

**TMDL Sub-Committee Draft Meeting Record
Boundary County Annex Building
October 23, 2024 at 10:00 a.m.**

Agency/Others in Attendance:

Ben Mitchell, Citizen
Brandon Glaza, U.S. Forest Service
Ed Atkins, Corp. Ag. / Landowner
Dave Wattenburger, Citizen
Jada Fairchild, KTOI Administrative Assistant
Jade Clinkenbeard, Idaho Department of Environment Quality (DEQ)
Tim Bertling, Boundary County
Theresa Wheat, KTOI, KVRI Felicitator
Todd Higen, DEQ
William Burquin, KTOI

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

Kootenai River Selenium Update

Selenium is sold as a supplement for people and livestock. This element is needed for everyone to survive, including the fish. Livestock and other wildlife are known to be deficient. If selenium levels get too high, this can affect fish ovaries and create deformities in the fish, such as no gill plates and twisted tails. If our waters are too polluted with selenium, it can kill the aquatic ecosystem.

Canada currently doesn't have any clean water acts, only recommendations. Canada also wants to expand their mining operations which will leave more selenium in the Kootenai River. Canada does claim to have selenium treatment facilities, a small-scale type design. These facilities are timely and expensive ways to extract selenium.

White Sturgeon and Rainbow Trout are affected by this the most. An over-load of selenium is incredibly toxic and can be deadly. Kootenai River Assessment Unit are listed as a "303d" and are not supporting the cold-water aquatic life beneficial use.

Monthly samples at Twin Rivers are being taken, with the selenium levels ranging from .8-1.4, depending on the dam flow. We are starting to notice an increasing trend of selenium, with a rough estimate of about 56 pounds of selenium entering the Kootenai River daily from the mines in Canada.

Stream Temperature Prediction Model and Water Quality Criteria Discussion

After taking into consideration of all of the factors that contribute to stream temperature, aspects, elevation, stream order, gradient, canopy cover, groundwater influence, and Bankfull width, Todd Higen was able to create a Stream Temperature Prediction Model using GIS Software. This prediction model still needs work, but currently every sample test has matched the prediction model. This is a monthly model, so every model will be different depending on the temperatures of the streams.

This model still needs adjusting and be finalized, but by changing the vegetation there may be a change in temperature that Todd and his team are working on. By doing this, Todd is hoping for a numeric and natural background water quality criteria. He also tracked the temperature change throughout the day, to see how quickly the changes from morning to evening, to determine how much groundwater influence there is. He noticed that the water is getting colder except for the summer months, even for the spring. Temperatures are getting colder and colder until summer, then temperature spikes.

Idaho DEQ and International Joint Commission Updates

The International Joint Commission (IJC) is currently formulating rules and regulations for the future as well as finding roles for certain people.

Meeting ended at 11:20 a.m.
Meeting Recorded by Jada Fairchild