From: donotreply@mt.gov
To: LEG Cmte-WPIC Comment
Subject: Public Comment for WPIC
Date: Sunday, August 28, 2022 6:42:43 PM

Public Comments for the Water Policy Interim Committee

Date: 28th August 2022 18:42

First Name:
Anna

Last Name:
Belinski

Email Address:
akbelinski@gmail.com

Subject:
Study of Selenium Standard for Lake Koocanusa

Comment:
The current selenium standard of 0.8µg/L was done based on solid science and reflects merited concern for the ecosystem of the Kootenai watershed. Also we should be especially concerned about the Whiter Sturgeon and have conservative ecological standards in place for their rehabilitation and survival. I support the current standard of 0.8µg/L of selenium for Lake Koocanusa.

Sent via leg.mt.gov/committees/interim/wpic/public-comments-wpic/

Montana State Legislature
MONTANA HOUSE OF REPRESENTATIVES

Representative Steve Gunderson
House District 01

DURING THE SESSION
State Capitol Building
PO Box 200400
Helena MT 59620-0400
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Natural Resources - Chair
Business and Labor
Local Government
Rules
Environmental Quality Council (EQC)
Libby Asbestos Superfund Oversight Committee (LASOC) -Chair

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7/5/2022

HJ-37 Special Committee remarks and statement.

I have a few unanswered questions:

1. No "Gravid" fish samples per testimony by the biologists taking the samples. How "scientific" is this method of securing data used to set a site specific Selenium standard?
2. Non-site specific data used to "establish" the standard for a site specific standard. Testimony showed data was substituted from other "similar" areas to set a site specific standard. Why are we allowing non-site specific data to be used to set a site specific standard? Where is the Science in this action? This sounds much like an opinion rather than a scientific study to set a standard that is lower than any site specific standard in the country. What is so special about the Selenium in the Kootenai watershed that requires setting a standard found nowhere else in the country, for that matter, in the world?
3. Revelations that the scientist who built the computer model asserts that the model was not calibrated properly nor used properly with the questionable data used to promulgate the site specific Selenium standard on Lake Koocanusa. If the tool is misused, the output is corrupted.
4. Repeated assertions that Idaho will litigate if Montana does not set a site specific standard lower than the EPA standard continues to be false. Idaho has adopted the Federal standard EPA has set for the Kootenai waterway. Why would a downstream state litigate if they have adopted the same Federal standard in a shared waterway? Senator Cohenour needs to STOP using this misinformation in public comment. It is misleading and patently FALSE.

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5. Revelations that DEQ documents show counties within Montana that far, far exceed the EPA allowable Selenium levels found in Lake Koocanusa. These exceedances are being ignored. Why is there a push to change a Federal standard that is already protective of our shared international border waterway? The only answer is this standard is instigated by Environmental and NGO organizations from across the international border. In the same breath we allow our in-state Selenium levels to be magnitudes higher without addressing them? There are areas within the jurisdiction of MT DEQ that exceed EPA's current Selenium standard by magnitudes. Furthermore, Lake Koocanusa within Lincoln County is number 34 of counties with reportable traces of Selenium that exceed EPA standards. This information comes directly from MT DEQ's own documents. They have known of this disparity for quite some time. Why are we so highly concerned with an element and standard that have no causasonal impacts from Montana industry in Lincoln County or Montana? WHY is DEQ continuing a race, Hell Bent, on setting a standard that DEQ will have no jurisdictional authority to regulate or enforce upon an industry in another country? Why are we not looking at the areas that we have jurisdictional and enforcement authorities within our own State FIRST?
6. Why is DEQ not following the findings of the BER appointed by the current administration? The chairman of BER found that there were findings that the standard, as promulgated, oversteps and overrides Montana statute. Why does DEQ maintain it is doing "what is right" at Lake Koocanusa if it is allowing Selenium levels in other areas within Montana greatly exceed the EPA standards? Why are we setting a standard that supersedes the EPA standard that they find as "protective" of other waterways in the US?

