robust Environmental Management System (EMS) that borrows concepts from ISO 14001 and from their parent operating company, Bathurst. The EMS will address all approval and permit requirements, legal requirements, and input from local communities and Indigenous groups so that it reflects the values of communities, is transparent, and goes beyond business as usual.

1.1.2.5 Occupational Health and Safety

NWP operates a healthy and safe workplace with a target of zero harm. NWP considers health and safety a core value and works with all employees and contractors to make being safe more than just words on paper. NWP equips, trains, and supports all employees and contractors to build a culture of safety for themselves and those around them.

Prior to starting construction of the Project, NWP will develop a robust Occupation Health and Safety (OHS) program that borrows concepts from OHSAS 18001 and from our parent operating company, Bathurst. The OHS program will address all approval and permit requirements, legal requirements, and input from our local communities and Indigenous communities so that it reflects the values of our communities, is transparent, and goes beyond business as usual.

1.1.2.6 Equity, Diversity, and Inclusion

NWP understands the business and human value created by an equitable, diverse, and inclusive workplace. NWP intends to develop programs to train, hire, and retain members of under-represented communities. As well, NWP will identify and make efforts to reduce barriers to participation in engagement, employment, or business relationships (Appendix 1-G).

Key local groups that NWP respects and supports include:

- The LGBTQ2+ community;

- Persons with diverse abilities; and
- Indigenous communities.

1.1.3 History of the Project and the Proponent

1.1.3.1 Exploration History

The history of exploration and development of the Elk Valley and the Project area extends back to coal development activities in southern Alberta and southeastern British Columbia in the late nineteenth century. In 1897, the Crow's Nest Pass Coal Company was established to develop the coal resources on the British Columbian side of the Crow's Nest Pass. Several subsidiaries were created to operate ancillary activities; they included the Morrissey, Fernie and Michel Railways, and the Crow's Nest Pass Electric Light and Power Company. Various mines were opened at Coal Creek, Natal, Michel and Morrissey. The Crown Mountain Coal and Coke Company was founded in 1907 but few records remain of its activities other than mention in 1912 of an exploration program up Alexander Creek. After the Second World War, demand for coal dropped and the Crow's Nest Pass Coal Company diversified through a subsidiary, Crow's Nest Pass Oil and Gas Company. As the 1950s and 1960s progressed, the mines were closed, and the company moved into forest products.

In 1965, the name of the company was changed from Crow's Nest Pass Coal Company to Crows Nest Industries Limited (Crows Nest Industries). In 1969, Crows Nest Industries undertook a completed a drilling program consisting of 11 holes for a total drilled meterage of 1,669 metres (m). In 1977, Shell Canada Limited (Shell) purchased Crow's Nest Industries and renamed it Crows Nest Resources Limited (Crows Nest Resources). In 1979, that company undertook a drilling program including seven holes for a total drilled meterage of 912 m. Further mapping and hand-trenching of seam exposures, the construction of a mechanically excavated pit and the collection of a bulk sample was undertaken during 1980 and 1981. In 1991, Shell sold the company, and ownership and responsibility for at least some of its coal assets were transferred with the sale. Eventually the property was relinquished and later acquired by Morris Geological, owned by local long standing coal geologist, Mr. Robert Morris. It appears that no further exploration work was conducted on the property until it was acquired by NWP in 2011.

In April 2011, NWP (then 100% owned by Jameson) entered into an Option Agreement with Mr. Morris to acquire up to 100% of the Project. The Option Agreement was structured such that NWP would initially earn up to 90% of the Project based on committed geological expenditure and completion of associated technical reports. In June 2012, NWP obtained an approval from the British Columbia Ministry of Mines and Energy to undertake exploration activities and commenced a drilling program in September 2012. That exploration program involved 5,707 m, 40-holes focused primarily on the North Block and South Block of the property with 617 m drilled in the South Extension area. Both coring and reverse circulation methods were used during this drilling program and while significant coal intersections form three major seams were observed, sample recovery was poor and the laboratory results were of limited value. All of the holes were geophysically logged through the reverse circulation pipe and all drill holes were logged open-hole where possible. In 2013, NWP drilled an additional 1,653 m in the North Block and South Block areas of the property which consisted of seven 150 millimetres (mm) large diameter core holes and six 95 mm reverse circulation drill holes. In 2018, NWP conducted a 4,711 m drilling program which focused on collecting coal quality and geotechnical information based on a total of 33 holes in North and South Block. A summary of drilling activities to date is provided in Table 1.1-2.

Table 1.1-2: Summary of Drilling, Crown Mountain Coal Property

Company	Year	Location	# of Holes	Metres Drilled
Crows Nest Industries Ltd.	1969	North Block	3	490
	1969	South Block	8	1,179
Crowsnest Resources Limited	1979	North Block	3	300
	1979	South Block	4	612
NWP Coal Canada Ltd	2012	North Block	17	2,516
	2012	South Block	18	2,575
NWP Coal Canada Ltd	2012	Southern Extension	5	617
	2013	North Block	4	406
	2013	South Block	9	1,247
NWP Coal Canada Ltd	2018	North Block	10	1,436
	2018	South Block	23	3,275

1.1.3.2 Project Evaluation History

Following the 2012 exploration program, NWP engaged Norwest Corporation (now Stantec) to undertake a Preliminary Economic Assessment for potential development of the Project. The Preliminary Economic Assessment concluded that Project presented potential opportunity for a robust economic return.

Large diameter coring was undertaken in 2013 to obtain bulk coal samples to analyse coal quality and coking properties of the potential product. A Pre-Feasibility Study for the Project was completed by Norwest in 2014. That Study confirmed the hard coking coal properties of the product and the likely attractive economics of the Project.

NWP initiated baseline environmental studies in 2013. Since 2013, baseline studies focused on the following disciplines:

- Archaeology;
- Fish and fish habitat;
- Wildlife (furbearers, ungulates, birds, bats, amphibians, Gillette's checkerspot);
- Soil and terrain mapping, and soil chemistry;
- Aquatic health;
- Vegetation and terrestrial ecosystem mapping;
- Wetlands;
- Hydrology;
- Meteorology;
- Noise;
- Air quality (dustfall); and
- Socio-economics.

The respective baseline assessments discuss the various task and timings of the baseline worked completed for the Crown Mountain Coking Coal Project EA.

In October 2014, NWP submitted an Initial Project Description for the Project to the EAO and the Canadian Environmental Assessment Agency (CEAA) seeking to initiate the commencement of the Environmental Assessment process. Following the completion of the Pre-Feasibility Study PFS and commencement of the EA, work commenced on the preparing the Bankable Feasibility Study (BFS). Following a further exploration program in 2018 and a range of detailed technical and economic studies, the BFS was completed in July 2020. The BFS concluded that "Crown Mountain represents a compelling high quality coking coal opportunity for development with a competitive operating and capital cost structure and access to existing common user rail and port infrastructure."

1.1.4 Project Team

NWP assembled a team of specialist scientists, engineers, and subject-matter expects to develop the Project Application/EIS. Key personal, contractors, and sub-contractors responsible for the studies, planning, design, and assessments of the Application/EIS are summarised in Table 1.1-3.

Technical information used in the preparation of this Application/EIS was also provided by NWP staff directly involved in the planning and design of the Project. Inquiries regarding this document should be directed to Michael Gray, President at the contact information provided in Section 1.1.1.

The Application/EIS has been prepared in accordance with the Section 11 and 13 Orders under the EAA (2002) and guidelines prepared by the EAO and CEAA, specifically, the Application Information Requirements (AIR) for the Crown Mountain Coking Coal Project (EAO, 2018) and the Guidelines for the Preparation of an Environmental Impact Statement pursuant to the Canadian Environment Assessment Act (2012) for the Crown Mountain Coking Coal Project (CEAA, 2015). On May 3, 2023, the Project was transitioned to the EAA (2018) through a Transition Order under Section 78(7) of the 2018 Act. The Application/EIS includes additional information requirements described in Section C of Schedule A of the Transition Order.

Table 1.1-3: Crown Mountain Coking Coal Project Team

Name of Firm	Office Location	Role
AECOM	Burnaby and Victoria, British Columbia	Consultant for the Human Health and Ecological Risk Assessment; lead author of Chapter 22.
BGC Engineering Inc.	Vancouver, British Columbia	Consultant for the terrain stability assessment and geohazards mapping.
Clarke Geoscience Ltd.	Kelowna, British Columbia	Consultant for the fluvial geomorphology assessment.
Dillon Consulting Limited	Richmond, British Columbia	Primary consultant for the development of the Application/EIS; consultant for the air quality baseline and modelling, hydrology baseline, surface water quality baseline, meteorology baseline, noise and vibration baseline and modelling, socio-economic and primary research program, land use assessment, visual aesthetics baseline, light assessment, bird community baseline, amphibian baseline, wetland ecosystems baseline assessment, accidents and malfunctions assessment; lead author of Chapter 4: Consultation and Engagement, Chapter 5: Effects Assessment

Name of Firm	Office Location	Role
		Scope and Approach, Chapter 6: Atmospheric Environment Assessment, Chapter 7: Acoustic Environment Assessment, Chapter 9: Groundwater Assessment, Chapter 10: Surface Water Quantity Assessment, Chapter 11: Surface Water Quality Assessment, Chapter 16: Physical and Cultural Heritage Assessment; Chapter 17: Economic Conditions Assessment, Chapter 18: Socio-Community Assessment, Chapter 19: Land Use Assessment, Chapter 20: Effects of the Environment on the Project, Chapter 21: Accidents and Malfunctions Assessment, Chapters 23 to Chapter 31: Indigenous Communities, Chapter 32: Assessment of Effects on Matters of Federal Interest, Chapter 34: Summary and Conclusions; contributors to Chapter 1: Introduction, Chapter 12: Fish and Fish Habitat Assessment, Chapter 15: Wildlife and Wildlife Habitat Assessment, Chapter 33: Management and Monitoring Plans; and effects assessment leads for Chapter 13: Landscapes and Ecosystems Assessment, Chapter 14: Vegetation Assessment, and Chapter 8: Soil and Terrain Assessment.
Enviromin, Inc.	Bozeman, Montana	Consultant for the environmental geochemistry of mine waste.
EXP	Calgary, Alberta and Anchorage, Alaska	Consultant and lead author for Chapter 2: Project Alternatives and Chapter 3: Project Description.
Jon Fennell, P.Geo.	Calgary, Alberta	Consultant for the Site Water Management Plan.
Keefer Ecological Services	Cranbrook, British Columbia	Consultant for mammal baseline surveys (i.e., American badger, grizzly bear, wolverine, Canada Lynx, American marten, bighorn sheep, elk, moose, and bats), Gillette's checkerspot survey, invasive plant survey, limber pine distribution assessment, listed plant and listed ecological communities baseline surveys, soil and vegetation chemistry baseline, Terrestrial Ecosystem Mapping, whitebark pine distribution, health, and critical habitat assessment, wildlife habitat modelling, soil baseline assessment, geohazards assessment, and ecological reclamation and restoration; contributors to Chapter 8: Soiland Terrain Assessment, Chapter 13: Landscapes and Ecosystems Assessment, Chapter 14: Vegetation Assessment, and Chapter 15: Wildlife and Wildlife Habitat Assessment.
Lotic Environmental	Cranbrook, British Columbia	Consultant for fish and fish habitat baseline surveys, aquatic health surveys, and aquatic offsetting; effects assessment leads for Chapter 12: Fish and Fish Habitat Assessment.

Name of Firm	Office Location	Role
Maven Water & Environment	Saskatoon, Saskatchewan	Lead consultant for the Best Available Technology (BAT) 'lite' evaluation.
MacDonald Hydrology Consultants Ltd. (MacHydro)	Cranbrook, British Columbia	Consultant for the Elk Valley Cumulative Effects Management Framework (EV-CEMF) modelling for bighorn sheep, grizzly bear, aquatic ecosystems (riparian habitat and Westslope Cutthroat Trout), and old and mature forest cumulative effects.
McKenna Geotechnical Inc.	Delta, British Columbia	Consultant for the Landform Design and Reclamation Management Plan.
Nupqu Development Corporation	Fernie, British Columbia	Consultant for the collection of surface water quality, hydrology, and dustfall monitoring data.
Okane Consultants Inc.	Cranbrook, British Columbia	Consultant for the groundwater monitoring program.
Pathways Archaeological Consulting Ltd.	Kimberley, British Columbia	Consultant the Archaeological Impact Assessments (Phase I, Ia, II, and III); contributors to Chapter 16: Physical and Cultural Heritage Assessment; lead author of the Archaeology Management Plan.
Sedgman Canada Ltd. (a member of CIMIC Group)	Vancouver, British Columbia	Consultant for the process plant design.
SRK Consulting	Vancouver, British Columbia and Denver, Colorado	Consultant for the geochemical baseline assessment, groundwater assessment, and surface and groundwater modelling; contributors to Chapter 9: Groundwater Assessment and Chapter 11: Surface Water Quality Assessment.
Stantec Consulting	Vancouver, British Columbia	Consultant for the infrastructure, mine design, and geotechnical aspects of the Project.
Tetra Tech Canada	Vancouver, British Columbia	Consultant and lead for wildlife effects assessments; lead author of Chapter 15: Wildlife and Wildlife Habitat; contributor to Chapter 13: Landscapes and Ecosystems Assessment.
Tipi Mountain Eco-Cultural Services Ltd.	Cranbrook, British Columbia	Consultant for the Archaeological Overview Assessment and the Archaeological Impact Assessments (Phase I, Ia, II, and III).
VAST Resource Solutions Inc.	Cranbrook, British Columbia	Consultant for the acoustic and live capture bat inventory.

1.2 Project Overview

The Project is intended as a greenfield open pit steelmaking coal mine located within the existing Elk Valley coal field in the East Kootenay Region of southeastern B.C. (Figure 1.2-1). The Project resource is a relatively small shallow coal deposit that outcrops in the eastern portion of the Elk Valley adjacent to the Alexander Creek Syncline which is the major geological feature of the Elk Valley coalfields. The shallow

outcropping seams provide a discrete opportunity for open-pit mining with a low strip-ratio reducing the volume of mine rock removal and management and reducing the overall project footprint.

The proposed Project is located within the Elk Valley coal field, comprises ten coal licenses that cover approximately 5,630 hectares (ha) of land (Figure 1.2-1; Table 1.2-1) and is located between several existing steelmaking coal mines in the Elk Valley and Crowsnest coal fields, with Teck Coal Limited's (Teck) Elkview Operations located approximately 8 kilometres (km) southwest of the Project and their Line Creek Operations located approximately 12 km north of the Project. The Project pits and Mine Rock Storage Facility will be located on Provincial Crown Land, and the rail loadout and haul road will be located on private land (Land Title and Survey Authority of British Columbia, 2021). Canfor's operating area tenure, A19040, covers the entirety of the Project footprint. The Project's rail loadout overlaps with Teck's privately held conservation lands.

