

Healthy Watersheds:

Mining reform needed in British Columbia to reduce threats to downstream states, communities, fish and wildlife.

The transboundary region of the United States and British Columbia (B.C.) has become a dangerous hotspot for pollution and chemical spills from the mining industry due to legacy, existing and proposed mines in areas upstream of the four bordering states.

Overview

According to the B.C. provincial government, **there are 33 mining exploration projects under way within a radius of about 60 miles of the province's southern border.** Most of these projects are just north of the Washington state border. U.S. states abutting Canada are vulnerable to the lax regulatory, financial liability and enforcement mechanisms for industrial mining in B.C.



Bull trout. Photo: USFWS

Existing and proposed mines in B.C. headwaters of three highly-productive Alaskan salmon rivers have alarmed state and U.S. federal officials. B.C. coal mining just north of the Montana and Idaho borders has already poisoned waters flowing into those two states. And most recently, a very controversial proposal for mining in the headwaters of the transboundary Skagit River, a critical system for the Endangered orca whales and Chinook salmon of Puget Sound, has made Washington the next jurisdiction to join the chorus of concerns over B.C.'s mining.

The mining company submitting the exploratory application for the Skagit Headwaters, Imperial Metals, is the same company responsible

for the devastating Mount Polley mine disaster in 2014, the largest mining disaster in Canadian history which decimated salmon runs in Fraser River tributaries, with clean up and restoration work still ongoing.

Skagit Watershed



“Financial assurance in B.C. is stronger in theory than in practice.”

-Responsible Risk: How putting a price on environmental risk makes disasters less likely report, Canada Ecofiscal Commission

B.C. mining development threatens Washington's Skagit River

In December 2018, Imperial Metals submitted an application to conduct mineral exploration for its Giant Copper Project, raising alarms for the environmental integrity of Skagit River headwaters. Imperial Metals is the company responsible for the devastating Mount Polley mine disaster in 2014, which spilled more than 2.6 billion gallons of toxic sludge into the Fraser River watershed, the largest mining disaster in Canadian history.ⁱ The mine, if developed, would threaten the Puget Sound's healthiest remaining runs of bull trout and all five species of salmon—vital food for southern resident orca whales as well as cherished resources to the Upper Skagit Indian Tribe upstream, and the Swinomish and Samish tribes downstream.

Officials, tribes and conservation groups on both sides of the border believe the project is at odds with the 1984 High Ross Treaty which recognizes "the desirability of preserving the natural environment of the Skagit Valley, in the Province of British Columbia."ⁱⁱ Washington Governor Jay Inslee has also expressed concern, as have the Seattle Mayor and City Council, the Skagit Watershed Council, Skagit Land Trust, regional groups working in Washington and B.C. including Conservation Northwest, and national groups like American Rivers.

The proposal threatening the Skagit River is but one of many projects on the edge of an exploration boom that is sweeping the southern mining and minerals regions of B.C., spurred by shifting commodity prices and rising demand for key minerals.

A history of transboundary concerns between Washington and British Columbia

Trail Smelter: Contamination from B.C. to Washington state

From 1924 to 1941, a smelting operation located in Trail, B.C. had been causing pollution-related damage to farmers and other interests in Washington. In the end, B.C. was forced to effect compensation to Washington farmers for substantial crop losses resulting from the transport of sulfur dioxide from its smelting operation. But the resolution required years of international effort on the part of Washington, British Columbia, the U.S. and Canadian federal governments, the International Joint Commission (IJC) (created by the U.S./Canada Boundary Waters Treaty of 1909) and, eventually, engagement of an international tribunal to mediate the dispute.ⁱⁱⁱ



Trail, B.C. smelter. Photo: U.S. Dept. of Ecology

Skagit River & High Ross Dam controversy



Ross Dam. Photo: Skagit Environmental Endowment Commission

Another transboundary dispute erupted between the City of Seattle and B.C. regarding the High Ross dam on the Skagit River controlled by Seattle City Light^{iv}, when B.C. refused to honor an agreement they made with the city. It would take 17 years of often acrimonious negotiations before the issue was finally resolved through a new agreement between the city and the province, with the financial aspects of that agreement guaranteed by the High Ross Treaty^v. The Treaty, through which the Canadian federal government guaranteed B.C.'s performance, was seen as essential

given the province's failure to perform under the previous agreement.