Let's not be squeamish here and ask the hard questions.
The answers to these questions can be found in the intense push to set this standard before the Bullock administration left office in 2020. This standard is only promulgated to give a "big stick" to Canadian environmental groups to stop Canadian Steel making coal production and a payback from Governor Bullock for those environmental groups

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and NGO's that helped elect him. I find it interesting that a Canadian Environmental group would do a FOIA on the elected officials of Lincoln County and Montana with the premise that we are helping protect a Canadian Mining company to pollute the shared Kootenai watershed environment. I would like to do a FOIA on the environmental groups to see how much collaboration they requested from the Bullock administration to promulgate an unattainable standard that would give the NGO's across the border, the tool to kill coal mining.

Why are we setting a Selenium standard we (Montana) cannot enforce against Teck Mining, that has repeatedly asserted and affirmed that they are the point source for the elevated (yet acceptable by the EPA) Selenium levels in Lake Koocanusa? Why are we setting an unattainable standard when Teck has spent almost 1 $Billion, voluntarily, establishing a water treatment system that is increasingly treating millions upon millions of gallons of water to remove Selenium and Nitrates? Why are we setting unattainable standards using junk science and junk data to justify the incorrectly calibrated and misused "computer model" to set the standard? Why are we setting an unattainable standard when the standard was set arbitrarily by "scientists" that have ulterior, and often conflicting, motives? Are these truly scientists following naked science or are these "folks with an agenda"? Why are we setting a standard that is unenforceable by Montana State law? Why are we concentrating on a segment of Montana that is only minimally impacted by selenium when the levels have been accepted as below a federal standard that is "protective" of aquatic life? Why is DEQ NOT focused on levels found within the State that in truth, DO exceed EPA's current acceptable standards?

HJ37 has done its duty. We have uncovered unanswered questions that should NOT allow DEQ to continue to push a Selenium standard that is not only unattainable by Canadian industry but unenforceable by MT DEQ.

Governor Gianforte, it is time to pull the plug on this travesty and pull back MT DEQ from continuing an unattainable standard that has been foisted illegally upon the

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citizens of Montana. If allowed to continue, this travesty and the process it was founded upon will be used in the future as a "big stick" against the citizens of Montana by the environmental and NGO groups to further delay, slow or completely stop, development within the great State of Montana. Fear of litigation is not a justification for allowing this travesty to progress further. The game plan of the environmental groups and associated NGO's is to use that fear to push elected officials in the direction they choose. Time to make a stand and stop this injustice.

So many questions and so few answers.

Respectfully,

MT HD1 Representative Steve Gunderson

August 31, 2022

Montana Trout Unlimited
P.O. Box 7186
Missoula, Montana 59807

The Honorable Jeff Welborn
Chairman, Water Policy Interim Committee
Montana State Legislature
P.O. Box 201706
Helena, Montana 59620-1706

Re: Draft HJ37 Report on Site Specific Selenium Standards for Lake Koocanusa and Kootenai River

Dear Chairman Welborn and Members of the Committee,

Montana Trout Unlimited (MTU) works to conserve, protect and restore coldwater fisheries and their watersheds. With more than 4,200 members represented by thirteen local chapters around the state of Montana, our organization supports conservation projects that benefit fish, wildlife, and people. That's why MTU is proud to support the site-specific standard for Selenium in Lake Koocanusa and the Kootenai River and has closely monitored the HJ37 study throughout the 2022-2023 interim along with many other stakeholders.

MTU has carefully followed the HJ37 study on the state's Selenium standards throughout the interim. We have often provided public comment on specific elements of the standard as well as the process to develop it, which was thorough, fair, transparent, collaborative, and has provided more than adequate opportunity for public engagement. The truth is that it was more than a five-year long process that has been led by the Montana Department of Environmental Quality (DEQ) in collaboration with other states, tribes, stakeholders, and Canada. The adopted rule, that was approved by the U.S. Environmental Protection Agency (EPA), is grounded in the best science available, and it gives the State of Montana the ability to protect its water quality, world class coldwater fishery resources, and the communities that they support.

MTU has reviewed the draft HJ37 report and wishes to go on record supporting the work of legislative staff to compile reams of public record, science and data, and regulation into a succent manner. While there is much more to be written and that could be said about Montana's Selenium standard and the process that went into creating it, we recognize the limits in scope that this forum provides. We appreciate the opportunity to express technical concerns with staff during the drafting process, and the open and transparent committee process that led to its creation.