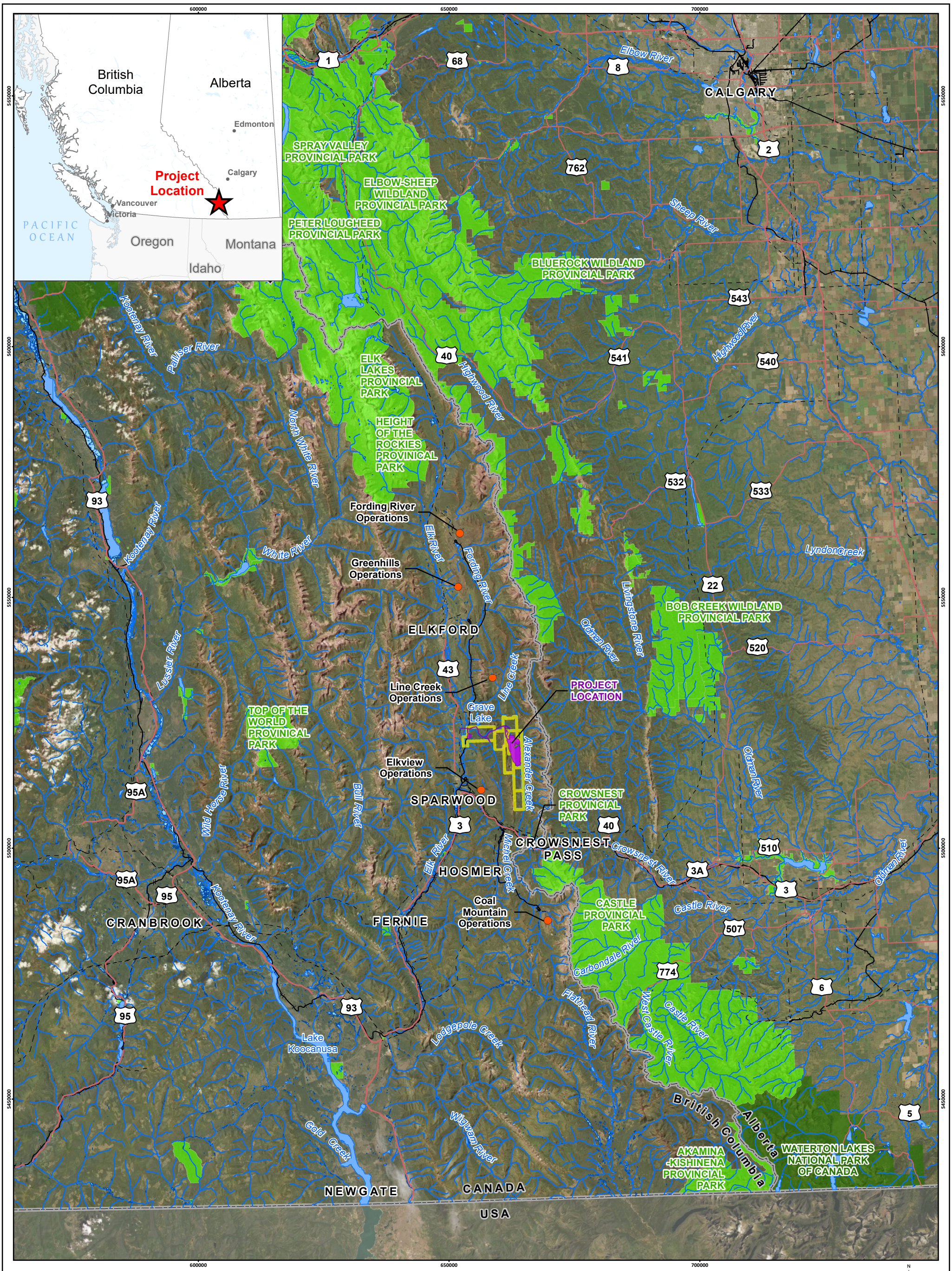
Table 1.2-1: Coal Licenses for the Crown Mountain Coking Coal Project

Title Number	Owner	Issue Date	Area (ha)
418150	NWP Coal Canada Ltd. (90%)	May 2, 2012	334.0
418151	NWP Coal Canada Ltd. (90%)	May 2, 2012	1001.0
418152	NWP Coal Canada Ltd. (90%)	May 2, 2012	167.0
418153	NWP Coal Canada Ltd. (90%)	May 2, 2012	251.0
418154	NWP Coal Canada Ltd. (90%)	May 2, 2012	835.0
418966	NWP Coal Canada Ltd. (90%)	December 12, 2016	974.0
419272	NWP Coal Canada Ltd. (90%)	December 20, 2018	778.5
419273	NWP Coal Canada Ltd. (90%)	December 20, 2018	704.8
419274	NWP Coal Canada Ltd. (90%)	December 20, 2018	334.1
419275	NWP Coal Canada Ltd. (90%)	December 20, 2018	250.1

Construction of the proposed Project is anticipated to be completed over 1.5 years (Table 1.2-2). The anticipated production capacity of the Project is up to 4.0 million run-of-mine tonnes (M ROMt) per annum to produce approximately 1.95 million tonnes per annum (Mtpa) of saleable export coal for a duration of approximately 15 years, not including site decommissioning (Table 1.2-2). This equates to a coal production capacity of approximately 10,150 ROM (run-of-mine) tonnes per day. Exploration activities have indicated that the coal at the Project site is typical of high quality hard coking coals produced from existing mines in the Elk Valley. The high quality coking coal would be transported via railway to coastal B.C., where it would be shipped overseas to be used in steelmaking.

The Project is in close proximity to important infrastructure, which includes major roads, rail service, access to power and Sparwood. These features will be important for the development of the Project. Due to the nature of the terrain and the geology of the area, surface mining methods are suitable for the planning and development of the Project.

The total Project footprint covers an area of approximately 1,283 ha and consists of the proposed mine infrastructure and support facilities. Key components of the proposed Project include (Figure 1.2-2):



Crown Mountain Coking Coal Project

Figure 1.2-1
Project Location

LEGEND

- Project Footprint
- Coal License Boundary
- Existing Teck Mine
- Highway
- Railway
- Transmission Line
- Watercourse
- Waterbody
- Wetland
- Provincial Park/Protected Area
- National Park
- British Columbia/Alberta Border

0 15 30
Kilometres

Scale 1:700,000

Map Drawing Information:
Data Provided By NWP Coal Canada Ltd, Dillon Consulting Limited, Province of British Columbia GeoBC Open Data, Government of Alberta Open Data, Natural Resource Canada. Imagery Provided By ESRI.

Map Created By: RB
Map Checked By: LKD
Map Coordinate System: NAD 1983 UTM Zone 11N

NWP Coal Canada Ltd

Project: 12-6231
Status: FINAL
Date: 2022-03-11

Document Path: \\42dillon\CAD\GIS\2012 and Prior\126231 Crown Mountain\EA_Report\Introduction\126231_Intro_ProjectLocation_v2.mxd

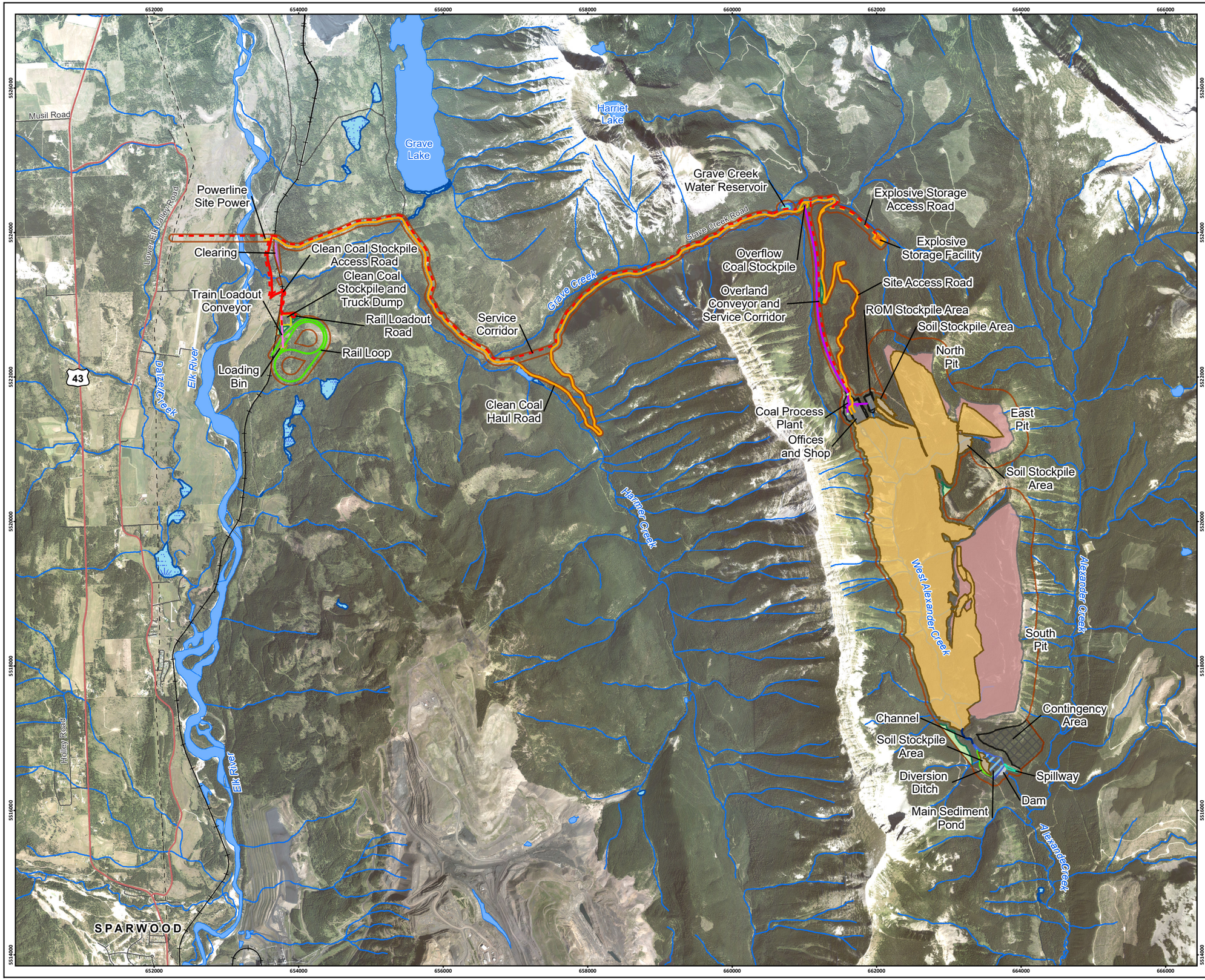
- Surface extraction areas (3 pits – North Pit, East Pit, and South Pit);
- Mine rock management areas;
- Water management infrastructure;
- Plant area (includes raw coal stockpile area, a processing plant, and site support facilities);
- Clean coal transportation route (via an overland conveyor and haul road);
- Rail loadout facility and rail siding (includes various auxiliary facilities such as a gate house, light vehicle wash, drug and alcohol testing/orientation building, and a small dry);
- Power supply;
- Natural gas supply;
- Explosives storage;
- Fuel storage;
- Clearing Right of Ways;
- Sewage treatment; and
- Water supply.

Major Project components include:

- Open pit surface mining operation using conventional truck and shovel mining methods with capacity for production of up to 4.0 million tonnes per year (Mtpa) ROM coal. The surface mine has been sequenced to limit the creation of external mine rock storage facilities (MRSF) and allow for on-going progressive reclamation.
- The Coal Handling and Processing Plant (CHPP), with a nominal capacity of 546 to 570 tonnes per hour, is capable of producing up to 2.2 Mtpa clean coal product with a target ash of 9.5% for coking coal and 10% for PCI coals with a total moisture of 9% or less. The CHPP includes coarse, fine and ultrafine coal washing circuits. The Project will produce dewatered coal wastes and does not require a conventional tailings impoundment.
- The primary water source will be supplied from the Interim Sediment Pond for the first four years of the operation, and then the primary water source will be the mined out North Pit. There will be a backup water supply source from a pond in the Grave Creek catchment and will be pumped to the site facilities for use at the site. Potable water will be sourced from a well.
- A series of two sedimentation ponds are proposed for managing the combined run-off from the mine footprint and undisturbed ground as the mine development advances. These ponds will be placed downstream of the main mine rock dump and will be decommissioned and reconstructed through the mine life to accommodate the advancing mine rock placement. Sedimentation ponds were sized for two phases of mining: an interim pond for operations up to the end of year 4 (EOY 4) and an ultimate pond for the full mine footprint into post-closure.
- Maintenance, warehouse, office and dry complex to support the operation and personnel.
- A clean coal handling and rail loadout system will be built to convey product coal from the site via a 2.7 km overland conveyor system to a transfer bin where coal is then loaded on to highway legal trucks. The trucks will haul the coal on the upgraded Grave Creek Road to a rail loadout system with 2 x 25,000 ton capacity stockpiles to load the trains. Coal would be railed to one of the existing coal terminals on the west coast of British Columbia. Based on publicly available information, existing coal terminals will have sufficient uncontracted capacity for the estimated coal production from the Project.

Crown Mountain Coking Coal Project

Figure 1.2-2
Proposed Project Layout



LEGEND

- Project Footprint
- Channel to Ultimate Pond
- Clean Coal Haul Road\Site Access
- Explosive Storage Access\Facility Road
- Rail Loadout Road
- Rail Loop
- Service Corridor
- Coal Process Plant Conveyor
- Coal Process Plant Duct
- Train Loadout Conveyor
- Waste Dump
- Mined Area
- Clean Coal Stockpile and Truck Dump
- Overflow Coal Stockpile
- Soil Stockpile Area
- Explosive Storage Facility\Pad
- Loading Bin
- Plant Site\ROM Stockpile Area
- Powerline-Site Power
- Water Reservoir
- Main Sediment Pond
- Dam
- Spillway
- Diversion Ditch
- Clearing
- Additional Area
- Contingency Area
- Highway
- Arterial/Collector Road
- Local/Resource Road
- Railway
- Transmission Line
- Watercourse
- Waterbody
- Wetland
- British Columbia/Alberta Border

0 1 2
Kilometres

N W E S

Scale 1:50,000

Map Drawing Information:
Data Provided By NWP Coal Canada Ltd, Dillon Consulting Limited, Province of British Columbia GeoBC Open Data, Government of Alberta Open Data, Natural Resource Canada.
Imagery Provided By GeoBC OrthoImagery (Aug 2016).

Map Created By: RB
Map Checked By: LKD
Map Coordinate System: NAD 1983 UTM Zone 11N

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Status: FINAL
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Additional details of the Project activities, components, and scheduling are provided in Chapter 3, with Figures 3.7-2 to 3.7-8 demonstrating the progressive development of the Project.

1.2.1 Project Phases and Schedule

The Project will be developed and operated in the following broad phases:

- Pre-Development (including regulatory approvals, engineering design and Project financing);
- Construction and Pre-Production;
- Operations;
- Reclamation and Closure (noting progressive reclamation will commence in Year 2 of Operations); and
- Post-Closure.

Details of the aspects and activities of each phase are included in Table 1.2-2 and in Chapter 3.

