Appendix 4-AA

October 2015 Working Group Meeting Presentations

Crown Mountain Coking Coal Project
Working Group Meeting #1

Meeting Date and Time: October 15, 2015, 8:30am
Meeting Location: St. Eugene Mission, Cranbrook, BC
Minutes Prepared By: Laura Dilley (Dillon Consulting Limited) and Amy Thede (Environmental Assessment Office)
Attendees:

Proponent team:

Art Palm	NWP Coal Canada Ltd.
Richard Pope	Dillon Consulting Limited
Laura Dilley	Dillon Consulting Limited
Chris Kennedy	SRK Consulting
Sara Wilkins	Norwest Corporation
Mike Keefer	Keefer Ecological Services
Ian Tamasi	Tipi Mountain Eco-Cultural Services
Mike Robinson	Lotic Environmental

Working Group Members:

Shelley Ball *	Senior Environmental Assessment Officer	Natural Resources Canada
Jon Bisset	Senior Biologist	Canadian Columbia River Inter-Tribal Fisheries Commission (CCRIFC)
Natasha Burgoyne	Cultural Liaison: Traditional Knowledge and Language	Ktunaxa Nation Council
Alison Burton	Coal Regulatory Coordinator	Ktunaxa Nation Council
Katrina Caley	Project Biologist	Canadian Columbia River Inter-tribal Fisheries Commission
Lowell Constable	Sr. Geotechnical Inspector	Ministry of Energy and Mines
Garett Cooper	Project Manager	Canadian Environmental Assessment Agency
Dale Desrochers	Senior Biologist, Regulatory - Mining Unit	Fisheries and Oceans Canada
Geraldine FitzGerald	Senior Advisor	Forest, Lands and Natural Resource Operations
Harp Gill	EA Coordinator	Environment Canada
Lorna Green	Senior Environmental Protection Officer	Ministry of Environment
Ryan Greville	A/Manager, Navigable Waters Protection	Transport Canada
Glen Hendrickson	Senior Permitting Inspector	Ministry of Energy and Mines
Tryfan Jones	Sr. Environmental Geoscientist	Energy & Mines
Nicole Kapell	Environmental and Archaeological Stewardship Coordinator	Ktunaxa Nation Council
Agathe Lebeau	Biologist	Environment Canada
Doug Martin	Sr. Ecosystem Biologist	Ministry of Forests, Lands and Natural

		Resource Operations
Rene McKibbin	Environmental Assessment Officer	Canadian Wildlife Service, Environment Canada
Terry Melcer	Chief Administrative Officer	District of Sparwood
Ray Morello	Director of Authorizations	Ministry of Forests, Lands and Natural Resource Operations
Kristen Murphy	Habitat Biologist	Ministry of Forests, Lands and Natural Resource Operations
Liz Murphy	Reclamation Specialist	Ministry of Energy and Mines
Alison Neufeld	Impact Assessment Biologist	Ministry of Environment
Tanmay Praharaj	Senior Program Engineer	Environment Canada
Teri Ridley	Biologist	Department of Fisheries & Oceans Canada
Patrick (Pat) Shaw	Environmental Quality Guidelines Scientist	Environment Canada
Christie Spry	Water Quality Scientist	Environment Canada
Colin Squirrell	Resource Officer	Ministry of Aboriginal Relations and Reconciliation
Kyle Terry	Hydrologist	Ministry of Environment
Leslie Yasul	EA Coordinator	Environment Canada
John Antill	Project Assessment Manager	EAO
Amy Thede	Project Assessment Officer	EAO

*via teleconference

Meeting Minutes:

1. Welcome and Introductions

2. Outline of the EA Process

- Overview of the provincial EA process by the EAO and CEAA, including an introduction to Valued Components (VCs) and the selection process.
- Comments and questions raised by Working Group (WG) members on the finalization of the Valued Component selection document will be posted on the provincial e-PIC website for public review.

3. Overview of the Crown Mountain Project

- Overview of the Project, including NWP Coal Canada Ltd (NWP Coal), Project components and activities, and key phases and timelines.
    - Discussion of waste rock management strategy and the 'layer cake approach'.
- Questions/discussion points raised during this part of the meeting:
    - Use of Teck conservation lands as it relates to the submission timeline of the Environmental Impact Statement (EIS) and the VCs selected:
        - NWP Coal noted that the EIS will not be submitted until land access has been confirmed with Teck and that VCs will not change based on use of Teck lands.
        - NWP Coal stated that they have not formally requested Teck to allow proposed Crown Mountain Project infrastructure on the Teck conservation lands.

        - NWP Coal stated that they have Teck's permission to conduct environmental and archaeological baseline work for the purposes of the environmental assessment and that portions of this work remain to be completed.
    - Target submission for the EIS:
        - NWP Coal noted that the timeline for submission will be dependent on comments from the WG members on the VC document, progression into the Application Information Requirements (AIR), discussions with the Ktunaxa Nation Council and others, and the overall global marketplace. NWP Coal estimated that an Environmental Assessment Certificate Application and the EIS could be submitted by mid-to-late 2016 or early 2017 depending on what field work remains for next summer.
    - Waste rock management:
        - Discussion on layer cake approach. NWP Coal noted that if approach does not work, the mine will not continue to run.
        - Confirmation of use of reject material and length of exposure as layer cake is under development. NWP Coal noted that rejects will be exposed for a period of time during the build-up of other rejects/spoil, during which it will take a bit of time for selenium exposure in watercourses to reach levels out of compliance. The intention is to minimize exposure as much as possible. NWP Coal may conduct in-field experiments to test this.
        - Confirmation that the design is a bottom up design. NWP Coal noted that tailings ponds will not be used for this Project.
        - Discussion on preliminary thoughts on reclamation. Chris Kennedy (SRK) noted that additional oxygen consuming plants will be beneficial in restoration.
        - Discussion on Metal Leaching/Acid Rock Drainage (ML/ARD) concerns. Chris Kennedy (SRK) noted that the site has a low potential for ARD. NWP Coal noted that drainage ditches and a settling pond will be developed as the 'layer cake' grows.
        - Discussion on calcite deposition and CO2 in reject pile. Chris Kennedy (SRK) noted that calcite and nitrite will also be considerations and will use strategies to mitigate against calcite deposition.
        - Note the need for monitoring plans for various constituents

4. Physical and Aquatic Resources – VCs/Study Areas/Baseline

- Discussion on air quality and noise, geology and geochemistry, surface water
- Questions/discussion points raised during this part of the meeting:
    - Use of Cumulative Effects Management Framework in consideration of Project VCs.
        - The Framework was used in the development of the draft VC document.
    - Canada/USA agreement regarding Air Quality cross border impacts - Once closer to Application need to notify USA, work with Environment Canada (EC) to do that
    - Discussion on channel morphology and surficial geology and potential overlap of physical components/chemistry components VCs with measurement indicators. Further details may be requested on characterization of ecosystems and linkages.
        - Links to fish habitat discussed. Representative VCs were chosen to represent important habitat.

- Valley fill at West Alexander Creek discussed. Noted by a WG member that in the EIS, it will be important to characterize valley fill and water moving through the valley and if treatment for suspended solids will be needed.
- Comment by WG member regarding the connection between a municipality well in Sparwood and the Michel Creek drainage.
- Continued discussion on 'layer cake approach' and the inclusion of processes for reclamation.
    - Chris Kennedy (SRK) noted that a conceptual model will be developed to evaluate selenium levels.
- Discussion on model and information to be available to WG members, and the desire for information to be clear so group can understand the approach.
    - Materials to be developed by SRK will include these details.
- Discussion on the local and regional study areas.
    - Richard Pope (Dillon) noted that the regional study area includes existing third party long term monitoring sites, such as water quality monitoring stations in the Elk River valley.
    - Local Study Area includes watercourses, such as Harmer and Grave Creeks, which may be impacted by operations at the Elkview mine.
- Discussion on baseline activities for surface water hydrology and quality and selection of VCs.
    - Richard Pope (Dillon) noted water quality sampling has included intensive freshet and low-flow sampling.
    - Discussion on water quality as an intermediate component and its important as a potential selected VC. The KNC to provide a memo to NWP Coal and Dillon outlining their thoughts on water quality as a selected VC. EAO noted that significance is not determined on intermediate components and that the EAO has been consistent in approaching water quality as an intermediate component.
- Clarification on invertebrate surveys requested and whether or not these will be for full reaches of both fish bearing and non-fish bearing watercourses.
    - Mike Robinson (Lotic) confirmed CABIN protocols focus on fish bearing/fish habitat; however, instream flow studies will be used to assess impacts.
    - DFO asked about timelines for further baseline data collection.
        - Lotic stated that there could be up to two years of further baseline work to be done for the Project.
- Discussion on direct impacts to West Alexander Creek and baseline assessment strategies in winter (due to access issues).
    - Mike Robinson (Lotic) noted that temperature loggers may be used to evaluate thermal suitability.
- Discussion on ecosystem vs. species-level approaches to assessing impacts and selection of VCs. Additional discussion at the sub-committee level will be required.
- WG Comment: Discussions of habitat offsetting etc. those become important tools for identifying offsets and tools. Lots of comments and feedback on how groundwater quality and quantity interacts with fish and fish habitat. Definitely connected in this project. Interactions of surface, groundwater, cause and effect.
- Riparian component is also critical and provides link to terrestrial wildlife and habitat. CEMF. KNC looked at VCs tend to be chosen as representative of systems. Riparian ecosystem represent a lot of species important to KNC ~200 species. How they are

connected is very important. Cascade effects and interactions. Those are the types of things KNC will want to see assessed.
    - FLNR raised the concern about loss of tributary fish habitat and selecting individual species as valued components rather than ecosystem level valued components.
    - Discussions on assessing separate fish populations in Grave Creek as barriers currently prevent some movement of species.
    - Groundwater is significant in Alexander Creek related to fish. Look at the scope of the studies to see if there are any gaps. There was a brief discussion on how to assess the dump design and related impact to Alexander Creek?
    - Discussion on overburden. It was discussed that valley fill and overburden and the groundwater movement below the creek should be characterized.
    - Discussion of fish and fish habitat and suitability. Dillon stated that installation of temperature loggers will provide data on thermal suitability.
    - Discussion of selection of migratory bird species as representative VCs. It was suggested by EC to include American Dipper on the list of representative migratory species.
    - Further discussion to be held at a fish and fish habitat sub-committee meeting for WG members and technical specialists.

5. Physical and Aquatic Resources – VCs/Study Areas/Baseline

- Discussion on terrestrial landscapes and ecosystems, sensitive plant species and communities, culturally significant plants and ecosystems, and wildlife and wildlife habitat.
- Questions/discussion points raised during this part of the meeting:
    - Discussion on the selection of VCs at a species and/or landscape level.
    - Invasive plant species within the area discussed and Mike Keefer (Keefer Ecological) noted several species have been observed within the Local Study Area (e.g., oxeye daisy, chamomile, knapweed, etc.)
    - Comment from EC on the recovery strategy for whitebark pine, which is likely to be released in 2016 and will identify critical habitat. Suggested that this strategy is taken into consideration for the Project.
    - Comment from a WG member on data that may be available from a recent Bioblitz on the Teck conservation lands.
    - Discussion of the potential biodiversity supported on the Teck conservation lands and potential offsetting of this area should it be used in the Project layout.
    - Discussion of strategies by NWP Coal to assess temporal loss of terrestrial components in the Project footprint.
        - Mike Keefer (Keefer Ecological) noted that the design is conceptual and the technical NWP Coal team intends to work with WG members to determine the best approach/methodology to assess potential impacts.
    - Discussion on use of modelling to assess potential existing habitat types and species occurrences. WG member commented that it is important to look at potential effects at an occurrence level.
        - Mike Keefer (Keefer Ecological) noted that strategies will be used and are important for data in Grave and Alexander Creeks.
    - Suggestion for NWP Coal to participate in the Cumulative Effects Management Framework as a way to gain knowledge of the area and data that has been collected.

- Discussion on groups/conservation initiatives in the area, such as Flathead Wild. Mike Keefer (Keefer Ecological) noted that the NWP Coal team will speak and work with groups to gain and share knowledge.
- Potential second year of migratory bird and amphibian studies was discussed.
  - Richard Pope (Dillon) noted that a second year will be completed.
- Discussion on wetlands in the area and use of waterfowl, as well as reptiles in the area.
  - Baseline studies are still required to confirm waterfowl use of wetlands and reptiles present.
- Comment from FLNR that it can be beneficial to spread baseline surveys out over several years to potentially assess variability.

6. Socio and Economic Components – VCs/Study Areas/Baseline

- Discussion on economic conditions, housing and community infrastructure, and community well-being.
- Questions/discussion points raised during this part of the meeting:
  - Discussion on consumption of berries and potential impacts to human health and access to food for consumption. Comment from KNC that backcountry recreation is an issue in the area (e.g., increasing access to habitats for berry picking by 'wild crafters').

7. Heritage, Land Use, and Health Components – VCs/Study Areas/Baseline

- Discussion on heritage and archaeological resources, land use and access, recreation and tourism, visual quality, and human health risk assessment.
- Questions/discussion points raised during this part of the meeting:
  - Discussion on the definition of a 'significant archaeological site'.
    - Ian Tamasi (Tipi Mountain) noted that it would be a site that was used on multiple locations and materials have been left behind that demonstrates use.
  - Discussion on dating techniques for tools.
  - Discussion on Grave Prairie and the oral history of this area.
  - Comment from a WG member that increased access to the area may impact a variety of VCs.
    - Richard Pope (Dillon) noted that site development might decrease access to certain areas.

8. Next Steps

- EAO led the discussion on next steps for the Project.
  - VCs selected with be incorporated into the AIR.
  - Sub-committee meetings/discussions with be held to further discuss selected VCs.
  - Working Group members have four (4) weeks to comment on the draft VC document. Comments will be due November 13.
  - EAO to confirm via email sub-committee groupings. It is anticipated that some WG members will participate on several sub-committees.

CROWN MOUNTAIN COKING COAL PROJECT

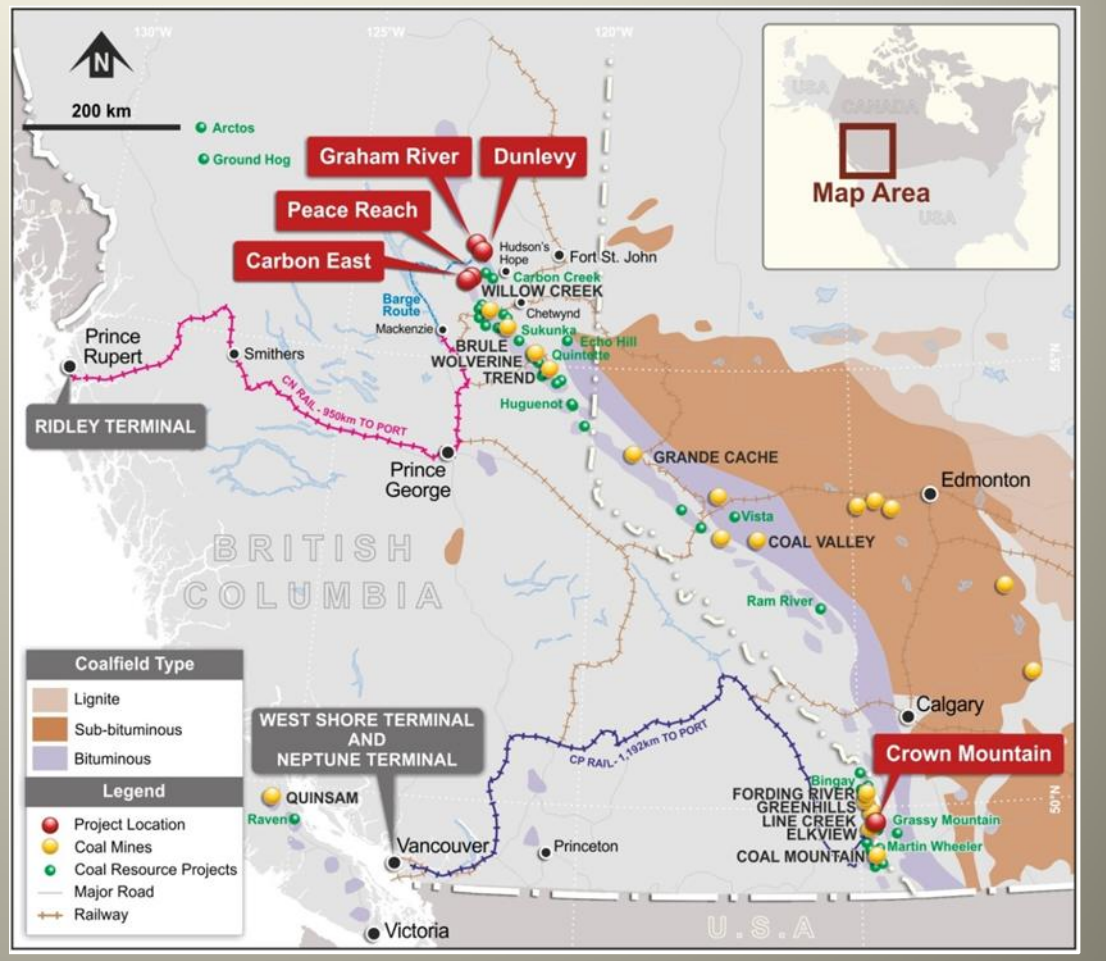
October 2015

NWP Coal Canada Limited

A Wholly Owned Subsidiary of Jameson Resources

NWP Coal Canada Limited

- NWP is a BC corporation wholly owned by asx-listed Jameson Resources Ltd (JAL).
- NWP and Dunlevy Energy (also wholly owned by Jameson) hold all of Jameson's assets in Canada.
- The Canadian assets include:
  - Crown Mountain Coking Coal Project: Located in southeast BC and 90% owned. The flagship project of the company.
  - Dunlevy Metallurgical Coal Project: Located in northeast BC, and explored in 2014. On hold pending improved coal markets.
  - Peace Reach, Carbon East, and Graham River Projects: Early stage strategic holdings in the Peace River coal field.



Highly Experienced Management Team

CANADA

Art Palm – Chief Executive Officer and Chairman

- Mining engineer with 40 years of experience
- Engineering, Operations & Executive positions at major US coal producers
- Extensive experience designing and managing mines (surface and underground) and coal preparation plants

AUSTRALIA

Steve van Barneveld – Non-Executive Director

- Process engineer with over 28 years experience
- Majority of years spent with Sedgman Limited, ultimately as COO
- Extensive experience in asset development, design, construction, and operations management

Jeff Bennett - Non-Executive Director

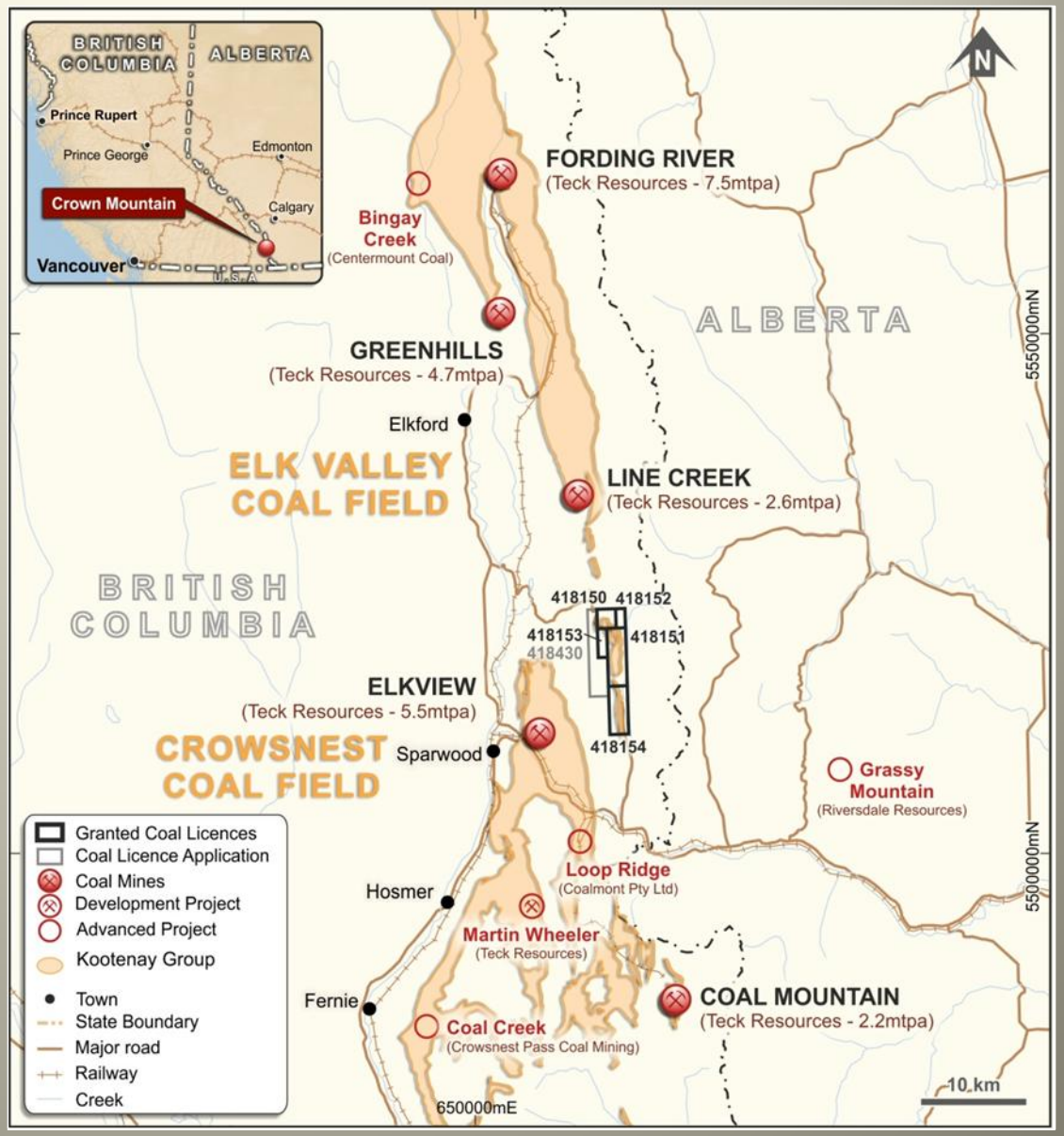
- Over 20 years of experience in resource, transport, IT, and service industries, holding senior financial positions with BHP, Shell, and others.

Suzie Foreman - Company Secretary

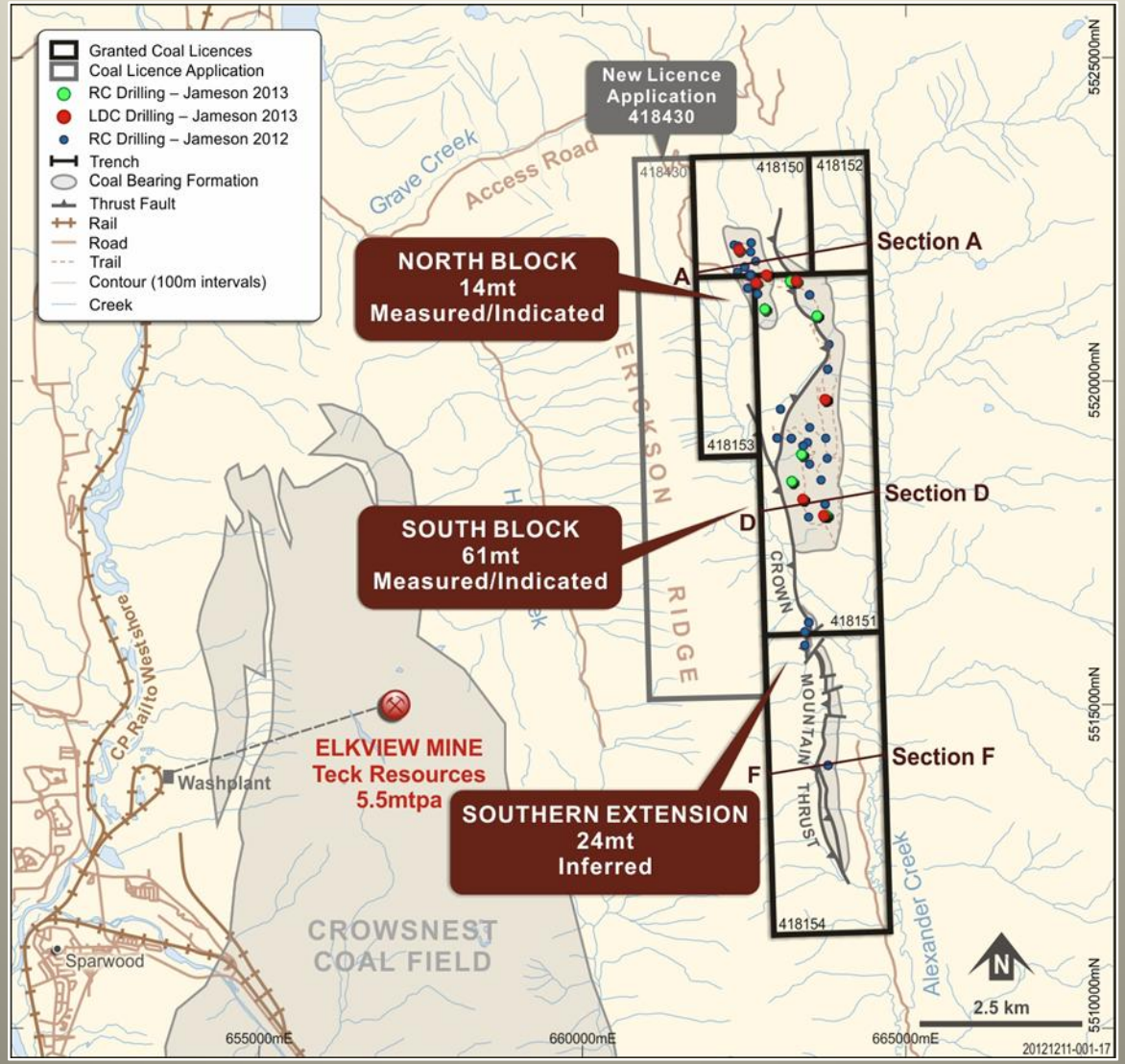
- Chartered Accountant with over 17 years of financial and corporate governance experience specialising in mining and exploration.

Project History

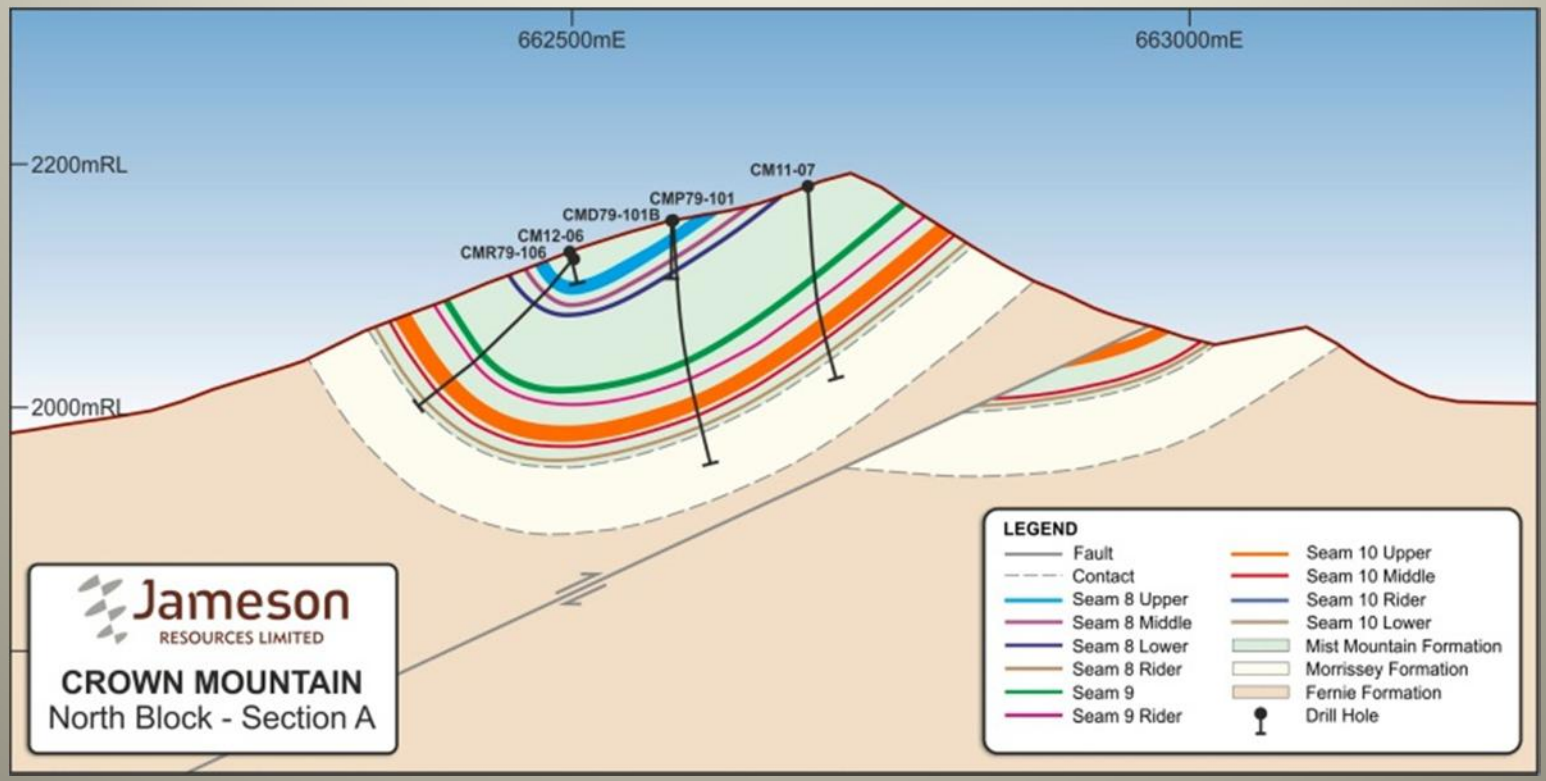
- The Elk Valley and Crowsnest coal fields offer compelling global opportunities for development of a coking coal project
- Teck is a major seaborne supplier of metallurgical coal, from its mines in the Elk Valley and Crowsnest coal fields
- Operating cost structures in Canada have become much more attractive than in Australia
- Established workforces and local communities that support mining
- Jameson's Crown Mountain project is one of the most advanced development assets in the region, with a positive PEA completed in April 2013, and PFS showing outstanding economics completed August 2014.
- Evaluation post-PFS shows several areas of potential upside.
- Project is now in the pre-application phase of the Environmental Assessment process.
- Various engagement and consultation activities completed to date with the Ktunaxa Nation Council, local community governments, and provincial and federal agencies.



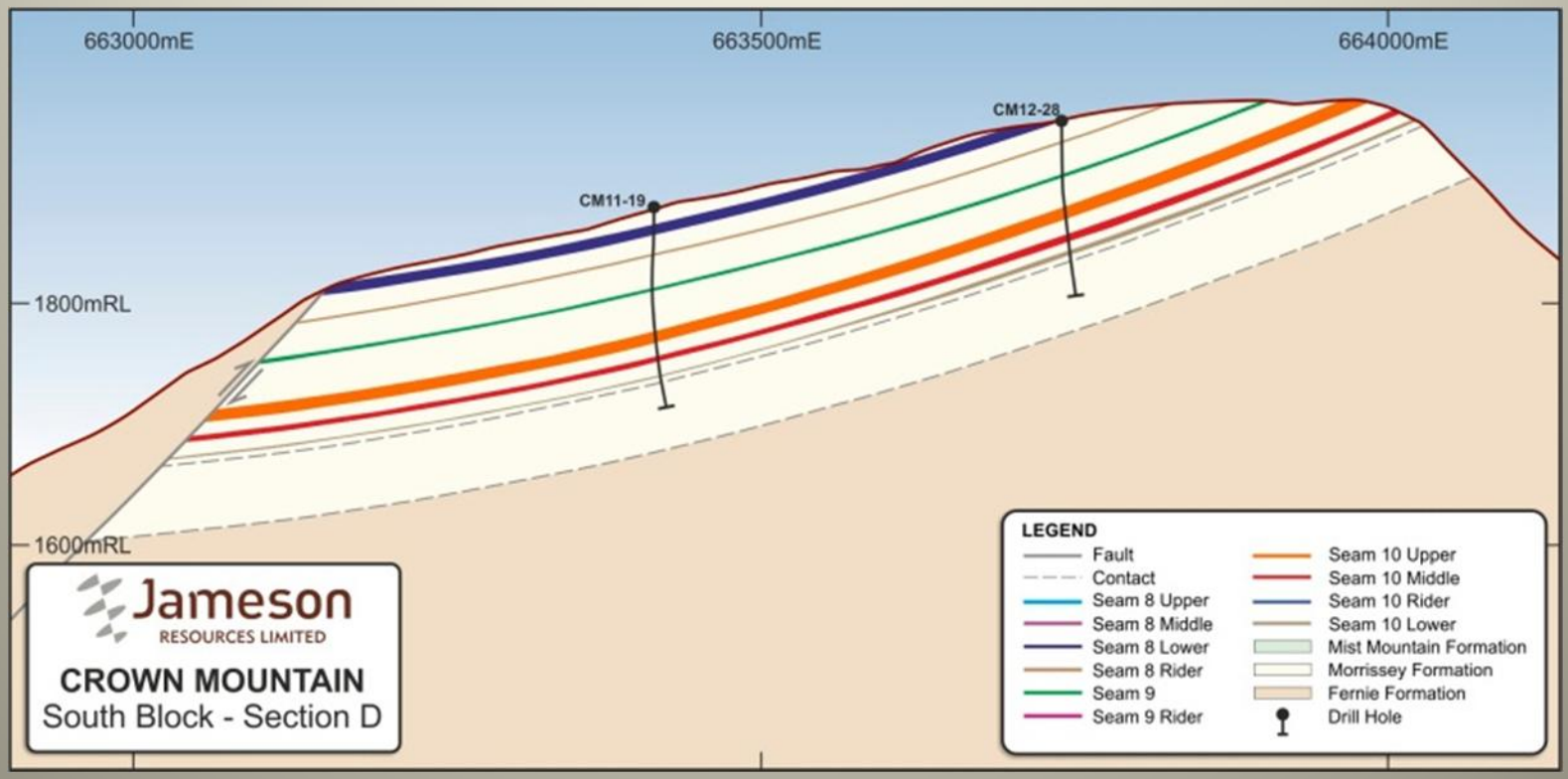
EXPLORATION



NORTH BLOCK GEOLOGY



SOUTH BLOCK GEOLOGY



Pre-Feasibility Study (PFS)

- Commissioned by Jameson after 2013's positive PEA and completion of a successful coal exploration program during summer 2013.
- Executed by Norwest Corporation of Calgary, Alberta, Canada.
- Focused only on the Measured and Indicated resources identified by Norwest.
- Completed in August 2014, the PFS confirmed Crown Mountain to be a technically robust project with outstanding economics and capable of first production in 2017
- The ability to lease equipment was evaluated as a means to reduce hard capital investment, and found to be very attractive.
- Contract mining options are being explored.