In that review, MTU does believe that it is worth including into the record of the report a description of the diverse group of stakeholders that have participated in the HJ37 process beyond DEQ, the EPA, and Teck Coal. The reality is that the rule enjoys broad and diverse support from the general public in Montana, including in the immediate area of Lincoln County. MTU members who live and work in the region were active participants in the development of the rule and have been involved throughout the HJ37 study, and those folks are just one example of the many stakeholders beyond DEQ and Teck Coal that have a deep interest in the outcome of Montana's Selenium standard. Those many stakeholders, especially including the tribal nations affected by the rule, brought much to the HJ37 process as well as the development of the standard itself and including an addendum of participants would add value to the report.

Please do not hesitate to contact us with any questions, or if you need additional information regarding the comments that we have submitted (via email at clayton@montanatu.org or by phone at 406-543-0054). Thank you for the opportunity to comment and for the diligent work throughout the interim on this study and report.

Respectfully,

Clayton Elliott
Conservation and Government Affairs Director
Montana Trout Unlimited

CROWLEY | FLECK PLLP
ATTORNEYS

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August 31, 2022

Via Email ONLY

Water Policy Interim Committee
HJ37 Special Committee

RE: Comments on draft HJ37 Report

Dear Members of the Water Policy Interim Committee and HJ37 Special Committee:

Thank you for this opportunity to provide comments on the draft HJ37 Report. Please accept these comments on behalf of Teck Coal Limited ("Teck"). The subject of this study is of great importance to Montana and to Teck, which, as shown throughout this process, in the attached timeline (Exhibit H), and in Teck's 2022 Implementation Plan Adjustment (Exhibit F), has devoted a great deal of expertise and other resources to understanding and addressing selenium. Teck's commitment is, of course, ongoing. It hopes to continue this process working with the State DEQ and stakeholders in a transparent and cooperative manner. Teck appreciates both committees' time and efforts on the interim study. We offer the attached redline edits, exhibits, and this additional explanation for your consideration, in the spirit of collaboration to ensure an accurate, complete record.

1. Page 1, draft findings 1-7: Minor edits are offered for additional clarity and accuracy.

2. Page 1, draft finding 3: As drafted, the finding begs the question: the selenium level is elevated compared to what? To reflect the undisputed situation, it is accurate to say that selenium exists and that some of it comes from Teck's coal mines in Canada.

3. Page 1, draft finding 5: The fish tissue criteria was adopted from the federal guideline, it was not derived from modeling. Similarly, all of the criteria for the Kootenai River were adopted from the federal guideline, none were derived from modeling.

4. Page 1, draft finding 8: Edits are offered to more closely follow the language of the Board's Order. The Board, not DEQ, originally promulgated the standard. The Board did not simply reverse its previous position; rather, it found that it "erred, as a matter of law, when it

concluded the Lake Numeric Standard was not more stringent than the comparable federal guideline and that it did not need to make the written findings required by §§ 75-5-203(2) and (3), MCA." The terminology is important because the term "reversed" does not inform the reader that the Board found legal error, which means that the standard is illegal. Additionally, the order's effect is clear. The Board is a state agency with quasi-judicial authority to find facts, interpret the law and resolve disputes. Board Order, Concl. of Law No. 3 (citing §§ 2-15-3502(4); 2-15-102(10), MCA). Unless overturned on appeal to a District Court, the Board's Order is binding authority.

5. Page 1, draft finding 9: The issue of whether DEQ's written finding complies with state law or not is far from settled. Teck and Lincoln County continue to argue that new rulemaking is required as ordered by the Board and therefore DEQ's written finding does not cure the violation of state law noted by the Board. Three of the five Board members present at the August 12, 2022 Board meeting agreed that the Board Order should remain as initially written – requiring additional rulemaking to cure the violation and to have a valid and enforceable site-specific water column standard for Lake Koocanusa. However, given that the Board has 7 members, the 3 votes do not equate to a majority and additional decision-making will occur at the Board's October 14, 2022 meeting. During Board deliberations, the Board Chairman affirmatively asserted that because the rule was adopted in violation of a statute, it is void from the beginning. Exhibit A, attached (Transcript of Board Meeting, 42:4-9 (August 12, 2022)); see also *Clark Fork Coalition v. Tubbs*, 2016 MT 229, ¶ 41 (holding that when a rule is found to be invalid since its inception (i.e.: based on invalid rulemaking), the "default remedy is to reinstate the former administrative rule"). Therefore, the current water quality standard for Lake Koocanusa reverts back to the statewide standard of 5 micrograms per liter. Circular DEQ-7.

