Case Study: How Cumulative Effects were Considered in the Context of a Coal Exploration Permit

PROJECT LOCATION

Elko, Southeast Region (Kootenay/Boundary)

Cumulative Effects:
Changes to environmental, social and economic values caused by the combined effect of past, present and potential future activities and natural processes.

CUMULATIVE EFFECTS VALUES ASSESSED

Grizzly bear

Westslope cutthroat trout

PROJECT DESCRIPTION

Notice of Work Permit:

- Creating a staging area and drill sites, modifying an existing trail, and excavating a new trail near Elko, B.C.

Potential Benefits:

- Mining related employment.
- Revenue generation.
- Mineral development.

Potential Concerns Identified:

- Potential for cumulative effects (CE) to hydrologic conditions and fish and wildlife habitat.
- Potential impacts to First Nations rights and title.

CUMULATIVE EFFECTS ASSESSMENT INFORMATION USED

Grizzly Bear Indicators

Berry Habitat – Indicator for foraging habitat. A large huckleberry patch is predicted to occur near the access road. This potentially poses risk to bears as it may lead to human-bear conflicts.

Road Density – Indicator for road-related impacts on bears, including mortality. The current condition exceeds the high risk benchmark.

Avalanche and Alpine Habitat – The proposed activities do not overlap with these key habitat types. This suggests low risk.

Connectivity – The proposed activities are within core habitat which is used as a connectivity corridor. This suggests high risk.

Westslope Cutthroat Trout Indicators

Road Density – Indicator for riparian habitat and streamflow at the watershed scale. The current condition exceeds the high risk benchmark.

Road Density Near Streams (100m) – Indicator for water quality, channel connectivity, and angler access. The current condition exceeds the high risk benchmark.

Road Density on Steep Slopes (>60%) – Indicator for slope stability and flow patterns. The current condition exceeds the high risk benchmark.

Stream Crossing Density – Indicator for sedimentation, aquatic habitat health and connectivity. The current condition exceeds the high risk benchmark.

CUMULATIVE EFFECTS AND THE DECISION MAKING PROCESS

During consultation for the permit application…

First Nations raised cumulative effects (CE) as a concern that had the potential to impact rights and title.

CEA review…

The proposed activities are adjacent to the Elk Valley where a provincial CE assessment (CEA) is underway. Draft Elk Valley CEA reports were available but were not *pubically* available at the time. However, given their high relevance, Elk Valley CEA approaches were largely adopted for use. With support from the regional CE Team, the Inspector of Mines acquired information about the values in the area, indicators to measure their status, and their current condition relative to benchmarks.

Addressing CE concerns…

The regional CE Team and FLNRORD biologists examined how the proposed work would alter the current condition of identified values. A key finding was that road density, a pressure indicator for both grizzly bears and westslope cutthroat trout, already exceeded the benchmark that indicated high risk. Further road development associated with the project would increase this risk. Biologists recommended that mitigation measures should be applied reduce the effects of the project.

Other considerations included measures to reduce human/bear interaction, limiting access, and following road development guidelines.

The decision…

The permit included conditions to fully reclaim all new roads. This reclamation will reduce the effects of roads after the project is complete.

The outcome…

Road density will be managed by requiring reclamation of all new roads. The project area is in an Access Management Area (AMA), which restricts angler, public, and other traffic (AMA permit requires gate installation). Assessments were shared with the proponent to inform their road development and management plans.

Overall, First Nations and the proponent were generally satisfied with the conditions that resulted from the permit.

Contact for more information:

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CUMULATIVE EFFECTS BENEFIT STREAMS			
STREAMLINE AUTHORZATONS	**SUPPORT DURABLE DECISIONS**	**IMPROVE OUTCOMES FOR VALUES**	**CONSIDER IMPACTS TO ABORIGINAL & TREATY RIGHTS**
Existing CEAs for values likely reduced staffing resources and permit times.	Supported decision making with current information and by documenting rationales.	Increased mitigation options considered and implemented.	Improved information to assess potential impacts to Aboriginal or Treaty rights.