Crown Mountain Resources and Reserves

- The resource base at Crown Mountain was revised upward in March 2014 after the 2013 summer drilling program's results were evaluated.
- The PFS has determined a total reserve base at Crown Mountain of 56 million tonnes.
- Confidence in the geologic interpretation is high, as nearly 90% of the reserves are in the Proven category.
- Plant yields were estimated based on the summer 2013 exploration program. Average LOM plant yield is 52%. Early years (North Block) is 59%.
- The clean coal strip ratio for the first 4 years averages a low 7.6:1 BCM:t, and 9.9:1 LOM

RESOURCE AREA	Measured (Mt)	Indicated (Mt)	Measured & Indicated (Mt)	Inferred (Mt)	Measured, Indicated & Inferred (Mt)
North Block	8.0	6.0	14.0	0	14.0
South Block	60.9	0	60.9	0	60.9
Southern Extension	0	0	0	23.7	23.7
TOTAL	68.9Mt	6.0Mt	74.9Mt	23.7Mt	98.6Mt

Crown Mountain Resource 2014 (Effective March 11, 2014)

RESOURCE AREA	ASTM Group	Run of Mine Coal Reserves (Mt)			
		Proven		Probable	
		COKING	PCI	COKING	PCI
North Pit	Bituminous	7.3	0.7	4.9	1.2
East Pit		3.6	0.5	0	0
South Pit		31.7	5.9	0	0
Sub-Total		42.6	7.1	4.9	1.2
Total Proven & Probable		49.7Mt		6.1Mt	
Total		55.8Mt			

Run of mine surface mineable reserve summary (Effective May 31, 2014)

Crown Mountain Coal Quality

	Crown Mountain Coking Coal[1]		Canadian NEBC HCC[2]	Canadian SEBC HCC[2]	Central Alberta[2]
	North and East Blocks	South Block			
Total Moisture (% as received)	8 - 9	8 - 9	8 - 9	8 - 9	8 - 9
Volatile Matter (% dry)	20.5	18	23 - 24.5	21 - 27	17 - 27
Ash Content (% dry)	9	9	8.3 - 8.6	8.5 - 9.6	8.5 – 9.5
Sulphur Content (% dry)	0.6	0.6	0.45 - 0.55	0.35 - 0.75	0.45 - 0.5
Free Swelling Index (FSI)	7 - 8	4 - 5	7 - 8	6 - 8	5 - 7
Vitrinite Reflectance R_oMax (%)	1.45	1.59	1.15 - 1.25	1.10 - 1.35	1.10 – 1.60
Maximum Fluidity (ddpm)	30	5	150 - 300	40 - 300	15 - 700
Phosphorus in Coal (% dry)	0.060	0.100	0.008 - 0.040	0.010 - 0.065	0.016 – 0.050
Base/Acid Ratio of Ash	0.07	0.05	0.12 - 0.18	0.07 - 0.10	0.11
CSR (Coke Strength after Reaction)	75	67	58 - 60	68 - 72	58 - 60

Quality Comparison of Crown Mountain Coal with Other Canadian Export Coking Coals

Notes:

[1] Results are based on laboratory scale washing and testing of exploration samples.

[2] Results are based on full washing plant under operating conditions.

Data source: Kobie Koornhof Associates

Crown Mountain PFS - Capital

Pre-Production Capital	US$
Major Mobile Equipment	108.1
Minor Mobile Equipment	8.3
Wash Plant	57.8
Infrastructure (rail load-out, roads, overland conveyor, power, offices, shop etc) and permitting	93.7
Pre-Strip	40.9
SUBTOTAL – CAPITAL	308.8
Contingency @ 10%	30.9
TOTAL CAPITAL	339.7

Pre-Production Capital (Base Case)

- The Base Case assumes all construction and start-up expenses are capitalized.
- Major mobile equipment includes excavators, dozers, haul trucks, backhoes, blasthole drills, and other equipment used in the surface mining process.
- The coal wash plant (raw coal handling, processing, thermal drier) represents a state-of-the-art facility complete with an intensive fines recovery circuit. The plant is located near the mine site to reduce ROM haulage costs and allow plant refuse to be used as a cap for mine spoil piles, thus mitigating the effect of metal leaching issues.
- Infrastructure includes roads, power lines, natural gas supply, water supply, the shop, office and supporting facilities, rail loop and clean coal loadout.

Crown Mountain PFS – Operating Cost

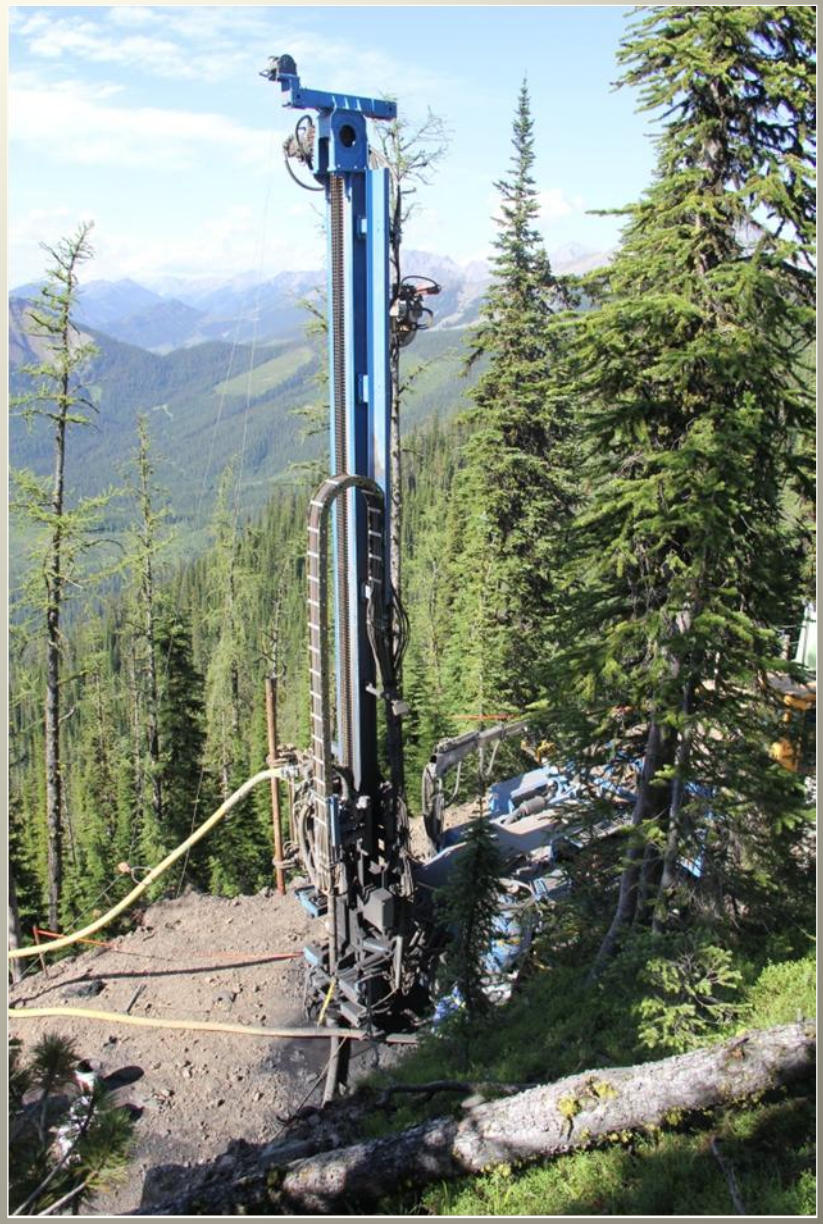
Cost Category	Cost Per Clean Tonne Life-Of-Mine (US$)
Waste Removal	41.41
Coal Mining	8.00
Plant	8.66
Clean Coal Handling	2.61
Reclamation	1.24
Marketing/Corporate	1.24
Administration	5.02
Total Costs – Site	68.18
Rail and Port Costs	32.20
Total Costs - FOB (pre-tax and royalty)	100.38

Prefeasibility Base Case FOB Costs (Pre-Tax Basis)

- All operating costs were built from unit costs applied to calculated volumes.
- The mine is assumed to be company-operated (no contractors)
- Above costs are for the base case.
- FOB costs average $88.64/t for the first 4 years.
- Operating costs increase if leasing is utilized .

Crown Mountain – PFS Highlights

- Annual clean coal production/sales of 1.7 million tonnes.
- Construction could commence as early as summer 2016.
- Total start-up capital of $339 million, of which a significant portion is appropriate for leasing.
- Total employment ranges between 250 – 300 persons over life of mine.
- Mine life is 17 years without Southern Extension, and potentially up to 25 years if Southern Extension proves feasible.
- All mining is by open pit method.
- Industry Best Practices to be employed with respect to environmental issues.

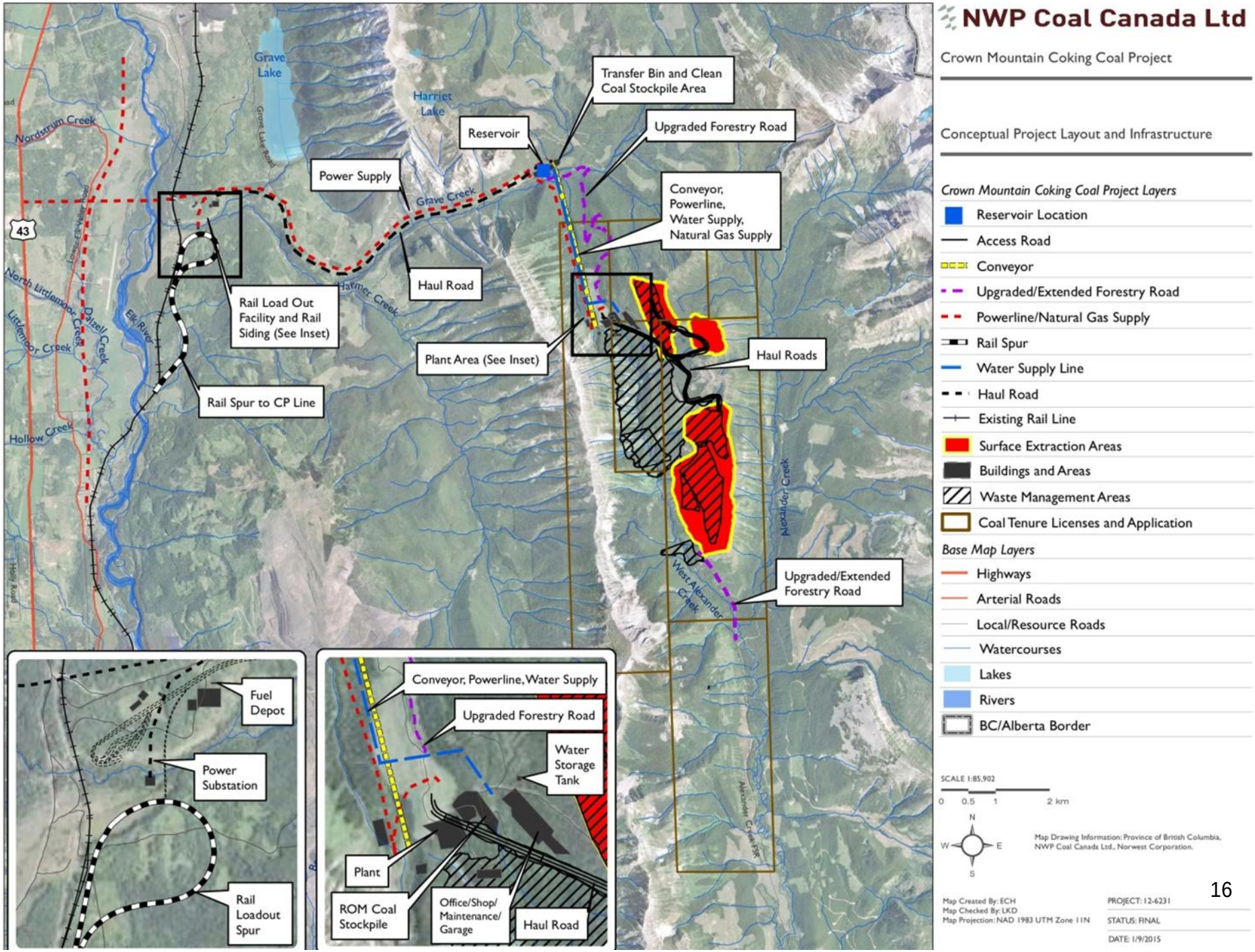


Crown Mountain – Post-PFS Activity

- The declining CAD:USD exchange rate results in FOB costs of US$77.08/tonne during the initial 4 years of operation, and US$87.28 life-of-mine (compared to the PFS' US$88.64 and US$100.38 respectively).
- Even at today's low coking coal benchmark price of US$95 the project would have positive margins.
- At least $200 million of the PFS' $339 million capital can be eliminated by leasing.
- Contract mining has excellent potential to reduce Capex further, and Opex as well.
- Prevailing lower fuel prices and better labour availability contribute to additional Opex savings.
- Third party reviews of the PFS have identified several areas of potential project upside subject to further evaluation.

Project Components and Activities

- Surface extraction areas;
- Waste management areas (includes waste rock and tailings, as well as associated diversion ditches, ponds, and access roads);
- Plant area (including shops, offices, and run-of-mine stockpile);
- Clean coal transportation route (overland conveyor, haul road, and access road);
- Transfer bin and clean coal stockpile area;
- Rail load-out facility, rail siding, and miscellaneous buildings;
- A new 12.7 km power line extension;
- Natural gas supply via a new valve station and 13.5 km new pipeline installed to connect to the existing pipeline;
- Explosives storage;
- Fuel storage;
- Sewage treatment; and
- Water supply from Grave Creek, and a new excavated reservoir approximately 250 m x 160 m in size, and associated infrastructure.

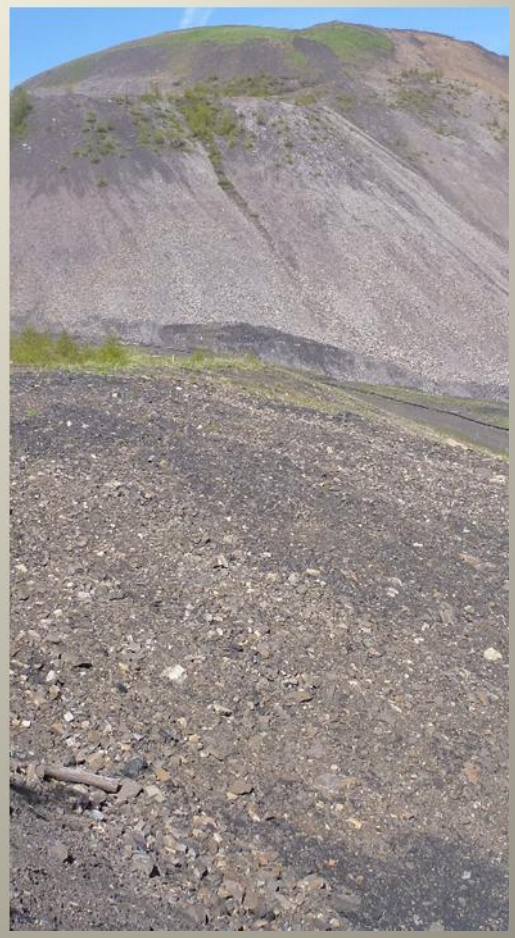

NWP Coal Canada Ltd
Crown Mountain Coking Coal Project
Conceptual Project Layout and Infrastructure
Grave Lake
Harriet Lake
Nordstrum Creek
Grave Lake Road
Transfer Bin and Clean Coal Stockpile Area
Reservoir
Upgraded Forestry Road
Power Supply
Grave Creek
Conveyor, Powerline, Water Supply, Natural Gas Supply
43
Haul Road
Harmer Creek
North Littlemoor Creek
Littlemoor Creek
Dalzell Creek
Elk River
Rail Load Out Facility and Rail Siding (See Inset)
Plant Area (See Inset)
Haul Roads
Rail Spur to CP Line
Hollow Creek
Alexander Creek
West Alexander Creek
Upgraded/Extended Forestry Road
Alexander Creek FSR
Fuel Depot
Power Substation
Rail Loadout Spur
Conveyor, Powerline, Water Supply
Upgraded Forestry Road
Water Storage Tank
Plant
ROM Coal Stockpile
Office/Shop/ Maintenance/ Garage
Haul Road
Crown Mountain Coking Coal Project Layers
Reservoir Location
Access Road
Conveyor
Upgraded/Extended Forestry Road
Powerline/Natural Gas Supply
Rail Spur
Water Supply Line
Haul Road
Existing Rail Line
Surface Extraction Areas
Buildings and Areas
Waste Management Areas
Coal Tenure Licenses and Application
Base Map Layers
Highways
Arterial Roads
Local/Resource Roads
Watercourses
Lakes
Rivers
BC/Alberta Border
SCALE 1:85,902
0 0.5 1 2 km
N
W E
S
Map Drawing Information: Province of British Columbia, NWP Coal Canada Ltd., Norwest Corporation.
Map Created By: ECH
Map Checked By: LKD
Map Projection: NAD 1983 UTM Zone 11N
PROJECT: 12-6231
STATUS: FINAL
DATE: 1/9/2015

Project Phases and Potential Timelines

- Key Project phases:
    - o Site preparation and construction
    - o Operations
    - o Decommissioning and site reclamation
- Life of Project approximately 16 years (excluding decommissioning).
- Project construction to occur over 1.5 years.
- Site preparation projected to begin following receipt of all approvals.
- Decommissioning and site reclamation to take place progressively, beginning in Year 16 and take approximately 2 to 3 years to complete.

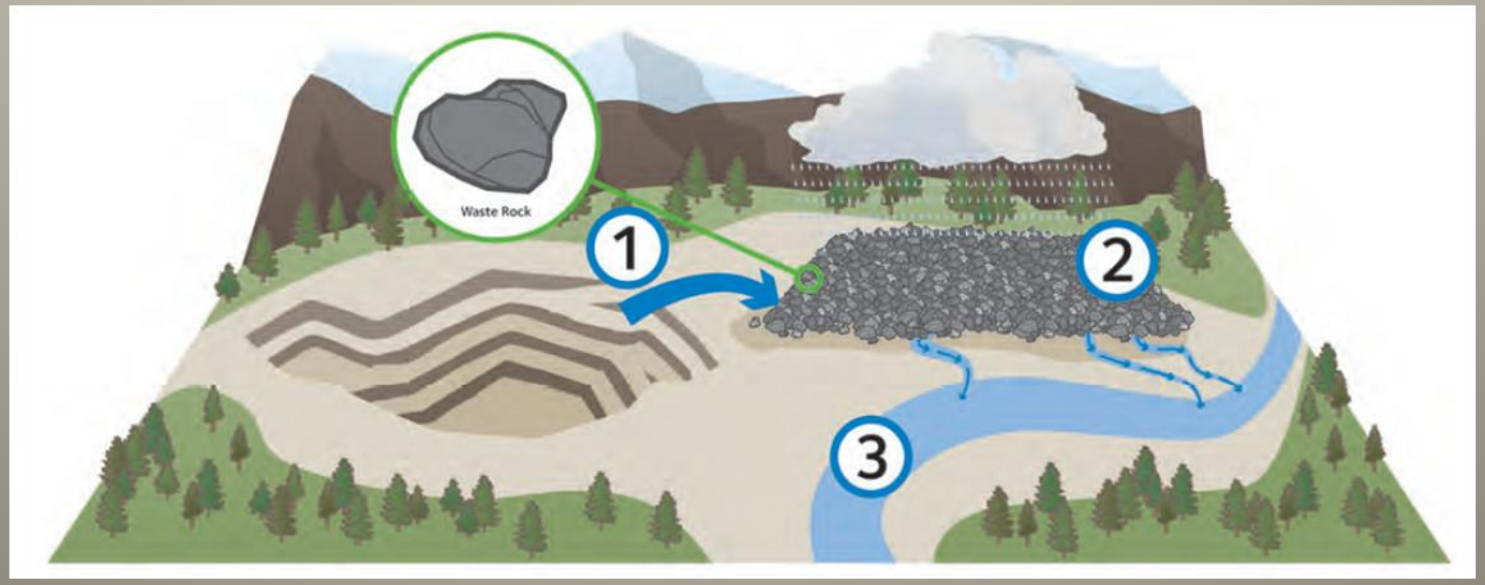
Management of Waste Rock

- Metal leaching and acid rock drainage (ML/ARD) considerations for water quality
- Selenium management options – Elk Valley Water Quality Plan best practices
- Coal rejects – potential impacts on selenium leaching and sequestration



Management of Waste Rock

- ML/ARD Considerations
  1. Removing rock from anaerobic environment
  2. Oxygen and precipitation infiltration – weathering of minerals
  3. Drainage to receiving environment



Source: Elk Valley Water Quality Plan

Management of Waste Rock

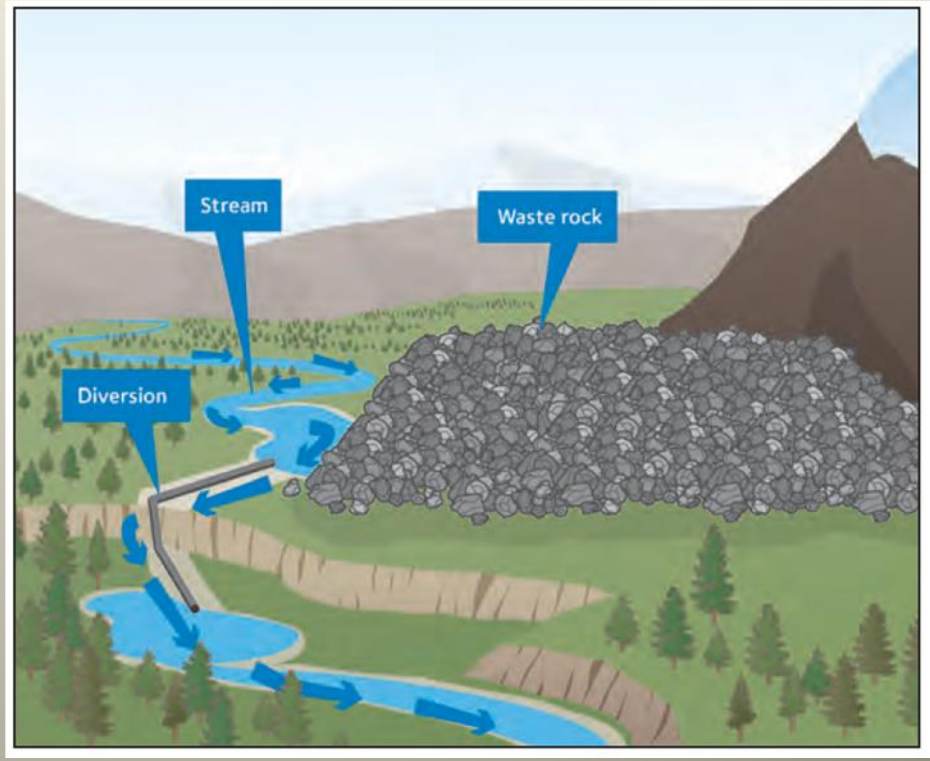
- ML/ARD Considerations
  - Elk Valley coal hosting rocks contain abundant carbonate minerals so ARD risks are low (but not absent)
  - Selenium leaching main challenge
    - Present as a trace element in pyrite ('fools gold')
    - Oxidation and 'rinsing' of pyrite – just like rust formation on car
  - Selenium is most soluble at neutral to alkaline pH (i.e. when carbonate minerals are present)

Management of Waste Rock

- Selenium inhibition options
  - Limit oxidation of sulphide
  - Reducing/sub-oxic conditions to sequester selenium
- Crown Mountain can build from the EVWQP and implement learnings to date
- As Crown Mountain is a greenfield project, it has the opportunity to establish industry leading management practices

Management of Waste Rock

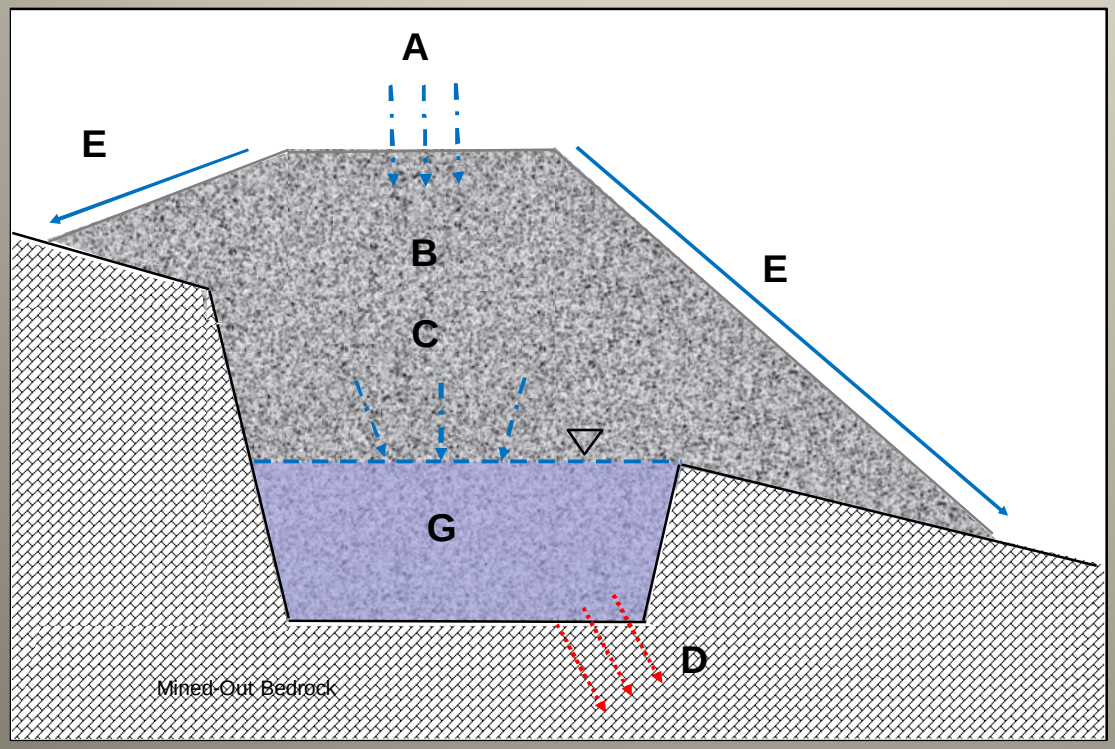
- Selenium management best practices from EVWQP:
  - Keep clean water clean (i.e., diversions)
  - Reduce oxygen diffusions/advection
  - Reduce water infiltration



Source: Elk Valley Water Quality Plan

Management of Waste Rock

- Selenium management options (EVWQP)
  - Saturated rock fills (SRFs) – appear to support conditions that inhibit and remove selenium
  - Covers – reduce percolation, some chemical benefits, but unclear for selenium



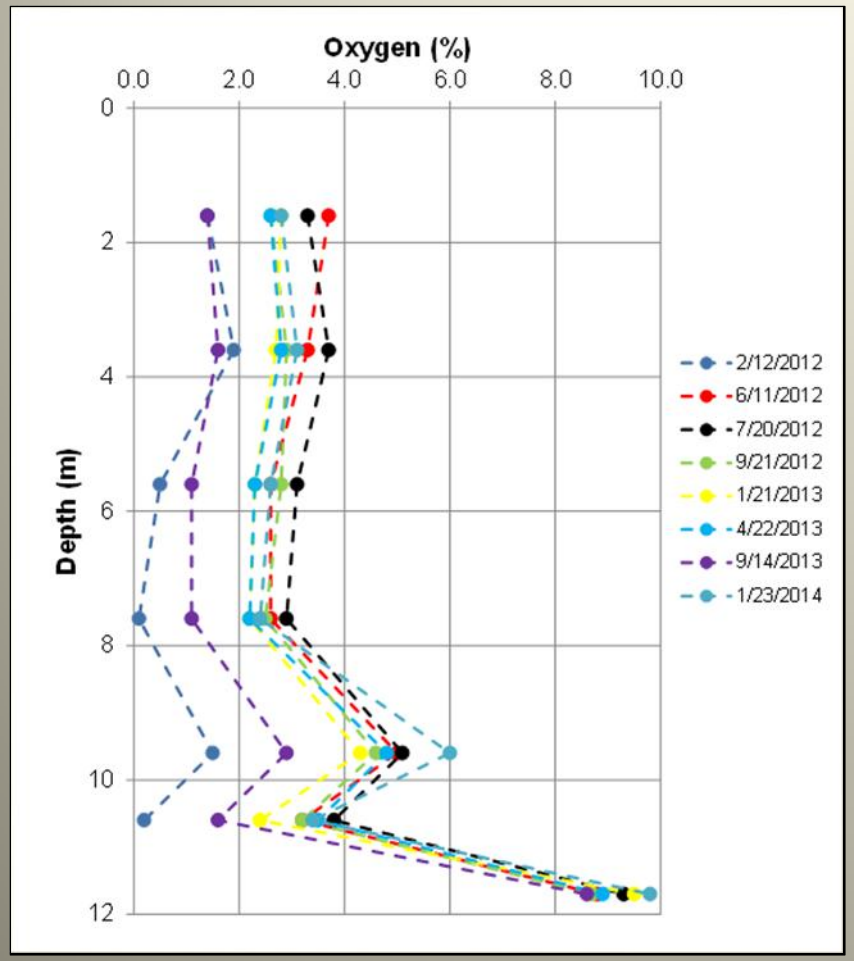
Conceptual SRF operation

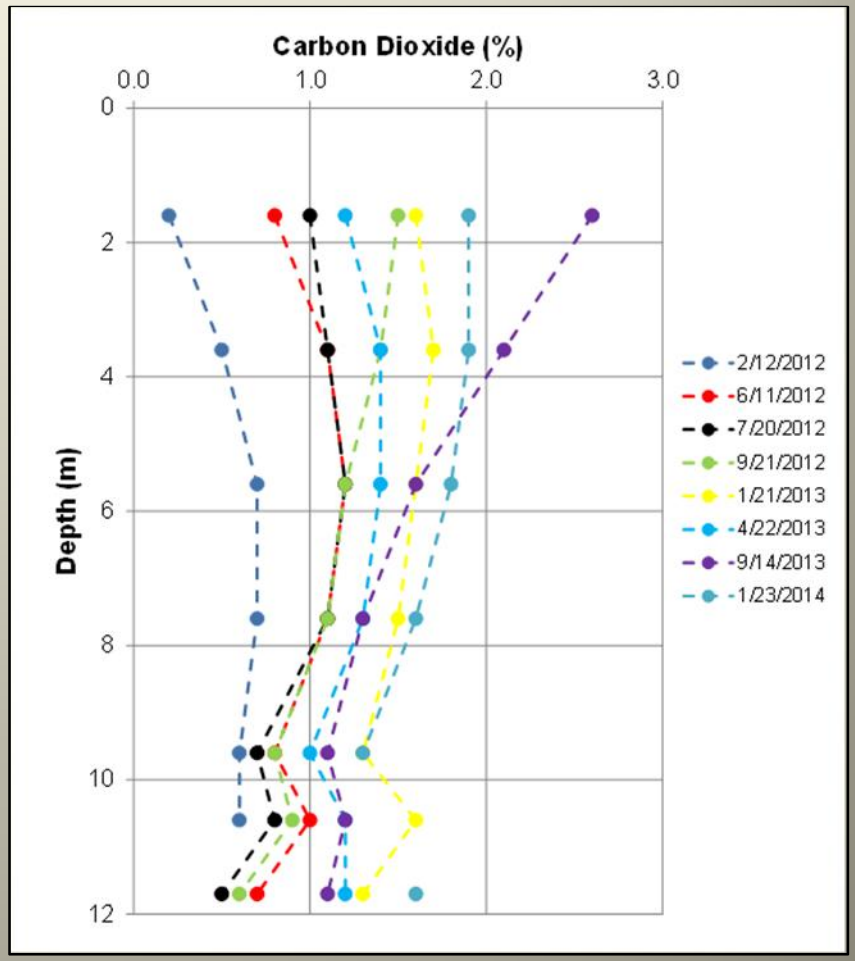
Management of Waste Rock

- Coal rejects – layer cake ‘icing’
  - Waste rock layers separated by layers of rejects (icing) to limit percolation and potentially encourage selenium sequestration