Table 1.2-2: Project Phases, Timing, and Key Activities

Phase	Project Year	Length of Phase	Description of Activities
Construction and Pre-Production	Year 1 to Year 2	19 months	Construction of the following infrastructure: • Road upgrades • Coal Handling Process Plant (CHPP) • Run-of-Mine (ROM) stockpile • Grave Creek Reservoir • Water management and water management structures • Interim Sediment Pond • Office/Shop complex • Powerline • Natural gas line • Explosives factory • Overland conveyor • Rail loadout • Waste materials facility Other activities: • Clearing and grubbing of vegetation • Soil salvaging • Stockpiling of wood waste • Logging of merchantable timber • Quarrying for construction materials • Transportation along Highway 43, Line Creek Mine Road, Valley Road, and Grave Creek Road
Operations	Year 3 to Year 17	15 years	Production of: • 270 bank cubic metres (BCM) of waste • 57.5 million metric tonnes (Mt) of ROM coal • 26.3 Mt of clean coal • 31.2 Mt of plant rejects

Phase	Project Year	Length of Phase	Description of Activities
			Construction of: • Additional shop in Year 1 • Main Sediment Pond in Year 4 • Mine roads, as necessary Other activities: • Use of water from the Interim Sediment Pond, contact water from North Pit and as necessary backup reservoir at Grave Creek • Use of on-site facilities and equipment • Coal processing • Sewage treatment • Management of Main Sediment Pond discharge • Transportation along Highway 43, Line Creek Mine Road, Valley Road, and Grave Creek Road • Progressive reclamation
Reclamation and Closure	Year 17 to Year 19	2 years	Decommissioning of the following infrastructure: • CHPP • ROM Stockpile • Grave Creek Reservoir • Construction Water Management • Office/Shop Complex • Powerline • Natural Gas Line • Explosives Manufacturing Site Reclamation of the following infrastructure: • ROM Stockpile • Plant/Office Complex Pad • Pit and mine rock storage facility areas not reclaimed at end of mine life Other activities: • Reclamation, geotechnical, and aquatic effects monitoring and implementation of follow-up and monitoring programs • Management of the Main Sediment Pond discharge • Transportation along Highway 43, Line Creek Mine Road, Valley Road, and Grave Creek Road
Post-Closure	Year 19 through Year 34	15 years	Activities include: • Decommissioning of the Main Sediment Pond • Reclamation, geotechnical, and aquatic effects monitoring and implementation of follow-up and monitoring programs

1.2.2 Purpose of the Project

The purpose of the Project is to use best practice mining and environmental management methods to extract shallow steelmaking coal reserves at the site and to process and export premium low-volatile hard

coking coal in high demand by Asian steelmakers. The development of the Project provides an opportunity for the continuation of the existing steelmaking coal export industry from the Elk Valley with substantial employment generation and significant ongoing regional, provincial and national economic benefit. The Project will provide a positive economic return to shareholders and the economy whilst ensuring a far improved environmental outcome than that of historical and current coal production.

There is a significant ongoing demand for high quality hard coking coal by Asian steelmakers. Whilst there is an expected transition towards the decarbonisation of the global steel industry over the next thirty years, the transition from existing conventional blast furnace technology requiring coking coal will take many years. In particular, in Asia where more than [75%] of steel is produced in blast furnaces, the demand for coking coal is expected to continue to grow until at least 2050.

The supply of coking coal is under pressure with the depletion of reserves at existing operations in Australia, Canada, and the United States and increasing cost of production as existing mines get deeper or require increased processing or infrastructure cost. The substantial challenge for steelmakers and resource developers is to identify sources of quality coking coal which can be mined both cost effectively and with minimal disturbance on the environment.

The NWP Shareholders have close relationships with steelmakers and extensive experience in assessing potential steelmaking coal development projects in all key supplier basins. The Project site represents a unique location where the high quality hard coking coal formation is present in three discrete shallow outcrops which enable economic open-pit mining extraction with reduced disturbance and waste removal and management. The topography of the site enables the nearby dumping of mine rock and opportunities for accelerated reclamation to minimise the impact on local and regional flora and fauna. The self-contained catchment on the site provides an ability to completely contain, manage and treat any water discharge from the site ensuring that the Elk Valley river system is not further impacted by development of the Project.

1.2.3 Project Coordinates and Access

The Project is located approximately 30 km by road from Sparwood, B.C. and is accessible by several Forest Service Roads, including Grave Creek Road in the northwest and Alexander Creek Road from the south. The provincial border between B.C. and Alberta occurs approximately 5 km east of the Project. The federal border between B.C. and Montana is located approximately 90 km south of the Project.

The approximate centre of the Project (i.e., the coal licenses) is located at:

Latitude/Longitude	UTM (NAD 83 Zone 11N)
049° 46' 52" N / 114° 43' 34" W	663695m E 5516775m N

1.3 Project Location

1.3.1 Geographic Setting and Natural Features

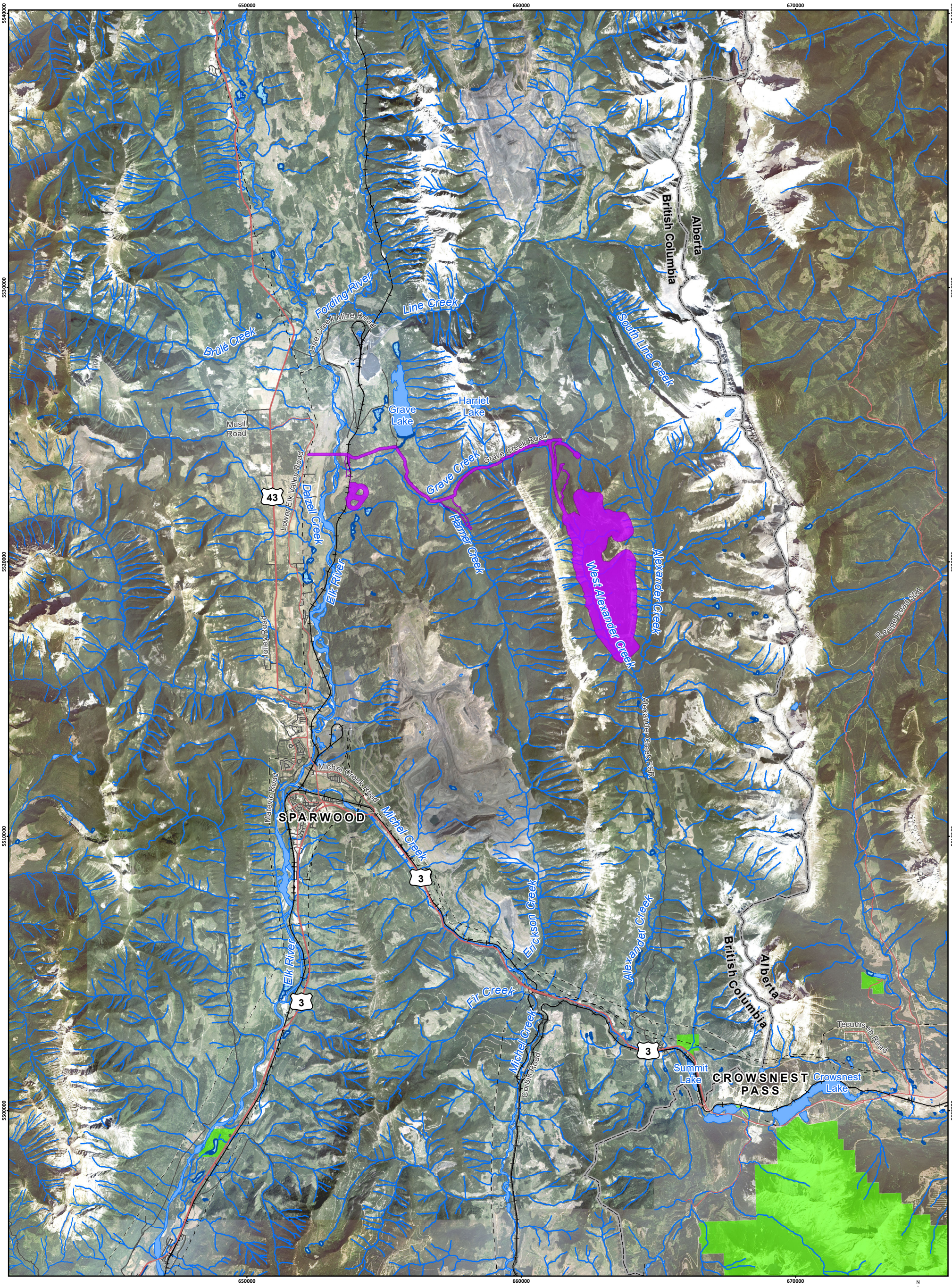
The proposed Project is located in the Front Ranges of the Rocky Mountains of B.C., in an area of the Elk Valley coal field with non-marine sediments of the Jurassic-Cretaceous Kootenay Group. This area is

characterized by numerous thrust faults, open to tight folds, and some normal faults. The high mountains of the area are composed of parallel ridge systems of resistant Paleozoic carbonates, separated by thrust faults of large displacement. Regionally, the Project lies within the Lewis Thrust sheet, between the Lewis Thrust and overlying Bourgeau Thrust. The relief on the Project property (i.e., the coal license tenures) generally ranges from 1,850 m to 2,200 m above sea level (m ASL). The area is characterized by rugged ridges with moderate to steep-sloping sides at higher elevations and gentle slopes at lower elevations. The west side of the Project is characterized by steep sided ridges and subdued mountains, while those on the east are rugged with many cirques and U-shaped valleys. The setting is truly mountainous, underlain mostly by structurally deformed sandstone, siltstone, mudstone, and coal.

The Project is situated over the dividing line of Upper Kootenay Basin and the Central Kootenay Basin hydrologic zones, which are characterized by low precipitation and dry summers, cold and dry winters, and low-to-moderate snow pack (Columbia Basin Trust, 2017). Air temperatures in the Project region are variable and influenced by various factors including elevation, latitude, and local topography. Existing air quality in the Project area is affected by natural air emissions (e.g., wind-blown dust, forest fires) and anthropogenic air emissions (e.g., existing coal mines, vehicular traffic, construction activities, residential heating, and winter road gritting). Other industrial activities that may affect local and regional air quality and greenhouse gas (GHG) emissions include pulp mills, sawmills, and several oil and gas facilities, in addition to prevalent agriculture and forestry practices.

Key watercourses in the area of the Project include the Elk River, Michel Creek, Alexander Creek, West Alexander Creek, Harmer Creek, Michel Creek, and Grave Creek (Figure 1.3-1). Waterbodies in the immediate vicinity include Grave Lake, Harriet Lake, Mite Lake, and Barren Lake. West Alexander Creek flows in a southerly direction joining with Alexander Creek immediately south of the Project. Alexander Creek continues to flow south before turning west at Highway 3 and subsequently joining Michel Creek. Michel Creek eventually discharges to the Elk River which flows generally southwest and discharges to Lake Koocanusa, a lake which partially occurs in the State of Montana. Grave Creek flows in a westerly direction from the upper extent of the Project area where it joins Harmer Creek flowing from the south. Harmer Creek eventually discharges to the Elk River. Historical and current mining activities in the Elk Valley have resulted in elevated concentrations of selenium, nitrate, sulphate, and cadmium in local watercourses, as well as calcite formation in some watercourses (Teck Resources Limited, 2014). Other sources of water quality impacts include local municipalities, agriculture, forestry, and deposition from natural and anthropogenic air emissions.

Fish species observed in the vicinity of the Project have included Westslope Cutthroat Trout (listed as Special Concern under Schedule 1 of the Species at Risk Act [SARA]), Bull Trout (provincially Blue-Listed), Eastern Brook Trout, Mountain Whitefish, and Rainbow Trout. Additional species observed regionally include Longnose Sucker, Longnose Dace, Torrent Sculpin, Burbot, Kokanee, Peamouth Chub, and Northern Pikeminnow. Distribution of Rainbow Trout, Burbot, Kokanee, Peamouth Chub, and Northern Pikeminnow is limited to downstream of Elko Dam on the Elk River and in Lake Koocanusa (Lotic Environmental, 2020).



Crown Mountain Coking Coal Project

Figure 1.3-1
Watercourses in the Project Area

LEGEND

- Watercourse
- Project Footprint
- Highway
- Arterial/Collector Road
- Local/Resource Road
- Railway
- Transmission Line
- Waterbody
- Wetland
- Provincial Park/Protected Area
- British Columbia/Alberta Border

Scale 1:130,000

Map Drawing Information:
Data Provided By NWP Coal Canada Ltd, Dillon Consulting Limited, Province of British Columbia GeoBC Open Data, Government of Alberta Open Data, Natural Resource Canada. Imagery Provided By Landsat 8 (Aug 2018), and GeoBC Ortho Imagery (Aug 2016).

Map Created By: RB
Map Checked By: LKD
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The Project area is characterized by old growth and mature forest, riparian habitat, avalanche chutes, and some grasslands and wetlands and predominately forested with the most common tree species being lodgepole pine, Engelmann spruce, alpine fir, and limber and jack pine. The Elk Valley has abundant and diverse vegetation, although human land-uses are prevalent on the landscape and many habitats have been modified (Elk Valley Cumulative Effects Management Framework Working Group [EV-CEMF Working Group], 2018). Historical and current mining, forestry, and agricultural activities in the Elk Valley have resulted in removal, fragmentation, and intensive modification of terrestrial ecosystems. Other sources of vegetation impacts in the Elk Valley include development of local municipalities, off-road vehicle use, intensive grazing (both by wildlife and livestock), loss of natural fire patterns, introduction of invasive plant species, natural and anthropogenic air emissions, and climate change.

The Elk Valley has long been known and appreciated for the abundance and diversity of wildlife which it supports. The Project area supports a variety of mammal, bird, amphibian, and invertebrate species, including several species of conservation concern such as grizzly bear, American badger, wolverine, bighorn sheep, mountain goat, multiple at-risk bat species, Barn Swallow, Common Nighthawk, Olive-Sided Flycatcher, western toad, and Gillette's checkerspot, among others. For a complete list of species of conservation concern with the potential to occur within the Project area, refer to Chapter 15, Section 15.1.1.3.

Further details on features of the natural environment, including relevant baseline studies, are described in Chapters 6 to 15.

1.3.2 Land Use

1.3.2.1 Historical Land Use

The Crowsnest Pass is a lower-elevation mountain pass in the Canadian Rockies and prior to the settlement and development of the area by European settlers, Indigenous peoples used this major breach through the Front Ranges for seasonal migrations and trade between mountain and plains cultures since time immemorial (Tourism Fernie, n.d.). Their life and movement across the land were timed to align with salmon runs, ungulate migrations and seasonal ripening of food and medicinal plants (Ignace, 1998). Hunting, trapping, and gathering of food resources and medicinal resources has been practiced by the area's Indigenous nations for over 4,000 years (Shuswap Indian Band, 2008).

