TMDL Sub-Committee Final Meeting Record
Boundary County Annex Building
April 10, 2025 at 10:00 a.m.

Agency/ Others in Attendance:

Billy Barquin, Kootenai Tribe of Idaho (KTOI)
Bob Steed, Idaho Department of Environmental Quality (IDEQ)
Brandon Diller, KTOI
Brandon Glaza, U.S. Forest Service (USFS)
Caleb Davis, U.S. Rep. Fulcher' Office
Campbell Olson, KTOI
Don Allenberg, KVRI Corporate Agriculture / Landowner
Jada Fairchild, KTOI
Jade Clinkenbeard, IDEQ
Kevin Greenleaf, Citizen
Lee Colson, KVRI Social/Cultural/Historical
Les Pinkerton, Boundary County Commissioner
Mathew Collin, IDEQ
Merritt Horsmon, Idaho Fish and Game (IDFG)
Mike Klaus, City of Bonners Ferry
Tim Bertling, Boundary County Commissioner
Theresa Wheat, KTOI
Todd Higens, IDEQ

Theresa started the meeting at 10:00 a.m. with introductions around the room including the Zoom attendees.

Kootenai River Selenium Update

Robert Steed, IDEQ, explained that selenium contamination is a recognized environmental issue in Eastern Idaho and is now emerging as a concern in North Idaho. While selenium is an essential nutrient required in small amounts for human and animal health, excessive levels can be toxic. In aquatic environments, elevated selenium concentrations have been shown to cause reproductive problems in several species, including sturgeon.

The standards used to assess the severity of selenium contamination are based on criteria established by the Idaho Department of Environmental Quality (IDEQ) administrative code. These criteria include specific thresholds for different bodies of water, as well as for fish tissue. While selenium levels in the Kootenai River remain within acceptable limits for the water column, they exceed the threshold in fish tissue samples. In particular, whitefish collected between the Montana border and Twin Rivers showed selenium concentrations above the allowable limit in muscle tissue.

IDEQ is actively working with the state of Montana to address the source of selenium contamination, which has been traced to the Elk Valley mines and coal mine pits in British Columbia**.** Runoff from these mountaintop mining operations carries selenium and other pollutants into Lake Kookanusia, which then flows into the Kootenai River via the Libby Dam.

To ensure Idaho is not contributing to the problem, IDEQ conducted thorough testing of all tributaries within the state and confirmed that there are no local sources of selenium. This evidence supports that the contamination is entering Idaho from upstream in Montana. To monitor the situation, monthly water and fish tissue samples are being collected from multiple locations along the river to track selenium levels and identify any changes over time.

Montana and Idaho Clean Water Act

Robert stated that under the Clean Water Act, one of IDEQ's primary responsibilities is to collect data that supports the development of TMDL—essentially pollution budgets for water bodies. This data helps determine both the concentration of contaminants in the main stem of the river and the levels entering from tributaries.

The source of the selenium contamination can be seen clearly using satellite imagery, such as on Google Maps, which shows extensive mountaintop mining operations in the Elk Valley region. These mining activities involve the removal of entire mountain tops, drastically altering the natural landscape. As water flows through these disturbed areas, it picks up selenium, nickel, and other harmful substances. In addition, nitrates from explosives used in the blasting process are also carried into the water system, further contributing to contamination downstream.

The Tribe has been urging IDEQ to take action on this issue for over 20 years, and IDEQ is now beginning to step in. Currently, two of the three river segments have been designated for TMDL development. Once the timing aligns, IDEQ will bring in an EPA-approved contractor to support the technical work, providing resources to selenium scientists to carry out in-depth analysis and modeling. Despite the involvement of federal contractors, public access to information and participation in the process will remain the same. Montana is also increasing its efforts in response to growing pressure and is beginning to mirror Idaho's actions in monitoring and addressing the selenium contamination at its source.

Idaho and British Columbia Memorandum of Understanding (MOU)

Robert further explained that a public Environmental Assessment Conference was recently convened to evaluate the Crown Mountain Project, a proposed coal mining operation in British

Columbia. The primary focus of the assessment was to determine whether the project could contribute to increased selenium pollution, which poses risks to both the environment and public health. The coal extracted from this site is intended for use in steel production and battery manufacturing.

During the conference, only 20 minutes were allocated for Indigenous communities to present their perspectives. This limited timeframe was insufficient for many to fully communicate their concerns and provide comprehensive input. While the mining companies involved have invested in local infrastructure, such as community centers and medical facilities, many communities remain divided on whether to support the project.