6. Page 2, Introduction: Edits are offered to ensure accuracy with federal and state laws, as well as HJ37.

7. Page 2, Introduction, 2nd paragraph: This issue is likely precedent-setting and will impact future regulation of many waterbodies throughout the state, some which are similar in terms of habitat and fish species, that are already impaired for selenium because they exceed the statewide standard of 5 micrograms per liter. At least one of the waters already has documented bioaccumulation, not just in fish, but also in birds. Yet, that water remains governed by the statewide standard of 5 micrograms per liter. The disparity is glaring and highlights the disconnect between the rule promulgated in 2020 for Lake Koocanusa and the reality of selenium issues and regulation throughout Montana.

8. Page 4, Selenium and Lake K, 2nd paragraph: The term "tailings" does not apply to the coal mining process, which generates waste rock, not tailings. Tailings generally refers to a hard rock mining process that produces tailings after a milling. See Mont. Code Ann. § 82-4-303(33). There is no milling in the coal mining process and therefore no tailings are produced.

9. Page 4, Selenium and Lake K, 5th paragraph: Edits regarding the "threatened" listing of Lake Koocanusa are supported by comments made by Rep. Steve Gunderson regarding DEQ's 2020 Integrated Report (Exhibit B, attached), as well as comments made by Teck during the 2020 selenium rulemaking (Exhibit C, attached).

10. Page 4, Selenium and Lake K, 6th paragraph: Regarding the discussion of EPA's selenium guideline, edits are offered to more closely align with the actual guideline, attached here as Exhibit D.

11. Page 6, top paragraph which is part of "Selenium and Lake K": edits offered based on a letter submitted by the majority of WPIC members during the selenium rulemaking, attached Exhibit E.

12. Page 6, Discussion of the Standard: John Kilpatrick testified that USGS found the egg/ovary fish tissue data too unreliable to use because it was not collected from gravid (ripe) ovaries. Trevor Selch with Montana FWP confirmed that they have never sampled a gravid fish. Citation to both individuals' testimony is added.

13. Page 8, 3rd paragraph: Edits are offered to more fully describe the two prevailing points made by Dr. Luoma: 1) that the model was incorrectly calibrated and 2) that best modeling practices were not followed when model inputs were varied and to emphasize his concern with protecting the credibility of a model that he co-authored.

14. Page 8, 5th paragraph: There is no federal water quality standard for selenium, only a guideline, which states may or may not adopt. For example, even though the federal guideline has changed and been lowered twice, Montana still applies the old 1987 federal guideline of 5 micrograms per liter on a statewide basis. See Circular DEQ-7.

15. Page 8, Footnote 26: Edits offered to capture testimony offered by Dr. Luoma addressing the food web, as well as evidence from expert Dave DeForest attached to DEQ's Derivation Document regarding inability to validate the model.

16. Page 10, 1st paragraph: See Comment 3 above, the rule does not remain in effect pursuant to the Board's April Order.

17. Page 10, 4th paragraph: Although DEQ has asserted, since the beginning of this study more than seven month ago that its rulemaking aligns with British Columbia's water quality objective, British Columbia has not taken any formal steps to change its current water quality objective of 2.0 micrograms per liter selenium for Lake Koocanusa.

18. Pages 10-11, Committee Recommendations: The federal Clean Water Act provides that "It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution." 33 U.S.C. § 1251. Further, "States adopt water quality standards to protect public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act." 40 C.F.R. 131.2. Therefore, Montana has legal authority to set water quality standards within its borders. EPA must approve the standards, but as EPA noted in its initial approval of the selenium standards:

> EPA notes that its charge under federal law is to review state water quality criteria submissions only to ensure that sound science shows they are protective of the designated use, not to determine whether the precise value selected by the state is the most scientifically rigorous number possible. EPA's regulations at 40 C.F.R. 131.4(a) expressly preserve states' right to "develop water quality standards more stringent than required." Accordingly, once EPA has determined that sound scientific rational shows that a state submission is protective of the designated use, its role under the cooperative federalism framework of the CWA is not to second guess the state's scientific analysis.
>
> EPA Ltr. to Mont. BER, *Re: EPA's action on Montana's Revised Selenium Criteria for Lake Koocanusa and the Kootenai River*, n. 11 (February 25, 2021) (*citing City of Albuquerque v. Browner*, 97 F.3d 415 (10th Cir. 1996) and *Ctr. For Regulatory Reasonableness v. United States Envtl. Prot. Agency*, No. CV 6-1435, 2019 WL 1440303 at *10 (D.D.C. Mar. 31. 2019)).
>
> Notably, EPA's own guideline of 1.5 micrograms per liter selenium in lakes "is expected to protect the **entire** aquatic community, including fish, amphibians, and invertebrates, based on available data." EPA, Aquatic Life Ambient Water Quality Criterion for Selenium – Freshwater (2016), p. xv (emphasis added). DEQ has not articulated a reason why that level is not good enough for Lake Koocanusa.

19. Page 11, Footnote 32: Although DEQ has testified about its triennial review process, that process may result in rulemaking, but it is not, by itself equivalent to rulemaking. Additionally, none of the recent triennial reviews have resulted in significant water quality standard adjustments beyond those necessary to comply with federal requirements and the requirements of the Montana Agricultural Chemical Groundwater Protection Act. None have been used to set standards more stringent than the federal guideline in a manner that complies with Mont. Code Ann. § 75-5-203. Further, the triennial review process broadly opens up all water quality standards, including nondegradation provisions and is ill-suited to a highly technical site-specific standard setting process. Further, the triennial review will likely not be complete until the end of 2023, with any resulting rulemaking occurring in 2024, which leaves

Lake Koocanusa subject to the state-wide water quality standard of 5 micrograms per liter for an additional two years.

20. Page 11, footnote 37. To address the statement that Teck is not treating all runoff and to respond to questions raised by Sen. Cohenour, please see Teck's 2020 Implementation Plan Adjustment for 2022, attached as Exhibit F. Teck is regulated by BC Ministry of Environment EMA Permit 107517 which establishes Site Performance Objectives and compliance limits at numerous in-stream sites near the mining facilities and further downstream. For example, a Site Performance Objective for selenium in Lake Koocanusa is set at 2.0 micrograms per liter. See Exhibit F, p. iii-iv, Figure E.1, pp. 73-75, Table 3.6. Therefore, Teck is required to comply with the limits by comparing the instream water quality level that includes all runoff and is not limited to the treated effluent. This is a dramatic difference from how Montana traditionally regulates its dischargers. Teck is not only regulated at the end of pipe discharges leaving their water treatment facilities (similar to how many of Montana's permitted discharges are regulated), additionally, Teck is also regulated within each receiving water body. Permit compliance is based on measurement of water quality in-stream, which includes all runoff water – treated and untreated. Since Teck is required to treat as much water as it takes to reach the in-stream water quality limits, the difference between the volume of water treated and the volume of runoff is of no consequence – there are no gaps in regulation, all of the water is regulated. Further, it is not feasible to capture and treat all water that interacts with the site before discharge to the receiving environment. Further, tank-based biological treatment systems, such as those employed by Teck, are optimized when flow and loading rates through the facility are consistent. The facilities can be ramped up and turned down; however, not to the degree that would be required to treat the extreme flow variation that occurs in mountainous regions.

Finally, Teck urges this committee to consider and adopt the findings in Teck's white paper entitled "LEGAL STATUS OF MONTANA SITE-SPECIFIC SELENIUM WATER QUALITY STANDARD," attached as Exhibit G. Specifically:

a. There is no evidence of increasing selenium levels in Lake Koocanusa. Neither water quality data presented by DEQ nor fish tissue data presented by FWP reveal alarming trends in selenium concentrations for Lake Koocanusa.
b. DEQ did not use the model correctly when developing the site-specific water quality standard. Had DEQ used the proper bioavailability level, the model results predict a protective selenium level between 1.5 and 3.0 micrograms per liter. As noted by USGS, use of the wrong bioavailability level causes significant overpredictions, leading to a falsely low standard. Evidence revealed that DEQ juggled coefficients when using the model, leading to unsupportable and unreliable results. Like Dr. Luoma, the Board of Environmental Review also noted that DEQ altered model inputs in the model scenarios. Board Order, p. 11.
c. The operation of Libby Dam was not, but should have been, considered when setting a water quality standard for selenium in Lake Koocanusa.

d. Setting the water quality standard for Lake Koocanusa at 0.8 micrograms per liter sets a bad precedent for Montana's surface waters, many of which currently have levels higher than that, some greater than 13 micrograms per liter.