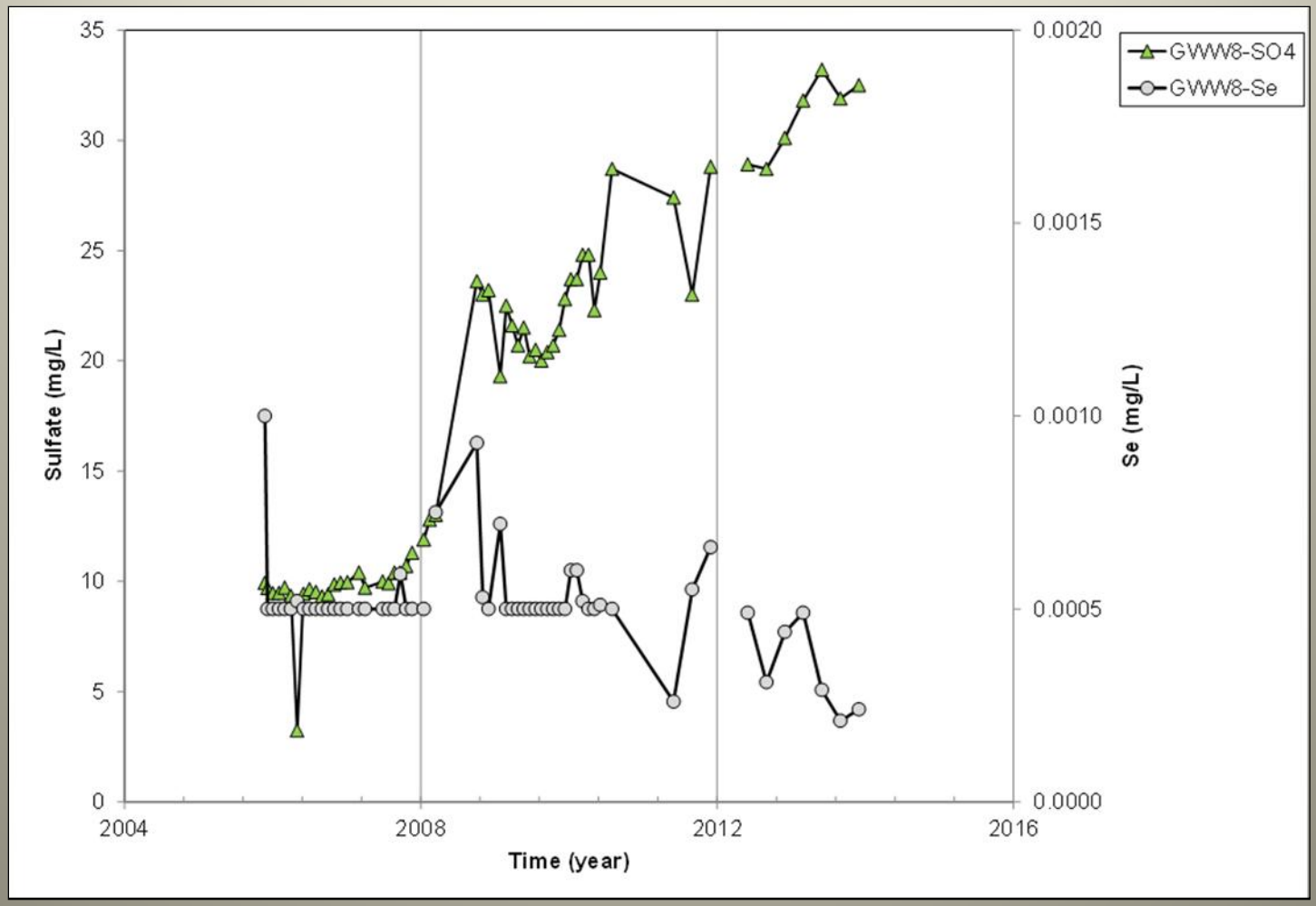
- Kennedy et al (ICARD 2015) showed that coal rejects can provide conditions needed to support inhibition and/or sequestration of selenium

Management of Waste Rock





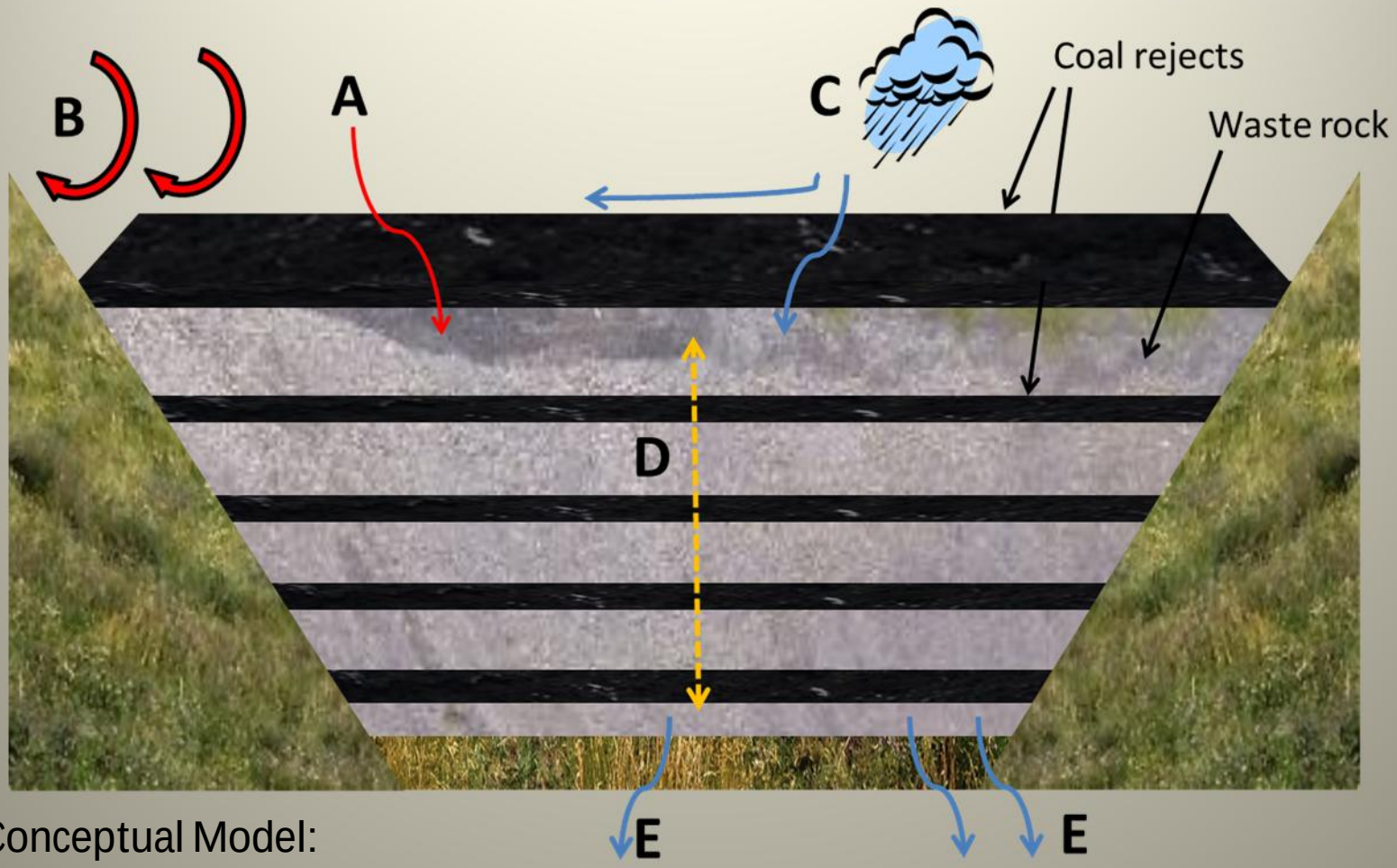
Management of Waste Rock



Management of Waste Rock

- Coal rejects (CR) – layered co-mingling
  - Other benefits would include lower volumes of seepage for management and smaller waste facility footprint

Waste Rock Management: CR Layered Approach



Conceptual Model:

- Decrease oxygen diffusion (A)
- Decrease or inhibit oxygen advection (B) – along with valley fill
- Limit water infiltration (C)
- Potentially promote selenium sequestration (D)
- Lower volumes of seepage for management (E)

Environmental Baseline Studies

- Extensive environmental baseline studies completed to date and are ongoing.
  - Surface water
  - Hydrology
  - Groundwater
  - Geochemistry
  - Meteorology
  - Terrestrial Habitat (wildlife, TEM, plants)
  - Fish and Fish Habitat

Disclaimer

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Further details on risk factors associated with the Company's operations and its securities are contained in the Company's prospectuses and other relevant announcements to the Australian Stock Exchange.

Some of the statements contained in this presentation are forward-looking statements. Forward looking statements include but are not limited to, statements concerning estimates of coal tonnages, expected costs, statements relating to the continued advancement of the Company's projects and other statements which are not historical facts. When used in this document, and on other published information of the Company, the words such as "aim", "could", "estimate", "expect", "intend", "may", "potential", "should" and similar expressions are forward-looking statements.

Although the company believes that its expectations reflected in the forward-looking statements are reasonable, such statements involve risk and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements. Various factors could cause actual results to differ from these forward-looking statements include the potential that the Company's projects may experience technical, geological, metallurgical and mechanical problems, changes in product prices and other risks not anticipated by the Company or disclosed in the Company's published material.

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Competent Persons Statements

Competent Person Statements

Mineral Reserves and Pre Feasibility Study Results

The information in this presentation relating to the Mineral Reserve Estimate and Pre Feasibility Study Results of the Company's Crown Mountain Coal Project are extracted from the ASX Release entitled "Prefeasibility study confirms Crown Mountain coking coal project will enjoy outstanding economics" announced on 11 August 2014 and is available to view on the ASX website (ASX:JAL), and the Company's website. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, that all material assumptions and technical parameters underpinning the reserve estimates and pre feasibility study results in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Mineral Resource

The information in this presentation relating to the Mineral Resource estimate on the Company's Crown Mountain Coal Project is extracted from the ASX Release entitled "Positive Property-Wide Coal Quality, Crown Mountain Coking Coal Project" announced on 14 March 2014 and is available to view on the ASX website (ASX:JAL), and the Company's website. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, that all material assumptions and technical parameters underpinning the resource estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

CROWN MOUNTAIN COKING COAL PROJECT

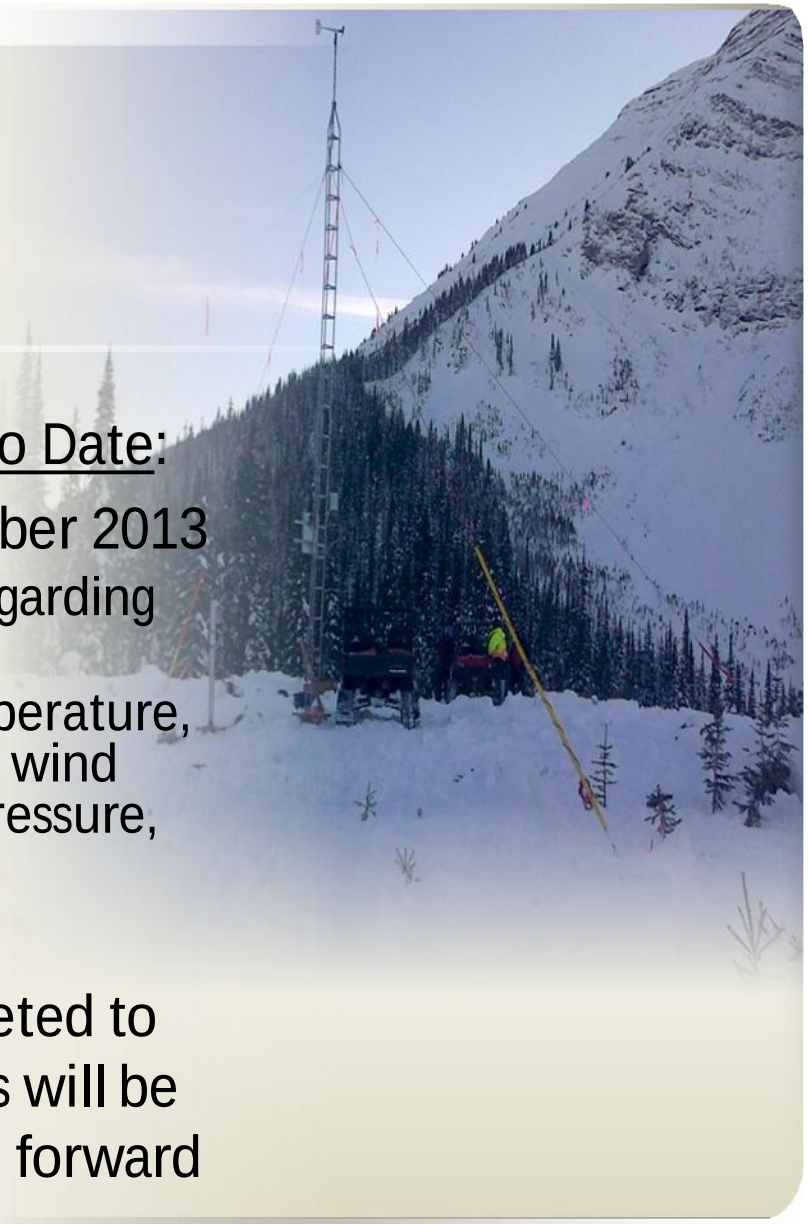
October 2015

Physical and Aquatic Resources

Physical and Aquatic Resources

- Air quality/GHG emissions/Noise
- Groundwater quantity and quality
- Geology and geochemistry
- Surface hydrology
- Surface water quality
- Aquatic health
- Fish and fish habitat

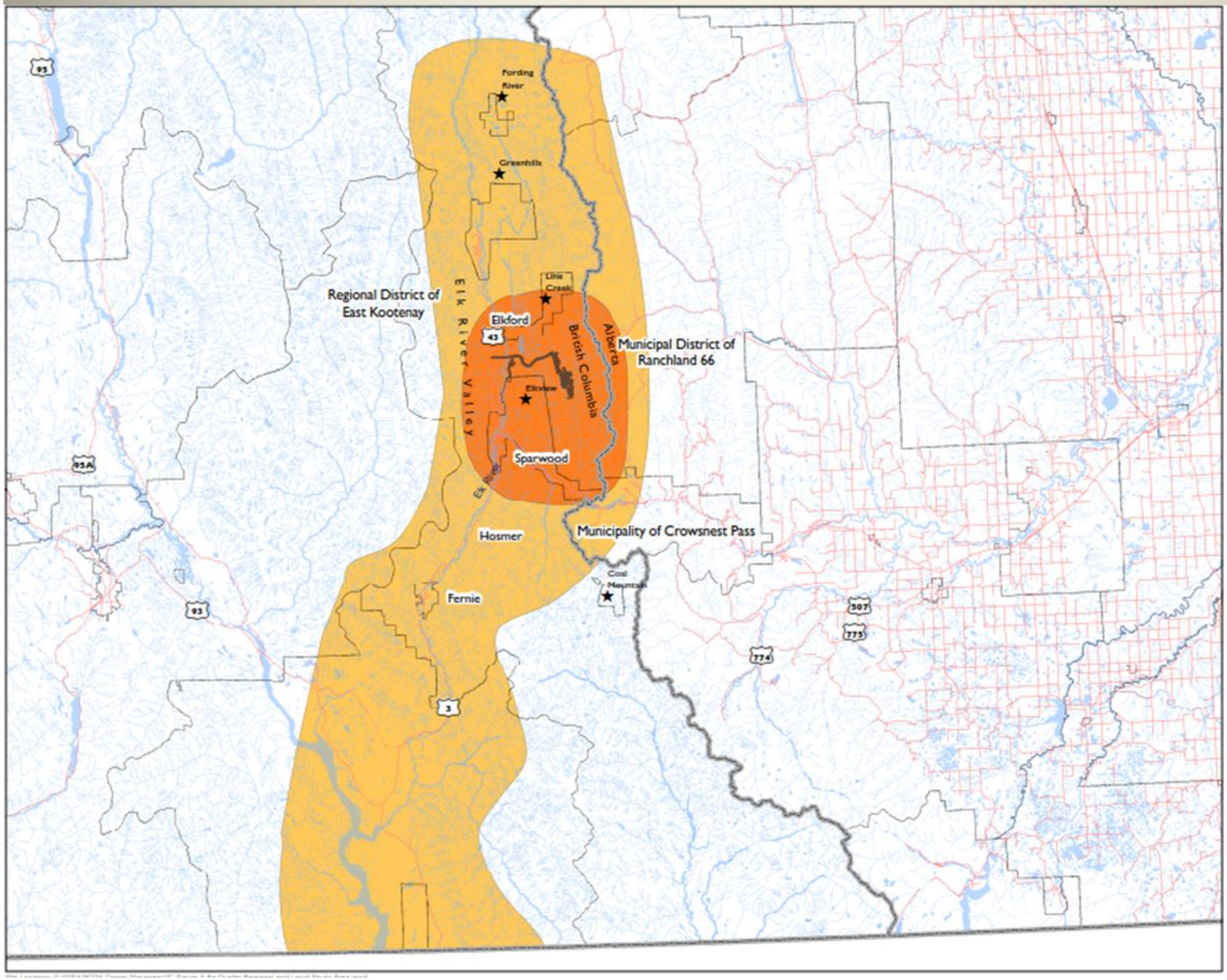
Air Quality/Noise



Introduction and Baseline Program to Date:

- Climate station installed in December 2013
  - Extensive discussions with MOE regarding approach, location, etc.
  - Precipitation (rain and snow), temperature, dew point temp, relative humidity, wind speed and direction, barometric pressure, and net radiation
- No detailed air quality and noise assessment work has been completed to date. Scope of these components will be developed with regulators moving forward

Air Quality Study Areas



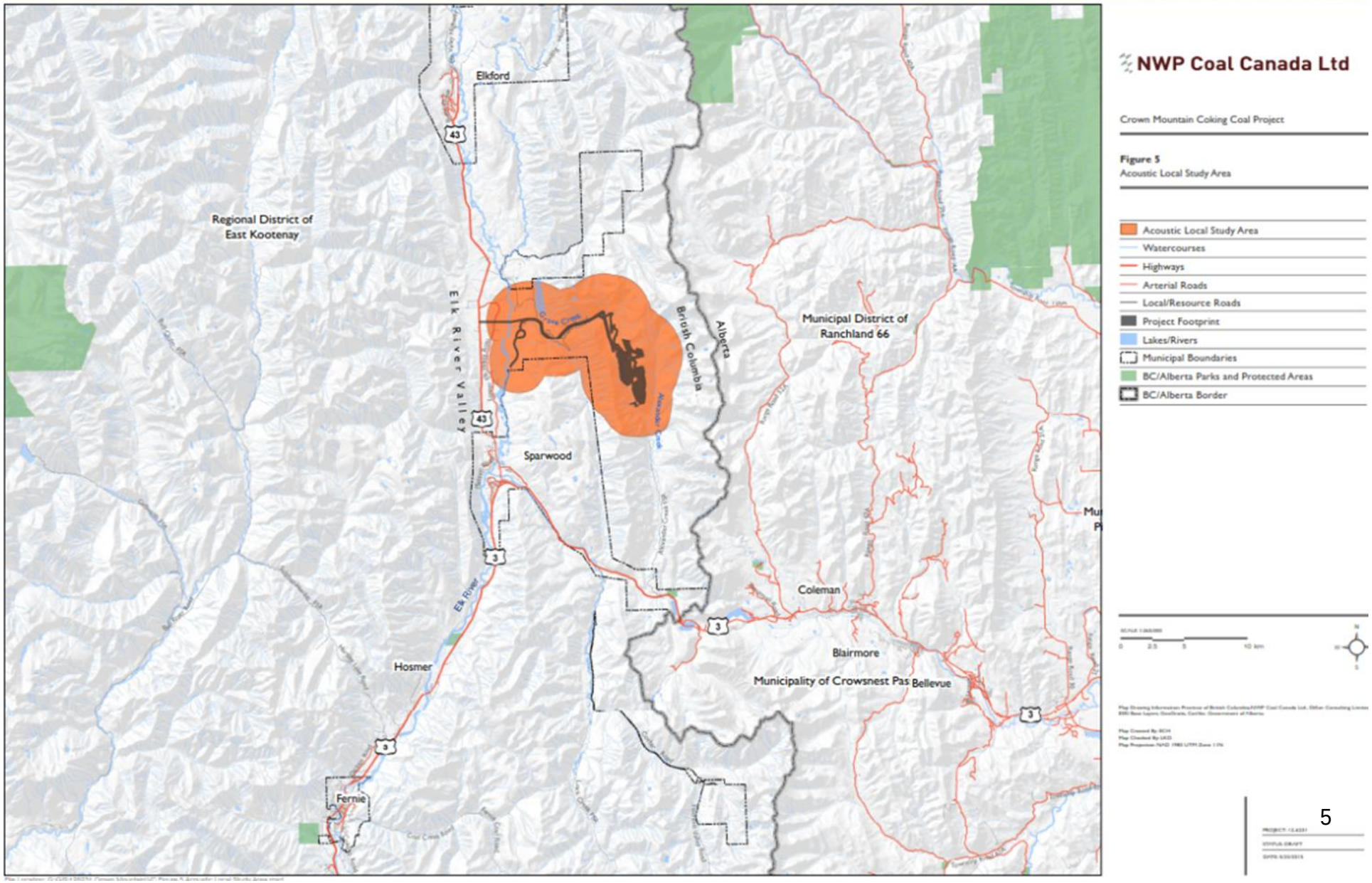
NWP Coal Canada Ltd

Crown Mountain Coking Coal Project

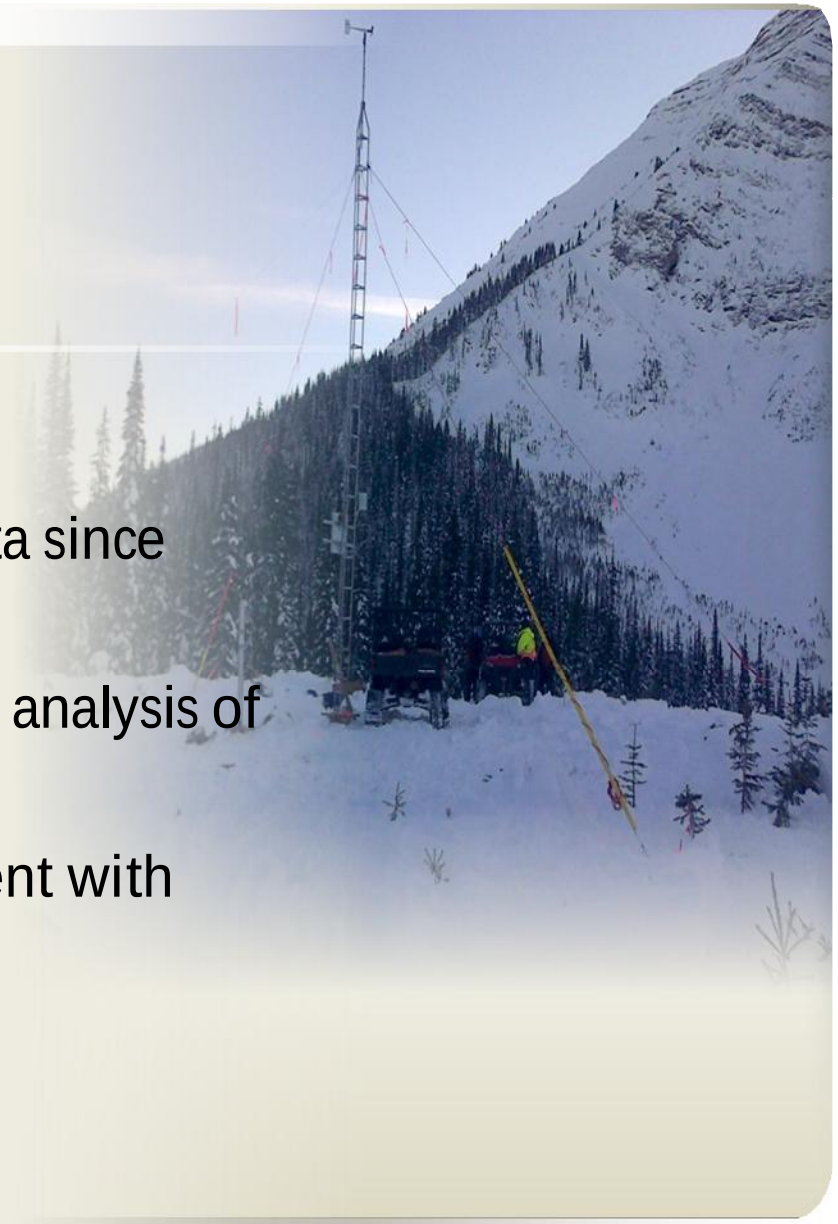
Figure 4
Air Quality Regional and Local Study Areas

- Air Quality Local Study Area
- Air Quality Regional Study Area
- ★ Existing Operating Mines
- Highways/Major Roads
- Watercourses
- Regional District/Municipal Boundaries
- Project Footprint
- Lakes/Rivers
- BC/Alberta Border

Noise Study Area



Air Quality/Noise



Key Findings to Date:

- Ongoing collection of climate data since 2013
- Data is being compiled for future analysis of air quality
- Climate data is generally consistent with conditions expected for the local environment

Air Quality/Noise VCs

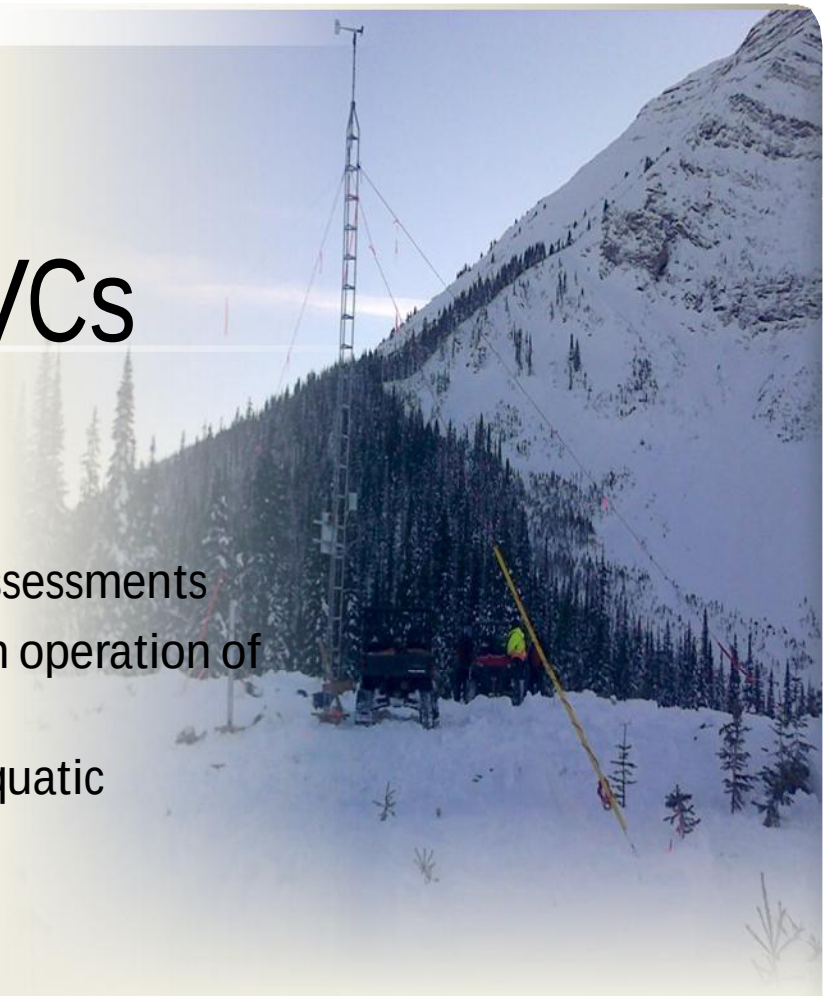
Selected Valued Components

- GHG emissions
- Noise

Intermediate Component

- Air quality

Air Quality/Noise VCs



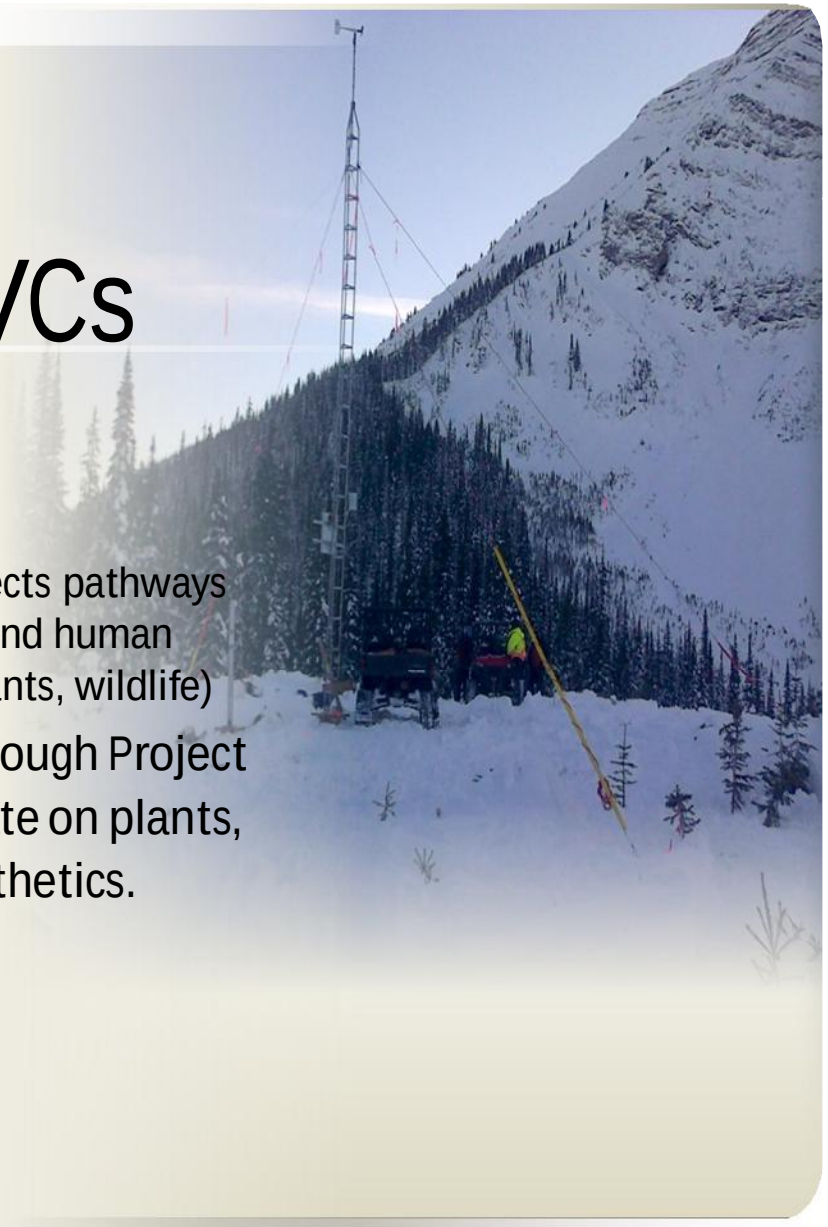
GHG Emissions

- Selected Valued Component
- To be measured through emissions assessments
- Generation of GHGs and dust through operation of equipment, roads, mining activities.
- Potential impacts to terrestrial and aquatic environments and human health.

Noise

- Selected Valued Component
- Project construction and operation may result in increased noise levels
- Potential sensory disturbance to noise receptors (e.g., humans, wildlife)

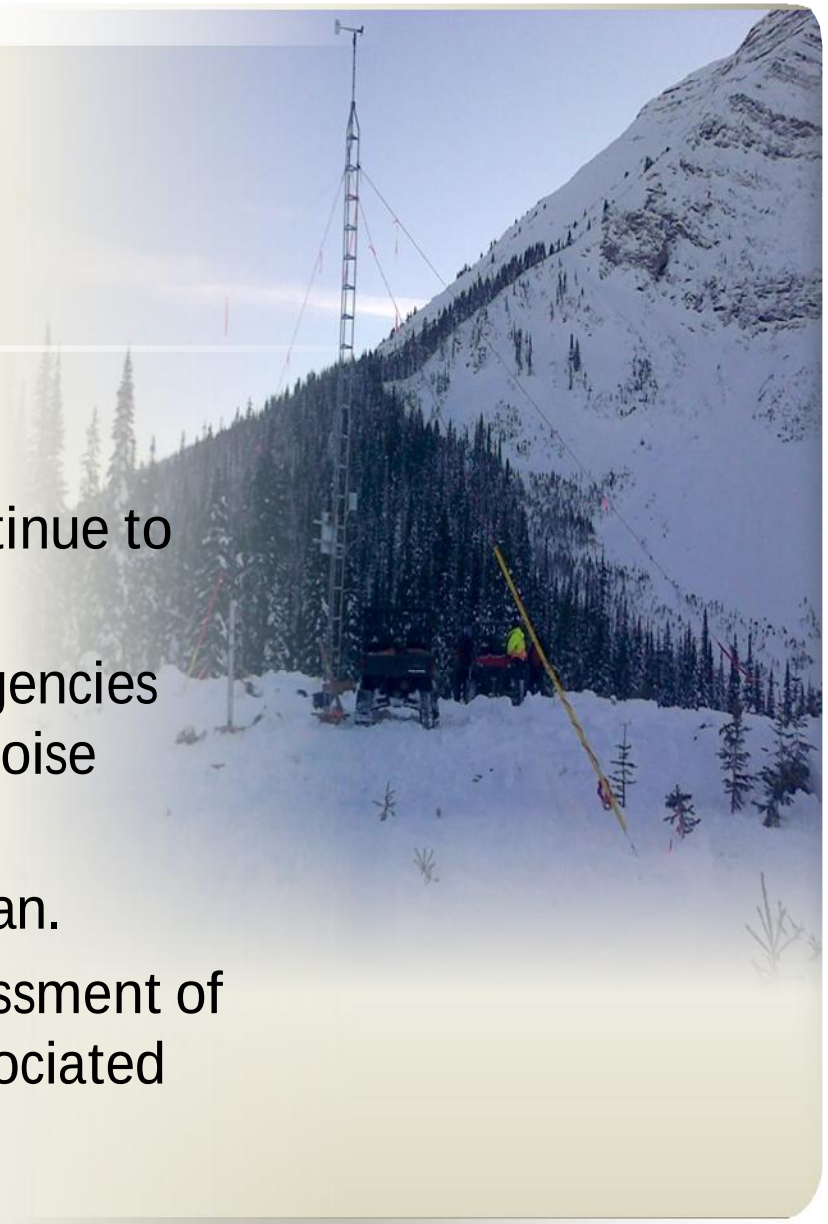
Air Quality/Noise VCs



Air Quality

- Intermediate component
  - Air quality could be affected along the effects pathways of various selected VCs including aquatic and human health and terrestrial ecosystems (e.g., plants, wildlife)
- Air contaminants and dust generated through Project activities have the potential to accumulate on plants, affect water quality, as well as visual aesthetics.