B.C.'s mining boom just north of the Washington state border

The Imperial Metals project threatening the Skagit River is the leading edge of an exploration boom that is sweeping the southern mining and minerals regions of B.C.,^{vi} spurred by shifting commodity prices and rising demand for key minerals. These projects in the transboundary region between Washington and B.C. represent a potential risk to U.S. ecosystems largely due to a failure to regulate on the part of a Canadian province that often benefits from its reputation as a sustainability leader. That reputation is also wearing thin for Canada as a whole, with the United Nations Environment Programme reporting in 2017 that the country has the world's second-worst record for mine tailings spills, after China, with seven incidents reported in the last decade.^{vii}



The British Columbia Geological Survey publishes an annual survey of exploration and mining activities that is broken out by region. Within a radius of about 60 miles of the province's southern border, and excluding coal mining operations and projects on Vancouver Island, the latest editions of the survey map out the following exploration projects:

- 19** in the southeast;^{viii}
- 10** in the south central region;^{ix}
- 4** projects in the southwest.^x

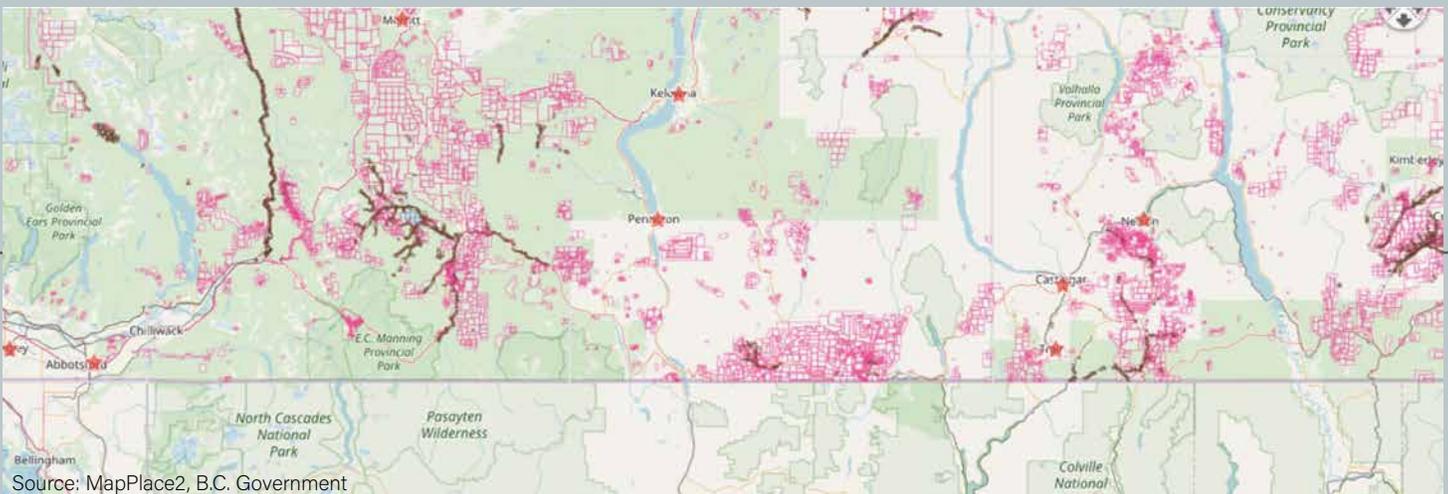
Notable Examples

Exploratory Project Name	Distance from Border	Nearby River/Watershed	Project Size
Greenwood Complex (Golden Crown)	±3.5 miles	Kettle River	2,513 acres
Greenwood Complex (Lexington)	±5 miles	Granby River to Columbia River	
Ladner Gold	32 miles	Sowaqua and Siwash Creeks	35,600 acres
Princeton Gold	30 miles	Tulameen and Similkameen Rivers	36,200 acres
Sheep Creek Gold District	±12.5 miles	Columbia River, Kootenay Lake	
Sheep Creek Gold District	31 miles	Tulameen River	26,675 acres

Relevant Notes

- The Greenwood gold, silver, and lead/zinc exploration complex, operated by Golden Dawn Minerals, includes the Lexington property, located next to the U.S. border, and the Golden Crown property near Christina Lake. The lake flows into Christina Creek, which empties into the Kettle River just before it enters the U.S. near Laurier, WA.^{xi} Golden Crown is also near the Granby River, which flows into the Kettle, a tributary of the Columbia River.
- Ladner Gold has “significant existing mineral resources” and “extensive underground development”. The company holds an existing permit that covers a tailings impoundment, mine, and mill, a five-year underground exploration permit, and a permitted tailings facility with “excess capacity”. The site’s local history dates back to 1850.^{xii}
- The Sheep Creek Gold District, operated by Margaux Resources Ltd., comprises several projects near the Salmo River, which flows into a tributary of the Columbia River, and one property near the southern end of Kootenay Lake.

Mineral tenures staked in southern British Columbia



Copper Mountain near the Washington state border: a focused look



The Copper Mountain Mine^{xiii}, located about 25 miles north of the Washington border and sitting on the Similkameen River which flows into the state, has been in operation in various configurations since 1922. The current phase of open pit mining began in 2011. The project covers a total area of 18,000 acres.

Since 2006, the B.C. government has published 31 compliance reports for Copper Mountain, 23 of them containing warnings, non-compliance advisory letters, orders and penalties, all indicating actual or potential violations of provincial law and regulations and/or approved permits. Compliance issues have become more, not less frequent, since operations began in 2011, with 21 of the 23 reports detailing tailings spills that have continued despite orders and warnings from inspectors. An overview analysis of the reports shows multiple violations in 2018 and 2019, many of them with direct or indirect impacts on the Similkameen River or Wolfe Creek, a fish-bearing stream that flows into the river.

