

Testifying: Erin K. Sexton, Senior Scientist, University of Montana, Flathead Lake Biological Station

Primary Focus of the Testimony: Environment with Public Health Focus and/or Environment, Climate Change and Science

Subject Description: Federal leadership is critical to mitigating Canadian mine contamination in U.S. waters, by providing research funds to establish baselines, and evaluate damages to U.S. property, water quality and fishery health.

I thank the Members for an opportunity to address this Committee on the need for more scientific data and information to address threats to international watersheds shared with our Canadian neighbors. As a researcher at the University of Montana, Flathead Lake Biological Station, I have been studying mining impacts in our CA-US watersheds for over thirteen years. Canadian mining ventures, operating in British Columbia (B.C.), are leaching toxic contaminants into U.S. waters at levels that exceed U.S. EPA standards for protection of fish, water quality and community health. Specifically, hazardous pollutants from large-scale coal mines in B.C. are being transported into Montana and Idaho by way of the transboundary Kootenai River; contaminants from legacy, operating and proposed hardrock mines threaten transboundary salmon and water quality in Alaska; and proposed hardrock mining in B.C. headwaters threatens freshwater and ocean resources in the Puget Sound region of Washington state. In all downstream states, B.C. mine pollutants jeopardize U.S. economic, environmental and community interests, including tribal lands, resources and rights. In short, Canada receives the economic benefits while the U.S. downstream waters receive contaminated mine waste at the expense of U.S. watersheds and communities.

I very much appreciate the steps already taken by this committee, including initial funding to the federal family of agencies working to document the volume and types of contaminants leaching into U.S. waters from B.C.'s mines (USGS FY19&20 Interior Appropriations funding, "implementation of a baseline strategy for transboundary rivers"). This funding enabled a critical first step in documenting mine contaminants leaching across the international boundary. For example, data gathered with the initial funding confirmed that B.C. mining contaminants are now exceeding U.S. EPA water quality standards at the international boundary of B.C. and Montana in the Kootenai watershed. Based on these findings, it is clear that a significant, multi-year investment is essential to enable federal agencies, working with tribes and states, to accurately quantify damages, seek reimbursement for contamination, and compel effective mitigation of impacts in these high-value watersheds that are integral to Montana, Idaho, Washington, and Alaska.

With all due respect to our Canadian neighbors, B.C.'s mining regulations fall far short of U.S. environmental standards. From project assessment to approval, monitoring to enforcement, operations to clean-up, the provincial regulatory structure fails to meet U.S. criteria. As a consequence, we are receiving mined water from B.C. that meets weaker environmental standards than our current federal and state laws. In addition, because the mines are permitted

in B.C., U.S. federal, state, and tribal governments are excluded from the decision-making process. For example, in the headwaters of the Kootenai watershed in B.C. (an important tributary of the Columbia River Basin), B.C. recently approved four large-scale mine expansions, despite clear scientific evidence that contamination is over 100 times the threshold for protecting fish and aquatic life. Contamination from those approved mines is now being transported into Montana and Idaho. These are clearly international issues, covered under the Boundary Waters Treaty between our two countries. Federal responsibility under this treaty requires federal-to-federal engagement and U.S. involvement in Canadian mine assessment if and when transboundary contaminants are anticipated. Already, U.S. research has revealed severe impacts in the U.S., including to our water quality, our fisheries, and our wildlife. High levels of selenium, one of the most troubling contaminants, is resulting in spinal and skeletal deformities in fish and birds. This presents an immediate threat to the rural communities that rely upon these resources for their economic futures. Only by scientifically documenting the types and volume of contamination flowing into U.S. communities can we begin to hold polluters accountable and implement restorative mitigations. And only by long-term funding for that research can your committee protect these downstream state-side communities.

Our need for continued data collection and damage assessment has never been greater. Recent data from the U.S. EPA, USGS and the Kootenai Tribe of Idaho show that concentrations of selenium and nitrate from legacy and active open-pit coal mines in B.C. have been steadily increasing for decades. While contaminant levels are highest immediately downstream from the mines in southeast B.C., pollutant concentrations also exceed safe levels well into Montana and Idaho. Specifically, the U.S. EPA, USGS and Kootenai Tribe of Idaho recently found selenium more than 100 km downstream of the mines in the Kootenai River of Montana and Idaho. Alarming new data show that selenium is nearly twice the U.S. EPA standard in certain fish, and may threaten the endangered white sturgeon, which is one of the most sensitive species of fish to selenium toxicity, and is a species of cultural significance to the Kootenai Tribe of Idaho.

Water quality models produced by Teck Resources predict that contaminant concentrations in the Kootenai / Elk headwater system will continue to increase for at least five more years, and hoped-for stabilization will depend upon as-yet unproven technology. In fact, previous mine-waste mitigation schemes have failed, resulting in additional fish-kill in downstream waters. Despite these failures and the demonstrated contamination of U.S. waters, Canadian regulators continue to assess and approve new mine ventures in the headwaters of U.S. states: Teck Resources is expanding operations upstream of Montana and Idaho; Imperial Metals (perpetrator of the largest environmental mining disaster in Canadian history, at Mount Polley) is operating the Red Chris mine in the headwaters of the AK-B.C. Stikine River, and is currently seeking to industrialize the headwaters of the Skagit River, upstream of Seattle. Furthermore, B.C. has permitted or is considering permits for Teck, Seabridge Gold, and others to operate some of North America's largest open-pit gold mines near the Canadian headwaters of Alaska's largest salmon-producing rivers, which are both culturally and economically significant. In all of these cases, and despite known contamination, Canadian regulators continue to assess and approve new ventures in the absence of scientifically validated plans to contain toxins. The threat is not hypothetical.