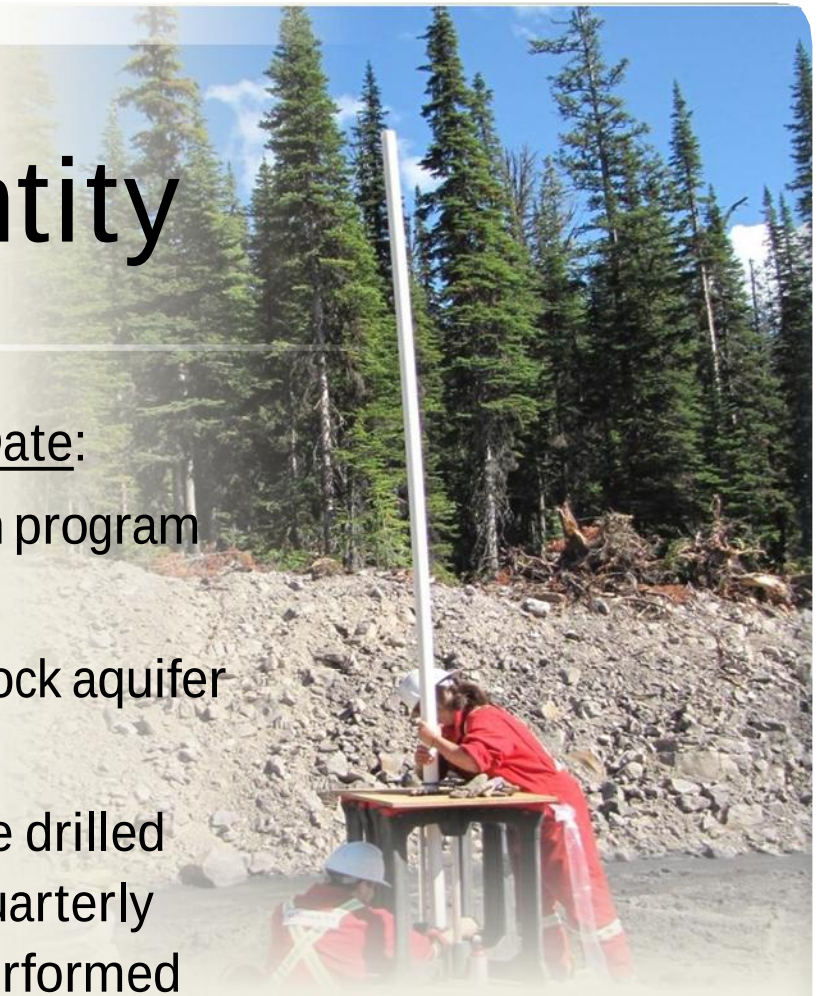
Air Quality/Noise



Proposed Next Steps:

- Maintain climate station and continue to collect local climate data
- In consultation with regulatory agencies develop a draft baseline air and noise monitoring strategy
- Develop air quality monitoring plan.
- Monitoring likely to include assessment of dust generation and fall rates associated with Project activities.

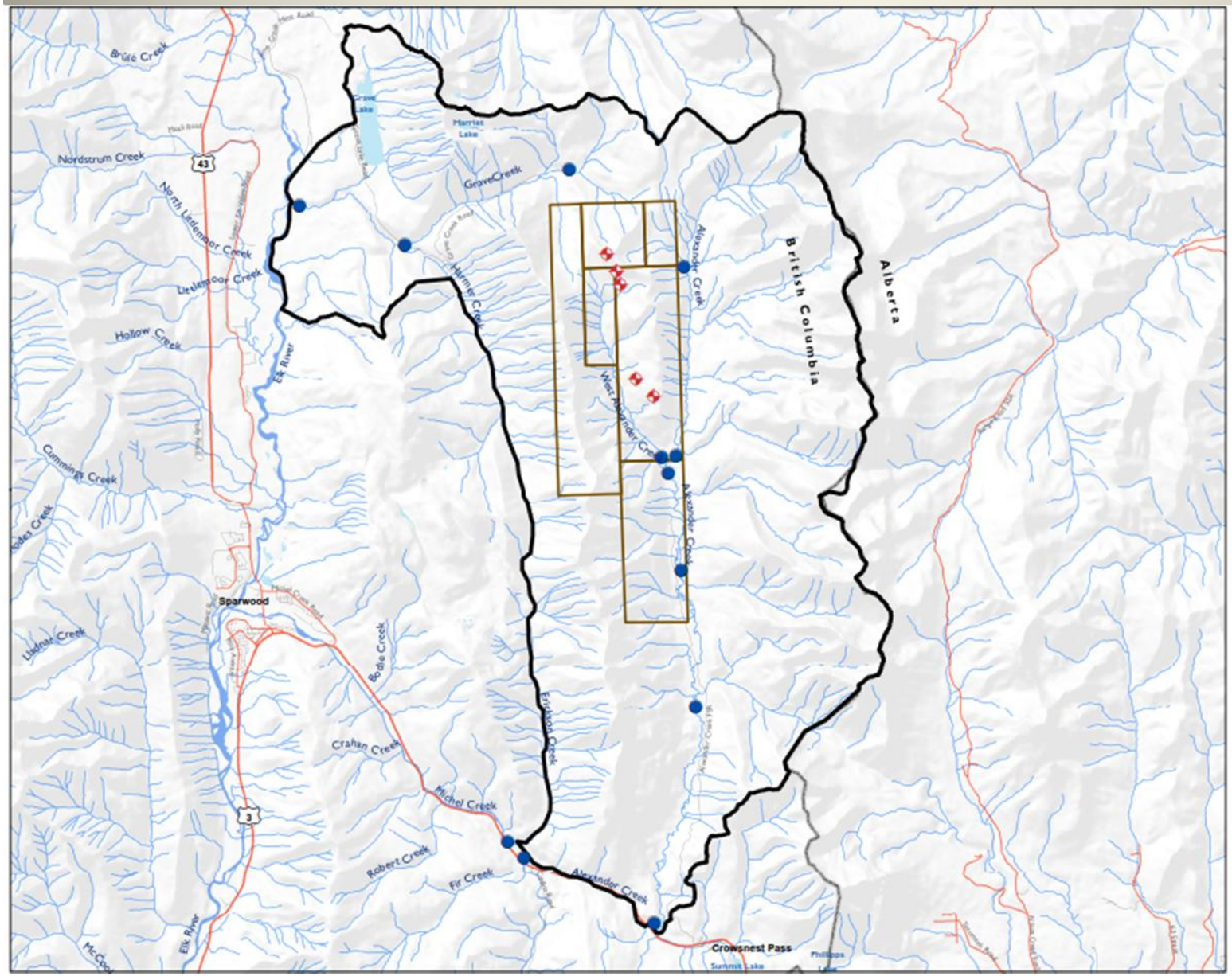
Groundwater Quantity and Quality



Introduction and Baseline Program to Date:

- A baseline groundwater investigation program was initiated in 2013
- Investigation provided baseline bedrock aquifer information
- 5 groundwater monitoring wells were drilled and a year of water level readings, quarterly sampling and aquifer testing were performed

Groundwater Monitoring Sites



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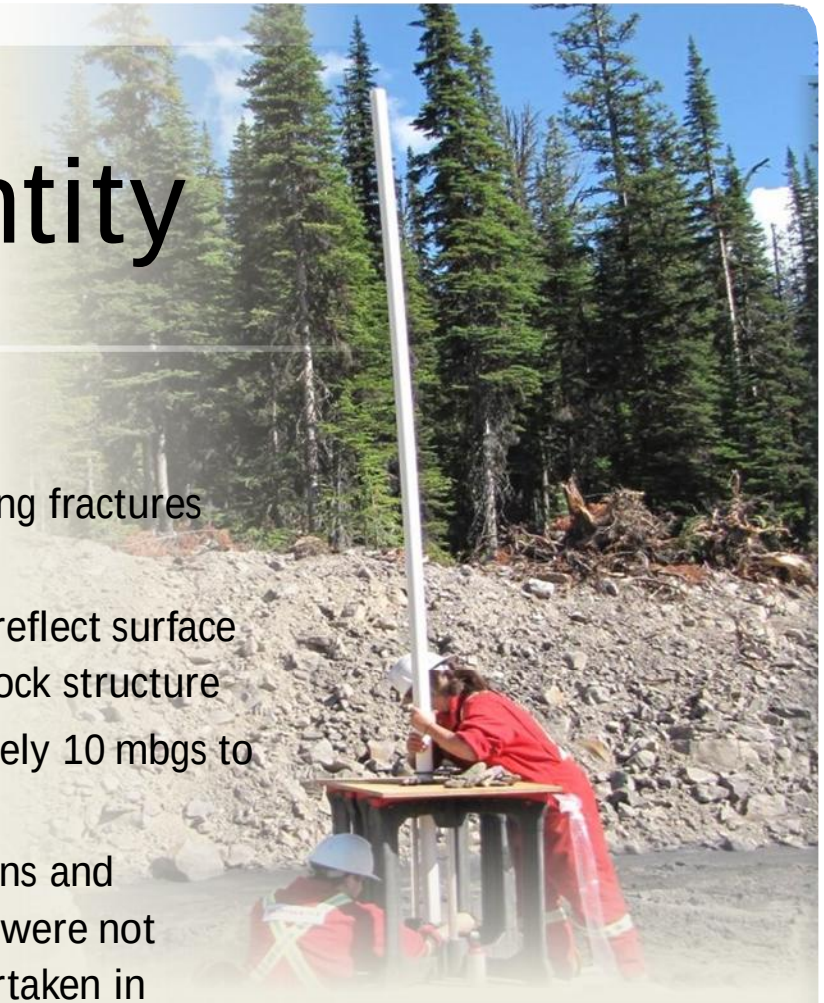
Crown Mountain Coking Coal Project

Figure 5-12

Groundwater and Surface Water Quality Sampling Locations

- Baseline Groundwater Monitoring Wells
- Baseline Surface Water Quality Stations
- Highways
- Arterial Roads
- Local/Resource Roads
- Watercourses
- Local Study Area
- Coal Tenure Licenses and Application
- Rivers
- Lakes
- BC/Alberta Border

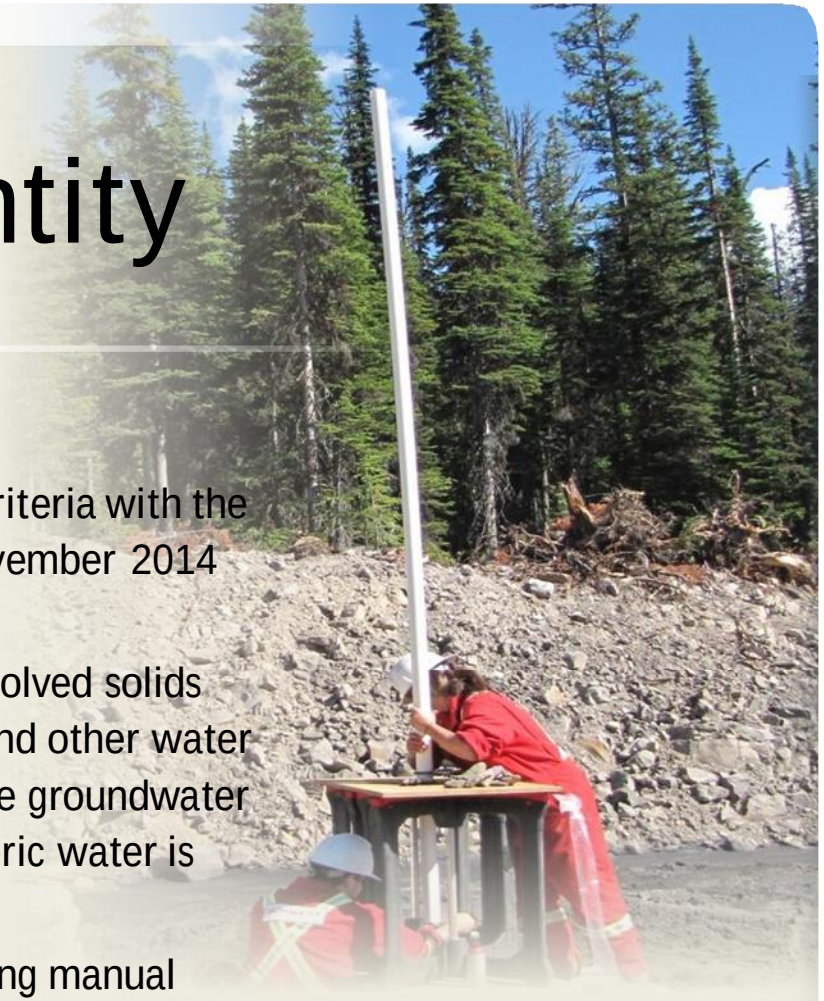
Groundwater Quantity and Quality



Key Findings to Date:

- Groundwater was observed primarily in bedding fractures and joints in bedrock and coal seams
- Groundwater flow directions are expected to reflect surface topography and to be strongly influenced by rock structure
- Depth to groundwater varies from approximately 10 mbgs to 80 mbgs and fluctuates seasonally
- High total suspended solids (TSS) concentrations and turbidity values indicated that well conditions were not ideal. Therefore, well development was undertaken in August 2014 to ensure samples will be more representative of the formation water

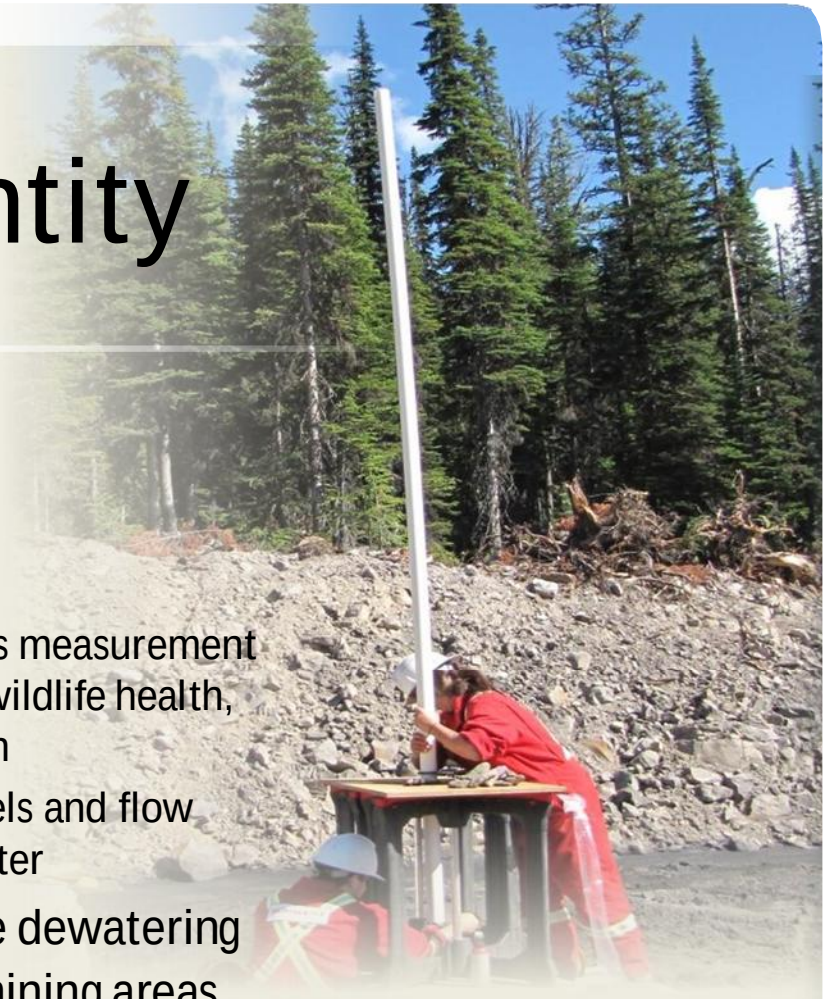
Groundwater Quantity and Quality



Key Findings to Date:

- Sampling results complied with the CDWQG criteria with the exception of Antimony (Well CM11-11) in November 2014 sampling
- Groundwater is quite fresh based on total dissolved solids (TDS) concentrations, electrical conductivity and other water quality analytes, which suggests that either the groundwater has been recently recharged or that atmospheric water is seeping into the wells
- Single well response tests were completed using manual weighted slugs and well responses were recorded for both the drawdown and recovery portions of the tests.
- Hydraulic conductivity varied between 3.4 x 10-7 m/s and 2.2 x 10-8 m/s

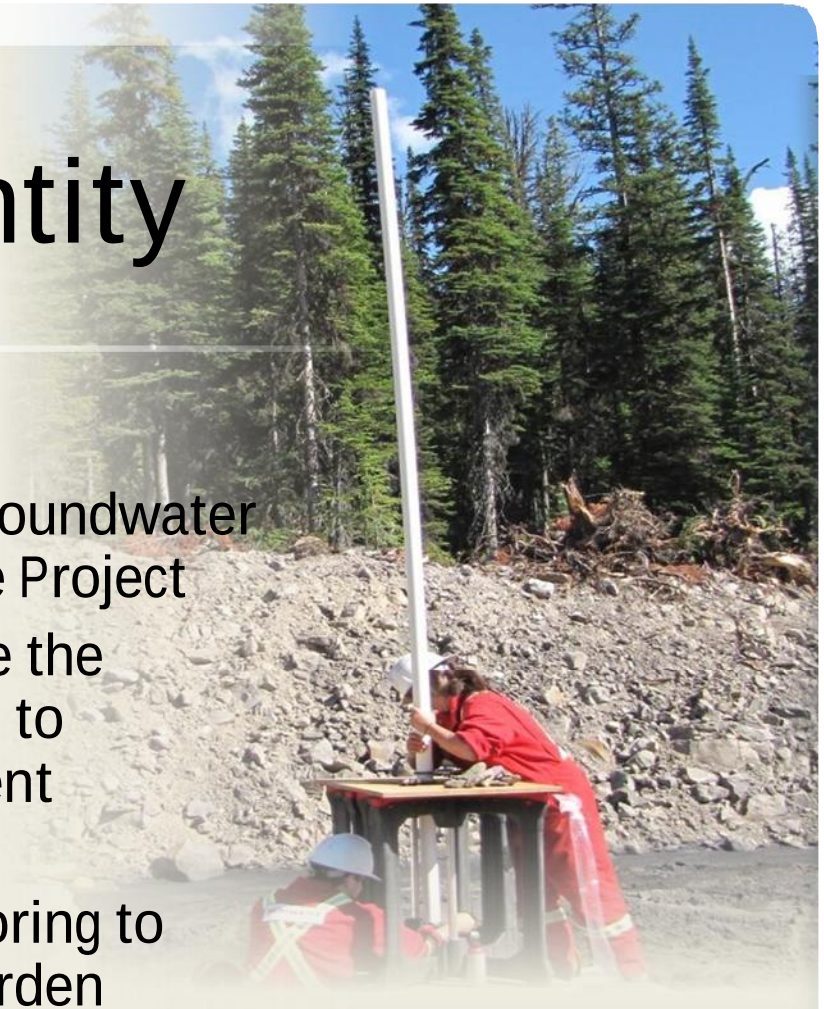
Groundwater Quantity and Quality VCs



Groundwater Quantity and Quality

- Intermediate Valued Components
  - Related to effect pathways of several VCs
  - Changes in quantity and quality to serve as measurement indicators for aquatic health, human and wildlife health, fish, terrestrial ecosystems, and vegetation
  - To be measured through groundwater levels and flow rates, analyte concentrations in groundwater
- Potential impacts: Associated with mine dewatering activities and the location of proposed mining areas, waste rock management areas, and mine infrastructure
- Potential effects: Changes in groundwater quality/quantity may result in changes to stream flow, impacting surface water quantity and quality

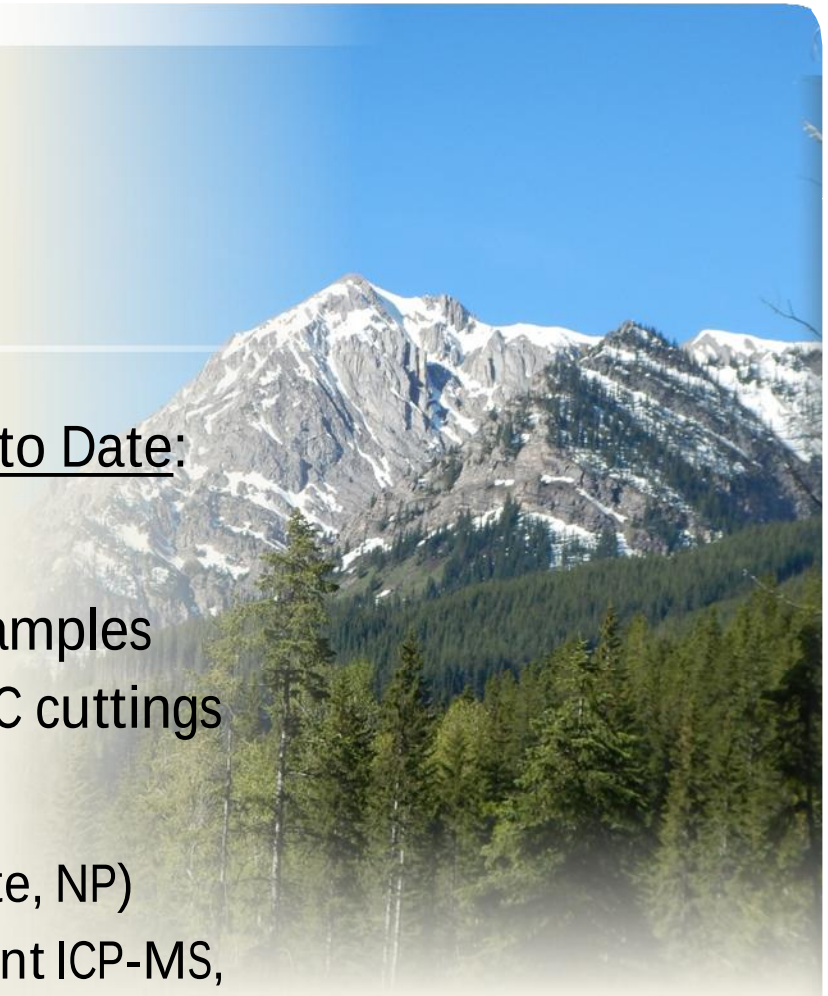
Groundwater Quantity and Quality



Proposed Next Steps:

- A pumping test to determine if groundwater is a potential water source for the Project
- Continue sampling to characterize the baseline groundwater quality and to monitor the post-well development groundwater chemistry trends
- Further investigations and monitoring to specifically target shallow overburden aquifers once facilities and dump locations are selected

Geology and Geochemistry



Introduction and Baseline Program to Date:

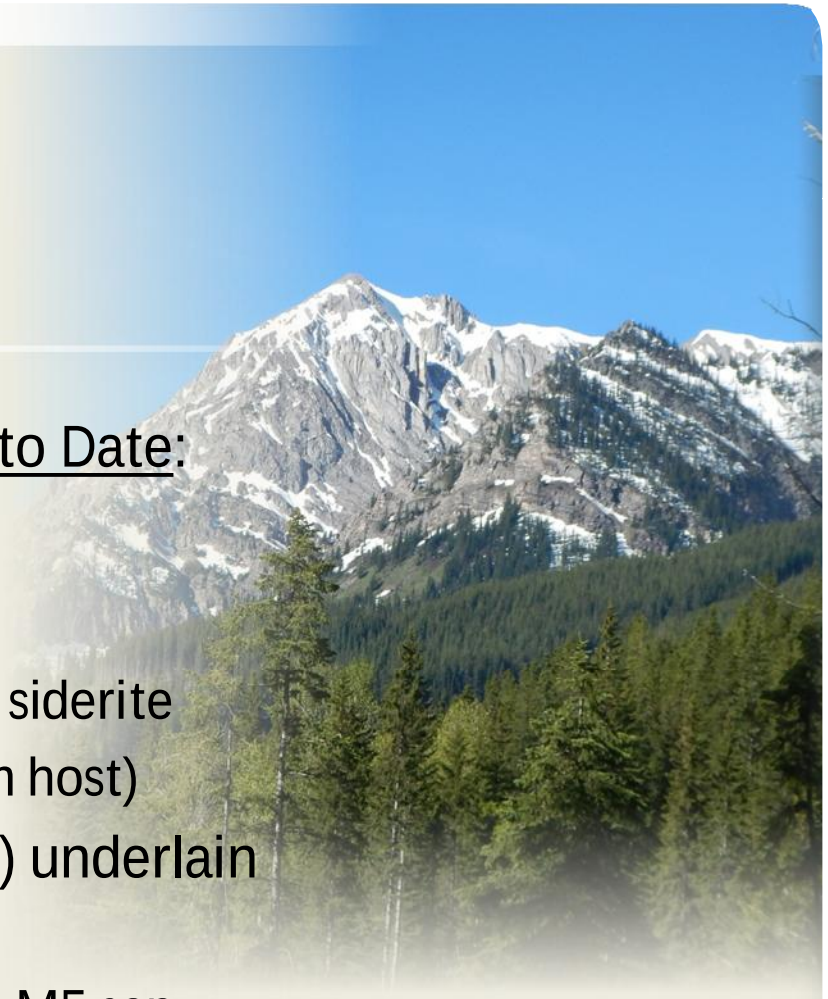
- Geology review
- Testing of 60 x 3 m composited samples from drill core (near seam) and RC cuttings
- Testing performed:
  - Acid-base accounting (S, carbonate, NP)
  - Elemental composition (37 element ICP-MS, Hg, F)

Geology and Geochemistry

Period	Litho-Stratigraphic Units			Principal Rock Types
Recent	-			colluvium
Quaternary	-			clay, silt, sand, gravel, cobbles
Lower Cretaceous	Blairmore Group			massive bedded sandstones and conglomerates
Lower Cretaceous to Upper Jurassic	Kootenay Group	Elk Formation		sandstone, siltstone, shale, mudstones, chert pebble conglomerate, minor coal
		Mist Mountain Formation		sandstone, siltstone, shale, mudstones, thick coal seams
		Morrissey Formation	Moose Mountain Member	medium to coarse-grained quartz-chert sandstone
			Weary Ridge Member	fine to coarse-grained, slight ferruginous quartz-chert sandstone
Jurassic	Fernie Formation			shale, siltstone, fine-grained sandstone
Triassic	Spray River Formation			sandy shale, shale quartzite
	Rocky Mountain Formation			quartzite
Mississippian	Rundle Group			limestone

Source: Gibson (1985)

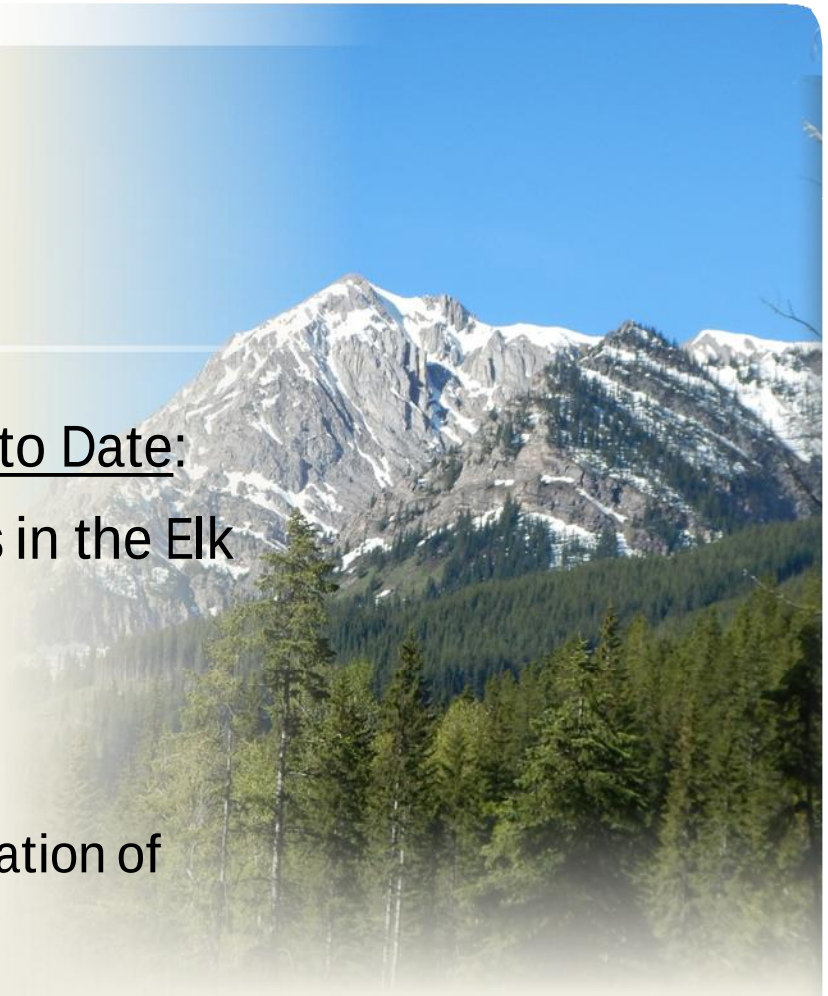
Geology and Geochemistry



Introduction and Baseline Program to Date:

- Mineralogy (from a geochemist's perspective)
  - Carbonates: calcite, dolomite and siderite
  - Sulphides: mainly pyrite (selenium host)
- Mist Mountain Formation (MMF) underlain by Morrissey Formation (MF)
  - Important to consider pit limits as MF can have ARD potential

Geology and Geochemistry



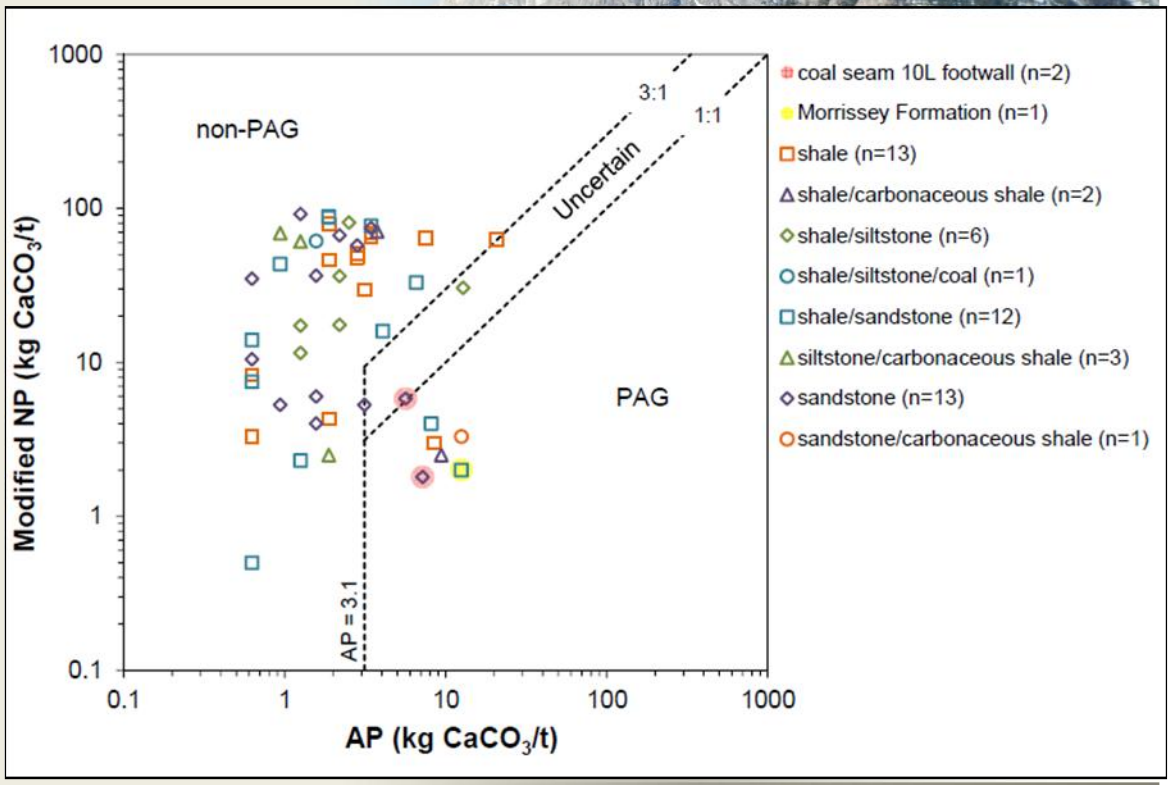
Introduction and Baseline Program to Date:

- Main geochemical considerations in the Elk Valley are:
  - Selenium
  - Nitrate from explosives
  - Calcite formation causing cementation of stream beds)

