

EXECUTIVE SUMMARY OF SELENIUM STANDARD LEGAL STATUS—4/28

On December 24, 2020, upon request of the Montana Department of Environmental Quality (DEQ), the Montana Board of Environmental Review (BER) promulgated a site-specific water quality standard for selenium in Lake Koocanusa, a man-made reservoir operated by the U.S. Army Corps of Engineers that crosses the boundary with Canada. This move severed six years of collaborative work in a bilateral process with British Columbia before a science-based consensus on a technically achievable and protective selenium threshold for aquatic life could be reached. DEQ's stated purpose for this standard was to protect sensitive fish species and target Teck Coal, a Canadian company mining north of the border. Recognizing that the standard is lower than the existing water quality in the lake and would therefore support an impairment listing, DEQ immediately used the standard as support for a referral of the matter to the International Joint Commission (IJC) on transboundary waters. On its last day in office, the Bullock Administration requested that the U.S. State Department initiate that process.

In reaction, the 2021 Montana Legislature, by wide majorities in both houses, passed a resolution, HJ 37, to study the new standard, concerned it may not have been factually, scientifically, or legally well-founded.

In separate, but parallel, administrative legal actions filed with the Board of Environmental Review (BER), Teck and Lincoln County, the location of the lake, challenged the administrative rulemaking process, asserting that it violated § 75-5-203, MCA, which establishes criteria for enacting a water quality standard more stringent than the comparable federal guideline. The applicable federal guideline for lentic (lake) waters is 1.5 micrograms per liter. The site-specific standard adopted for Lake Koocanusa in 2020 is nearly one-half that, at 0.8 micrograms per liter.

On February 25, 2022, the BER ruled in favor Lincoln County and Teck based on those arguments. On February 28, the HJ 37 Special Committee held the second of its hearings on the matter. Testimony received corroborated arguments made throughout the rulemaking process and legislative session that the rulemaking was a rushed process, based on data misrepresentations and flawed science, and that it violated state law. Moreover, no evidence supported claims of negative

impacts on fish populations and aquatic health, just as no evidence supports claims of increasing selenium levels in the lake, which have been stable since 2012.

RESULTS OF BER FINAL DECISION AND HJ 37 TESTIMONY

1. **Montana's site-specific selenium standard for Lake Kocanusa is more stringent than the federal standard and was promulgated in violation of state statute, 75-5-203, MCA. (BER decision, finding 13, p. 17.)**
2. **The Stringency Statute, 75-5-203, MCA, requires "peer-reviewed scientific studies" to support a more stringent than federal rule. (BER decision, finding 20, p. 19.)**
3. **The selenium standard at issue and the rulemaking that resulted in it "fail to comply with the Stringency Statute. Sections 75-5-203(1), (2), (3), MCA." (BER decision, order 4, p. 20.)**
4. **"Because the Board's rulemaking failed to comply with section 75-5-203, MCA, in order to have a valid and enforceable lake water column standard, new rulemaking must be initiated." (BER decision, order 6, p. 20.)**
5. **There is no evidence based on qualified, usable data of increasing selenium levels in Lake Kocanusa.**
 - a. **The egg/ovary data on which scientific protocols require basing the standard did not contain a single usable data point. FWP, T. Selch, admitted they "never had a gravid fish," to sample from. (Memo, p. 6.) USGS, similarly, admitted there is a "data gap" in reproductive tissue data and, in fact, no fish tissue data was used for the standard because none of it was usable. (Memo, p. 6.). FWP also admitted it has not noted any population declines or missing age class. (Memo, p. 6.).**
6. **As testified to by a co-author of the model DEQ used in setting the standard, Dr. Samuel Luoma, it did so improperly, failing to calibrate it for the conditions of Lake Kocanusa. BER admitted use of the model "overpredicted concentrations." (Memo, p. 10). There was no calibration for bioavailability factors. (Memo, p. 10).**
7. **Dr. Luoma also testified the DEQ's use of the model included juggling coefficients and rationales unscientifically, leading to unsupportable and unreliable results. (Memo, p. 13). The BER acknowledged that the model**

allows assumptions and inputs to be changed to reach different results, that DEQ had used an input more stringent than the federal guideline to reach the standard, and that when DEQ used the federal guideline it then altered other inputs to be more conservative and thus reach the same overly stringent standard. (BER decision, finding 22, p. 11).

- 8. The operation of Libby Dam, the erection of which created Lake Koochanusa and the operation of which drains it almost entirely each year, was not examined at all for a connection to selenium levels in the lake, even though there is a fish consumption advisory for mercury, which is associated with dam operation and is not mining related.**
- 9. The factual basis of the standard did not use data gathered in compliance with mandatory scientific protocols, and in modeling related to the standard DEQ did not employ the model correctly (according to its co-creator).**
- 10. The resulting standard, .08 micrograms per liter, is both more stringent than the federal guideline and would put 34 of Montana's counties, if applied there, out of compliance, leading to impairment listings recognized for federal purposes.**
- 11. This flawed standard, lacking qualified and usable facts, science, and legal process, has been cited as the reason for federal and possibly international interference in Montana's water quality decision-making by the International Joint Commission on boundary waters. Having been found invalid and unenforceable, it is no longer a water quality standard and a full rulemaking process is needed to establish a new, valid standard.**