Following settlement of the region, coal mining in the Elk Valley began in the late 1800s after the discovery of coal exposures along the Elk River (Kinnear, n.d.). The settlement of the Elk Valley associated with coal mining also resulted in an increase in logging to supply the mines and settlements with lumber, and eventually for export. As such, small-scale open pit mining and forestry were the mainstay of the area throughout the early 1900s. In the early 1940s, small-scale open pit mining began between Sparwood and the Crowsnest Pass (Scales, 2006), and large-scale coal mining began in the 1960s, becoming the largest producing coalfield in B.C. (Swain, 2007). When the coking coal market in Japan was developed by early 1970 there was enough demand to support starting open pit strip mining and five large mines in the Elk Valley were constructed in the 1970s which continue to operate to present day (EV-CEMF Working Group, 2018; Kinnear, n.d.). Between 1950 and 2015, the total coal mine footprint for the Elk Valley region increased from 25km^2 to 143km^2 (EV-CEMF Working Group, 2018). Since the early 1900s, forestry practices in the region have progressively moved upslope; beginning in valley bottoms and moving to forested slopes and higher elevations (Golder Associates Ltd [Golder], 2015a; Kortello et al., 2019).

Between 1913 and 1920, forestry cut blocks and forestry roads were primarily located along the valley bottoms of the Elk and Fording Rivers and Michel Creek (Golder, 2014 in Golder, 2015b), but have since expanded to include the Cummings, Coal, Alexander and Harmer creeks (Golder, 2015a).

Agriculture and ranching has also been an integrated part of the East Kootenay way of life since settlement of the region more than 100 years ago (VAST Resource Solutions Inc., 2014). With mining discoveries in western Canada, ranchers followed settlers, and the first herds were brought into the Kootenay's over the old pack trails (McCauley, 2000). Grazing leases are one of the oldest forms of land tenure in B.C., with the first leases issued in the 1860s (Ministry of Forests, Lands and Natural Resource Operations, 2016). Through the 1970s to the 1990s, the effects of diminished forage resources became prominent in the East Kootenay. As a result, remediation actions to maintain and restore grasslands were initiated in 1998 (Bond et al., 2013).

Tourism in the Elk Valley has grown over the last century, and both domestic and international tourism play a large role in economic development for the region (EV-CEMF Working Group, 2018). The mountainous landscape of the region provides an ideal location for both winter and summer tourism. Recreational developments like Fernie Alpine Resort helped establish the Elk Valley region as an adventure destination, growing in popularity over time. Heli-skiing, cat-skiing and snowmobiling in B.C.'s southern Rockies gained popularity in the 1960s and 1970s (Kootenay Rockies, 2021; British Columbia Snowmobile Federation, 2021).

1.3.2.2 Current Land Use

The Project occurs within the Regional District of East Kootenay (RDEK) and within the boundaries of the Kootenay Boundary Land Use Plan, the Elk Valley Official Community Plan (OCP), and the Alexander Creek and Grave Prairie Access Management Areas (AMAs; Figure 1.3-2). The RDEK covers approximately 28,000 km^2 of land in southeastern B.C. Within the vicinity of the Project, current land uses include: residential; recreational (e.g., hunting, all-terrain vehicle [ATV] trails, fishing, hiking, etc.); exploration; resource; industrial; rangeland; agriculture; forestry; and linear infrastructure. Additional information on land use and the assessment of effects on land use is provided in Chapter 19.

Economically, coal production is the largest industry in the Elk Valley and there are several proposed, operating, and non-operational coal mines in the region. Active coal mines in the vicinity of the Project include Teck's Elkview, Line Creek, Fording River, and Greenhills Operations. The coal mines in the area produced approximately 21 Mt of export quality steelmaking coal in 2020 (Teck Resources Limited, 2021a), making the Elk Valley coal field the most productive in the nation. According to the EV-CEMF (EV-CEMF, 2018), the total coal mine footprint in the Elk Valley has more than quadrupled since 1950 (from approximately 25 square kilometres [km^2] to 143 km^2).

An existing network of roads, railway, and bridges exists within and surrounding the Project (Figure 1.3-2). Two highways exist in the vicinity of the Project, the Crowsnest Highway (Highway 3), a major east-west highway, and the Elk Valley Highway (Highway 43), providing north-south connections between Sparwood and Elkford. A Canadian Pacific Railway (CP) rail line runs north-south along the Elk River, approximately 15 km west of the Project, and connects the Elk Valley coalfield to coal terminals near Vancouver, B.C. The main line of the CP line occurs adjacent to Highway 3 from Alberta to Sparwood and then trends south to Fernie before continuing to the ports on the west coast. A spur from this line extends to the north following the Elk Valley to service the Teck's Line Creek, Fording River, and Greenhills Operations.

HEIGHT OF THE ROCKIES PROVINCIAL PARK
UPPER ELK VALLEY - FORDING RIVER C AMA
UPPER ELK VALLEY - FORDING RIVER A AMA
UPPER ELK VALLEY - FORDING RIVER B AMA
CHAUNCEY TODHUNTER AMA
ELKFORD
WEIGERT CREEK AMA
GRAVE PRAIRIE AMA
PROJECT LOCATION
NORTH GALBRAITH AMA
ALEXANDER CREEK AMA
SPARWOOD
CROWSNEST PROVINCIAL PARK
ELK VALLEY PROVINCIAL PARK
CROWSNEST PASS
CORBIN CREEK AMA
POWER PLANT AMA
FERNIE
BARNES LAKE AMA
MOUNT FERNIE PROVINCIAL PARK
PICKERING HILLS AMA
MORRISSEY PROVINCIAL PARK
UPPER FLATHEAD AMA
WIGWAM FLATS AMA
EAST FLATHEAD AMA
Lake Koocanusa
White River
Elk River
Bull River
Fording River
Line Creek
Grave Creek
Alexander Creek
Erickson Creek
Michel Creek
Crowsnest River
Oldman River
Livingstone River
Castle
Carbondale River
West Castle River
Castle River
Flathead River
Lodgepole Creek
Brûlé Creek
532
43
3
3A
40
774
93
625000
650000
675000
700000
5575000
5550000
5525000
5500000
5475000

Crown Mountain Coking Coal Project

Figure 1.3-2
Land Use in the Vicinity of the Project

LEGEND

- Regional District of East Kootenay
- Old Growth Management Area
- Recreation Line

Land Use Designations

- Coal ERDZ (Dedicated)
- Deferred
- Enhanced Resource Development Zone
- Protected Area
- Private Land
- Integrated Resource Management
- Special Resource Management Zone
- Kootenay Boundary Land Use Plan
- Kootenay Boundary Higher Level Plan
- Southern Rocky Mountain
- Elk Valley Land Use Designation
- Elkford Official Community Plan Area
- Fernie Official Community Plan Area
- Sparwood Official Community Plan
- Elk Valley Official Community Plan Area
- Access Managment Areas
- Project Footprint
- Highway
- Railway
- Transmission Line
- Watercourse
- Waterbody
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- Provincial Park/Protected Area
- British Columbia/ Alberta Border

0 10 20 Kilometres

N W E S

Scale 1:350,000

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The Elk Valley is within the 1.24 million hectares of the Cranbrook Timber Supply Area (TSA), and the Rocky Mountain Forest District managed by B.C. Timber Sales. There are five sawmills that operate in the Cranbrook TSA. Pine, spruce, and Douglas-fir are the most harvested tree species. Currently, the Annual Allowable Cut for the Cranbrook TSA 808,000 cubic meters (British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Development [FLNRORD], 2017). Canadian Forest Products Ltd. (Canfor) is the main forestry company that operates within the area of the Project. No legal Old Growth Management Areas (OGMAs) are within the Project footprint. Within the vicinity of the Project, non-legal OGMAs occur locally and regionally and the Project overlaps within approximately 250 ha of non-legal OGMAs (FLNRORD, 2020a).

The RDEK spans 2,754,184 ha, with 264,339 ha (9.6%) in the Agriculture Land Reserve (ALR) (Statistics Canada, 2016). According to 2018 census data, 348 farms operated on 71,620 ha in the RDEK. The largest agricultural land base use is crop production (11.5 % of farmed area in RDEK), and the largest animal agriculture sector is beef cattle (3% share of B.C) and swine (2.7 % share of B.C.). Within the Elk Valley, 14,761 ha are designated as Agricultural Land Reserve, with 10,901 ha under private ownership, 1,624 ha under Crown ownership and the remaining 2,237 ha are not inventoried parcels (i.e., are less than one acre in size, are remote, Federal land, water or unsurveyed crown land) (B.C. Ministry of Agriculture, 2013). The Project transects 96.7 ha of ALR land.

A wide variety of recreation continues to be prevalent in the Elk Valley, with a growing number of tour guide operators and tourists attracted to the area from B.C., Alberta, and around the world. Tourism in the Elk Valley is largely concentrated in Fernie, a renowned destination for winter activities including downhill skiing with a growing summer visitor base. Fernie's tourism strategy plans to continue to capitalize on the natural attractions of the Elk Valley including skiing, hiking, fishing, golfing, and other outdoor and nature based activities. Hunting and trapping provide substantial recreation and subsistence opportunities for resident hunters and First Nations, and income for outfitters and guides. The Elk River Valley is intensively used as a recreational fishery, particularly the section of the Elk River between Sparwood and Elkford. Lakes located within the vicinity of the Project are used for recreational fishing and some are stocked according to the Freshwater Fisheries Society of B.C. (2020). Given the high fishing pressure in the area, the Elk River and its tributaries are designated as Classified Waters, including Alexander Creek which occurs east of the Project and within the coal licenses (FLNRORD, 2019). The Classified Waters designation indicates that a special angling license is required to fish the waters. Fishing is prohibited in Grave Creek (FLNRORD, 2019).

Within the Elk Valley, there is an extensive and interconnected network of local and regional trails used for hiking, running, crossing country skiing, and mountain biking. Near the Project, various trails, including the sections of the Elk Valley Trail and the Great Divide Trail occur. Motorized recreation (i.e., ATV and snowmobile) activities also occur on designated trails, gravel roads, access roads, and forestry roads in the area.

The Elk Valley region continues to be an important part of the traditional territories of local Indigenous groups. It is acknowledged that the ceremonial, traditional and spiritual practices of local Indigenous communities are tied to the environmental and ecological attributes of their lands which have provided sustenance since time immemorial. Today's continued use of ceremonial and sacred areas across the land are tied to those areas used by Indigenous ancestors (i.e., for both spiritual/cultural based sustenance and

resource based sustenance). Details on local Indigenous communities and territories are provided in Section 1.3.5.

1.3.2.3 Land Tenure

The East Kootenay region is characterized by resource extraction industries such as mining and forestry and the contrasting landscape, which provides features for nature-based tourism and recreation. As a result, land use within the region has a relatively high number of mining tenures and recreation opportunities. Within the regional area surrounding the Project, active forest tenures are held by several groups. Through the tenures, the Province grants the rights and outlines the conditions to harvest Crown timber. The active Forest Licenses are held by Canfor and Aq'am Resources Ltd. Partnership. The active Occupant License to Cut tenures are held by NWP, Teck, Resorts of the Canadian Rockies Inc., Fording Coal Ltd., and Pacific American Coal Ltd. The SB TSL S20 single mark tenures are held by Marvin Fraser, Canfor, Leonard Gudeit, Joseph Blackmore, Brandon Blackmore, and 489581 BC Ltd. Roberts Enterprises Ltd. holds two active Woodlot Licenses northwest of the Project footprint. In addition, the Nupqu Development Corporation, a natural resource management company owned by Ktunaxa Nation, holds all the Community Forest Agreements (Firelight Group et al., 2014; FLNRORD, 2020b).

CanWel owns approximately 55,000 ha of private managed forest land in the Elk Valley (Benoit et al., 2019). In addition, Canfor purchased the rights to harvest timber in Managed Forest 471 from Tembec. Managed Forest 471 includes the majority of surface tenure held by Teck within the Elk Valley. Under a Harvesting Rights Agreement with Teck, Canfor has the exclusive right to harvest, sell, process, or dispose of timber on Managed Forest 471 land (Golder, 2015a). Managed Forest 27 also overlaps with the Land Use and Access RSA (Golder, 2015a).

Forestry tenures and forestry tenure access roads also occur throughout the area. Canfor is also the primary forestry operator on Crown Land in the vicinity of the Project. Other licenses are operated by B.C. Timber Sales – Kootenay. Canfor's operating area tenure, A19040, covers the entirety of the Project footprint (FLNRORD, 2020c). Regionally, one (1) nature gas tenure (i.e., Flathead) and several oil and gas surface wells occur; however, none of the wells are currently active (Figure 1.3-3). The oil and gas surface wells are held by Alberta Energy Company, Border Oils, Calstan, Canadian, Canlin Energy Corporation, Chevron, Canadian Natural Resources Limited, ConocoPhillips, Encana Corporation, ECAOG, EVC, Exxon Mobil, Fording, Lorrnel, Norwest, PARA, SCE, Shell, Suncor, Symmetry, and Teck.

Trapline tenures and guided outfitter tenures occur throughout the Elk Valley (Figure 1.3-3). Registered traplines are licensed tenures issued by the Province of B.C. (B.C. Ministry of Sustainable Resource Development, 2003). The Project overlaps with four (4) trapline tenures, including tenures:

- TR0423T006;
- TR0423T010;
- TR0423T021; and
- TR0423T022.

Several other traplines surround the Project, including traplines tenures:

- TR0423T005;
- TR0423T009;
- TR0423T011;
- TR0423T012;
- TR0423T018;
- TR0423T020; and
- TR0423T023.

650000 700000

5550000

WMU 4-24

HEIGHT OF THE ROCKIES PROVINCIAL PARK

White River

TR0424T006

TR0423T016

TR0423T014

Elk River

WMU 4-23

TR0422T007
400873

ELKFORD

TR0423T018

TR0423T020

TR0423T013

Oldman River

Livingstone River

532

43

Fording River

Line Creek

TR0423T012

Brûlé Creek

TR0423T011

Grave Lake

TR0423T010

Grave Creek

PROJECT LOCATION

TR0423T009

TR0423T022

TR0423T006

TR0423T021

Alexander Creek

Erickson Creek

Bull River

400806

SPARWOOD

TR0423T008

TR0423T023

WMU 4-22

CROWSNEST PROVINCIAL PARK

40

TR0422T004

ELK VALLEY PROVINCIAL PARK

Michel Creek

CROWSNEST PASS

Crowsnest River

3A

400402

3

400877

TR0422T003

TR0423T017

Elk River

Castle

FERNIE

TR0423T024

TR0423T005

MOUNT FERNIE PROVINCIAL PARK

TR0423T004

Carbondale River

774

TR0422T001

TR0422T008

MORRISSEY PROVINCIAL PARK

TR0401T006

TR0402T004

TR0423T002

400863

TR0401T005

93

Flathead River

West Castle River

Castle River

Lodgepole Creek

Lake Koocanusa

TR0423T001

WMU 4-1

TR0402T005

TR0401T004

650000 700000

5500000

Crown Mountain Coking Coal Project

Figure 1.3-3
Land Tenure in the Vicinity of the Project

- Coal Tenure
- Mineral Tenure
- Placer Tenure
- Forest Tenure
- Trapline Area (TR0423T006)
- Guide Outfitter Area (400806)
- Wildlife Management Unit (WMU 4-23)
- Project Footprint
- Highway
- Railway
- Transmission Line
- Watercourse
- Waterbody
- Wetland
- Provincial Park/Protected Area
- British Columbia/ Alberta Border

0 7.5 15
Kilometres

N W E S

Scale 1:350,000

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The Elk River Guiding Company operates throughout the Land Use and Access RSA, specializing in guided fly fishing trips on the Elk River, Michel Creek, Fording River, and Flathead River as well as other waterbodies throughout the area (Elk River Guiding Company, n.d.). Other companies that operate on the Elk River include Fernie Wilderness Adventures, Kootenay Fly Shop and Guiding Company, Dave Brown Outfitters, Fly Fish the Elk, Freestone Fly Angler, St. Mary Angler Fishing, and Crowsnest Angler Fly Shop (Golder, 2015a; Tourism Fernie, n.d.). The main branch of the Alexander Creek is also used for angling, including guided trips for Cutthroat Trout with the Kootenay Fly Shop and Guiding Company and Dave Brown Outfitters. There are no active guide outfitter tenures that overlap with the Project.