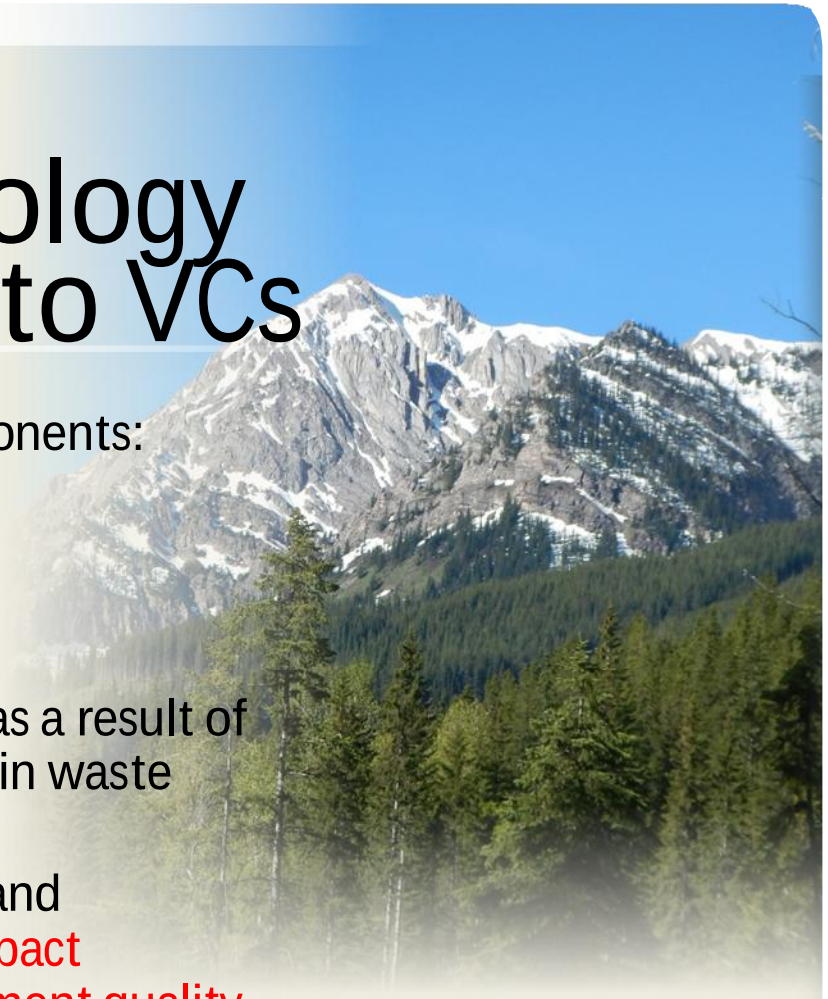
Geology and Geochemistry

Key Findings to Date:

- Low ARD potential and typical of EV
- Co-deposition would mitigate ARD
- MF ARD potential needs refinement
  - e.g., Pit limits, lateral and vertical distribution
- Selenium typical of other samples in Elk Valley (1 – 2 mg/kg)

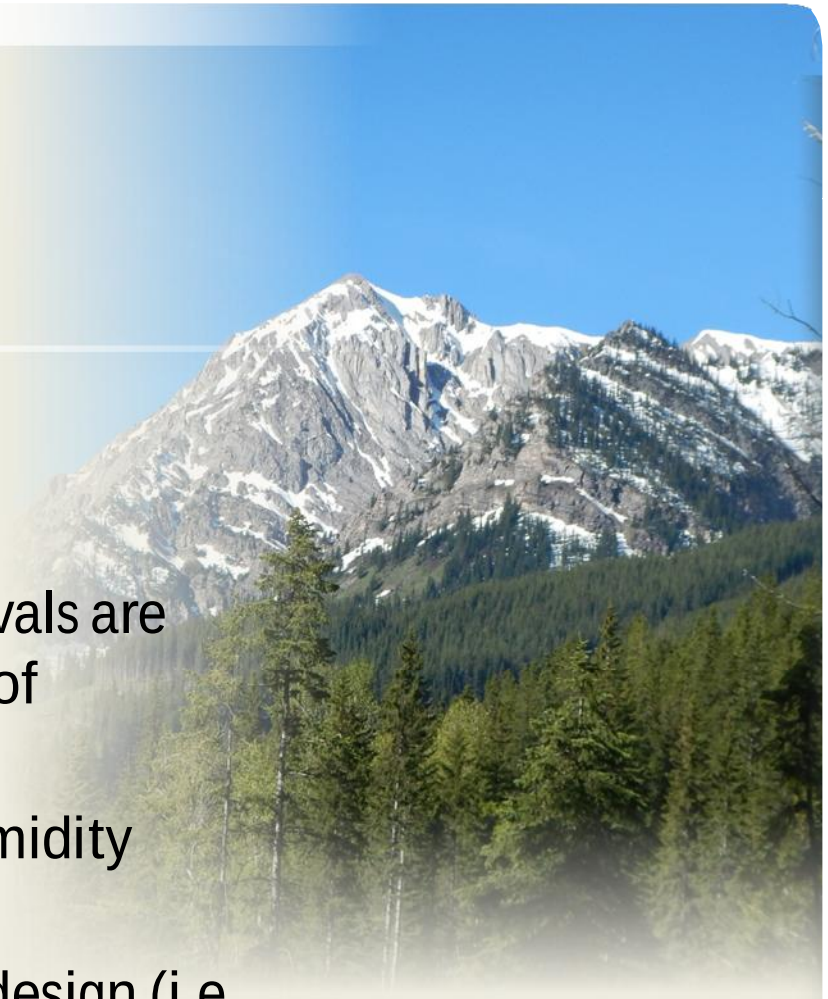


Relationship of Geology and Geochemistry to VCs



- Related to several Intermediate Components:
  - Terrain (terrain type, slope, and aspect)
  - Groundwater
  - Surface water quality
  - Sediment quality
- Potential impacts: Changes in terrain as a result of mining and pit development. Changes in waste rock and process waste geochemistry
- Potential effects: Changes in geology and geochemistry have the potential to impact groundwater , surface water, and sediment quality. VC impacted may include:
  - Aquatic health, terrestrial ecosystems (e.g., vegetation, wildlife), and people

Geology and Geochemistry



Proposed Next Steps:

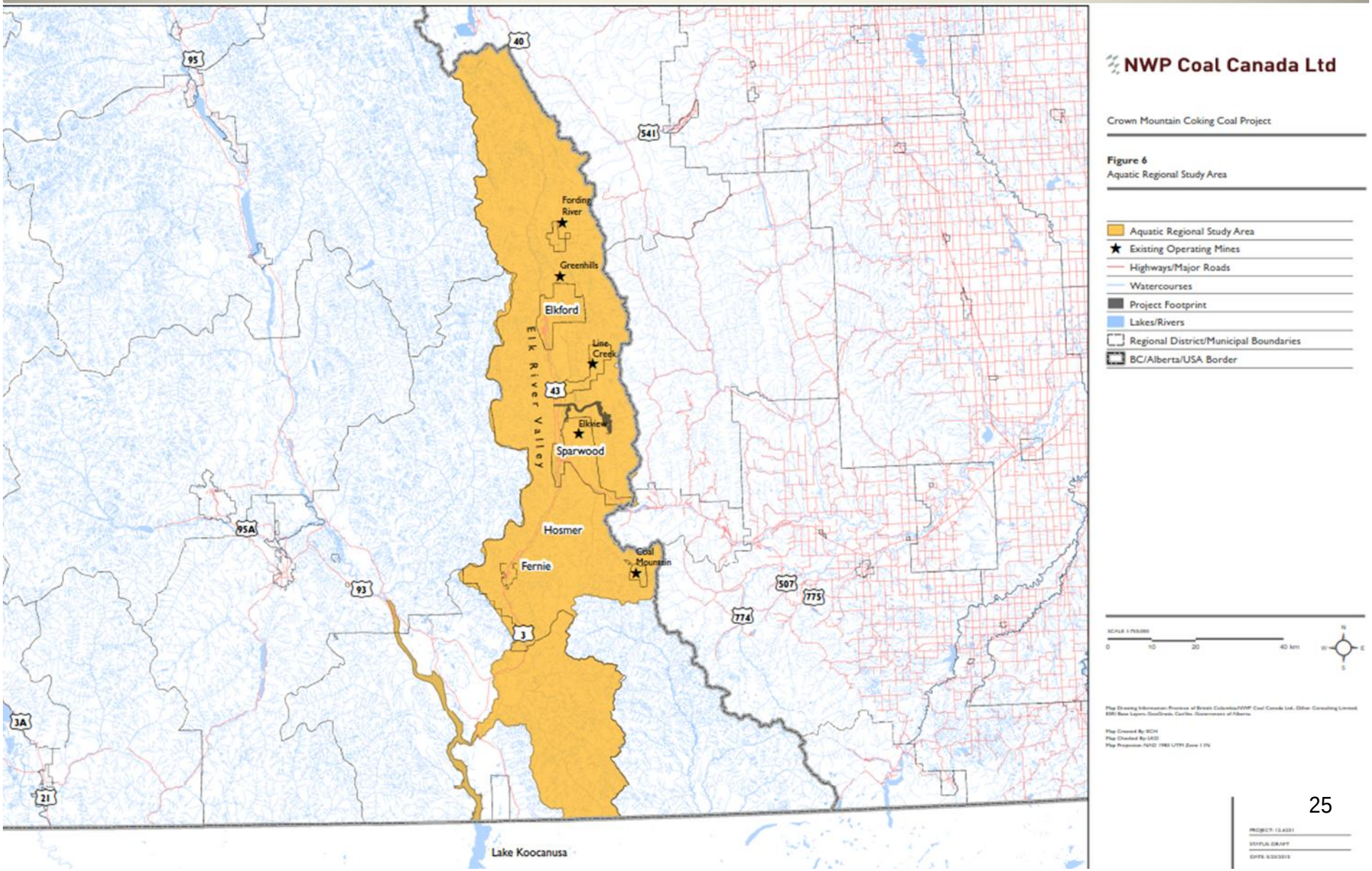
- More comprehensive coverage
- Confirm distribution of PAG intervals are isolated and consistent with rest of MMF/Elk Valley
- Mineralogical and kinetic (i.e. humidity cells) testing of waste materials
- Linking characterization to mine design (i.e. MF occurrence in pit walls)
- Characterization of process waste samples

Surface Water Hydrology

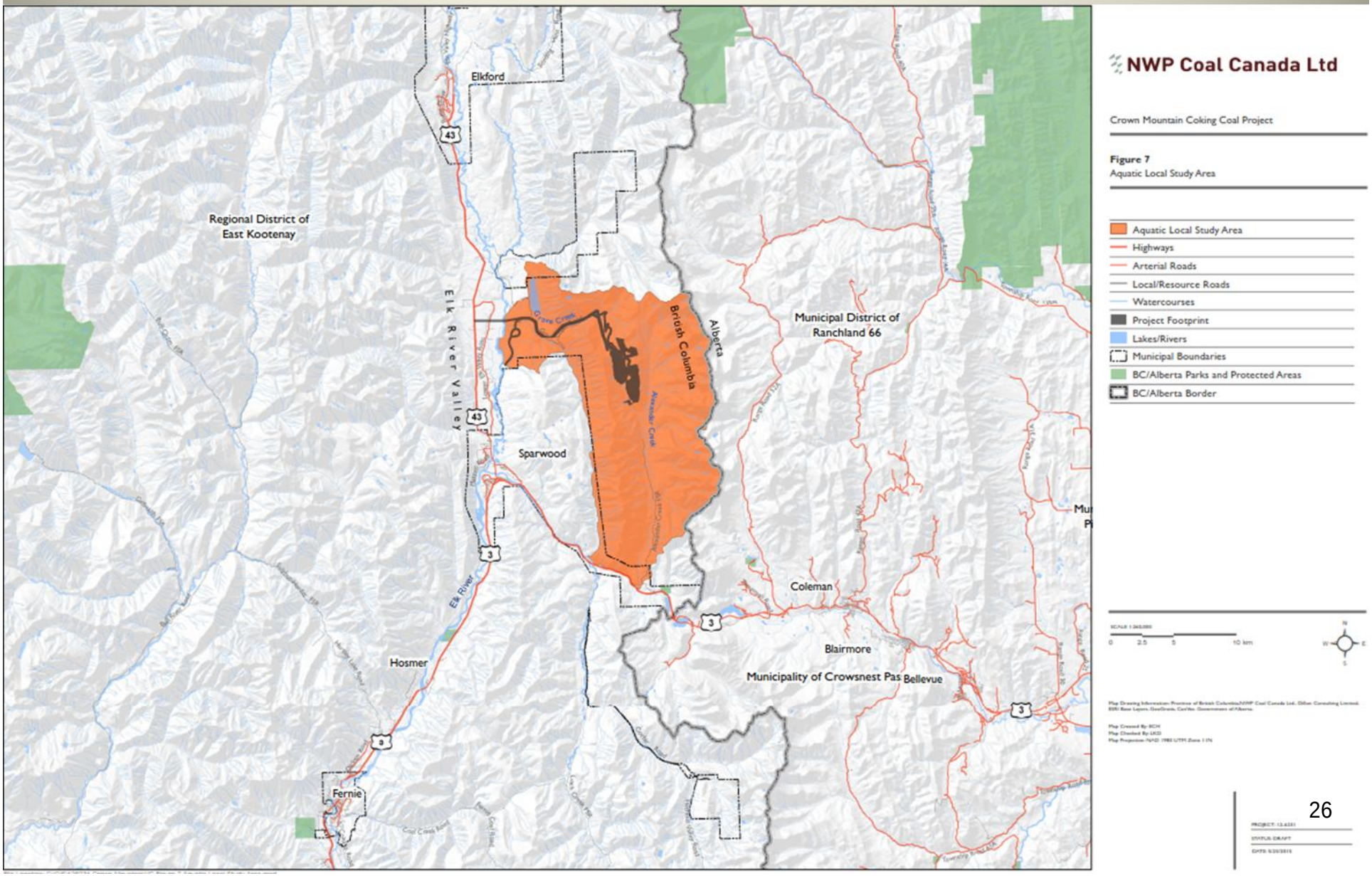
Introduction and Baseline Program to Date:

- Data loggers installed in May 2012 concurrent with initial start of water quality sampling program
- Data downloads and stream gauging completed in the spring, summer, fall, and winter since 2012
- Total of 12 assessments completed
- Initial hydrology program reviewed with the BC MOE
- Watercourses monitored: Grave Creek; Alexander Creek; and West Alexander Creek

Hydrology Study Areas



Hydrology Study Areas



Surface Water Hydrology

Key Findings to Date:

- Data assessment ongoing including preliminary development of annual streamflow hydrographs providing freshet, rainfall, and summer low flow estimates for the monitoring stations

Surface Water Hydrology Intermediate Component

Surface Water Quantity

- Intermediate component
  - Component that is potentially affected along effects pathways of selected VCs (e.g., aquatic health, fish, terrestrial ecosystems, people)
  - To be measured through surface water levels and flow rates
- Potential impacts: Reduction in flow rates and alteration of natural flow regimes associated with water withdrawal
- Potential effects: May result in changes in aquatic health such as fish and benthic invertebrates as well as riparian and wetland ecosystems.

Surface Water Hydrology

Proposed Next Steps:

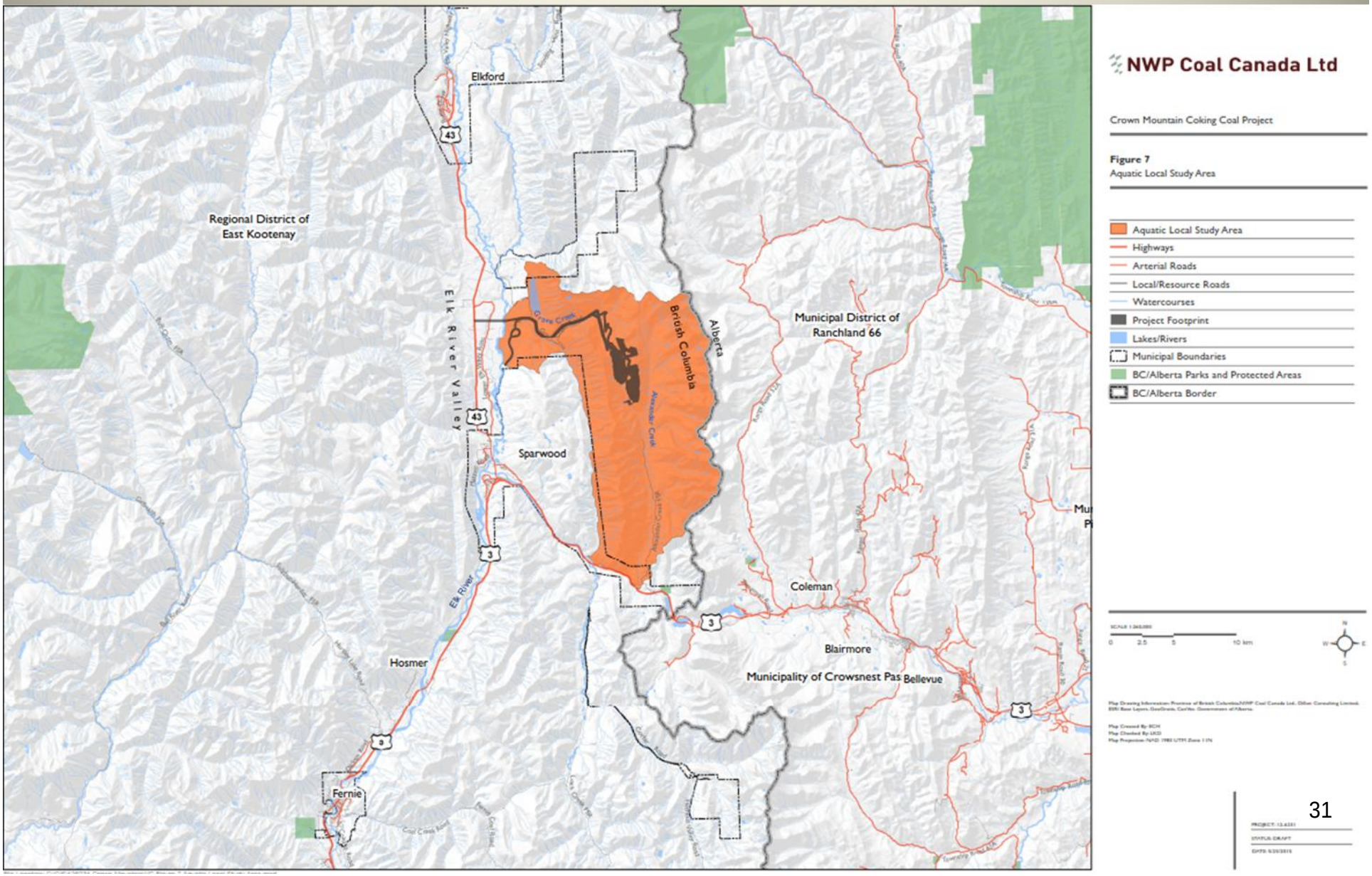
- Continue characterization of flow regimes and data collection
- Determine potential effects associated with anticipated changes in flow regimes
- Ongoing hydrology work will tie into future surface water quality and aquatic studies

Surface Water Quality

Introduction and Baseline Program to Date:

- Water quality sampling initiated in May, 2012 at 11 stations
- Initial program reviewed with BC MOE
- Baseline has included:
  - 2 intensive spring freshet surveys
  - 2 low-flow sampling surveys
- Collection has included:
  - Conventional parameters: pH, conductivity, turbidity, dissolved oxygen, total dissolved solids, and temperature
  - Detailed QA/QC program: Duplicate samples and travel blanks

Surface Water Quality Study Area



Surface Water Quality

Key Findings to Date:

- Data continues to be compiled – no detailed analysis to date
- A review of the program was completed in September 2015 to evaluate sampling frequency moving forward

Surface Water Quality Intermediate Component

Surface Water Quality

- Intermediate component
  - Component that is potentially affected by Project activities, including water withdrawal and waste rock management
  - Changes in water quality may impact selected VCs such as aquatic health, fish people, and terrestrial environments
  - Measured through metal and non-mental concentrations in surface water
- Potential impacts: Withdrawal of water from Grave Creek, waste rock management
- Potential effects: Water contamination (e.g., metal leaching) and sedimentation in watercourses

Surface Water Quality

Proposed Next Steps:

- Water quality program may be reduced to quarterly sampling, first round to be conducted in spring 2016
- Analysis of water quality results to date to understand and characterize existing conditions

Fish and Fish Habitat

Introduction and Baseline Program to Date:

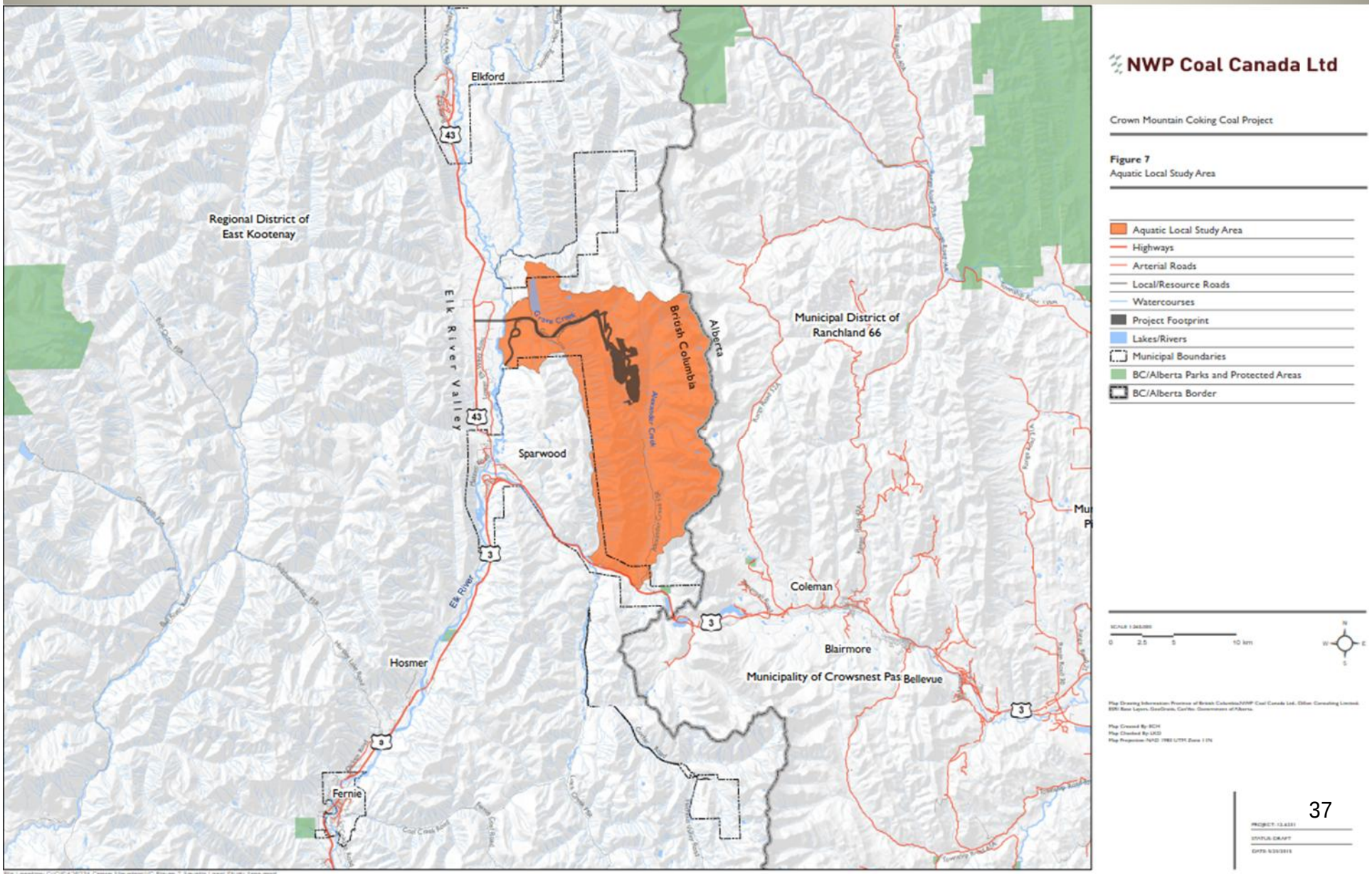
- Preliminary Gap Analysis completed in 2013
- Baseline program focuses on:
  - Characterizing the existing aquatic environment
  - Providing information sufficient to assess Project effects on the aquatic VCs
  - Providing information to assist in the design of future monitoring programs

Fish and Fish Habitat

Introduction and Baseline Program to Date:

- Overwintering fish habitat survey
- Spring and fall fish spawning surveys
- Reconnaissance-level fish and fish habitat assessments
- Fish community (fish abundance and detailed fish habitat)
- Benthic invertebrate and periphyton communities

Aquatics Study Area



Fish and Fish Habitat

Key Findings to Date:

- Fish distribution
  - Grave Creek: westslope cutthroat trout
  - Grave Creek tributaries: westslope cutthroat trout
  - West Alexander Creek: westslope cutthroat trout
  - Alexander Creek: westslope cutthroat trout and bull trout
- Barriers/populations
  - Grave Creek Reach 1
  - Alexander Creek Reach 2

Fish and Fish Habitat VCs

Selected Valued Components:

- Westslope cutthroat trout
- Bull trout
- Kokanee
- Mountain whitefish
- Longnose sucker
  - Impacts to be evaluated through fish presence/not detected surveys, habitat quality and quantity, water quality parameters, and fish population metrics
  - Potential impacts: Changes to fish habitat as a result of removal of habitat (e.g., West Alexander Creek), changes in surface water quality and quantity (e.g., in-stream flow changes as a result of water withdrawal, increased levels of selenium associated with waste rock management)
  - Potential effects: Reduction of productive capacity of watercourses for fish, loss of habitat (e.g., West Alexander Creek), changes in water quality and quantity, exposure to deleterious substances

Fish and Fish Habitat

Proposed Next Steps:

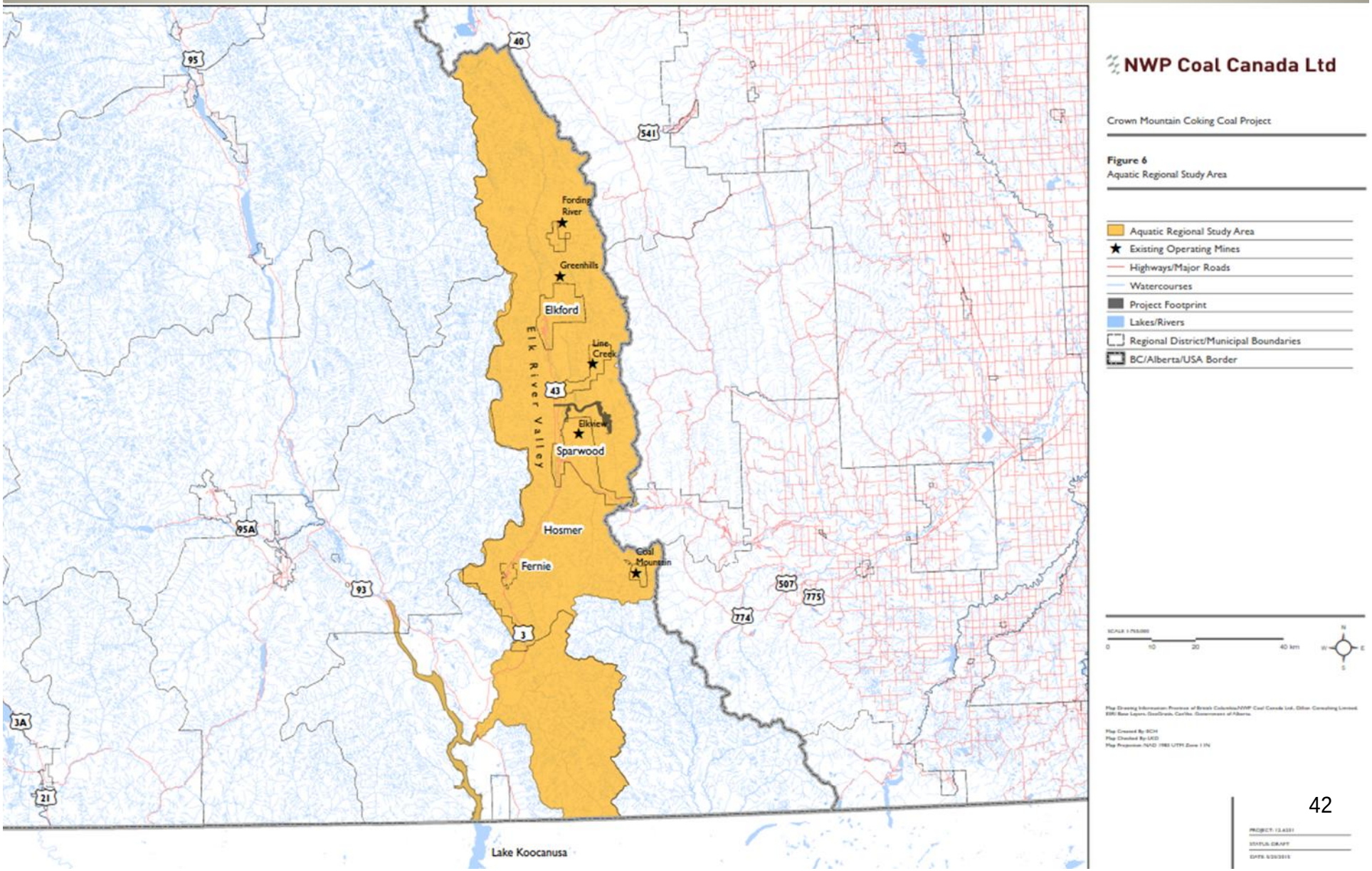
- Year 2 field programs
  - Fish community
  - Benthic invertebrates
  - Periphyton
- IFS
- Downstream fish use
  - Bull trout distribution
  - Upper Alexander connectivity to Michel Creek
  - Lentic species
- Habitat offsetting planning

Aquatic Health

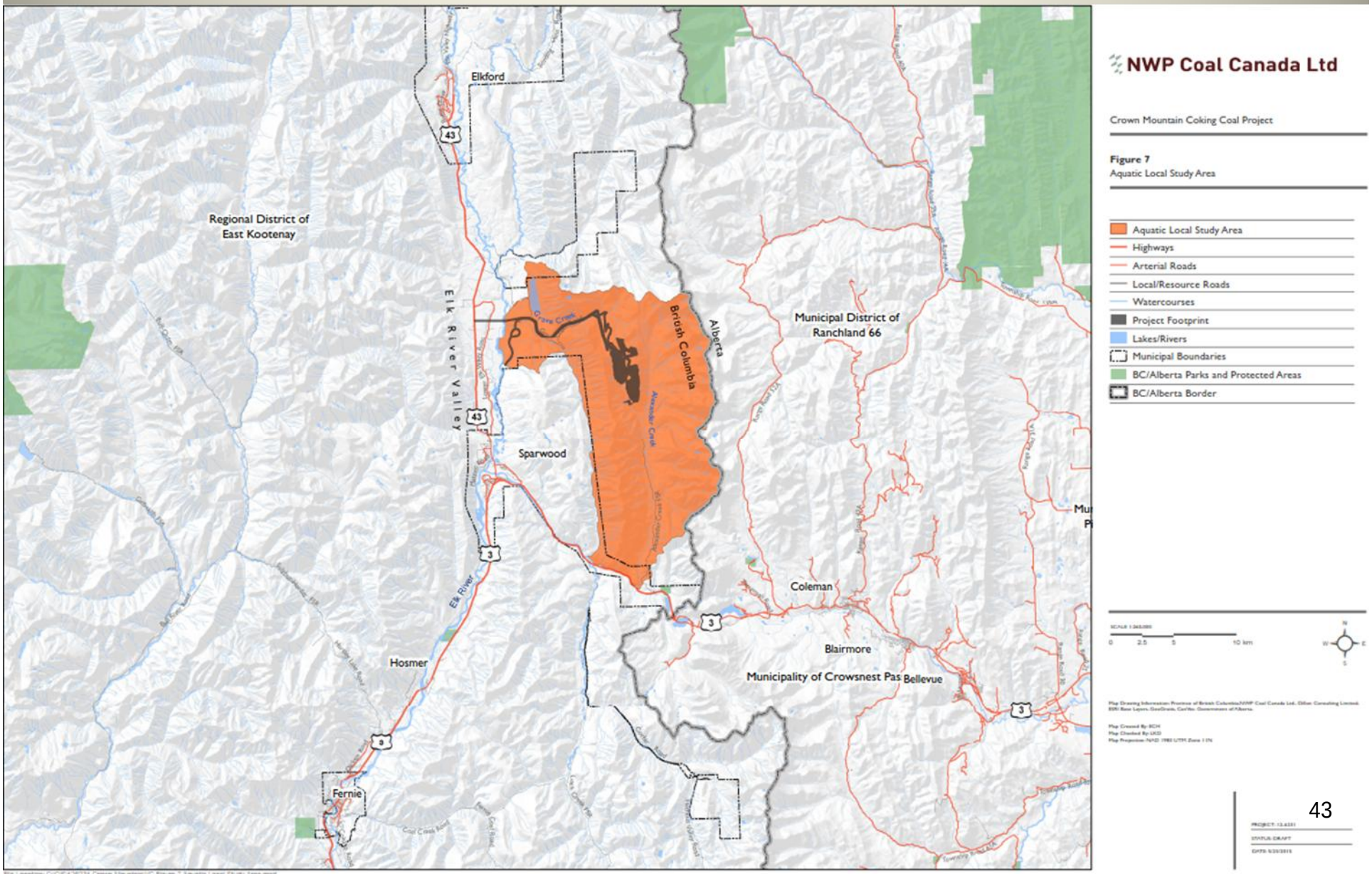
Introduction and Baseline Program to Date:

- Preliminary gap analysis
- Preliminary wetland and amphibian assessments conducted in 2014
- Fish community assessments completed
- Benthic and periphyton community surveys completed
- Key watercourses surrounding Project include:
  - Grave Creek
  - Alexander Creek
  - West Alexander Creek
  - Elk River
  - Harmer Creek