Lessons learned from decade of transboundary challenges

A number of valuable lessons are apparent from looking back at the transboundary disputes between B.C. and U.S. states, as well as the growing number of high-risk mines in the headwaters of highly-productive Alaskan salmon rivers and the mounting numbers of mining disasters. The lessons include, among others:

- The growing number of B.C. mines in the transboundary regions, including watersheds shared with Washington, is such that a disastrous Mt. Polley event is inevitable. It is not simply a question whether, but when, and how disastrous the consequences will be to downstream U.S. ecosystems.
- In the absence of enforceable protections and financial assurances for U.S. interests, downstream damages will take many years of acrimonious debate before resolution of claims, if ever they can be resolved.
- Existing Memoranda of Understanding and work groups between the U.S. border states and B.C., while useful for enhanced communication, are toothless when it comes to binding protections for downstream U.S. ecosystems.

A window of opportunity

Fortunately, U.S. decision-makers are becoming increasingly concerned, and a bipartisan response on this issue has begun, including a call from all eight U.S. Senators representing Washington state, Montana, Idaho and Alaska, asking that B.C. Premier John Horgan act to address downstream contamination issues.^{xiv}

There is now a window of opportunity to secure needed reforms within B.C. that would bring about greater protections to the U.S.-Canada transboundary region. The current B.C. government is proposing reforms to its antiquated Mines Act, and has invited public comment on the proposals.

There are many constructive reforms that B.C. could undertake that would go a long way toward protecting downstream U.S. communities, but they are unlikely to enact these reforms in the absence of a constructive and focused push to do so.

Footnotes

ⁱ The breach resulted in the release of an estimated 25 million cubic meters of wastewater and tailings including 326 tons of nickel, over 400 tons of arsenic, 177 tons of lead and 18,400 tons of copper and its compounds placed in the tailings pond. Those massive amounts of toxic compounds have now escaped into the surrounding environment.

ⁱⁱ Treaty Between Canada and the United States of America Relating to the Skagit River and Ross Lake, and the Seven Mile Reservoir on the Pend D'oreille River. E100403 - CTS 1984 No. 16

ⁱⁱⁱ See <https://intlpollution.commons.gc.cuny.edu/an-international-environmental-law-case-study-the-trail-smelter-arbitration/>. The Trail Smelter decision shaped a core principle underlying international environmental law, namely that a country that creates transboundary pollution, or some other environmentally hazardous effect, is liable for the harm this causes, either directly or indirectly, to another country. In the end, it took direct action by the US and Canadian federal governments, leading to a Special Agreement between the two federal governments, to finally resolve the dispute.

^{iv} <https://digitalrepository.unm.edu/nrj/vol26/iss2/6>

^v <https://www.congress.gov/treaty-document/98th-congress/26/all-info>

^{vi} By its nature, mining exploration is difficult to tie down with any degree of precision. Companies tend to limit the information flow on projects they may still see as tentative, and a mine's commercial viability can fluctuate based on volatile commodity markets or the techniques used to assess a mineral deposit. The high level of uncertainty makes it all the more important, but considerably more difficult, to accurately assess the scope of the problem.

^{vii} Lavoie, Judith, The Narwhal, Canada Has Second-Worst Mining Record in World: UN, October 27, 2017, <https://thenarwhal.ca/canada-has-second-worst-mining-record-world-un/>.

^{viii} Katay, Fiona, British Columbia Geological Survey, Exploration and mining in the Southeast Region, British Columbia, January 3, 2019, http://cmscontent.nrs.gov.bc.ca/geoscience/PublicationCatalogue/InformationCircular/BCGS_IC2017-01-03.pdf.

^{ix} Northcote, Bruce, British Columbia Geological Survey, Exploration and mining in the South Central Region, British Columbia, January 4, 2019, http://cmscontent.nrs.gov.bc.ca/geoscience/PublicationCatalogue/InformationCircular/BCGS_IC2019-01-04.pdf.

^x Northcote, Bruce, Exploration and mining in the Southwest Region, British Columbia, January 5, 2019, http://cmscontent.nrs.gov.bc.ca/geoscience/PublicationCatalogue/InformationCircular/BCGS_IC2017-01-05.pdf. Full listing includes activity on Vancouver Island.

^{xi} Katay, F., 2019. Exploration and mining in the Southeast Region, British Columbia. In: Provincial Overview of Exploration and Mining in British Columbia, 2018. British Columbia Ministry of Energy, Mines and Petroleum Resources, British Columbia Geological Survey, Information Circular 2019-01, pp. 57-82 at pages 72 and 75.

^{xii} New Carolin Gold Corporation, Project Overview, <https://www.newcarolingold.com/project/>.

^{xiii} Copper Mountain Mining Corporation, <https://www.cumtn.com/operations/copper-mountain-mine/overview/>.

^{xiv} Cox, Sarah, The Narwhal, U.S. senators to Horgan: clean up B.C.'s mining mess, June 13, 2019, <https://thenarwhal.ca/u-s-senators-to-horgan-clean-up-b-c-s-mining-mess/>.