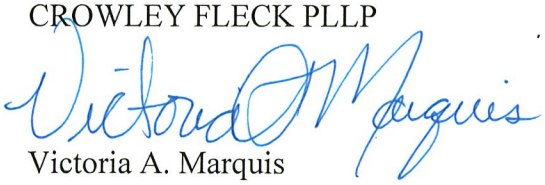
e. Implementation of a 0.8 microgram per liter selenium standard at Lake Koocanusa may bring unwanted federal regulation to Montana in the form of International Joint Committee or other federal and international involvement.

f. There is no downstream liability to the state of Idaho because Idaho's newly adopted selenium standards are identical to the federal guidelines; therefore, for the Kootenai River, the standards from Montana to Idaho are the same. Additionally, there is no liability because Idaho has recognized that Montana does not have any regulated selenium discharges within Montana's portion of the Kootenai watershed.

Thank you for your time and attention to this important matter. Should you desire additional information, presentations, or testimony on any of Teck's comments, its mining and water treatment operations, its 2020 Implementation Plan Adjustment document provided here, or anything else related to selenium in Lake Koocanusa, please let us know.

Sincerely,

CROWLEY FLECK PLLP



Victoria A. Marquis

Enclosures: Exhibits A – H

c: Client, w/enc.

July 2022
Water Policy Interim Report

REPORT TO THE 68TH MONTANA LEGISLATURE

HJ37

LEGISLATIVE SERVICES DIVISION

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TABLE OF CONTENTS

This report is a summary of the work of the Water Policy Interim Committee, as outlined in the Water Policy Interim Committee's 2021-22 work plan and House Joint Resolution 37 (2021). Members received additional information and public testimony on the subject, and this report is an effort to highlight key information and the processes followed by the Water Policy Interim Committee in reaching its conclusions. To review additional information, including audio minutes, and exhibits, visit the Water Policy Interim Committee website: www.leg.mt.gov/water.

A full report, including links to the documents referenced in this print report, is available at the Water Policy Interim Committee website: www.leg.mt.gov/water.

TITLE OF PAPER

HJ37: STUDY OF LAKE KOOCANUSA SELENIUM STANDARD

That the Legislative Council be requested to designate the Environmental Quality Council, subject to section 5-5-217, MCA, and to direct sufficient staff resources, pursuant to section 5-11-112, MCA, to establish a collaborative process with the Department of Environmental Quality to:

(1) analyze the data and processes referenced in and used to support rulemaking to determine if ARM 17.30.632, as it pertains to Lake Koocanusa, complies with the Montana Water Quality Act and the federal Clean Water Act; and

(2) offer recommendations on what changes, if any, are needed to ARM 17.30.632 or supporting documentation.

DRAFT FINDINGS

1. Selenium is a micronutrient that may be toxic in high doses.
2. At toxic levels, ~~S~~selenium can affect~~s~~ fish by interrupting the reproductive cycle.
3. ~~Elevated levels of s~~Selenium has~~ve~~ been recorded in Lake Koocanusa and the Kootenai River, some attributable to coal mining operations further upstream in British Columbia.
4. The Department of Environmental Quality and other agencies have been gathering water quality and fish tissue data in the basin since at least 2015. As the regulatory agency for water quality in Montana, DEQ has contemplated site-specific criteria since that time.
5. Mathematical modeling was used to compute ~~protective~~ criteria for a water column ~~and fish tissue~~ limit~~s~~ for selenium in Lake Koocanusa ~~and the Kootenai River~~. Various federal, tribal, non-Montana entities, and the public provided input into these calculations.
6. The proposed selenium standards rule underwent hearings and comments in late 2020, including a hearing in front of the Water Policy Interim Committee. The rule was promulgated ~~approved~~ by the Board of Environmental Review in December 2020 and subsequently approved by the Environmental Protection Agency.
7. Some have questioned if selenium levels are ~~have~~ increasinged, if the selenium model~~ing~~ was correctly calibrated and appropriately used, and if various fish species were adequately sampled~~ing~~.
8. The Board of Environmental Review found legal error in ~~reversed~~ the prior board's decision when it determined the selenium rule for the water column standard is more stringent than~~t~~ the federal guideline~~standards~~. The board has ordered that the water column standard and the rulemaking upon which it is based failed to comply with Montana law and that new rulemaking must be initiated in order to have a valid and enforceable site-specific water column standard for Lake Koocanusa.~~a rewriting of the selenium rule, but it is unclear of the order's effect~~.
9. The DEQ issued ~~submitted~~ written findings based on the previous rulemaking record, and did not initiate new rulemaking. ~~to the Board of Environmental Review, as provided under the stringency review. The rule remains in effect.~~