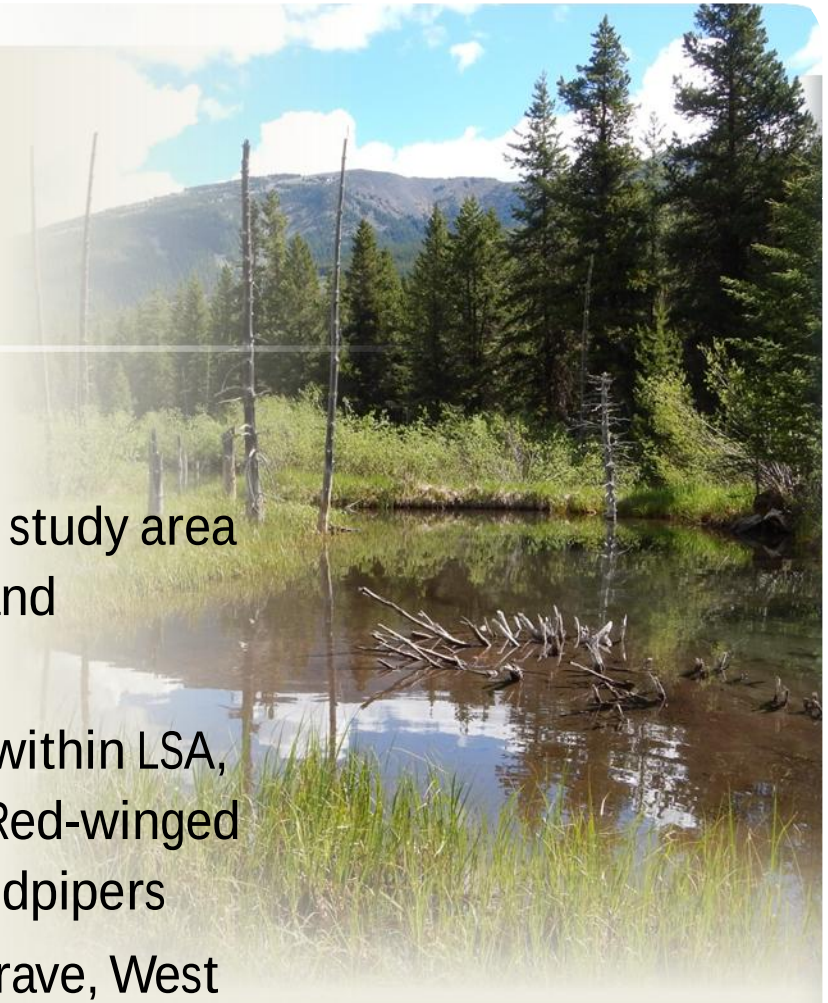
Aquatic Health Study Areas



Aquatic Health Study Areas



Aquatic Health



Key Findings to Date:

- 3 amphibian species observed in the study area including wood frog, western toad, and Columbia spotted frog
- Various waterbird species observed within LSA, including migratory species such as Red-winged Blackbird, Mallards, and Spotted Sandpipers
- Range of fish species found within Grave, West Alexander, and Alexander Creeks

Aquatic Health VCs

<u>Selected Valued Components:</u>

- Benthic Invertebrates
- Fish species within the RSA
- Amphibian species
- Waterbirds

Aquatic Health VCs

Benthic Invertebrates

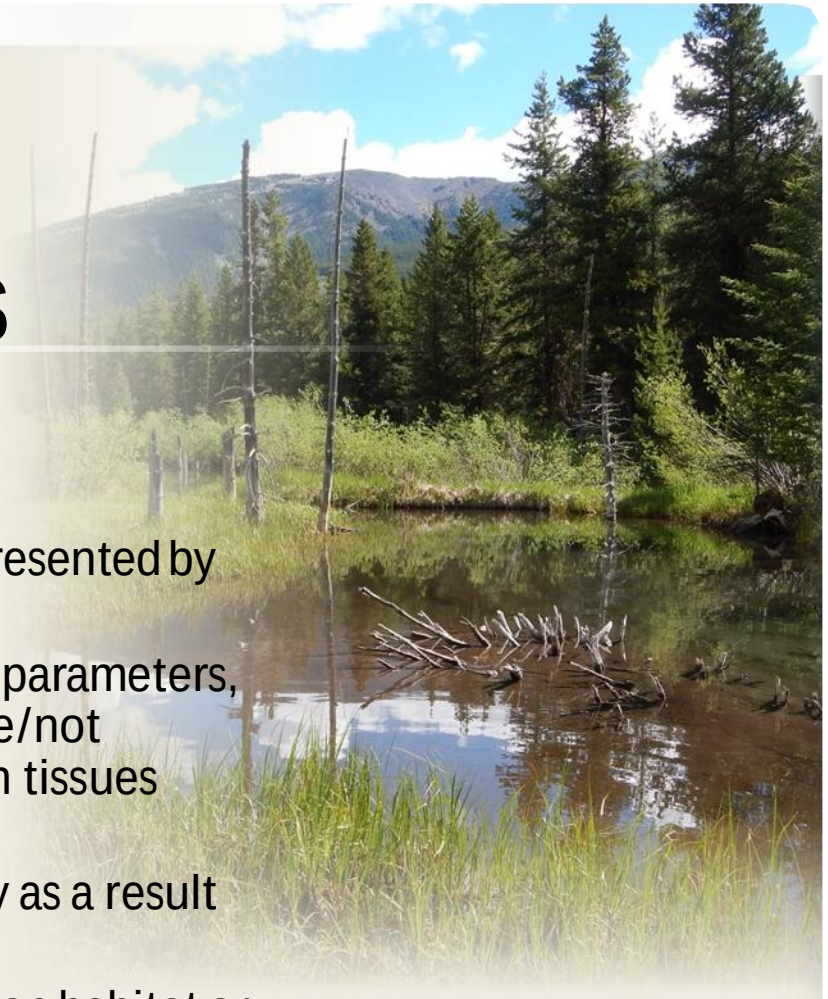
- Selected Valued Component
  - Benthic invertebrate communities will be used to assess potential changes in water and sediment quality
  - Impacts to be assessed through water quality parameters, benthic metrics (e.g., growth, survival), sediment quality, and groundwater and surface water
  - Potential impacts: Species sensitive to changes in the aquatic environment, such as changes in surface and groundwater. Impacts may be related to waste rock management, removal or alteration of surface water environments
  - Potential effects: Reduced complexity of benthic invertebrate communities, adverse effects on fish, reduced water quality

Aquatic Health VCs

Fish Species within the RSA

- Selected Valued Component
  - All fish species that occur within the RSA, represented by: Westslope cutthroat trout; bull trout; burbot; longnose sucker; mountain whitefish; and kokanee
  - Impacts to be evaluated through water quality parameters, sediment quality, fish population metrices, and fish growth, survival, and reproduction
  - Potential impacts: Changes to surface water quality and quantity (e.g., increased levels of selenium associated with waste rock management)
  - Potential effects: Impacts may result in changes in fish reproduction

Aquatic Health VCs



Amphibians

- Selected Valued Component
  - Amphibians within the RSA to be represented by Columbia spotted frog
  - To be assessed through water quality parameters, sediment quality, amphibian presence/not detected, and metal concentrations in tissues
  - Potential impacts: Changes in water quality/quantity and sediment quality as a result of Project activities
  - Potential effects: Changes in amphibian habitat or amphibian populations (e.g., impacts to reproductive success)

Aquatic Health VCs

Waterbirds

- Selected Valued Component
  - Representative species include Harlequin Duck, Red-winged Blackbird, Spotted Sandpiper, and Mallard
  - Impacts to be evaluated through water quality parameters (which incorporates assessment of air, groundwater, and surface water)
  - Potential impacts: Elevated levels of selenium in water resources as a result site development
  - Potential effects: Increased selenium in surface water may impact aquatic prey which is consumed by waterbirds (e.g., benthic invertebrates), resulting in impacts to waterbird species

Aquatic Health

Proposed Next Steps:

- Continuation of baseline studies:
  - Waterbirds
  - Amphibians and wetlands
  - Benthics and periphyton
  - Fish communities
- Future studies to be developed in consultation with regulators

CROWN MOUNTAIN COKING COAL PROJECT

October 2015

Terrestrial and Wildlife Resources

Terrestrial and Wildlife Resources

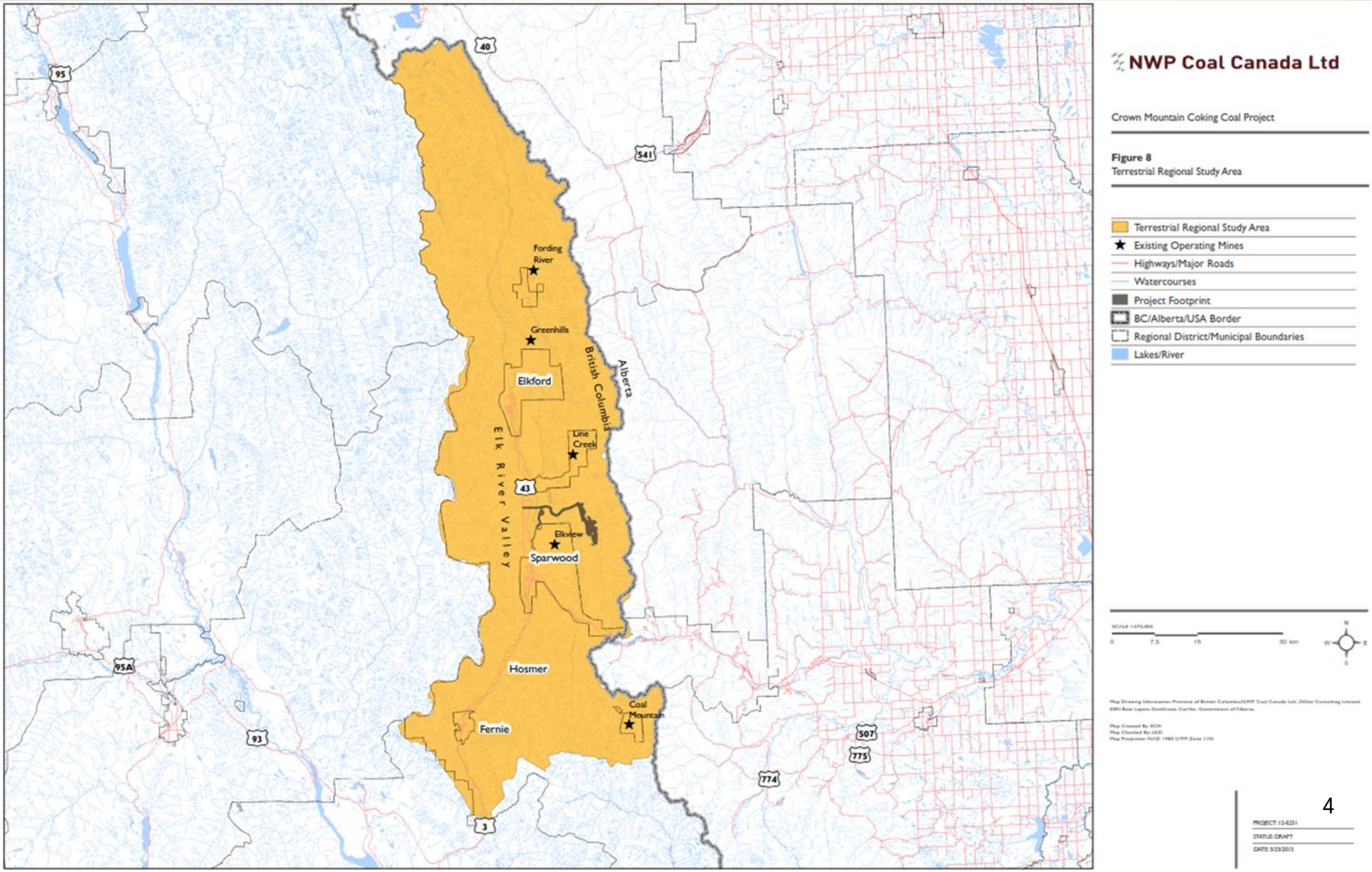
- Terrestrial landscapes and ecosystems
- Sensitive plant species and communities
- Culturally significant plants
- Wildlife and wildlife habitat

Terrestrial and Landscape Ecosystems

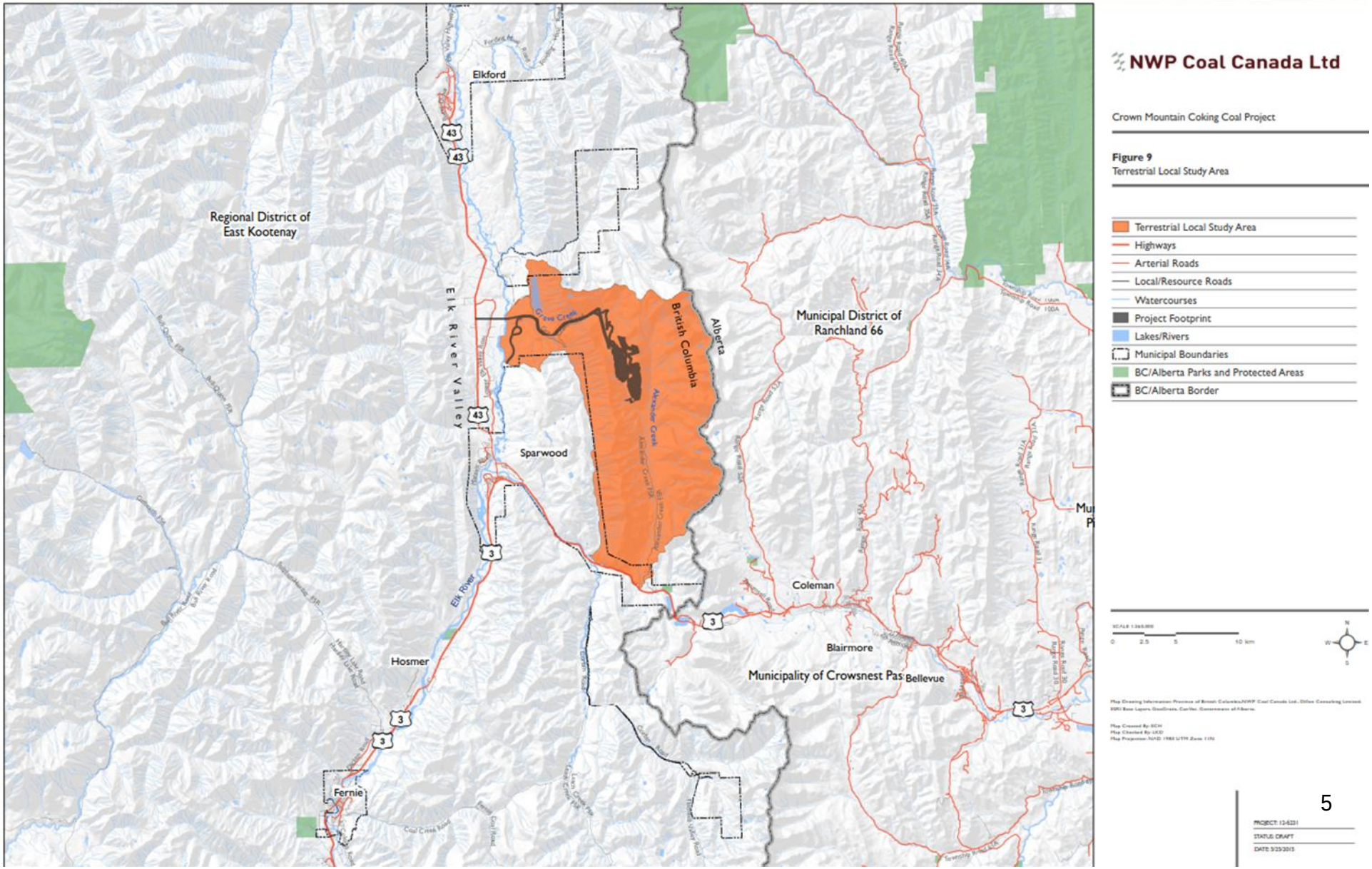
Introduction and Baseline Program to Date:

- Baseline Terrestrial Ecosystem Mapping (TEM) classified ecosystems with the LSA
  - 167 field plots were established, including 80 full SIVI plots and 87 visual plots
- The BC Biogeoclimatic (BEC) system was used to classify subzones and site series within the LSA

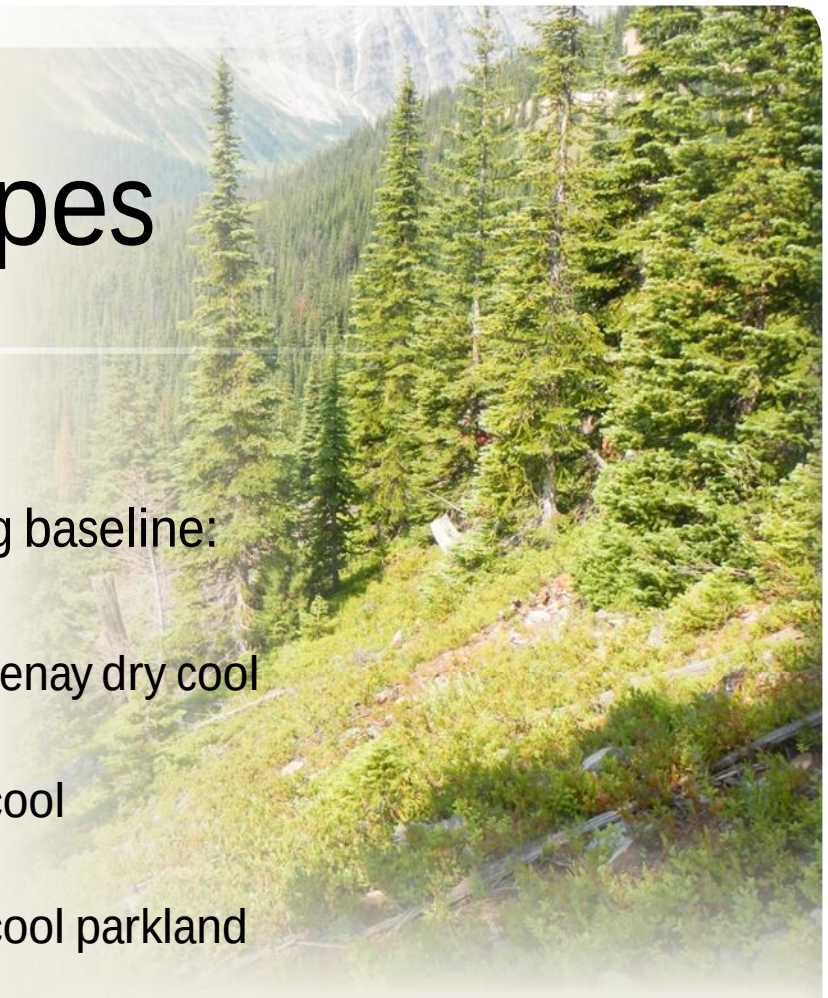
Terrestrial Resource Study Areas



Terrestrial Resource Study Areas



Terrestrial Landscapes and Ecosystems



Key Findings to Date:

- Four subzones were identified during baseline:
  - Montane Spruce dry warm (MSdw)
  - Englemann Spruce Subalpine Fir Kootenay dry cool (ESSFdk1)
  - Englemann Spruce Subalpine Fir dry cool woodland (ESSF dkw)
  - Englemann Spruce Subalpine Fir dry cool parkland (ESSFdkp)
- Range of terrestrial landscapes across the LSA

Terrestrial Landscapes and Ecosystems

Selected Valued Components:

- Avalanche chutes
- Grassland ecosystems
- Wetland ecosystems
- Riparian habitat
- Old growth/mature forests

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

Sensitive Plant Species and Communities

Introduction and Baseline Program to Date:

- Rare plant surveys initiated in 2014 and completed in 2015, concurrent with TEM
- Several provincially-listed plant species observed:

	Scientific Name	Common Name
Red Listed	*Astragalus crassicarpus*	ground plum
	Astragalus drummondii	Drummond's milk-vetch
	Castilleja cusickii	Cusick's paintbrush
	Penstemon nitidus	wax-leaved beardtongue
	Townsendia parryi	Parry's townsendia
Blue Listed	**Astragalus bourgovii*	Bourgeau's milk-vetch
	**Delphinium sutherlandii*	Sutherland's larkspur
	Lomatium sandbergii	Sandberg's desert-parsley
	Pinus albicaulis	whitebark pine
	Silene drummondii	Drummond's campion

Sensitive Plant Species and Communities

Baseline Program to Date / Key Findings:

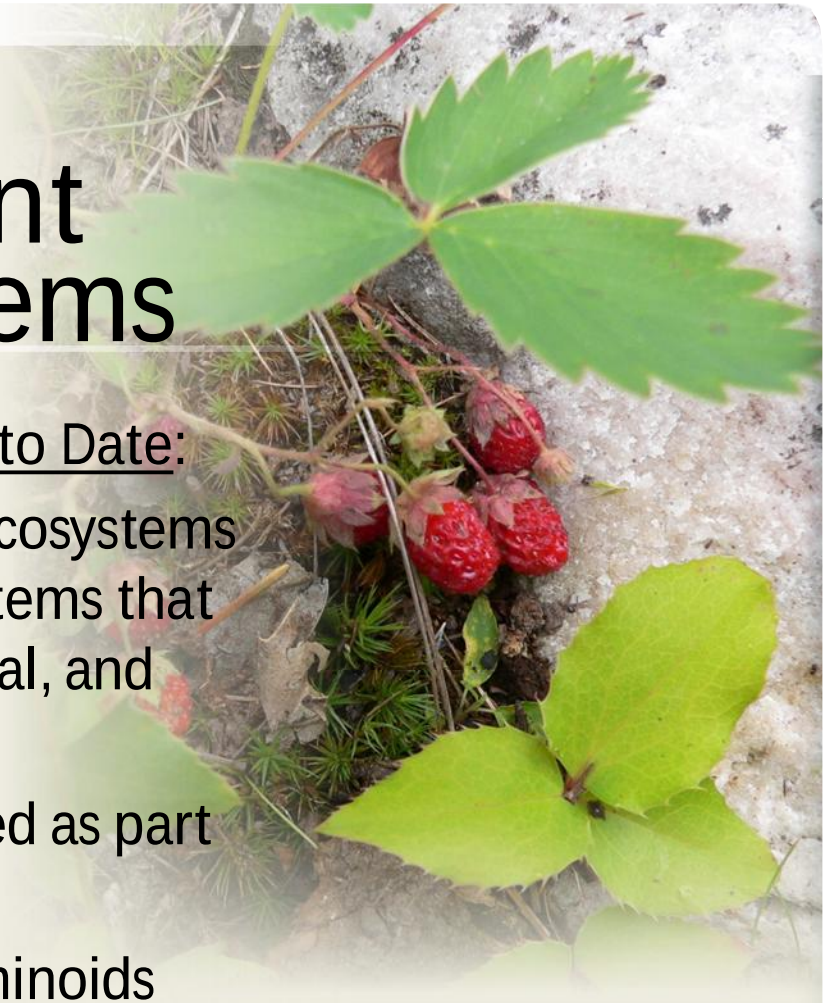
- Several listed forbs species have been found at the mouth of Alexander Creek and in the Grave Creek area
- Whitebark pine and limber pine known to occur within the Project footprint
  - Mature whitebark pine observed showed signs of blister rust, seedlings did not

Sensitive Plant Species and Communities VCs

Selected Valued Components:

- Sensitive plant species and communities
  - Impacts to be evaluated through community abundance and distribution, species richness, habitat availability
- Whitebark pine
- Limber pine
  - Impacts to be evaluated through habitat availability and distribution and known occurrence and abundance
- Potential impacts: Vegetation removal associated with site development, alteration of drainage patterns, introduction of invasive species
- Potential effects: May result in structural and functional changes to plant communities

Culturally Significant Plants and Ecosystems



Introduction and Baseline Program to Date:

- Culturally significant plants and ecosystems include those species and ecosystems that have consumption/food, medicinal, and cultural and/or social importance
- Baseline studies to date conducted as part of TEM
- Trees, shrubs, and forbs and graminoids were assessed for their use as medicine, food, technology, dyes, or other.

Culturally Significant Plants and Ecosystems

Trees:

Scientific Name	Common Name	Plant Use m = plants used as medicine, f = plants used as food, t = plants used for technology, d = plants used as dyes, o = other	Source
Abies lasiocarpa	subalpine fir	m, t, o	Hart et al. 1978; Turner 1979; Moerman 1998
Betula papyrifera	paper birch	m, t, o	Hart et al. 1978; Turner 1979; Keefer and McCoy 1999
Larix occidentalis	western larch	m, f, t, o	Hart et al. 1978; Turner 1979, 1997; Moerman 1998
Picea engelmannii	engelmann spruce	m, t	Hart et al. 1978; Turner 1979
Pinus albicaulis	whitebark pine	f	Hart et al. 1978; Turner 1997
Pinus contorta	lodgepole pine	m, f, t	Hart et al. 1978; Turner 1979, 1997; Moerman 1998
Populus balsamifera ssp. trichocarpa	black cottonwood	m, f, o	Hart et al. 1978; Turner 1979, 1997; Moerman 1998
Populus tremuloides	trembling aspen	t	Turner 1979
Pseudotsuga menziesii	Douglas fir	m, t	Hart et al. 1978; Turner 1979, 1997; Keefer and McCoy 1999
Thuja plicata	western redcedar	t	Hart et al. 1978; Turner 1979; Moerman 1998

Culturally Significant Plants and Ecosystems

Shrubs:

Scientific Name	Common Name	Plant Use m = plants used as medicine, f = plants used as food, t = plants used for technology, d = plants used as dyes, o = other	Source
Acer glabrum	Douglas maple	t	Turner 1979
Alnus incana ssp. tenuifolia	mountain alder	m, d, t	Hart et al. 1978; Turner 1979; Moerman 1998
Amelanchier alnifolia	saskatoon	f, t	Hart et al. 1978; Turner 1979, 1997; Keefer and McCoy 1999
Arctostaphylos uva-ursi	kinnikinnick	m, f, o	Hart et al. 1978; Turner 1997; Keefer and McCoy 1999
Cornus stolonifera	red-osier dogwood	f, t, o	Hart et al. 1978; Turner 1979, 1997
Juniperus communis	common juniper	m, t, o	Hart et al. 1978; Keefer and McCoy 1999
Juniperus scopulorum	Rocky Mountain juniper	m, t, o	Hart et al. 1978; Turner 1979, 1997; Moerman 1998; Keefer and McCoy 1999
Lonicera involucrata	black twinberry	d	Turner 1979
Mahonia aquifolium	tall oregon-grape	m, f, d	Hart et al. 1978; Turner 1979, 1997; Keefer and McCoy 1999
Prunus virginiana	choke cherry	m, f, t	Hart et al. 1978; Turner 1997; Moerman 1998; Keefer and McCoy 1999
Ribes lacustre	black gooseberry	f	Hart et al. 1978; Turner 1997
Rosa sp.	rose	m	Hart et al. 1978; Turner 1997; Moerman 1998
Rubus idaeus	red raspberry	f	Hart et al. 1978; Turner 1997
Rubus parviflorus	thimbleberry	f	Hart et al. 1978; Turner 1997
Salix sp.	willow	t, o	Turner 1979
Shepherdia canadensis	soopolallie	m, f	Hart et al. 1978; Turner 1997; Moerman 1998; Keefer and McCoy 1999
Symphoricarpos albus	common snowberry	m	Hart et al. 1978; Moerman 1998
Vaccinium membranaceum	black huckleberry	f	Turner 1997
Vaccinium myrtillus	low bilberry	f	Turner 1997
Vaccinium scoparium	grouseberry	f	Hart et al. 1978; Turner 1997
Viburnum edule	high-bush cranberry	f, o	Hart et al. 1978; Turner 1979, 1997

Culturally Significant Plants and Ecosystems

Forbs and Graminoids:

Scientific Name	Common Name	Plant Use m = plants used as medicine, f = plants used as food, t = plants used for technology, d = plants used as dyes, o = other	Source
Achillea millefolium	yarrow	m, o	Hart et al. 1978; Moerman 1998; Keefer and McCoy 1999
Allium cernuum	nodding onion	f	Hart et al. 1978; Turner 1997; Moerman 1998; Keefer and McCoy 1999
Balsamorhiza sagittata	arrowleaf balsamroot	m, f	Hart et al. 1978; Turner 1997; Moerman 1998; Keefer and McCoy 1999
Calamagrostis rubescens	pinegrass	t	Hart et al. 1978; Turner 1979
Castilleja miniata	scarlet paintbrush	f	Hart et al. 1978
Chimaphila umbellata	prince's pine	m	Hart et al. 1978; Moerman 1998
Equisetum arvense	common horsetail	t	Turner 1979
Equisetum sp.	horsetail	t	Hart et al. 1978
Erythronium grandiflorum	yellow glacier lily	f	Turner 1997; Keefer and McCoy 1999
Fragaria virginiana	wild strawberry	f	Hart et al. 1978; Turner 1997
Goodyera oblongifolia	rattlesnake plantain	m	Hart et al. 1978
Heracleum maximum	cow parsnip	m, f	Hart et al. 1978; Turner 1997
Heuchera cylindrica	round-leaved alumroot	m	Hart et al. 1978; Moerman 1998
Mentha arvensis	field mint	f, m, o	Hart el al. 1978; Moerman 1998
Veratrum viride	Indian hellebore	m	Hart et al. 1978; Moerman 1998

Culturally Significant Plants and Ecosystems

Selected Valued Component:

- Impacts to be evaluated through community abundance and distribution and compositional changes
- Potential impacts: Vegetation removal associated with site development, alteration of drainage patterns, introduction of invasive species
- Potential effects: May result in structural and functional changes to plant communities

Wildlife and Wildlife Habitat

Introduction and Baseline Program to Date:

- Furbearer studies were conducted in 2014 and 2015
- Ungulate aerial flights conducted in winter 2013, fall 2014, and spring 2015
- Badger and Gillett's checkerspot surveys conducted in 2014
- Breeding bird and raptor surveys conducted in 2014
- Discussions/meetings with BC MOE regarding habitat models and reports on wildlife (grizzly bear and ungulates)

Wildlife and Wildlife Habitat

Introduction and Baseline Program to Date:

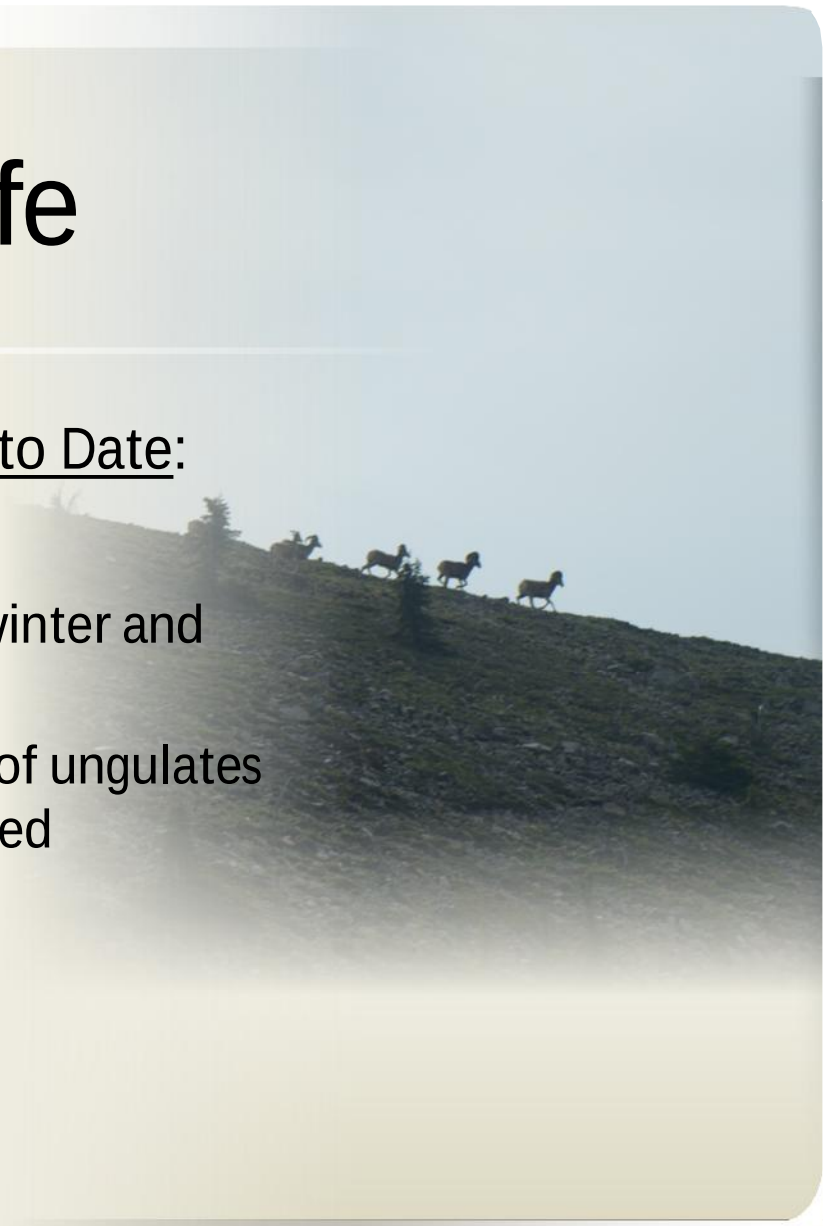
- Furbearer studies included:
  - Snow tracking to determine presence, distribution, and relative abundance of key carnivore and primary prey species
  - Bait/scent hair-snag stations coupled with remote motion cameras to detect rare, wide-ranging carnivores
  - Hair samples were collected for MFLNRO for DNA work

Wildlife and Wildlife Habitat

Key Findings to Date:

- Results of furbearer studies:
  - All key furbearer species were documented in the Crown Mountain LSA, which includes:
    - American marten
    - Weasel spp.
    - Wolverine
    - Lynx
    - Grizzly Bear
- Lynx were widespread throughout LSA
- Weasel and marten were most abundant in upper elevations
- Marten was not widespread throughout LSA
- Wolverines detected in Alexander and Upper Grave watersheds
- Grizzly detected in Alexander-Deadman corridor

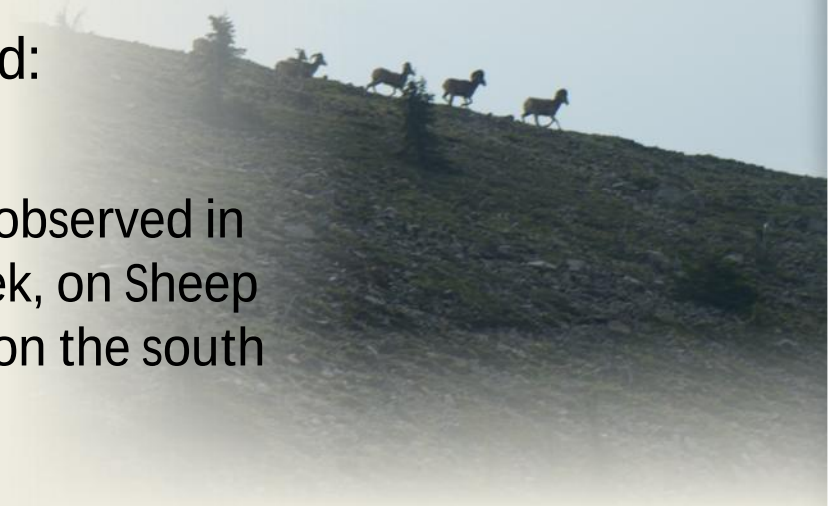
Wildlife and Wildlife Habitat



Introduction and Baseline Program to Date:

- Ungulate studies included:
  - Aerial flights were completed in winter and autumn 2014 and spring 2015
  - Broad-scale distribution patterns of ungulates within the study area were assessed

Wildlife and Wildlife Habitat



Key Findings to Date:

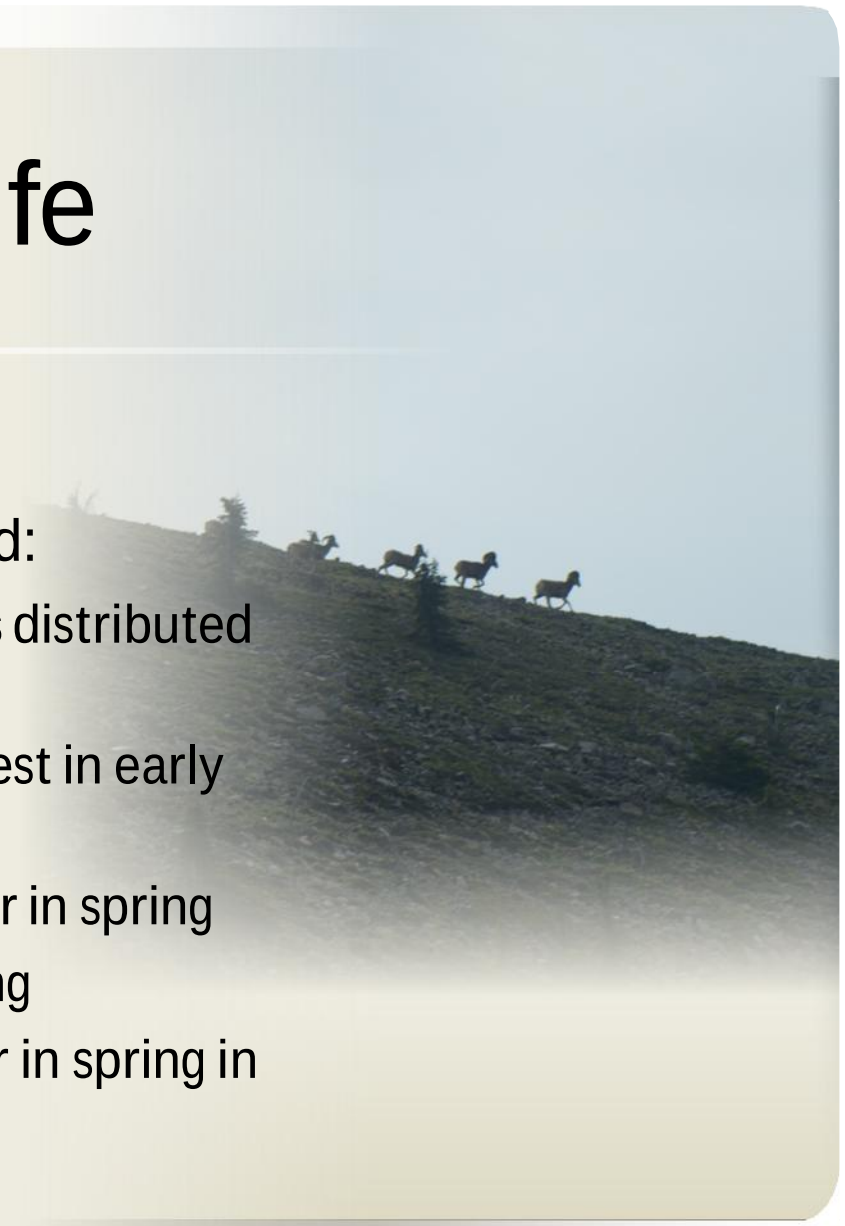
- Winter 2014 aerial flight observed:
  - 7 groups of ungulates
  - Minor to moderate ungulate use observed in lower one third of Alexander Creek, on Sheep Mountain, on Erikson Ridge, and on the south aspect of Grave Creek valley

Wildlife and Wildlife Habitat

Key Findings to Date:

- Autumn 2014 aerial flight observed:
  - Observed 15 groups of ungulates distributed in 6 of the 7 survey sub-units
  - Approximately twice as many ungulate groups observed that in winter and three times as many individuals
  - Ungulate groups had a broader distribution within LSA in comparison to winter
  - Presence of elk indicates ungulate species in LSA varies seasonally

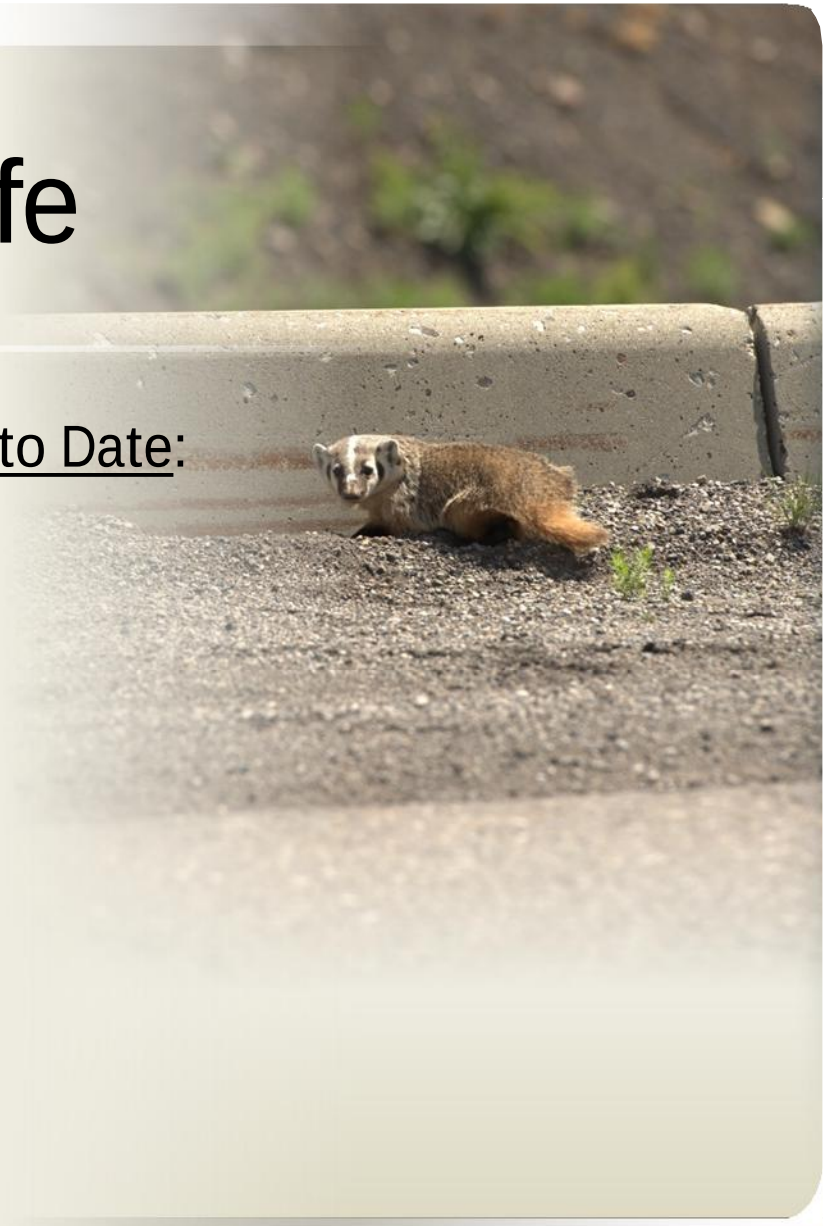
Wildlife and Wildlife Habitat



Key Findings to Date:

- Spring 2015 aerial flight observed:
  - Observed 34 groups of ungulates distributed in all 7 survey sub-units
  - Ungulate use appears to be highest in early spring and summer
  - Number of elk significantly higher in spring
  - Species diversity greatest in spring
  - Distribution of ungulates broader in spring in comparison to fall and winter

Wildlife and Wildlife Habitat



Introduction and Baseline Program to Date:

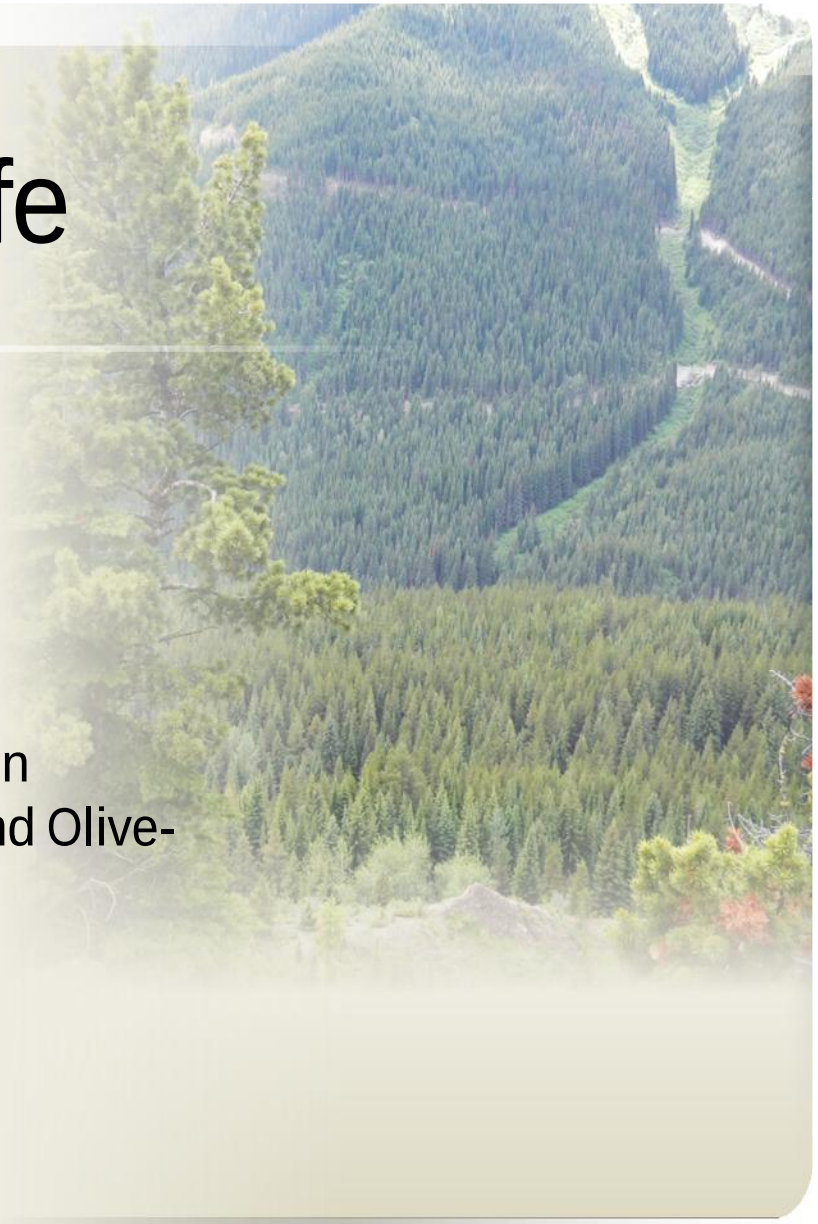
- American Badger
  - Surveys conducted in 2014
- Gillett's checkerspot
  - Survey conducted in 2014
- Breeding Birds and Raptors
  - Survey conducted in 2014

Wildlife and Wildlife Habitat

Key Findings to Date:

- Badger
  - LSA was stratified for badger habitat and burrow surveys were conducted along transects
  - Approximately 50% of LSA favourable habitat
- Gillett's checkerspot
  - Potential habitat identified as forest openings and open canopy forest, preferably in riparian or valley bottom locations

Wildlife and Wildlife Habitat



Key Findings to Date:

- Breeding Birds
  - 59 species of birds observed
  - 3 species listed under the SARA as Threatened, (Schedule 1): Common Nighthawk, Northern Goshawk, and Olive-sided Flycatcher

Wildlife and Wildlife Habitat

Selected Valued Components:

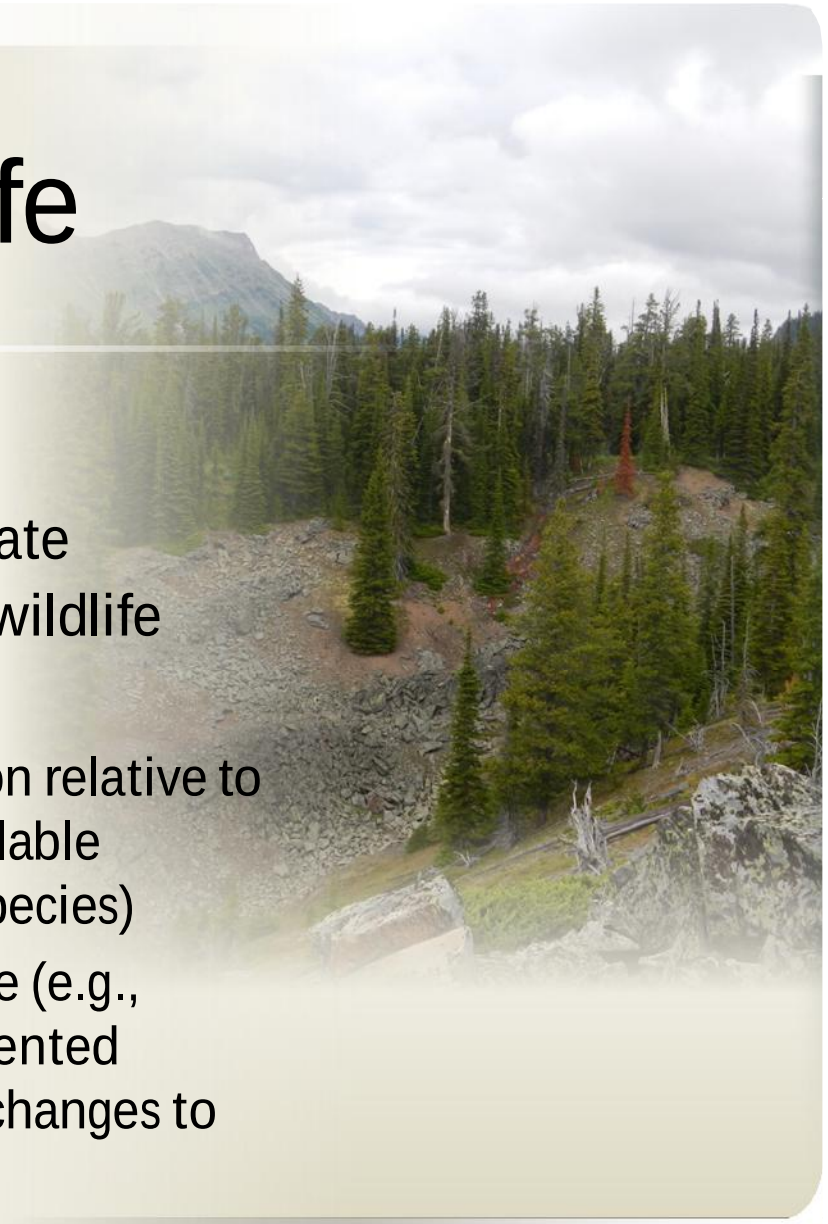
- American badger
- American Dipper
- At-risk bat species
  - Little brown bat, northern myotis, eastern red bat
- Bighorn sheep
- Canada lynx
- Elk
- Gillett's checkerspot

Wildlife and Wildlife Habitat

Selected Valued Components:

- Grizzly bear
- Migratory birds
  - Barn Swallow
  - Olive-sided Flycatcher
- Moose
- Northern Goshawk
- Western toad
- Wolverine

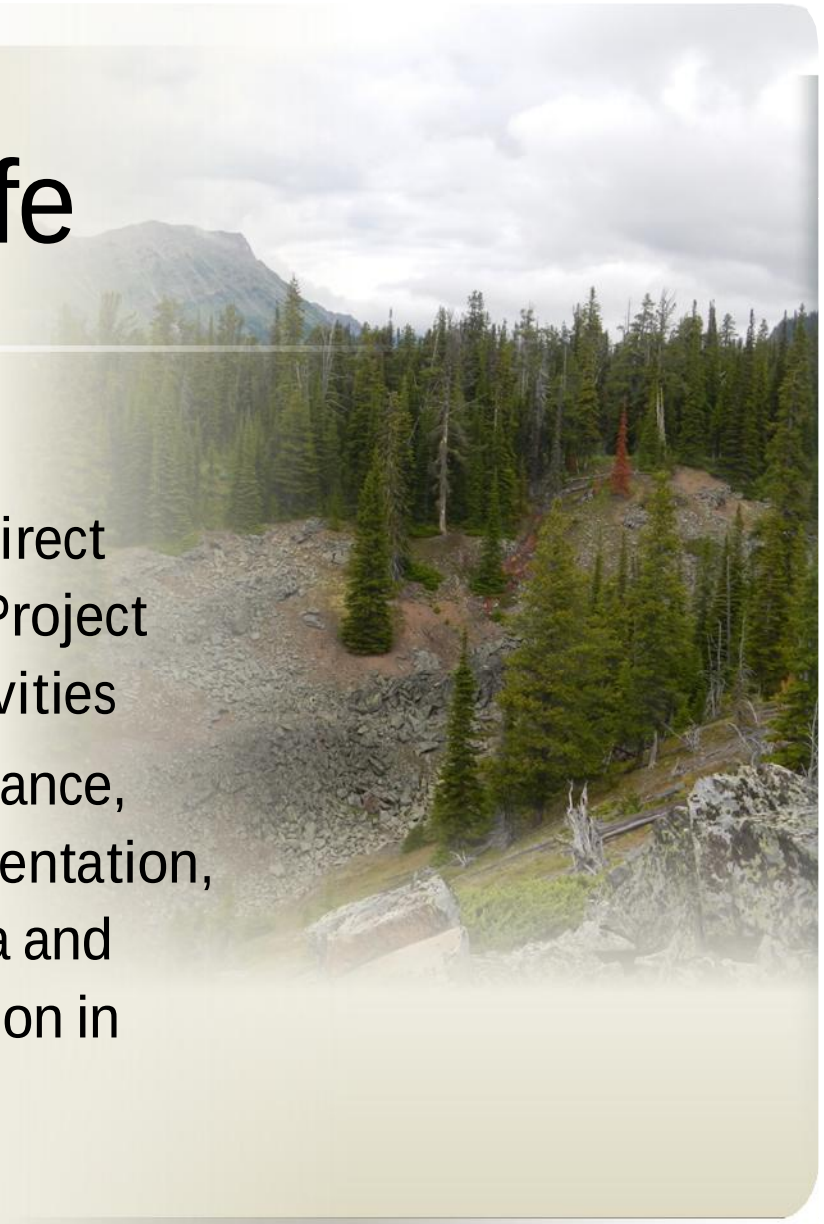
Wildlife and Wildlife Habitat



Selected Valued Components:

- Measurement indicators to evaluate potential impacts to wildlife and wildlife habitat include:
  - Habitat availability and distribution relative to baseline (e.g., changes in the available habitat and distribution for this species)
  - Known occurrence and abundance (e.g., changes to the number of documented occurrences relative to baseline, changes to individual populations)

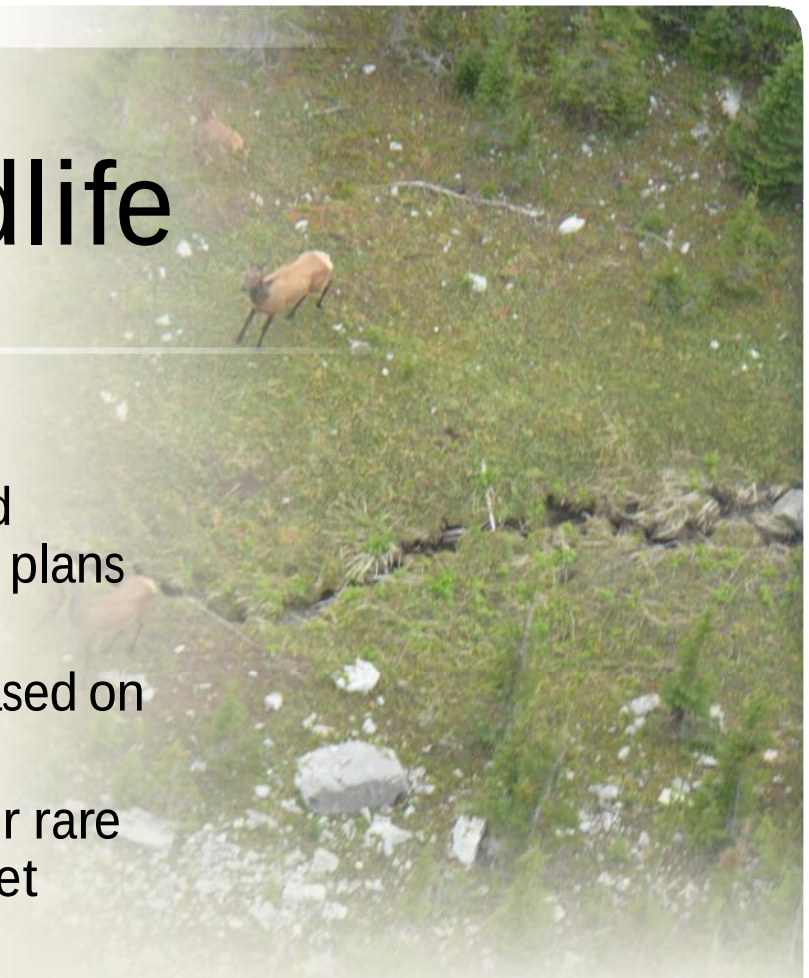
Wildlife and Wildlife Habitat



Selected Valued Components:

- Potential impacts: Indirect and direct impacts may occur as a result of Project development and operations activities
- Potential effects: Sensory disturbance, wildlife mortalities, habitat fragmentation, changes in wildlife use of the area and predation associated with alteration in habitat structure and availability

Terrestrial and Wildlife Resources



Proposed Next Steps:

- Additional sampling of vegetation and ecosystems, should site development plans change
- Complete wildlife habitat mapping based on information obtained through TEM
- Identification of candidate habitats for rare plants and candidate habitats for offset restoration based on findings of TEM
- Identify potential movement corridors
- Assess intensity of ungulate use in Alexander and Grave Creek corridors

CROWN MOUNTAIN COKING COAL PROJECT

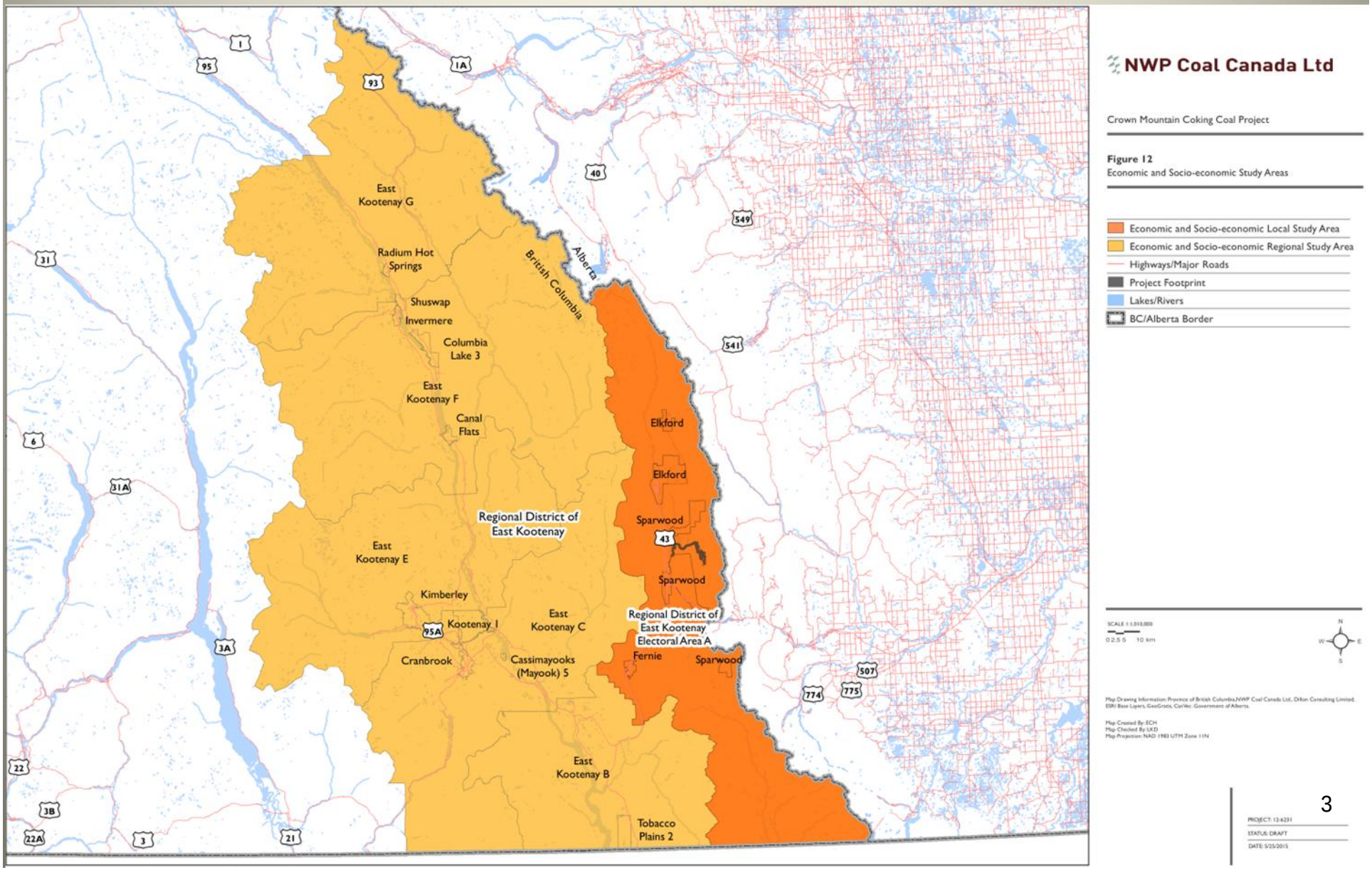
October 2015

Social and Economic Components

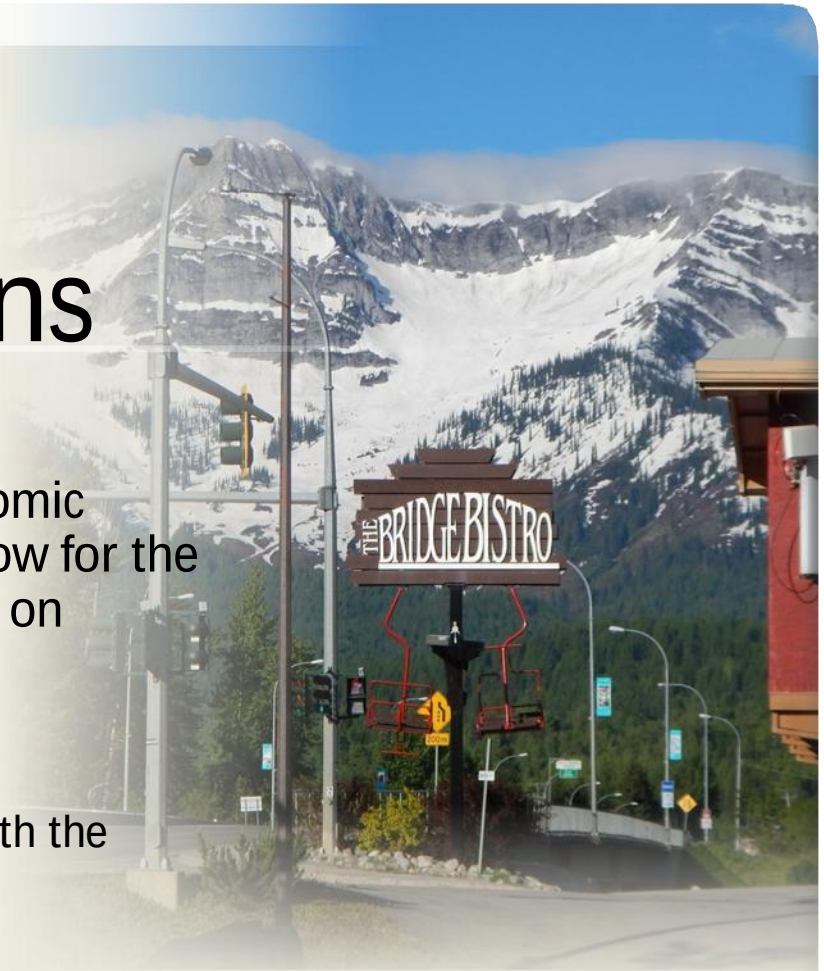
Social and Economic Components

- Economic conditions
- Housing, community services and infrastructure
- Community health and well-being

Social and Economic Study Area



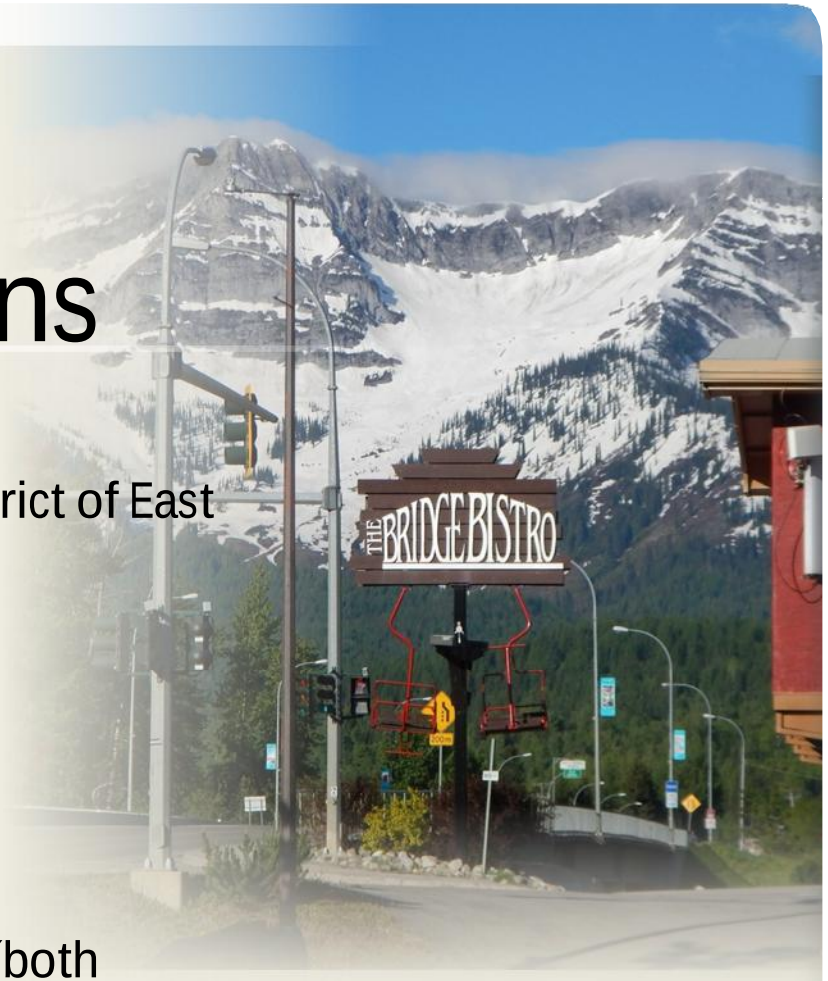
Economic Conditions



Introduction:

- An understanding of the existing economic conditions within the Elk Valley will allow for the assessment of potential Project effects on elements such as:
  - Increased local demand for labour
  - Opportunities for local businesses
  - Opportunities for capacity building with the Ktunaxa
  - Etc.
- A high level overview of existing information has been completed; however, a detailed baseline assessment of local economic conditions has not taken place to date

Economic Conditions



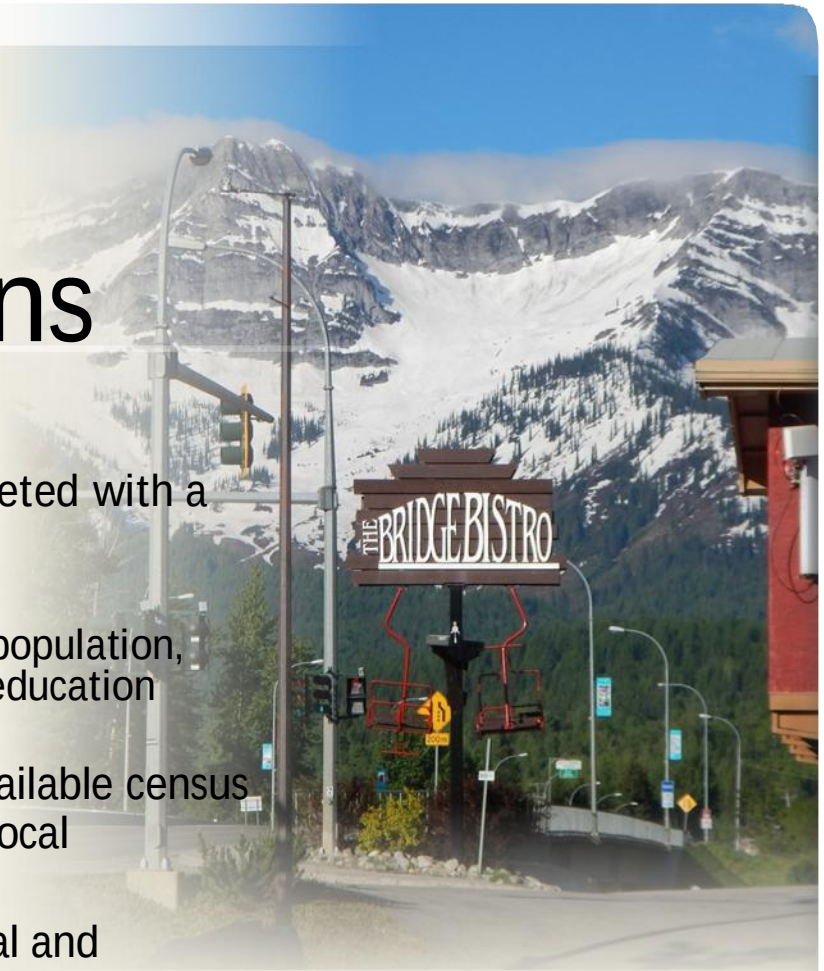
Key Background Information:

- Project occurs within the Regional District of East Kootenay and Electoral Area A
- Local communities include:
  - District of Sparwood
  - Community of Hosmer
  - City of Fernie
  - Municipality of Crowsnest Pass
  - District of Elkford
- Area has a long history of coal mining (both operational mines and exploration)
- Extensive recreational use of the area also an economic driver (various local outfitters, etc.)