As part of the Environmental Assessment Office (EAO) public comment period for the Project in May to June, 2016, the Elk Valley Mountaineers identified a land tenure at the base of Crown Mountain (EAO, 2016).

1.3.2.4 Land Capability

In B.C., ALR lands are areas with the greatest agricultural capability. Approximately 10% of the land in the RDEK is located within the Provincial ALR. Approximately one third of ALR land in RDEK is privately owned. The remaining two thirds is Crown land owned and managed for multiple purposes (e.g., wildlife, forestry, mining, etc.). In B.C., agricultural capability ratings and limitations are assessed through a classification system known as the Land Capability Classification for Agriculture in British Columbia (B.C. Ministry of Environment and B.C. Ministry of Agriculture and Food, 1983). The classification system describes seven land capability classes for agriculture (Classes 1 to 7). Land capability classes for the Project footprint were obtained from the province's Agricultural Capability Mapping database based on digitized maps dated from the 1960s to 1980s (B.C. Ministry of Agriculture, 2018).

Within the vicinity of the Project, ALR lands are concentrated north of Sparwood along the Elk River, and west of Grave Lake. The Project footprint transects 96.7 ha of an ALR land parcel. The land capability within the Project footprint ranges from Class 4 to Class 7 (B.C. Ministry of Agriculture, 2018). The majority of the proposed Project footprint is Class 7; land that has no capability for arable or sustained natural grazing. Small portions of land along the proposed Project haul roads, access roads, and rail loadout is Class 6, land that is non-arable but is capable of producing native and/or uncultivated perennial forage crops. Land along the service corridor between the clean coal haul road and the Elk River is Class 5, land that has limitations that restrict its capability to produce perennial forage crops or other specially adapted crops. Near the rail loadout loop, land capability is described as Class 4, indicating this area has limitations that require special management practices or several restrict the range of crops.

1.3.2.5 Regional and Local Land Use Plans and Zoning

There are several provincial and local land use and management plans as well as zoning bylaws in place within or near the Project. A summary of each plan is provided in Table 1.3-1. Additional details are discussed in Chapter 19.

The Project is located within the Regional District of East Kootenay and contains areas of Crown land subject to the Kootenay Boundary Land and Resource Management Plan (KBLUP; Kootenay Inter-Agency Management Committee [KIAMC], 1997). Approximately 74,000 km^2 of land is included within the KBLUP, which is subdivided into four land use designation categories identified as Resource Management Zones (RMZ). The land use designations indicate the general land and resource management intent for the area

and comparative emphasis of conservation-oriented land-uses to development-oriented land uses. The Project footprint is located within the Cranbrook RMZ and public lands designated as Coal Enhanced Resource Development Zone (ERDZ-Coal).

Table 1.3-1: Land Use Plans, Land Use Management Plan, and Zoning Applicable to the Project

Plan or Zoning Bylaw	Region	Summary of Plan or Zoning Bylaw
Kootenay/Boundary Land Use Plan Implementation Strategy, 1997	Kootenay Boundary Interagency Management Committee	Strategy provides strategic long-term direction to enhance security and certainty for private planning and investment in resource management. Also provides geographically-specific resource management guidelines for individual resource values (e.g., connectivity, grizzly bears, ungulate winter range, etc.). Strategy developed to contribute to environmental, social, and economic sustainability, reduce potential for disruptive land use conflicts and support a secure and certain basis for public and private planning as well as investment in resource development and community planning. The Project is located almost entirely within the Coal Enhanced Resource Development Zone (ERDZ-Coal). The ERDZ-Coal designation prioritizes coal resource use and activities, including exploration, development and production, where intensive coal mining and related activities are anticipated.
Kootenay-Boundary Higher Level Plan Order, 2002	Kootenay Boundary Interagency Management Committee	Established new resource management zones and objectives. Plan provides legal direction for identifying and defining old and mature seral forests. The objectives and guidelines outlined in the Kootenay-Boundary Higher Level Plan Order (2002) are not intended to impact the permitting of subsurface resource exploration and development. These objectives do not affect the operational plans for exploration, development, and production activities when authorized through the other legislation.
Southern Rocky Mountain Management Plan, 2003	Kootenay-Boundary	Sustainable management plan focused on southern portions of the Regional District of East Kootenay. This Plan was amended in 2010 to reflect the B.C. Government's decision to prohibit mining, oil and gas, and coal exploration and development in the Flathead River Watershed. The Project footprint does not overlap with this plan's designated area.
Elk Valley Official Community Plan (OCP) Bylaw No. 2532, 2014	Regional District of East Kootenay	The primary purpose of this OCP is to provide policy direction for the development of private land in the Elk Valley. It provides a long-range strategic planning document that identifies preferred future land use for the Elk Valley. The Project is situated on lands designated in the OCP as Rural Resource (RR), which allows uses such as resource extraction, green space and recreation, rural residential, and agricultural.

Plan or Zoning Bylaw	Region	Summary of Plan or Zoning Bylaw
Elk Valley Zoning Bylaw No. 829, 1990	Regional District of East Kootenay	The Project is currently situated on lands designated by the Zoning Bylaw No. 829 as RR Zone RR-60, which currently allows agricultural use, extraction of sand and gravel, and harvesting, transport and storage of forest resources, and wildland use (including cabins and backcountry commercial recreation lodges), amongst other uses. The Heavy Industrial Zone MG-2 permits mineral and hydrocarbon extraction.
Regional Sustainability Strategy, 2014	Regional District of East Kootenay	Establishes a long term vision for the region that reflects a commitment to balance, to diversity, to improve, and to seek out new opportunities for building upon the quality of life in East Kootenay.
Old Growth Management Areas (OGMAs)	Provincial	Old Growth Management Areas (OGMAs) are a mechanism to protect and attain old-growth forests and enhance biodiversity. The Kootenay Boundary Higher Order Plan (2002) provides legal direction for identifying and defining old and mature seral forests. This order outlines biodiversity emphasis targets for different seral stages by landscape unit and biogeoclimatic unit (B.C. Ministry of Sustainable Resource Development, 2002). Non-Legal OGMAs are spatially defined areas of old growth forest that are defined through operational planning or landscape unit planning processes. When preparing Forest Stewardship Plans, forest licensees are not required to follow OGMA direction and can choose to manage biodiversity targets through alternative methods.
Cranbrook West Recreation Management Strategy, 2005	Ministry of Sustainable Resource Management	Strategy for area north of Sparwood and provides the strategic-level direction on backcountry recreation. This plan does not consider industrial access.
Agricultural Land Reserve (ALR)	Agricultural Land Commission (ALC)	A provincial zone in which agriculture is recognized as a priority land use. Agriculture, farming, and other compatible land uses are permitted on these lands. Unless approved by the ALC, non-agricultural uses are restricted on these lands (ALC, 2014). ALR areas are primarily located along with Elk River, which runs north to south through Elkford, Sparwood and Fernie.
City of Fernie Official Community Plan Bylaw No. 2231, 2014	City of Fernie	This OCP focuses on land use and future growth opportunities for the municipality and states that 50% of Fernie's population base is tied to the coal mining industry; Fernie has goals to provide higher numbers of accommodation options for permanent and temporary coal mining workers; mining will likely maintain its position as a major component of the sub-regional economy; and identifies seven key areas to focus environmental protection and stewardship on: Environmentally Sensitive Areas, Wildlife Corridors, Aquatic Habitats and Water Quality, Air Quality, Urban Forest, Viewscapes, and Sand and Gravel Extraction.

Plan or Zoning Bylaw	Region	Summary of Plan or Zoning Bylaw
Fernie Alpine Resort Official Community Plan Bylaw No. 2363, 2012	Regional District of East Kootenay	Focuses on tourism resources but acknowledges coal mining as an important resource activity in the Elk Valley as a whole. Information regarding Ktunaxa Nation history and archaeological resources is also included.
Regional District of East Kootenay – Island Lake Lodge Official Community Plan Bylaw No. 2170, 2009	Regional District of East Kootenay	Focuses on tourism resources but acknowledges coal mining as an important resource activity in the Elk Valley as a whole. Information regarding Ktunaxa Nation history and archaeological resources is also included.
District of Elkford Official Community Plan Bylaw No. 710, 2010	District of Elkford	The OCP focuses on land use and development policies with a goal date of 2035. The OCP focuses on long term sustainability and includes plans to combat climate change and reduce greenhouse gas emissions. The plan also acknowledges a current economic reliance on coal mining and aims to increase tourism
District of Sparwood Official Community Plan Bylaw No. 1165, 1982	District of Sparwood	Includes a statement on Economic Development with the goal to support a diverse economy that provides a wide range of jobs and services to supplement the mining industry and acknowledges that mining is the primary economic driver in Sparwood.
District of Sparwood Water Smart Action Plan, 2010	District of Sparwood	The Water Smart Action Plan was created in association with the Columbia Basin Trust and serves as an internal operations document for local government. The plan includes a section on public stewardship and education regarding water consumption.
City of Fernie Water Smart Action Plan, 2010	City of Fernie	The Water Smart Action Plan was created in association with the Columbia Basin Trust and serves as an internal operations document for local government. The plan includes a section on public stewardship and education regarding water consumption.

Conservation, management, and wildlife inventory documents for the area include, but are not limited to:

- Water Monitoring and Climate Change in the Upper Columbia Basin – Summary of Current Status and Opportunities (Columbia Basin Trust, 2017);
- Elk Valley Cumulative Effects Assessment and Management Report (EV-CEMF Working Group, 2018);
- Alexander Creek Water Quality Monitoring Report, 2015 to 2017 (McPherson et al., 2018);
- Kootenay Remote Camera Wildlife Monitoring Project (Chow, 2019);
- Sparwood Beaver Wetland Site Report and Health Assessment (Walker and Millions, 2017);
- East Kootenay Bighorn Sheep Inventory January-February 2019 (Poole, 2019); and
- Aquatic Environment Synthesis Report (Windward Environmental et al., 2014).

Additional information on species-specific documents are provided in the Application/EIS.

1.3.2.6 Current and Reasonably Foreseeable Developments

Table 1.3-2 provides a summary of past, existing, and potential future projects that occur within the region. Some aspects of these projects may have a spatial or temporal linkage with the Project. Additional detail regarding projects and activities that are included in the cumulative effects assessment is provided in Chapter 5, Section 5.3.5. Figures 5.3-4, 5.3-5, and 5.3-6 of Chapter 5 show past, current, and reasonably foreseeable developments and activities in relation to the proposed Project.

Table 1.3-2: Past, Present, and Reasonably Foreseeable Developments

Project / Activity	Development Category	Project Life	Location	Proponent
Natural Resource Extraction – Mining (Past mining operations including Hosmer Wheeler Mine, Natal Ridge, Michel Creek, Sparwood Ridge, Balmer, and J-Area (Sparwood Operations)	Certain (Past)	Various	Various	Various
Coal Mountain Operations	Certain (Present)	1905 to 2019	15 km southeast of Sparwood, B.C.	Teck Coal Limited
Elkview Operations	Certain (Present)	1969-present	3 km east of Sparwood, B.C.	Teck Coal Limited
Line Creek Operations	Certain (Present)	1981-present	25 km north of Sparwood, B.C.	Teck Coal Limited
Fording River Operations	Certain (Present)	1972-present	29 km northeast of Elkford, B.C.	Teck Coal Limited
Greenhills Operations	Certain (Present)	1983-present	8 km northeast of Elkford, B.C.	80% Teck Resources Limited (80%) and POSCO Canada Limited (20%)
Kootenay West Mine	Certain (Present)	2019-present	12 km northeast of Canal Flats, B.C.	CertainTeed Gypsum Canada Inc.
Elkhorn Quarry West (Windermere Mining Operations)	Certain (Present)	1982-present	Windermere, B.C.	CertainTeed Gypsum Canada Inc.
Energy - Elko Dam	Certain (Present)	1924-present	16 km upriver from the Elk's confluence with Lake Koocanusa	B.C. Hydro
Koocanusa Reservoir	Certain (Present)	1973-present	B.C. / Montana Border	United States Army Corps of Engineers (USACE) (i.e., Libby Dam)

Project / Activity	Development Category	Project Life	Location	Proponent
Marten Phosphate Project	Certain (Present)	2014-present	Michel Creek watershed	Fertoz International Inc.
Michel Coal Project	Reasonably Foreseeable Future	Proposed	15 km southeast of Sparwood, B.C.	North Coal Ltd.
Grassy Mountain Coal Project	Reasonably Foreseeable Future	Proposed	7 km north of Blairmore, Alberta	Benga Mining Limited
Tent Mountain Mine	Reasonably Foreseeable Future	Proposed	Crowsnest Pass	Montem Resources
Fording River Extension Project	Reasonably Foreseeable Future	Proposed	South of Fording River Operations	Teck Coal Limited
Bingay Main Project	Reasonably Foreseeable Future	Proposed	21 km north of Elkford, B.C.	Centermount Coal Limited
Elan Hard Coking Coal Project	Reasonably Foreseeable Future	Proposed	Crowsnest Pass	Atrum Coal Ltd.
Climate Change	Reasonably Foreseeable Future	Ongoing	Regional/Global	Various
Forestry	Certain (Past and Present) and Reasonably Foreseeable Future	Ongoing	Regional	Various
Natural Processes or Events	Certain (Past and Present) and Reasonably Foreseeable Future	Ongoing	Regional	Various
Energy - Pipelines	Certain (Past and Present)	Ongoing	Regional	Various
Energy - Electrical Transmission	Certain (Past and Present)	Ongoing	Regional	B.C. Hydro
Transportation	Certain (Past and Present)	Ongoing	Regional	Various
Recreation and Tourism	Certain (Past and Present)	Ongoing	Regional	Various
Commercial, Residential, and Industrial Use	Certain (Past and Present)	Ongoing	Regional Communities	Various
Parks and Protected Areas	Certain (Past and Present)	Ongoing	Regional	Various
Agriculture	Certain (Past and Present)	Ongoing	Regional	Various