A key environmental concern centers around the potential destruction of a natural stream. Under the current proposal, the stream would be filled in to accommodate two stream processing systems. This action could have serious ecological consequences, particularly in terms of disrupting local species and the broader ecosystem.

The state of Idaho does not oppose the mining of the Crown Mountain region outright; however, it strongly advocates for a responsible approach that prioritizes the protection of water sources and the surrounding environment. Any development must carefully consider long-term sustainability and the well-being of affected communities.

Internal Joint Commission (IJC) Reference

Two years ago, the state of Montana, the Kootenai Tribe of Idaho (KTOI), and other stakeholders formally requested a reference with the International Joint Commission (IJC) to address concerns about cross-border pollution. The IJC serves as a communication and coordination body between the federal governments of the United States and Canada, handling international water and environmental issues. While Idaho did not initially request a reference, preferring to manage such matters at the state level, officials have requested a seat at the table should the process move forward.

Headquartered in Washington, D.C., the IJC plays a key role in managing international environmental concerns. A training session related to this process indicated that if the reference is accepted, it could take up to ten years to fully implement a functioning system. However, recent developments suggest that progress is happening more quickly than expected.

The first step in the process was the formation of a governance body, which includes representatives from the Montana Department of Environmental Quality (DEQ), Tribal representatives, and other stakeholders. This governance body is responsible for guiding the decision-making process moving forward. The Kootenai Tribe has played an active role in shaping the reference, which is essentially a formal framework that identifies a specific environmental concern and sets the stage for developing collaborative, negotiated solutions. Montana and Idaho DEQ noted that they would not have pursued this reference if the pollution levels were low enough that they did not pose a risk to fish or other wildlife. However, increasing concentrations have raised significant concerns.

The IJC's support staff has been instrumental in organizing the process, developing necessary tools, and providing strategic guidance. All outcomes and proposals developed through this process are submitted to an independent review group—comprised of experts not involved in the negotiations—to ensure transparency, integrity, and objectivity.

TMDL Status

Jade Clinkenbeard, IDEQ explained that in 2006, a Sediment and Potential Natural Vegetation (PNV) Temperature TMDL was developed to address water quality concerns in the Kootenai/Moyie region. This TMDL was subsequently updated in 2014 and again in 2019 to reflect new data and changing conditions. Additionally, in 2022, a story map was created as part of a five-year review. This interactive tool remains a valuable resource for understanding the watershed and its management history.

Looking ahead, a future TMDL focused on selenium monitoring is anticipated. Notably, there is still no established TMDL protocol for temperature in large river systems in the area.

The most recent Integrated Report also identified an Assessment Unit (AU) for mercury contamination, which is being addressed at the state level. Progress on this front is currently on hold pending approval of a TMDL procedure by the Environmental Protection Agency (EPA).

In terms of ongoing monitoring efforts, water samples are being collected monthly from 6 to 10 locations across rivers in the Kootenai/Moyie watershed. These samples consistently show average selenium concentrations of approximately one microgram per liter. IDEQ is considering expanding the monitoring parameters in the future to include additional contaminants such as nitrates and dissolved

nickel. Observed levels of dissolved selenium vary by both time and location—fluctuating throughout the year depending on environmental conditions and river dynamics.

Water Temperatures

Todd Higens, IDEQ, explained that stream temperature data was collected and analyzed from multiple locations across the Kootenai/Moyie Watershed, the Priest Lake Basin, and several other streams throughout North Idaho. Data from the Idaho Falls region was also used for this analysis. The primary objective of this sampling effort was to identify the variables influencing stream temperature.

Analysis of the collected data revealed that stream temperature is affected by multiple factors, with groundwater influence emerging as the most significant—largely due to its complexity and difficulty to quantify. Additional variables impacting stream temperature include elevation, canopy cover, solar aspect, stream gradient, stream order, and stream width. While each of these factors may appear minor when considered individually, their combined effect significantly influences temperature variability.

Utilizing this data, a geospatial stream temperature prediction model was developed to estimate the future daily average temperatures of streams. Although the model is still undergoing refinement, it is already capable of accurately predicting temperature ranges.

This predictive model is currently being used to support the development of a temperature TMDL for the South Fork and the Coeur d'Alene River. In parallel, the IDEQ is working to revise stream temperature standards. In collaboration with the EPA and the U.S. Fish and Wildlife Service, IDEQ is working toward establishing more realistic and ecologically appropriate temperature criteria.

Meeting ended at 11:30 a.m.
Meeting Recorded by Jada Fairchild