Economic Conditions VC

- Evaluated a range of Candidate Valued Components
- Economic Conditions selected as a Valued Component
- Measurement indicators include:
  - Opportunities for training and skills development
  - Employment opportunities generated by the Project
  - Income generation
  - Revenue generation
  - Generation of business for local services and businesses
  - Local and provincial government revenue (e.g., GDP)
- Potential effects: Project expected to contribute positively to economic development both regionally and locally.

Economic Conditions



Proposed Next Steps:

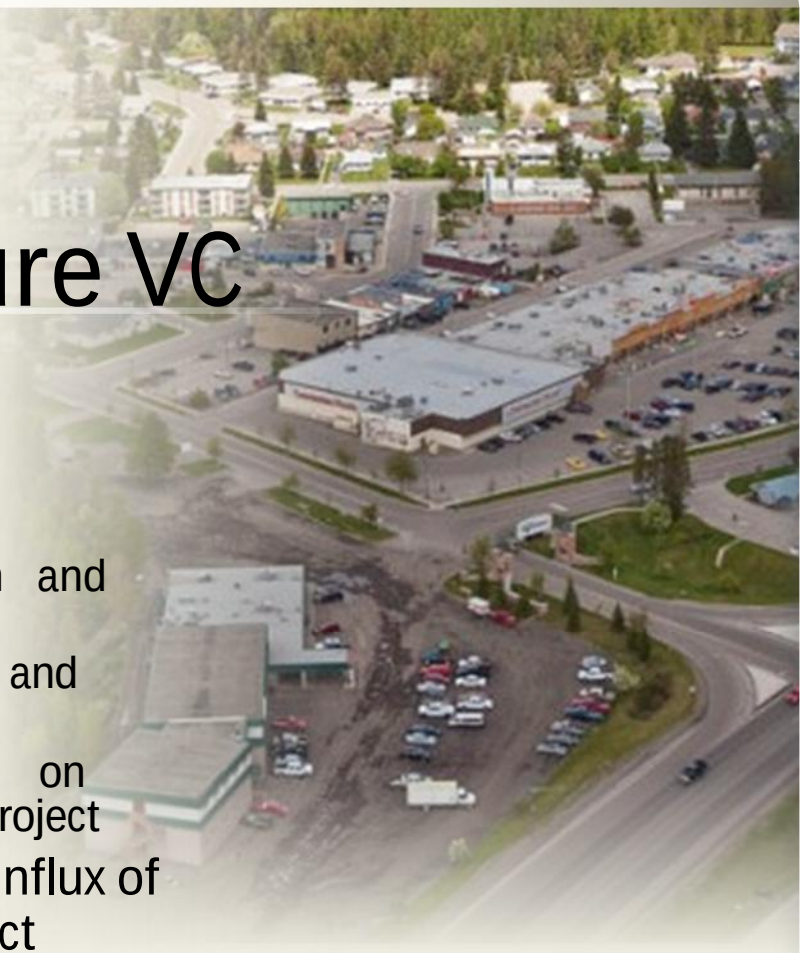
- Detailed economic assessment to be completed with a focus on nearby communities. Will include:
  - An overview of local economic conditions
  - Assessment of demographic information (population, available workforce [ages, skill sets, etc.], education levels, etc.)
- Information sources expected to include available census data and other data readily available from local municipalities and stakeholder groups
- Economic VCs will be evaluated at both local and regional scales to allow for an understanding of how the Project may potentially cause direct and/or indirect impacts on items such as economic growth, income, and employment

Housing, Community Services and Infrastructure

Introduction :

- An understanding of the local housing, community services, and infrastructure will allow for the assessment of potential effects such as:
  - Increased demand for housing
  - Increased demand for local services (e.g., community centres, emergency services)
- High level overview of existing information has been completed however no detailed baseline compilation and assessments of existing conditions has taken place to date

Housing/Community Services /Infrastructure VC



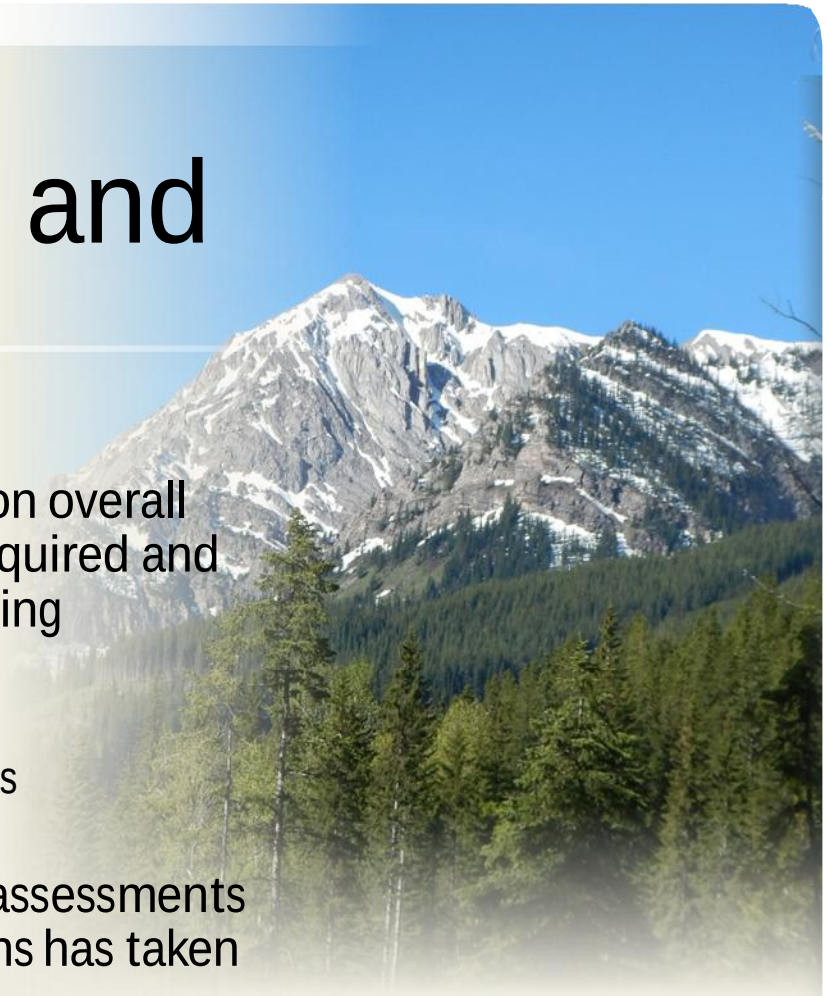
- Selected Valued Component
- Measurement Indicators include:
  - Housing supply and demand
  - Communities services (e.g., education and emergency services)
  - Infrastructure (e.g., water, wastewater, and transportation infrastructure)
  - Population of communities based on demographic changes as a result of the Project
- Potential effects include an increase or influx of employees (and their families) for Project construction and operation which could increase demand on local services such as housing, emergency services, and local infrastructure

Housing, Community Services and Infrastructure

Proposed Next Steps:

- Detailed assessment of existing information for local communities to be completed. Expected to include a review and assessment of:
  - Housing data
  - Municipal services information (solid waste, water, etc.)
  - Available community and social services
  - Recreation activities and services
  - Local bylaw information
- Information sources expected to include data readily available from local municipalities and stakeholder groups
- Economic and socio-economic VCs will be evaluated at both local and regional scales to evaluate potential direct and/or indirect Project effects

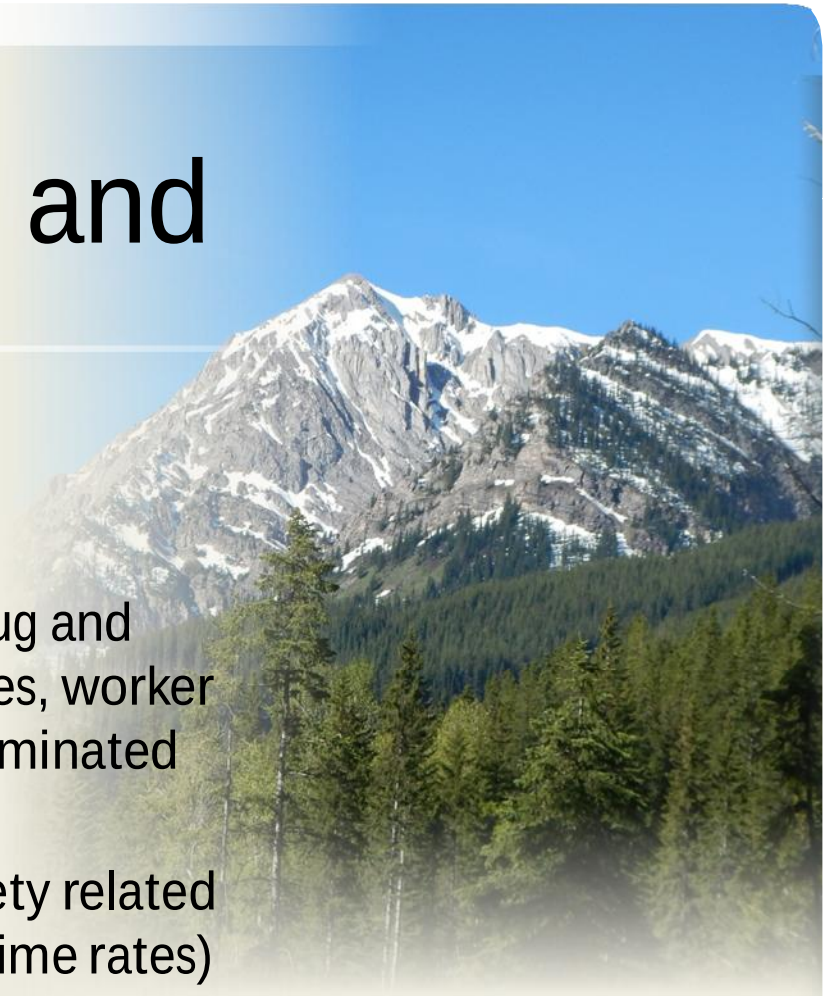
Community Health and Well-Being



Introduction:

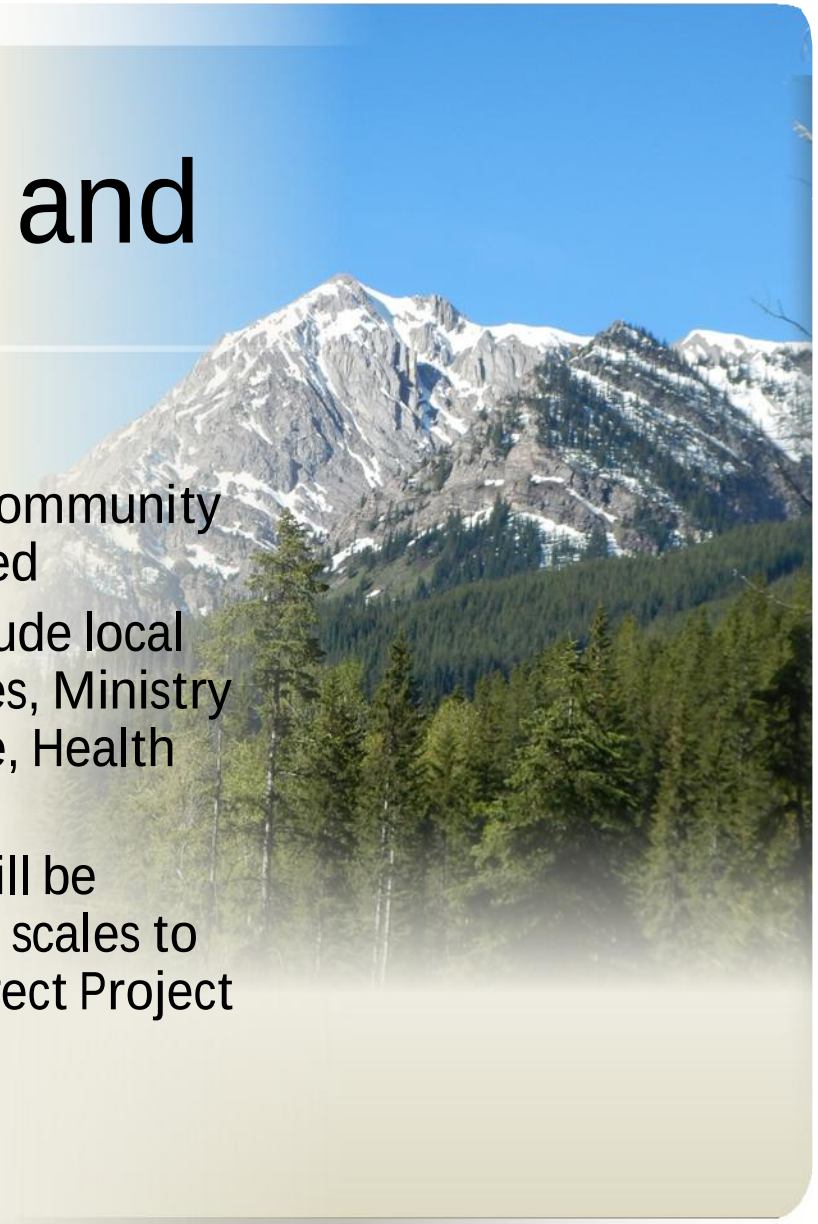
- An understanding of potential effects on overall community health and well-being is required and expected to include evaluation of existing conditions such as:
  - Crime rates
  - Current worker schedules and conditions
  - Etc.
- No detailed baseline compilation and assessments of existing community health conditions has taken place to date
- This component overlaps with other socio-economic assessment components as well as with the assessment of human health impacts

Community Health and Well-Being VC



- Selected Valued Component
- Measurement Indicators include:
  - Various health indicators (e.g., drug and alcohol abuse, shift work schedules, worker conditions, consumption of contaminated water or food)
  - Public safety (e.g., health and safety related to the Project site or in vicinity, crime rates)
- Community health / public safety can be impacted both directly and indirectly

Community Health and Well-Being



Proposed Next Steps:

- Assessment of potential impacts to community health and well-being to be completed
- Information sources expected to include local municipalities, local health authorities, Ministry of Health Services, Ministry of Justice, Health Canada, and key stakeholder groups
- Economic and socio-economic VCs will be evaluated at both local and regional scales to evaluate potential direct and/or indirect Project effects

CROWN MOUNTAIN COKING COAL PROJECT

October 2015

Heritage, Land Use, and Health Components

Heritage, Land Use and Health Components

- Heritage and archaeological resources
- Land use and access
- Recreation and tourism
- Visual quality
- Human health and terrestrial risk assessment

2

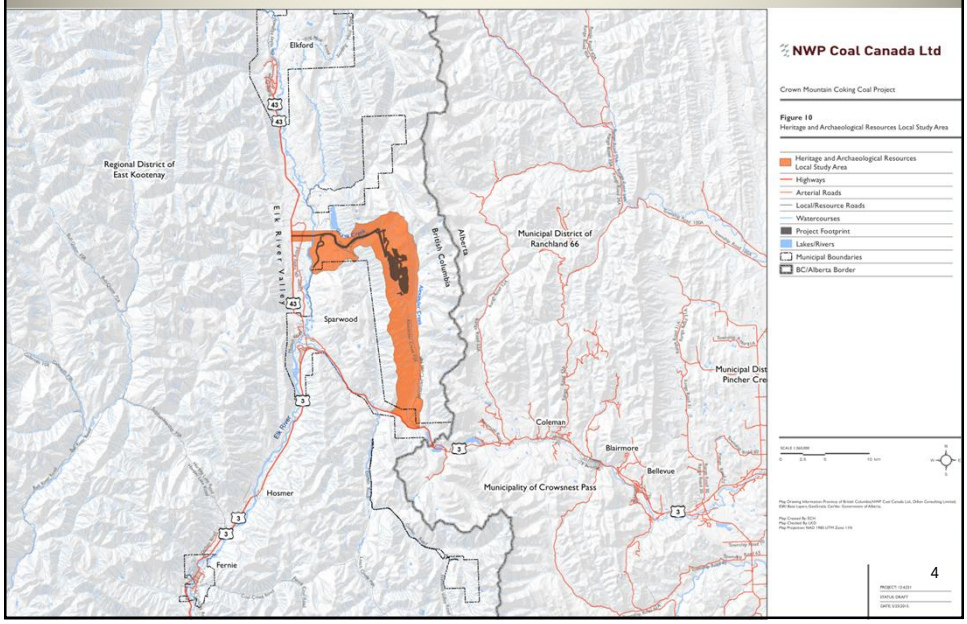
Heritage and Archaeological Resources

Introduction and Baseline Program to Date:

- The Project is located within the asserted traditional territory of the Ktunaxa Nation
- The Elk River Valley has been historically used by local Aboriginal Groups
- Heritage resources and archaeological sites are know to occur in the vicinity of the Project
- A detailed evaluation of heritage and archaeological resources is needed to adequately assess potential project impacts as a result of site development
- Phase I Archaeological Overview Assessments (AOA) completed in 2012 & 2014

3

Heritage/Archaeological Study Area



4

Heritage and Archaeological Resources

Key Findings to Date:

- Identification and assessment of archaeological resource potential
- Compilation of LSA information, site locations and results from previous archaeological inventories (1974), impact assessments (2005-present [forestry] and 2013 & 2014 [Crown Exploration])

5

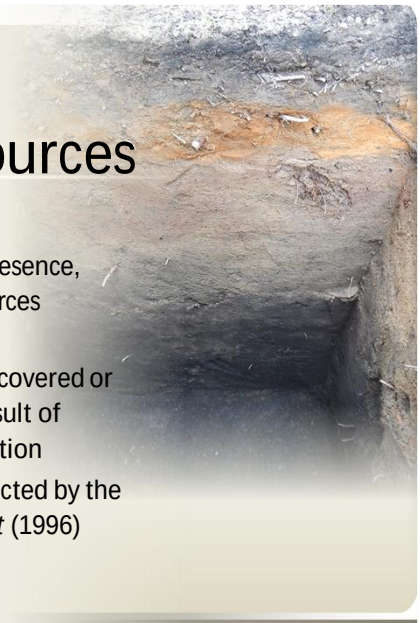
Heritage and Archaeological Resources

Key Findings to Date:

- 110 AOA Polygons within the Archaeology LSA
- 62 AOA Polygons with a potential overlap with proposed development footprint
- 47 recorded archaeological sites within LSA
- *Approximately* 20 archaeological sites within the proposed development footprint
- Site Types include pre-contact artifact scatters mainly associated with transient, short-term camps, hunting activity and resource gathering sites
- Also include known locations and potential for undocumented locations containing pre-contact Human Remains

6

Heritage and Archeological Resources

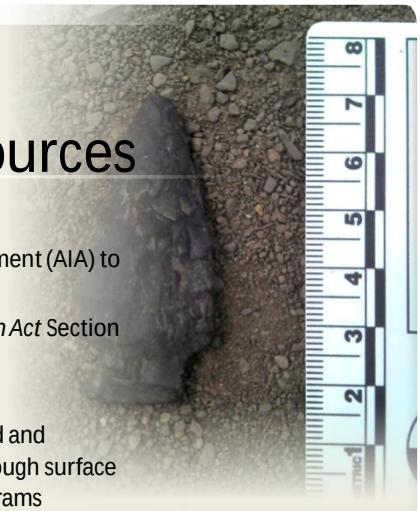


Selected Valued Component

- Measurement Indicators include: presence, number, type, and location of resources
- Potential Effects: Heritage and/or archaeological resources may be uncovered or disturbed during the Project as a result of ground disturbance during construction
- Cultural and heritage sites are protected by the provincial *Heritage Conservation Act* (1996)

7

Heritage and Archeological Resources



Proposed Next Steps:

- Phase II - Archaeological Impact Assessment (AIA) to take place in future within the LSA
- Permit obtained - *Heritage Conservation Act* Section 14 Inspection Permit #2015-0098
- Proposed phased approach to the AIA
- Identify locations of previously recorded and undocumented archaeological sites through surface surveys and subsurface inspection programs
- Traditional Use and Traditional Ecological Knowledge Study (hunting, fishing, plants for medicine or food, etc.) – Led by Ktunaxa
- Ongoing engagement and consultation activities

8

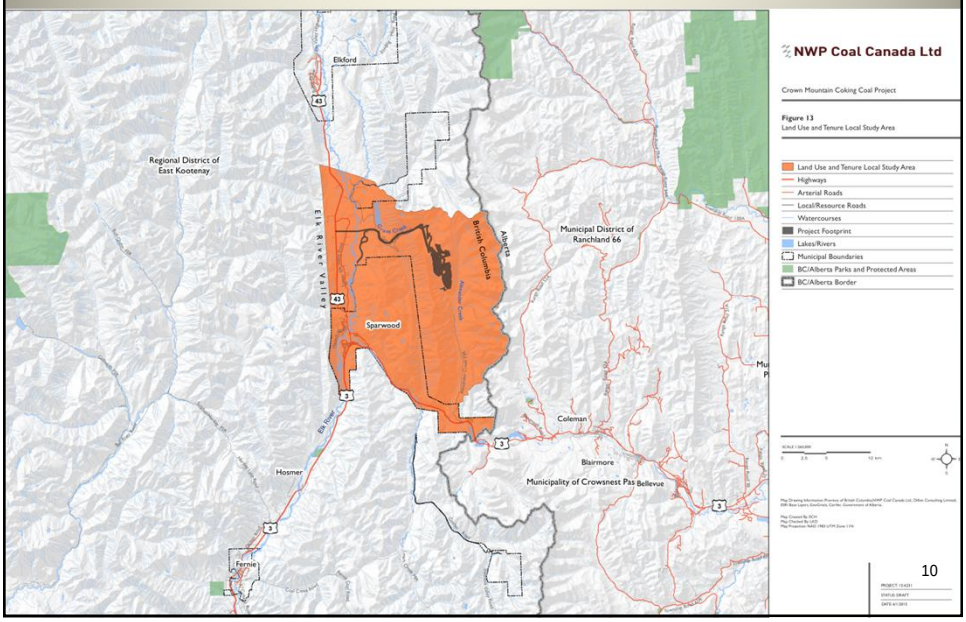
Land Use and Access

Introduction and Baseline Work to Date:

- An understanding of land use within and around the Project needs to be completed to allow the evaluation of potential Project effects on items such as:
  - Forestry-related activities
  - Recreation and tourism (discussed below)
  - Traditional use by the Ktunaxa
- High level overview of existing information completed to date, however no detailed assessments or discussions related to local land use have taken place to date.

9

Land Use and Tenure Study Area



10

Land Use and Access

Key Findings to Date:

- The Project occurs within the Regional District of East Kootenay and within the boundaries of the Kootenay Boundary Land Use Plan, the Elk Valley Official Community Plan, and the Alexander Creek Access Management Area
- Current land uses include residential, recreational (e.g., hunting), exploration, resource, industrial, rangeland, agriculture, and forestry
- Active coal mines in the vicinity of the Project as well as various historic mines in the area
- Available mapping indicates 3 trapping cabins and 12 registered traplines in the vicinity of the Project

11

Land Use and Access

Selected Valued Component

- Measurement Indicators include:
  - Implementation and consistency of land use designation
  - Implementation and use of land use policies
  - Access to resource harvesting areas for recreation purposes
  - Quality of recreational and tourism experiences
- Potential Effects: The Project has the potential to change access to the existing land base. Changes could potentially restrict access to areas used for recreational or tourism purposes, as well as for resource harvesting (e.g., forestry)

12

Land Use and Access

Proposed Next Steps:

- Baseline assessment of current land use activities within and around the Project area
- Information sources expected to include:
  - Local governments (e.g., local planning documents)
  - Provincial databases
  - Discussions with local stakeholders
- Traditional Use and Traditional Ecological Knowledge Study
- Ongoing engagement and consultation activities

13

Recreation and Tourism

Introduction and Baseline Work to Date:

- An understanding of recreational use of the area needs to be completed to allow the evaluation of potential Project effects
- High level overview of existing information completed to date however no detailed assessments or discussions related to recreation and tourism have taken place to date

14

Recreation and Tourism

Key Findings to Date:

- Recreational use in the area includes hunting, fishing, recreational vehicles (ATVs/snowmobiles), and hiking
- The Elk River Valley is intensively used for recreational fishing
- Given the high fishing pressure in the area, the Elk River and its tributaries are designated as Classified Waters, including Alexander Creek
- Several fishing/hunting/guiding outfitters operate in the East Kootenay region including the Elk Valley
- A number of hunting, fishing, ATV and snowmobile clubs established in the area

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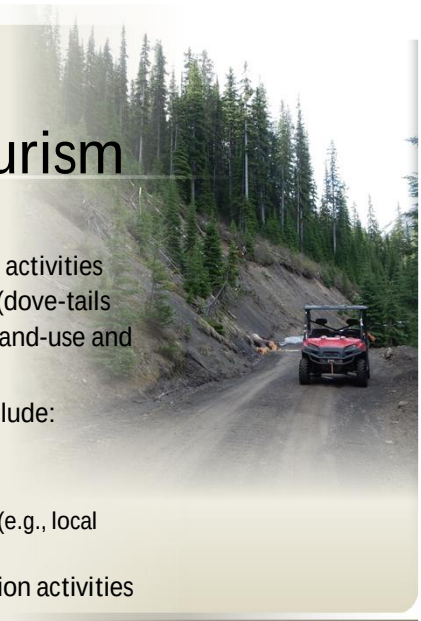
Recreation and Tourism

Selected Valued Component

- Measurement Indicators would include:
  - Recreational use (e.g., hunting, ATV trails, fishing, hiking, etc.)
  - Noise and air quality
  - Quality of recreational and tourism experiences
- Potential effects: Community use of the existing land base may change as a result of the Project construction and operation. Existing recreational use will change and areas once used for recreational purposes will be restricted or have controlled access to ensure public safety

16

Recreation and Tourism

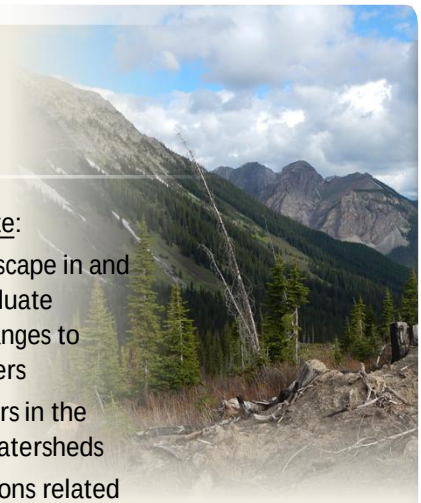


Proposed Next Steps:

- Baseline assessment of recreational activities within and around the Project area (dove-tails with requirement for evaluation of land-use and access)
- Information sources expected to include:
  - Local governments
  - Provincial databases
  - Discussions with local stakeholders (e.g., local outfitters)
- Ongoing engagement and consultation activities

17

Visual Quality

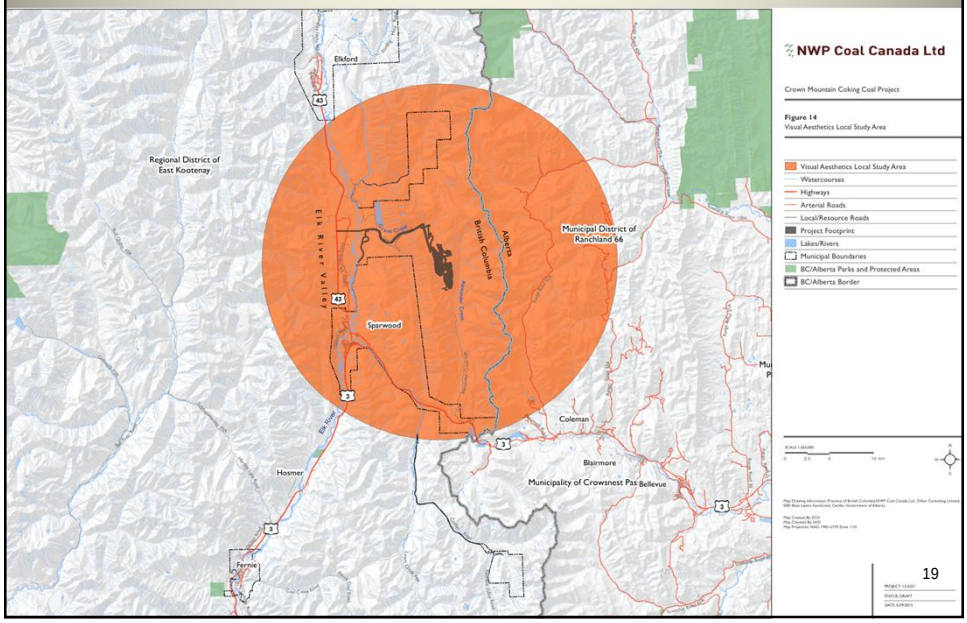


Introduction and Baseline Work to Date:

- An understanding of the visual landscape in and around the Project is needed to evaluate potential Project effects such as changes to visual aesthetics for recreational users
- Particular emphasis on view corridors in the Grave Creek and Alexander Creek watersheds
- No detailed assessments or discussions related to the visual landscape have taken place to date

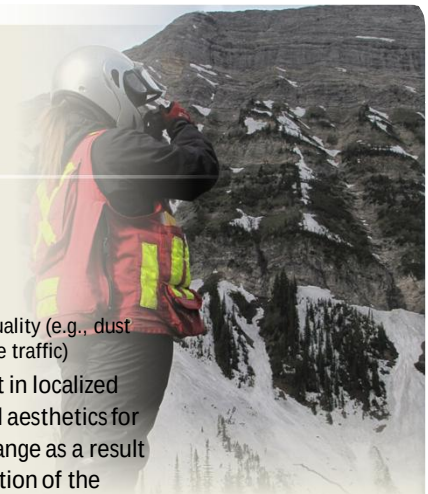
18

Visual Quality Study Area



19

Visual Quality

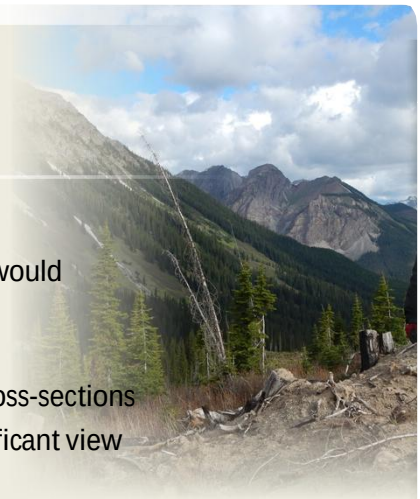


Selected Valued Component

- Measurement Indicators include:
  - View corridors
  - Visual quality, including changes to air quality (e.g., dust accumulation through mining and vehicle traffic)
- Potential effects: The Project will result in localized changes to the visual landscape. Visual aesthetics for backcountry recreational users may change as a result of the Project. Construction and operation of the Project will change the existing landscape and associate view corridors in the Grave Creek and Alexander Creek watersheds

20

Visual Quality

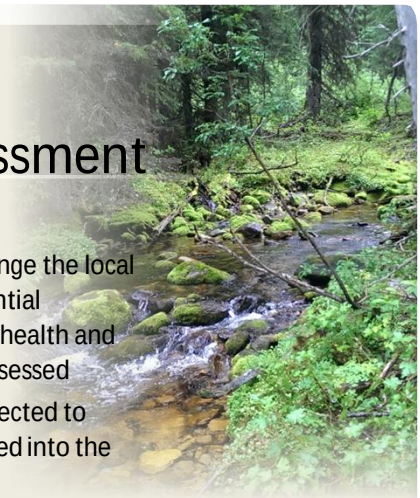


Proposed Next Steps:

- If required, a visual assessment would include:
  - Analysis of landscape units
  - Assessment of line-of-sight cross-sections
  - Viewshed mapping from significant view points
- Approach will be finalized in association with regulators

21

Human Health and Terrestrial Risk Assessment



Introduction and Baseline to Date:

- The Project has the potential to change the local and/or regional environment. Potential implications with regards to human health and terrestrial wildlife will need to be assessed
- Some the existing baseline data collected to date (or ongoing) will be incorporated into the RA (e.g., surface water quality)
- Additional information will also need to gathered (e.g., metal levels in tissues)

22

Human Health and Terrestrial Risk Assessment

Selected Valued Components:

- People (local communities, First Nations, temporary residents at recreation areas)
- Wildlife
  - Measurement indicators include:
    - Hazard Quotients (based on intermediate components / other measurement indicators (e.g., air quality [particulate matter], groundwater quality, surface water quality, sediment quality, tissue analyses))
    - Incremental Lifetime Cancer Risk

23

Human Health and Terrestrial Risk Assessment

Proposed Next Steps:

- Continue to collect baseline data suitable for the completion of a human health and terrestrial wildlife RA. Data expected to include:
  - Surface water and sediment quality
  - Groundwater quality
  - Air quality
  - Contaminant levels in vegetation and tissues
- Approach for RA will be finalized in association with regulators

24