In Montana, Idaho, Washington and Alaska, we face very concerning unknowns. Conservative estimates suggest that even were the B.C. transboundary mines to be shuttered today, the pollutants would continue to leach into surface waters for many centuries to come. And trendlines suggest the toxicity of these contaminants will continue to increase for generations - which is why we seek immediate and long-term funding for monitoring in these transboundary watersheds. These issues can be quantified and addressed, through federal leadership and funding. With a multi-year commitment for critical data collection across Montana, Idaho, Washington and Alaska, we can address important data gaps with respect to the complete suite of potential contaminants, the quantities of pollutants that are being released, and how long those toxins will persist in our rivers, fish, wildlife and communities. This data, collected by U.S. federal agencies will enable them to work with tribal and state governments to evaluate mining impacts, seek compensation where applicable and determine what and where restorative mitigation is necessary.

In 2018, in response to increasing concerns from tribes and members of Congress about this issue, the U.S. EPA convened a federal interagency working group, *“tasked with identifying the gaps and limitations within the Memoranda of Understanding between British Columbia and Alaska, Washington, Idaho and Montana, relating to British Columbia mining within United States-British Columbia transboundary watersheds.”*

FY20 Report language from this committee states that: *“U.S.- British Columbia Transboundary Watersheds. The Committees direct the Agency to continue and expand its work coordinating with Federal, State, local, and tribal agencies to monitor and reduce transboundary hazardous contaminants in the Kootenai watershed. The Agency is directed to coordinate with the Department of State, U.S. Geological Survey, and other partners to submit a report to the Committees within 60 days of enactment on any remaining data gaps to address transboundary watershed contamination in the Kootenai with Canada. The Agency is also directed to release to the Committees, within 180 days of enactment, any data gap analysis relating to potential impacts to water quality and/or aquatic resources related to hard rock copper and gold mining projects in British Columbia for transboundary rivers.”*

While we greatly appreciate these steps toward inter-agency cooperation and reporting, we also realize these initial measures must be complemented by continued investment in long-term data collection and agency collaboration. In Alaska and Washington state, where legacy, operating, and proposed B.C. mines endanger critical salmon habitat that sustains the region’s multi-billion-dollar fisheries economy and traditional and customary ways of life, the primary need is for fundamental baseline scientific data collection, and long-term monitoring. In Montana and Idaho, where contamination from active B.C. mines already impacts important natural and cultural resources, the need for data collection is combined with a need for a full damages assessment and mitigation plan. The direct economic and social costs to U.S. citizens must be quantified if we are to negotiate appropriate solutions with B.C. and Canadian leadership.

The initial FY19 and FY20 appropriations of \$1,500,000, granted by this Committee, enabled USGS to initiate first-phase baseline data collection to better understand current conditions in U.S. rivers threatened by B.C. mining. Unfortunately, in the Kootenai River of MT and ID, preliminary data show contamination concentrations holding steady (in exceedance) all the way through Montana and into Idaho. This surprising and important information was discovered only because the USGS, U.S. EPA, and Kootenai Tribe of Idaho cobbled together existing funds for an independent and thorough analysis. Follow-up studies will further refine our understanding, and will help downstream states articulate specific damages when negotiating solutions with B.C. In Montana, it is too late to collect “baseline” data, as B.C. mining has been ongoing for more than a century in our headwaters. In Washington and Alaska, however, we have an opportunity to identify baseline “natural” conditions, so that changes caused by proposed B.C. mines can be quantified and properly attributed. The time is now to adequately fund this needed baseline data collection, before B.C. and Canada continue to permit additional mines in this region--absent this critical information.

The call for resolution to this contamination of U.S. waters and communities has been loud and clear, and from the highest offices. Last year, eight U.S. Senators from the four affected downstream states penned a joint letter to B.C. Premier John Horgan, demanding action to remedy the international water dispute. Similarly, affected Native American tribes have written multiple letters to the U.S. Department of State and U.S. EPA expressing deep concerns about impacts to tribal treaty lands and requesting increased federal engagement to address the risks associated with legacy mining damages, on-going contamination, and future leaching from B.C. mines into U.S waters.

Transparent, objective science, led by the US EPA, USGS and USFWS is critical to document the impacts from mines, and inform the U.S. approach to this problem. Currently, there is insufficient data to inform both a short and long-term strategy, which may include assessment of damages and assignment of accountability north of the border. Scoping of work to be done by the US EPA and USGS suggest that \$16 million/year over a minimum of five years is needed to confidently evaluate the current impacts and future risks, based on current pollutant trends, across all four states. A robust commitment to federal-led science is imperative to the U.S. efforts to achieve meaningful and lasting resolution to this issue, and ultimately to ensure that the cost of this contamination isn't paid by downstream communities in Idaho, Montana, Washington and Alaska.