1.3.3 Federal Lands

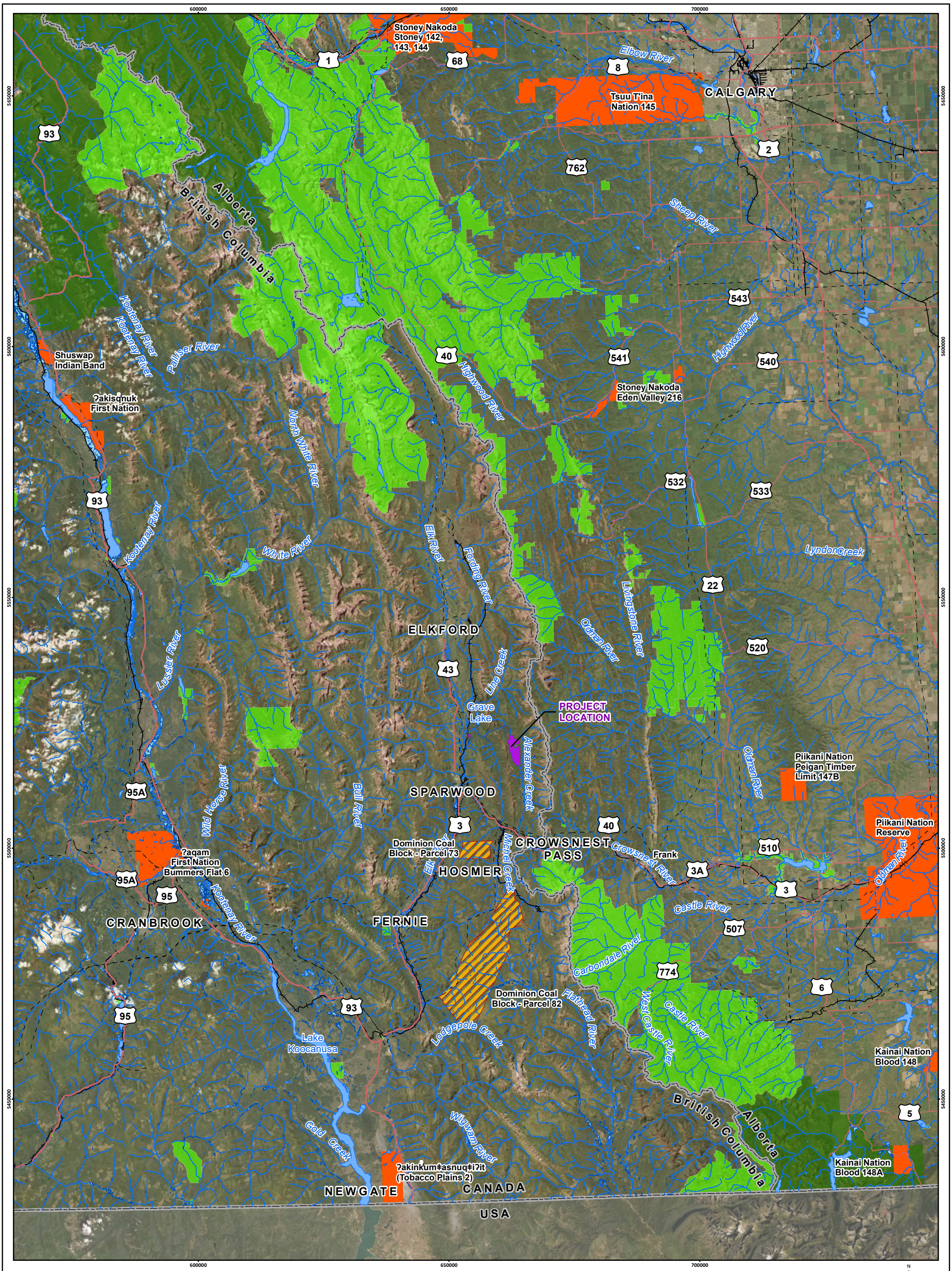
The nearest federal lands to the proposed Project are the ?aq'am First Nation Bummer's Flat 1 Reserve (approximately 69 km southwest), Stoney Nakoda Edan Valley 216 Reserve (approximately 70 km northeast), Tobacco Plains 2 (approximately 80 south), Piikani Nation Peigan Timber Limit 147B (approximately 52 km east in Alberta), and Parcels 73 and 82 of the Dominion Coal Blocks (approximately 20 and 40 km southwest, respectively; Figure 1.3-4). Federal land is not required to facilitate the Project and the Project does not overlap with any federal land.

1.3.4 Environmentally Sensitive Areas

The Project is not located within any nationally or provincially-designated parks, protected areas, or regional parks. Provincial parks (Crowsnest Provincial Park and Elk Valley Park), a forest recreation site, and range tenures, all considered provincial Crown Land, occur near the Project; however, none overlap with the Project footprint. Additional details of regional and local environmentally sensitive areas are provided below.

Environmentally sensitive areas (ESAs) proximate to the Project include wetlands, sensitive ecosystems, and protected lands (e.g., administered, non-administered, and privately held conservation lands). No provincial Sensitive Ecosystems Inventory projects have been completed in East Kootenay region to date. Wetland and flood ecosystems are abundant and extensive along the major river valleys of the East Kootenay, including the Columbia, Kootenay, and Elk Rivers. Beyond these valley bottom floodplains, wetlands are small and uncommon, but provide important landscape variability that influences biodiversity and stability. Wetlands may occur in the shallows of small lakes and along seepage areas on slopes or saturated areas in flat areas or depression. Several small wetlands occurring within and surrounding the Project. Wetlands north and south of the Project contain provincially-listed site associations, including but not limited to the Red-listed Ga02$ Nuttall's alkaligrass – foxtail barley (seral) Alkaline/Saline Meadow (Puccinellia nuttalliana - Hordeum jubatum (seral) Alkaline/Saline Meadow) and the Blue-listed Wm05 Common Cattail Marsh (Typha latifolia Marsh). The provincially Red-listed ecosystem Gg12 Rough Fescue – Bluebunch Wheatgrass – Yarrow – Clad Lichens (Festuca campestris - (Pseudoroegneria spicata) - Achillea borealis - Cladonia spp.) occurs near the proposed Project rail loadout and rail loadout access road. Additional information regarding provincially-listed wetlands and other sensitive ecosystems in the vicinity of the Project is provided in Chapter 13.

Species listed as Endangered under SARA (2002) that have the potential to occur in the region and around the Project including American Badger, little brown myotis, northern myotis, Williamson's Sapsucker subsp. nataliae, and whitebark pine. Whitebark pine critical habitat (including recovery/regeneration habitat) occurs within and around the Project footprint. Additional information on species at risk is provided in Chapter 14 and Chapter 15. Westslope Cutthroat Trout, listed as Special Concern under SARA (2002), occur in several watercourses within the Elk Valley near the Project, including the Elk River, Michel Creek, Alexander Creek, and West Alexander Creek. Other wildlife species listed as Threatened or Special Concern under SARA (2002) are presented in Chapter 15.



Crown Mountain Coking Coal Project

Figure 1.3-4
Federal Lands near the Project

LEGEND

- Dominion Coal Blocks
- First Nation Reserve Lands
- Project Footprint
- Highway
- Railway
- Transmission Line
- Watercourse
- Waterbody
- Wetland
- Provincial Park/Protected Area
- National Park
- British Columbia/Alberta Border

0 15 30
Kilometres

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Scale 1:700,000

Map Drawing Information:
Data Provided By NWP Coal Canada Ltd, Dillon Consulting Limited, Province of British Columbia GeoBC Open Data, Government of Alberta Open Data, Natural Resource Canada. Imagery Provided By ESRI.

Map Created By: RB
Map Checked By: LKD
Map Coordinate System: NAD 1983 UTM Zone 11N

NWP Coal Canada Ltd

Project: 12-6231
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1.3.4.1 Parks and Protected Areas

Various provincial parks, regional parks, forest recreation sites, and range tenures (Figure 1.3-5) occur in the Elk Valley and RDEK. Parks and protected areas within RDEK are largely characterized by the Kootenay Rockies and the Elk Valley River, which provide opportunities for recreation to land users. There are seven (7) provincial parks in RDEK covering a total of area of 44,240 ha. These parks and their distance from the Project include:

1. Height of the Rockies Provincial Park (approximately 45 km north);
2. Elk Lakes Provincial Park (approximately 59 km north);
3. Crowsnest Provincial Park (approximately 14 km south);
4. Elk Valley Provincial Park (approximately 22 km southwest);
5. Mount Fernie Provincial Park (approximately 41 km southwest);
6. Morrissey Provincial Park (approximately 48 km southwest); and
7. Akamina – Kishinena Provincial Park (approximately 82 km southeast).

Other areas of interest include RDEK's Elk Valley Regional Park located along Highway 43 between Sparwood and Elkford (approximately 8 km north) and the Elk Valley Heritage Conservation Area along the Elk River near Fernie (approximately 13 km south; Figure 1.3-5).

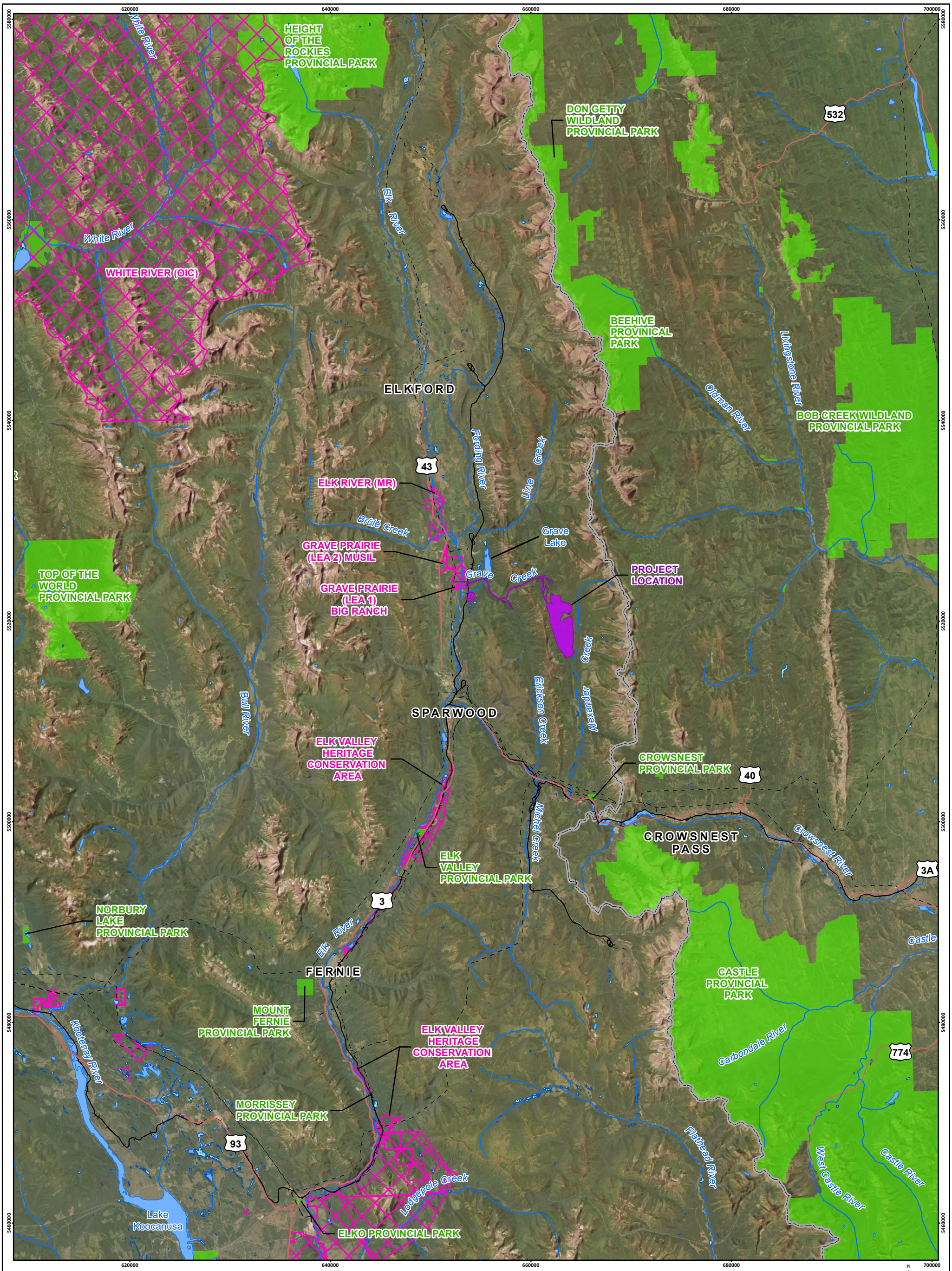
Conservation areas within the vicinity of the Project include the Big Ranch Conservation Area, located near Grave Prairie, and the Elk River Conservation Lands. The Big Ranch Conservation Area and the Elk River Conservation Lands are provincially designated conservation lands (i.e., acquired or secured through various legal tools and agreements). In addition to these protected lands, there are also privately held conservation lands near Grave Prairie and Alexander Creek, which are managed and controlled by the private landowner and partners. See Chapter 19 for additional information.

In 2013, Teck purchased land in the Alexander Creek and Grave Creek watersheds. In January 2021, the Ktunaxa Nation and Teck announced the signing of a confidential Joint Management Agreement to manage the lands for conservation purposes protecting significant fish and wildlife habitat (Teck Resources Limited, 2021b).

1.3.4.2 Managed Wildlife Habitat and Habitat Features

Wildlife habitats with associated development guidelines and/or management objectives within the East Kootenay include ecosystems sensitive to disturbance and habitats containing high values to wildlife.

Designated high-quality habitats are areas that contain recognized valuable (i.e., limiting) resources for wildlife species and are important for population viability and include Ungulate Winter Ranges (UWRs), ungulate mineral licks, Wildlife Habitat Areas (WHAs), and Wildlife Management Units (WMUs), AMAs, and Wildlife Habitat Features (WHF). The Project is located within the intermediate and low biodiversity emphasis options of the Cranbrook RMZ and is not within the mapped grizzly bear habitat and connectivity corridors (KIAMC, 1997).



Crown Mountain Coking Coal Project

Figure 1.3-5
Parks and Protected Areas

- Provincial Park/Protected Area
- Conservation Land
- Project Footprint
- Highway
- Railway
- Transmission Line
- Watercourse
- Waterbody
- Wetland
- British Columbia/ Alberta Border

0 10 20 Kilometres

N W E S

Scale 1:350,000

Map Drawing Information:
Data Provided By NWP Coal Canada Ltd, Dillon Consulting Limited, Province of British Columbia GeoBC Open Data, Government of Alberta Open Data, Natural Resource Canada.