INTRODUCTION

The Clean Water Act requires the nation to restore and maintain the chemical, physical, and biological integrity of ~~improve~~ the nation's waters. Under its provisions, when a state has "primacy," which Montana does, the State exercises its authority ~~It allows the states~~ to execute this legislation, ranging from assessing the quality of waters, setting standards for those waters, and issuing permits to ~~pollute~~ discharge into those waters. The setting of standards for ~~the Kootenai River and the~~ Lake Koocanusa~~tenai~~ reservoir behind Libby Dam is the subject of this report.

Though narrowly viewed regarding only Lake Koocanusa, this is a ~~highly~~ localized issue in far northwestern Montana. But it also involves questions arising from Montana's primacy over its waters and the question of how to best regulate selenium throughout the state, given that many of Montana's waters have much higher levels of selenium – some more than ten times higher than Lake Koocanusa but still regulated with by the outdated federal guideline of 5 micrograms per liter, which is the current statewide standard for selenium.~~,~~ ~~t~~This study also involved more than the WPIC and the DEQ, including another legislative interim committee~~s~~, a legislatively created board~~s~~, federal agencies, tribes, a state and a province.

LAKE KOOCANUSA AND THE KOOTENAI RIVER

The Kootenai River, known as the Kootenay in Canada, begins in the Beaverfoot Range of the Rocky Mountains west of Banff, Alberta. Its name stems from an indigenous word for "water people."[1] The river runs 485 miles to the Columbia River at Castlegar, British Columbia, draining a watershed of 16,180 square miles. Much of the river course follows the Rocky Mountain Trench, a geologic feature caused by geologic faulting.

The river flows southward into Montana, before bending northwesterly near Libby and coursing through northeastern Idaho and back into Canada. The river's J-shaped course flows around the Purcell Mountains, and is bound by the Continental Divide ranges to the east, the Selkirk Mountains in the west, and the Cabinet Range in the south.[2] The river bends again to join the Columbia River before entering the state of Washington. Tributaries include the Vermilion, Cross, Palliser, White, Wild Horse, St. Mary, Elk, Fisher, Yaak, Moyie, Goat, and Slocan rivers. Major lakes and reservoirs include the Kootenay Lake and Lake Koocanusa.

The river is subject to the Columbia River Treaty. The Kootenai River has four dams along its course, provided~~ing~~ mostly for flood control. The first dam is at Libby.

Lake Koocanusa is a 90-mile long reservoir formed by Libby Dam. The dam's authorized purpose is flood control and hydropower. The dam was constructed under the Columbia River Treaty between the U.S. and Canada.[3]

The dam and reservoir also provide recreation, water quality, and fish and wildlife benefits. The Kootenai River downstream is home to bull trout (a threatened species under the Endangered Species Act) and white sturgeon (endangered).[4] Sport fish include rainbow trout, west slope cutthroat trout, brook trout, Kokanee salmon, burbot, whitefish, Kamloops trout, and others.