Map Created By: RB
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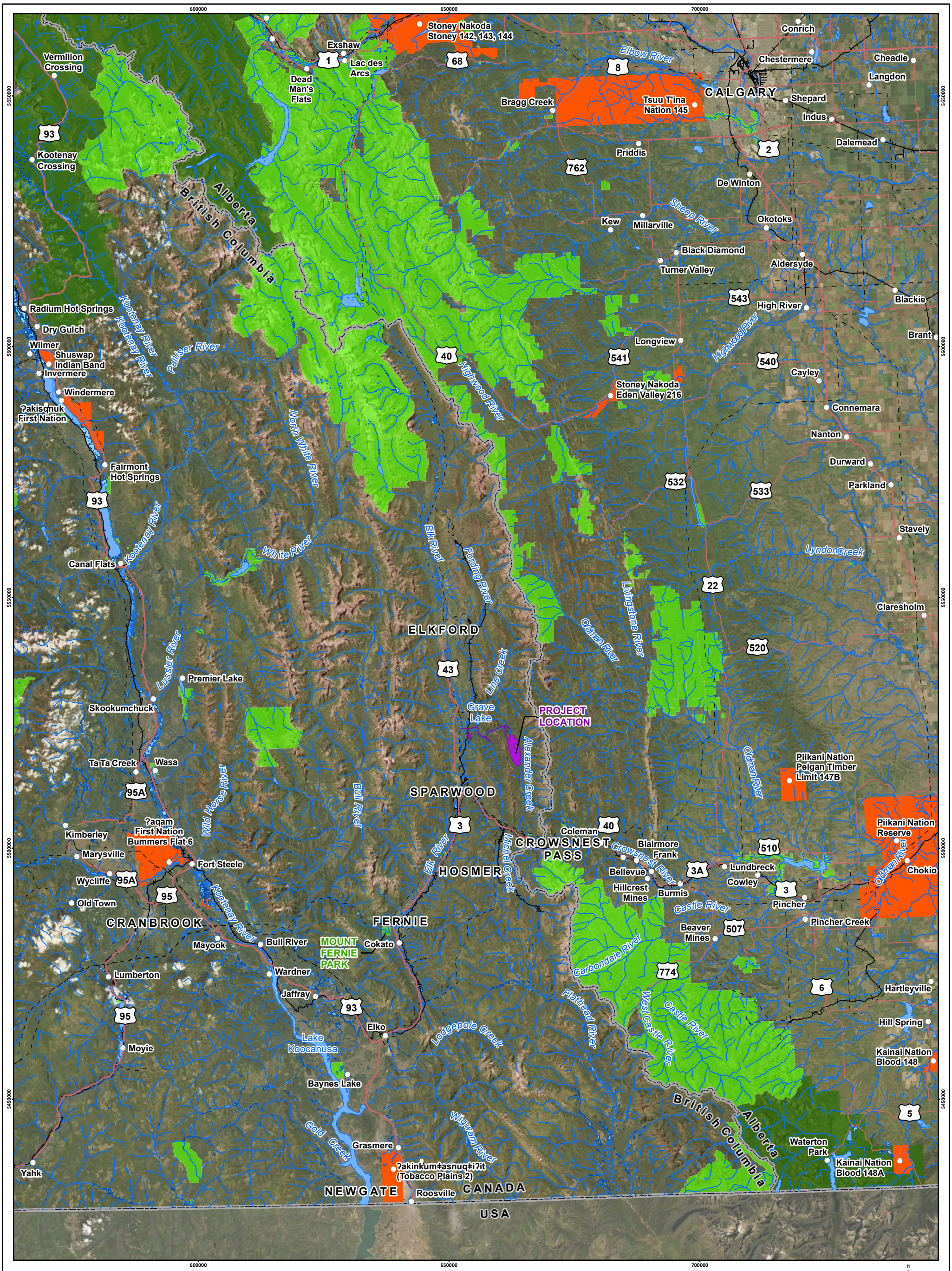
As a result of the rapid expansion of the resource road network and the increasing popularity of motorized recreation, there has been a dramatic growth in the public use of forests and forest lands in the East Kootenay region. The Motor Vehicle Prohibition Regulation of the provincial Wildlife Act prohibits or restricts motor vehicle use on B.C. Crown land. The Motor Vehicle Prohibitions (MVP) under the Motor Vehicle Prohibition Regulation are used to protect habitat, reduce wildlife disturbance, and provide areas of use without motorized vehicles. Under the Wildlife Act, Motor Vehicle Closed Area, formally referred to as Access Management Areas (AMAs), prohibit the use or operation of vehicles. There are two Motor Vehicle Closed Areas that overlap with the Project, the Grave Prairie Motor Vehicle Closed Area and the Alexander Creek Motor Vehicle Closed Area. Given the change of the AMAs to Motor Vehicle Closed Area in late 2021, the majority of the Application/EIS still refers to these areas as AMAs.

1.3.5 Local Communities

Local communities proximate to the Project include the District of Sparwood, the community of Hosmer, the City of Fernie, the Municipality of Crowsnest Pass, and the District of Elkford (Figure 1.3-6). With the exception of the Municipality of Crowsnest Pass in Alberta, the local communities occur within the RDEK. The RDEK functions as a partnership of the municipalities and electoral areas (unincorporated areas) within its boundaries. The Project is located in an area only accessible by forest service roads.

Local Indigenous Communities to the Project include ?aq'am First Nation Bummer's Flat 1 Reserve (approximately 69 km southwest), Stoney Nakoda Edan Valley 216 Reserve (approximately 70 km northeast), Tobacco Plains 2 (approximately 80 south), and Piikani Nation Peigan Timber Limit 147B (approximately 52 km east in Alberta; Figure 1.3-4).

The lands of B.C. have been used by Indigenous Communities and peoples for traditional land and resource uses since time immemorial. As identified by the IAAC (IAAC, 2015a; IAAC, 2015b; IAAC, 2015c; IAAC, 2015d; IAAC, 2020a; IAAC, 2020b), the Project falls within the asserted traditional territories of the members nations of the Ktunaxa Nation (?akisq'nuk, yaqan nuykiy, ?aq'am, and Tobacco Plains Band), Shuswap Indian Band, the Kainai, Piikani Nation, and Siksika Nation. The Stoney Nakoda (Chiniki, Bearspaw, and Wesley First Nations), has asserted a Land Claim Area which extends into B.C., outside of Treaty 7 territory where this additional land claim area overlaps with the Project footprint as identified by IAAC (IAAC, 2015c). The Project is located adjacent to the traditional territories of the Tsuut'ina Nation (IAAC, 2021a). The Elk Valley Métis Nation (EVM Nation) is the closest Métis group to the Project footprint and a Chartered Community within the Métis Nation of British Columbia (MNBC). As determined by IAAC, EVMN and MNBC citizens in the region from adjacent chartered communities may be exercising their potential rights within the Project footprint (IAAC, 2015c). The Métis Nation of Alberta – Region 3 are determined by IAAC to be potentially impacted by the Project as rights-bearing Métis communities are best considered as regional in nature, as opposed to settlement-based (IAAC, 2021c). Details regarding the asserted traditional territories of these Indigenous groups is provided in Chapters 23 through 31.



Crown Mountain Coking Coal Project

Figure 1.3-6
Local Communities

LEGEND

- City/Town/Village
- First Nation Reserve Lands
- Project Footprint
- Highway
- Railway
- Transmission Line
- Watercourse
- Waterbody
- Wetland
- Provincial Park/Protected Area
- National Park
- British Columbia/Alberta Border

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Specific to the Ktunaxa Nation, the Project falls within the Ktunaxa Nation and the Ktunaxa Kinbasket Statement of Intent Boundary, indicating the extent of asserted traditional territory used by the Ktunaxa Nation in B.C. The Ktunaxa Nations maintain underlying sovereign and sui generis title[3] to all lands and waters within their territories, including the Elk Valley and the Project footprint. The Ktunaxa Nation currently consists of four member Bands in B.C. and two Bands in the United States, covering approximately 70,000 km^2 of Ktunaxa historical traditional territory (Ktunaxa Nation, 2014). Ktunaxa member groups located in B.C. include:

- The ʔakisq nuk First Nation;
- The ʔaq am – St. Mary's First Nation;
- The yaqan nukiy – Lower Kootenay Band; and
- The Tobacco Plains Indian Band.

The Ktunaxa Kinbasket Treaty Council is the treaty that is pertinent to the EA and is currently in Stage 5: Negotiations, where the table is transitioning through the Ktunaxa Nation Rights Recognition & Core Treaty Memorandum of Understanding (BC Treaty Commission, 2022).

The Stoney Nakoda Nations, the Kainai, Piikani Nation, Siksika Nation, and the Tsuut'ina Nation are the Treaty 7 signatories potentially impacted by the Project (IAAC, 2020a, b; 2021a, b). In addition to their Treaty 7 rights, the Kainai, Piikani Nation, and Siksika Nation's asserted territory consists of the traditional homeland of the Blackfoot peoples (the Blackfoot Confederacy) which includes the exercise of their Aboriginal rights across the ancestral homeland of the Blackfoot peoples (IAAC, 2020a, IAAC, 2020b; IAAC, 2021b).

The Section 11 Order issued for the Project details Indigenous consultation requirements during the Pre-Application/EIS phase. The Section 11 Order includes Schedules B and C, which specifically name the Indigenous groups requiring consultation, with additional guidance provided in the April 26, 2018 AIR document. The EAO varied the procedural order for the EA with the issuance of a Section 13 Order on October 30, 2020. The change amended the Section 11 Order to add additional Indigenous groups. Additionally, CEAA provided guidance on February 20, 2015 via the EIS Guidelines, with further direction provided by IAAC on March 16, 2020. Indigenous communities/groups engaged for the Project are summarized in Table 1.3-3. Information (e.g., governance, land use, etc.) regarding each of the communities is provided in Chapters 23 through 31.

Table 1.3-3: Summary of Indigenous Communities Engaged for the Crown Mountain Coking Coal Project

Indigenous Community/Group	Provincial and/or Federal Guidance
Ktunaxa Nation Council • St. Mary's Indian Band • Lower Kootenay Indian Band • Tobacco Plains Indian Band • Akisq'nuk First Nation	• Section 11 Order - Schedule B (May 27, 2015) • EIS Guidelines (February 20, 2015)

3 In Canadian law, Aboriginal title is sui generis (meaning of its own kind or unique), in that the land title originates in an Indigenous group's occupation of its ancestral lands prior to the European assertion of sovereignty. As such, it is different from other forms of property rights because it is a communal right belonging to specific Indigenous communities. In that regard, Aboriginal title may not be sold or purchased by individuals; it may only be voluntarily surrendered to the Crown by an Indigenous community through agreements such as treaties. It includes both surface and subsurface resources, such as mineral rights and oil and gas developments (Irwin, 2018).

Indigenous Community/Group	Provincial and/or Federal Guidance
Shuswap Indian Band	• Section 11 Order - Schedule C (May 27, 2015) • EIS Guidelines (February 20, 2015)
Kainai First Nation (Blood Tribe)	• Section 13 Order (October 30, 2020) - additions to Schedule C of the Section 11 Order • IAAC revised list of Indigenous Groups (March 16, 2020)
Piikani Nation	• Section 13 Order (October 30, 2020) - additions to Schedule C of the Section 11 Order • IAAC revised list of Indigenous Groups (March 16, 2020)
Stoney Nakoda First Nations • Bearspaw First Nation • Chiniki First Nation • Wesley First Nation	• Section 13 Order (October 30, 2020) - additions to Schedule C of the Section 11 Order • IAAC revised list of Indigenous Groups (March 16, 2020) • EIS Guidelines (February 20, 2015)
Métis Nation of Alberta, Region 3	• IAAC revised list of Indigenous Groups (March 16, 2020)
Métis Nation of British Columbia	• EIS Guidelines (February 20, 2015)
Siksika Nation	• IAAC revised list of Indigenous Groups (March 16, 2020) • Section 13 Order (October 30, 2020) - additions to Schedule C of the Section 11 Order
Tsuut'ina Nation	• IAAC revised list of Indigenous Groups (March 16, 2020)

1.4 Regulatory Framework

1.4.1 Scope of the Assessment

The proposed Project is subject to an EA under both the Canadian Environmental Assessment Act (2012) and the EAA (2018).

The Project is subject to a coordinated federal-provincial EA process conducted under the principles of the Canada–British Columbia Agreement for Environmental Assessment Cooperation (the Agreement). Under the Agreement, federal and provincial jurisdictions work together on impact assessments for projects that require both a federal and a provincial assessment to increase efficiency and certainty and achieve quality assessments.

1.4.1.1 Federal Scope of the Project

The construction, operation, decommissioning, and abandonment of a coal mine with a production capacity of more than 3,000 tonnes per day (tpd) is considered a Designated Project pursuant to the Regulation Designating Physical Activities (SOR/2012-147) under the Canadian Environmental Assessment Act (2012). The anticipated production capacity of the Project is up to 4.0 M ROMt per annum (approximately 10,150 tpd) for 15 years. The Project is therefore considered a Designated Project under the Canadian Environmental Assessment Act (2012). The Project can be viewed on the Canadian Impact Assessment Registry at: https://iaac-aeic.gc.ca/050/evaluations/proj/80087.

Pursuant to Section 15(d) of the Canadian Environmental Assessment Act (2012), the Impact Assessment Agency of Canada, formally CEAA, is the authority responsible for federal review of this proposed Project. CEAA issued the final Guidelines for the Preparation of an Environmental Impact Statement for the Crown Mountain Coking Coal Project on February 20, 2015 for the preparation of an EIS.

The Canadian Environmental Assessment Act (2012) was repealed by the Impact Assessment Act (IAA; 2019) in 2019. As per subsection 181(1) of the IAA (2019) the environmental assessment process for the Project was continued under Canadian Environmental Assessment Act (2012).

1.4.1.2 Provincial Scope of the Project

A new coal mine with a production capacity of greater than 250,000 tonnes per year of clean coal or raw coal or a combination of both clean coal and raw coal is considered a Reviewable Project pursuant to the Reviewable Projects Regulation (B.C. Reg. 370/2002) under EAA the (2002). The Project is therefore considered a Review Project under the EAA (2002). The Application/EIS has been developed pursuant to the Application Information Requirements (AIR) approved by EAO and complies with relevant instructions provided in the section 11 Order and any other direction provided by EAO. The Project can be viewed on the EAO EPIC at: https://projects.eao.gov.bc.ca/p/588511f9aaecd9001b828bf0/project-details.

Pursuant to Section 2(2) of the EAA (2002), the EAO is the authority responsible for provincial review of this proposed Project. NWP submitted the Final AIR to the EAO on April 26, 2018. The EAA (2002) was repealed by the EAA (2018) in 2019. As per subsection 78(6) of the EAA (2018), the EA process for the Project was continued under the 2002 Act. On May 3, 2023, the Project was transitioned to the EAA (2018) through a Transition Order under Section 78(7) of the 2018 Act.

1.4.1.3 Environmental Assessment Process Overview

As described in Section 1.4, the proposed Project requires approval under the federal Canadian Environmental Assessment Act (2012) and the provincial EAA (2018). Figure 1.4-1 provides an illustration of the general approach used to complete the Application/EIS of the proposed Project and follows the general principles and specific guidance of environmental assessment and federal and provincial regulators, respectively.

The purpose of this Application/EIS is to obtain regulatory approvals to construct and maintain the proposed Project. To satisfy regulatory requirements, the Application/EIS:

- Identifies the scope of the Project and the assessment;
- Describes the proposed Project and environmental setting (biophysical, socio-economic and Indigenous peoples components);
- Identifies, assesses, and mitigates potential adverse environmental effects; and
- Evaluates the significance of any residual environmental effects.

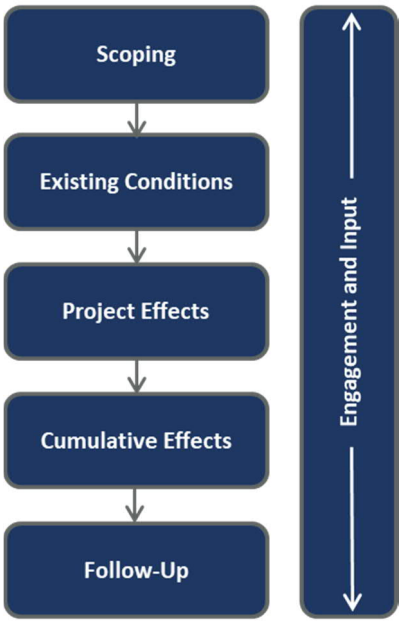

Figure 1.4-1: Summary of the Environmental Assessment Approach for the Project

The Application/EIS outlines the program implemented for engagement of Indigenous communities and stakeholders and provides an analysis of feedback received. Effects of accidents and malfunctions, effects of the environment on the Project, and cumulative environmental effects are also discussed in this Application/EIS. Details of the methods used to identify and assess the potential effects of the Project are provided in Chapter 5.

1.4.2 Applicable Permits and Approvals

In addition to the federal and provincial environmental assessment processes, the Project will require a variety of permits and approvals from federal and provincial agencies for the construction, operation, and closure of the Project as well as regional and local permits that may be required. Sections 1.4.2.1 and 1.4.2.2 outline the relevant federal and provincial permits and approvals that will be required for the Project, respectively, and Section 1.4.2.3 presents regional and local permitting considerations.

At this time, NWP is not pursuing concurrent permitting under the Concurrent Approval Regulation (BC Reg. 371/2002).

1.4.2.1 Federal Authorizations

A list of potential federal authorizations, licenses, and permits that are anticipated to be required to develop the Project is provided in Table 1.4-1. All required federal authorizations will be secured prior to construction of the proposed Project.

Table 1.4-1: Applicable Federal Permitting and Approval Requirements

Permit or Approval Required	Enabling Legislation	Regulatory Authority	Applicable Project Activity or Component
Canadian Environmental Assessment Act Decision Statement	Canadian Environmental Assessment Act, 2012	Impact Assessment Agency of Canada	Decision statement on whether the proposed project is likely to cause significant adverse environmental effects. It includes conditions, consisting of mitigation measures, and a follow-up program that the proponent must fulfil to proceed with the project.
Fisheries Act Authorization	Fisheries Act, 1985	Fisheries and Oceans Canada	Authorization under Section 35(2) of the Fisheries Act for harmful alteration, disruption, or destruction (HADD) of fish habitat.
Factory License	Explosives Act, 1985	Natural Resources Canada	License required for the on-site explosive manufacture
International River Improvements Act Notification	International River Improvements Act, 1985	Environment and Climate Change Canada	A notification under the International River Improvements Act may be required as the Project is located within the watershed of Lake Koocanusa. As specified under Section 3(1)(a) of the International River Improvements Regulations, an international river improvement is excepted from the operation of the Act if: the improvement has or will have in its operation an effect of less than 3 cm on the level or less than 0.3 m^3/s on the flow of water at the Canadian boundary. NWP shall notify and provide the Minister of Environment in writing with the information referred to in paragraphs 6(a) to (e) of the Regulation if applicable.
Magazine License	Explosives Act, 1985	Natural Resources Canada	License for the storage of explosive products
Migratory Bird Permit	Migratory Birds Convention Act, 1994	Environment and Climate Change Canada	Permit for vegetation clearing during migratory bird nesting season.
Species at Risk Act Permit	Species at Risk Act, 2002	Environment and Climate Change Canada	Permits required for activities that may affect a listed species or its habitat and for the handling of sensitive species for wildlife salvages.

Permit or Approval Required	Enabling Legislation	Regulatory Authority	Applicable Project Activity or Component
Transportation of Dangerous Goods Act and Regulations Permits	Transportation of Dangerous Goods Act, 1992	Transport Canada	Permits for the transportation of dangerous goods by rail, road, or air.
Radio-isotope License	Nuclear Safety and Control Act, 1997	Natural Resources Canada	Authorization for nuclear devices such as slurry density flow meters
Radio Licenses	Radiocommunications Act, 1985	Industry Canada	License for the on-site radio communication system.

1.4.2.2 Provincial Authorizations

A list of potential provincial authorizations required for the Project is outlined in Table 1.4-2. The list is not intended to be exhaustive due to the complexity of government regulatory processes and the large number of minor permits, licenses, approvals, consents and authorizations, and potential amendments that will be required throughout the life of the Project. All required provincial authorizations will be secured prior to construction of the proposed Project.

Table 1.4-2: Applicable Provincial Permitting and Approval Requirements

Permit or Approval Required	Enabling Legislation	Regulatory Authority	Applicable Project Activity or Component
Environmental Assessment Certificate	Environmental Assessment Act, 2018	Environmental Assessment Office	The Crown Mountain Coking Coal Project. Certificate includes conditions that the proponent must fulfil to proceed with the Project.
Coal Lease	Coal Act, 2004	Ministry of Energy, Mines and Low Carbon Innovation	Authorization for the exploration and production of coal
Mines Act Permit	Mines Act, 1996	Ministry of Energy, Mines and Low Carbon Innovation	Permit to construct, operate, close/decommission, and reclaim a mine
Liquid Effluent Discharge Permit	Environmental Management Act, 2003	Ministry of Environment and Climate Change Strategy	Authorization to discharge mine-affected effluent to receiving waters from any water storage facility or diversion structure
Air Emissions Discharge Permit	Environmental Management Act, 2003	Ministry of Environment and Climate Change Strategy	Authorization for air emissions discharges, including sources of dust (e.g., conveyors, haul roads) and emissions from the Coal Handling Process Plant

Permit or Approval Required	Enabling Legislation	Regulatory Authority	Applicable Project Activity or Component
Record of Sewerage System and Sewerage System Letter of Certification	Public Health Act, 2008, Sewerage System Regulation,	Interior Health Authority	Septic tank and disposal field
Hazardous Waste Registration	Environmental Management Act, 2003, Hazardous Waste Regulation	Ministry of Environment and Climate Change Strategy	Authorization of temporary storage of hazardous wastes (e.g., waste oil, batteries)
Registration of Petroleum Storage and Distribution Facilities	Environmental Management Act, 2003 Petroleum Storage and Distribution Facilities Storm Water Regulation	Ministry of Environment and Climate Change Strategy	Fuel storage areas
Construction Permits for Water Supply Systems	Drinking Water Protection Act, 2001	Interior Health Authority	Potable water wells, water system construction, and water system operations
Occupant License to Cut - Mine Site and Special Use Permit	Forest Act, 1996	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	Licenses to harvest timber for site clearing and for use of Crown Land within a Provincial Forest
Occupant License to Cut	Forest Act, 1996	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	Vegetation clearing (tree removal) on Crown land
Road Use Permit	Forest Act, 1996	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	Approval for the use of forest service roads
Heritage Conservation Act Concurrence Letter	Heritage Conservation Act, 1996	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	Concurrence Letter stating that the archaeological assessment is complete.
Section 14 Heritage Inspection Permit	Heritage Conservation Act, 1996	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	Areas of archaeological potential within the Project footprint
Section 12 Site Alteration Permit	Heritage Conservation Act, 1996	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	Alteration of an archaeological site
Industrial Access Permit	Industrial Roads Act, 1996	Ministry of Transportation and Infrastructure	Access improvements to access roads.

Permit or Approval Required	Enabling Legislation	Regulatory Authority	Applicable Project Activity or Component
License of Occupation and Statutory Right of Way	Land Act, 1996	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	Authorization to occupy crown land for powerline right-of-way
Explosives Storage and Use Permit	Mines Act,1996	Ministry of Energy, Mines and Petroleum Resources	Approval for explosive storage and use.
Mining Right of Way Permit	Mining Right of Way Act, 1996	Ministry of Energy, Mines and Petroleum Resources	Right of way access within Crown or private lands
Permit to Connect a Powerline	Safety Standards Act, 2003 – Electrical Safety Regulation	B.C. Hydro	Connection of a private powerline to the B.C. Hydro grid
Highway Use Permit - Resource & Industrial Access	Transportation Act, 2004	Ministry of Transportation and Infrastructure	New roads joining onto a public road
Water Use Approval, Water Use License	Water Sustainability Act, 2014	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	License to divert, store, and use water and make changes in or around a stream
Change Approval For Work In And About A Stream	Water Sustainability Act, 2014	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	Approval for changes in and about a stream that are of a complex nature
Wildlife Permit	Wildlife Act, 1996	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	Permits for wildlife salvages and bird nest removal or relocation
Fish Collection Permit	Wildlife Act, 1996	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	Authorizes the capture and/or collection of fish
Pesticide Use Permit	Integrated Pest Management Act, 2003	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	Noxious weed and invasive plant control in disturbed areas within the Project footprint
Pesticide User License	Integrated Pest Management Act, 2003	Ministry of Environment and Climate Change Strategy	Control of noxious weeds

1.4.2.2.1 Elk Valley Water Quality Plan

The Project is located with the designated area of the Elk Valley Area Based Management Plan, also known as the Elk Valley Water Quality Plan (EVWQP). The EVWQP is a plan to manage the cumulative effects of coal mining on water quality and was developed by Teck in response to a Ministerial Order issued in April 2013 under the Environmental Management Act (EMA; 2003).

The Order directed Teck to develop a plan to stabilize and reduce water quality concentrations of selenium, cadmium, nitrate, and sulphate (the Order Constituents) and the rate of formation of calcite in streams. The plan was to include short, medium, and long-term water quality targets for the order constituents for specified locations in the Elk River, Fording River, and the Canadian portion of Lake Koocanusa. The EVWQP was developed with significant consultation with Indigenous groups, various levels of government, resource tenure holders, the public and other stakeholders. The Minister of Environment approved the EVWQP on November 18, 2014, and the Minister's approval letter also set out Approval Conditions. The EVWQP and the Minister's Approval Conditions apply to all coal mines in the designated area of the Elk Valley, including the Project.

1.4.2.2.2 Elk Valley Cumulative Effects Framework

As part of the Provincial Cumulative Effects Framework, the EV-CEMF aims to assess the historic, current, and potential future conditions of selected valued components and to support natural resource management decisions within the region. The purpose of EV-CEMF is to develop an approach to understand cumulative effects on the environment from various industries and natural events in the Elk Valley. Impacts are assessed using five region-specific valued components (VCs) selected by the EV-CEMF Working Group: Westslope Cutthroat Trout, grizzly bear, bighorn sheep, old growth and mature forest, and riparian habitat. The EV-CEMF will be used as an additional tool in the cumulative effects assessment for the Project for the region-specific VCs. Cumulative effects predictor models developed by the EV-CEMF will be used and the results of the EV-CEMF modelling will be presented and discussed for each region-specific VCs, specifically Westslope Cutthroat Trout, grizzly bear, bighorn sheep, old growth and mature forest, and riparian habitat.

1.4.2.3 Municipal Permits

The Project footprint overlaps with land that is primarily designated for resource extraction use (i.e., Coal – ERDZ and Rural Resource). While these lands are widely used for recreational purposes, it is important to note that these lands are not primarily designated for recreational use. As such, the Project is considered to be generally consistent with land use designations. The exception to this is the relatively small amount of land transected by the powerline, which is designated as Open Space, Recreation and Trails under the Elk Valley OCP (2014) and Rural Residential under the Elk Valley Zoning Bylaw No. 829 (1990). Less than 1% of the total Project footprint is located on lands that are not intended for commercial uses such as coal mining. NWP will be required to submit an application for an OCP and Zoning Bylaw Amendment to the Region for the small amount of area designated as Open Space, Recreation and Trails, as well as the land designated as Rural Residential.

1.5 Organization of the Application/Environmental Impact Statement

This document is the Application/EIS for the proposed Crown Mountain Coking Coal Project and is submitted to federal and provincial authorities in both paper copy and digital format. The report is organized into the following sections:

- Summary of the Environmental Impact Statement, prepared as separate document, in both of Canada's official languages and provides a concise description of Project (scope, benefits, applicable permits), a summary of consultation and key issues raised and feedback received, an

overview of predicted changes to the environment and Valued Components, how the Project will support the goals of the Elk Valley Water Quality Plan, and proposed mitigation measures, NWP's conclusions on any residual effects and their significance, and follow-up and monitoring programs proposed;

- Table of Contents with a complete listing of chapters, sections of chapters, and lists of Figures, Tables, Photographs, and Appendices;
- Glossary of terms used in the Application/EIS as well as lists of acronyms, units, and abbreviations;
- Chapter 1: Introduction provides background information about the proponent, an overview of the Project and its location, and a description of the regulatory framework under which the Project will be reviewed;
- Chapter 2: Project Alternatives describes the need for and purpose of the Project, as well as alternative means of carrying out the project, including coal extraction, coal processing, site access, location of key project components, energy and water supplies, mine waste disposal, and water management considered;
- Chapter 3: Project Description describes components, associated and ancillary works that assist in understanding anticipated environmental effects, as well as descriptions of activities associated with the planning/design, construction, and operation phases of the Project;
- Chapter 4: Consultation and Engagement summarizes the Indigenous community, public stakeholder, and government agency consultation and engagement undertaken for the Project;
- Chapter 5: Effects Assessment Scope and Approach presents information relevant to the scope and methods used for predicting potential changes to the environment and on identified Valued Components, applying/identifying mitigation measures to offset adverse environmental effects, and determining any residual and cumulative environmental effects and their significance;
- Chapters 6 through 19 describe the existing conditions for each identified Valued Component (VC), as derived from baseline data collection and engagement, assess the potential effects of the Project on the VCs, propose mitigation measures to be applied, evaluate the significance of potential residual effects from the Project, and evaluate potential cumulative effects for each VC;
- Chapter 20: Effects of the Environment on the Project identifies how local conditions and natural hazards could adversely affect the Project and, in turn, the environment;
- Chapter 21: Accidents and Malfunctions Assessment describes the risks and effects of potential accidents and malfunctions on the environment caused by human error or exceptional natural events, and measures and safeguards available and in place should such events occur;
- Chapter 22: Human and Ecological Health Assessment describes the quantitative human health and ecological risk assessment for relevant VCs;
- Chapters 23 through 31: Indigenous Communities describes the potential effects of the Project on Indigenous rights and interests and Treaty Rights, as outlined in the Canadian Environmental Assessment Act (2012) and the Guidelines for the Preparation of an Environmental Impact Statement for the Crown Mountain Coking Coal Project (EIS Guidelines; CEAA, 2015);
- Chapter 32: Assessment of Effects on Matters of Federal Interest provides a summary of effects and significance determination for each federal Valued Component listed under Section 5 of the Canadian Environmental Assessment Act (2012);
- Chapter 33: Management and Monitoring Plans describes programs designed to verify the accuracy of the effects assessment and to determine the effectiveness of recommended measures to mitigate potential adverse effects of the Project; and

- Chapter 34: Summary and Conclusions provides a summary of potential Project effects, proposed mitigation measures, potential residual effects and their significance, cumulative effects, and a statement of conclusions.

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