[1] https://www.britannica.com/place/Kootenay-River
[2] https://kootenairivernetwork.org
[3] https://www.nwd.usace.army.mil/CRSO/Project-Locations/Libby/
[4] https://www.nwd.usace.army.mil/CRSO/Project-Locations/Libby/

SELENIUM AND LAKE K

Scientists and government agencies have kept a watchful eye on water quality in "Lake K" and the Kootenai River since at least 1972. [5]

Increasing levels of selenium and other contaminants (nitrates, cadmium, sulfates) have long emanated from the Elk River Valley, an upstream tributary in British Columbia.[6] Coal mining in Canada has caused selenium levels to rise, as water running through waste rock ~~tailing~~ piles carries selenium and other substances into the watershed.[7]

Coal mining in the Elk River Valley began in 1897 east of Fernie, British Columbia. Today, Teck Coal Limited ~~Resources Ltd.~~ operates four Elk Valley mines, employing approximately 4,000 workers and exporting "steelmaking coal" mostly to the Asia-Pacific region.[8] As one of the world's largest sources of steelmaking coal, the mines are expected to operate for years into the future. Other deposits in the valley may also be mined.

Selenium is an element present in sedimentary rock, shales, coal, and phosphate deposits and soils.[9] It is a micronutrient essential for fish and human diets, but can bioaccumulate and is toxic at high levels. In fish, which are more sensitive to selenium than humans, toxic levels of selenium ~~the element acts by~~ interrupt~~ing~~ reproduction; selenium halts reproduction, causing deformities at a young age and resulting in fewer fish.[10] For example, a year class of fish could disappear.[11]

Ninety five percent of the selenium load entering Lake Koocanusa is from the Elk River.[12] In 2012, based on estimates that selenium levels in Lake Koocanusa would exceed 5 micrograms per liter by 2015, ~~T~~the DEQ listed aquatic life in the lake as "threatened" due to rising selenium levels. The selenium level in Lake Koocanusa today remains near 1 microgram per liter, much lower than estimated in 2012.[13]

The Clean Water Act allows authorized state agencies to set water quality standards. These standards are subject to approval from the Environmental Protection Agency. In 2016, the EPA issued a numeric guideline of 1.5 micorgrams per liter selenium for lakes and provided a process states could use to develop~~recommended that states adopt~~ "site-specific" standards if threatened or endangered fish species are present and the site exhibits high bioaccumulation characteristics.~~because of how the element bioaccumulates and moves up the food chain depends upon local conditions.~~[14]

In 2020, the department proposed ~~a~~ water quality standards for selenium for the Kootenai River from the U.S.-Canada border to the Montana-Idaho border, including the Lake Koocanusa reservoir, citing ~~their observed~~ increasing selenium levels.

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[5] https://www.usgs.gov/centers/wyoming-montana-water-science-center/science/kootenai-river-basin-dissolved-selenium-data
[6] Department of Environmental Quality, *Selenium Site-Specific Criterion Update* (2020)
[7] U.S. Geological Survey, *Selenium and mercury in the Kootenai River, Montana and Idaho, 2018-2019* (2020)
[8] Teck Resources Ltd., *2021 Annual Report (2022)*
[9] Department of Environmental Quality, *Selenium Site-Specific Criterion Update* (2020)
[10] Testimony of Tonya Fish, Region 8 water quality standards contact (EPA) to HJ37 special committee, Feb. 28, 2022.

[11] Testimony of Trevor Selch, fisheries pollution control biologist (FWP) to HJ37 special committee, Feb. 28, 2022.
[12] Department of Environmental Quality, *Selenium Site-Specific Criterion Update* (2020)
[13] I.b.i.d.
[14] I.b.i.d.; U.S. EPA, Aquatic Life Ambient Water Quality Criterion for Selenium – Freshwater (2016), p. xiii, App. K.

The DEQ held a public hearing on the selenium criteria on Nov. 5, 2020. This hearing came after a Oct. 9, 2020, hearing by the WPIC, which has oversight of water quality and quantity issues. The WPIC, by a tie vote, did not object to the rule at that time. A majority of the WPIC members later submitted comments on the proposed rule, stating their opposition to it. On Dec. 24, 2020, the Board of Environmental Review adopted the rule.[15] The Environmental Protection Agency approved the rule in February, 2021.

DISCUSSION OF THE STANDARD

The rule has been the subject of challenge and discussion ever since its adoption.

In particular, the Montana Legislature ~~to~~ passed House Joint Resolution 37, requesting a study to "analyze the data and processes referenced in and used to support rulemaking."

The Legislative Council assigned the study to the Water Policy Interim Committee, which has jurisdiction over the quality and quantity of water.[16] To meet the spirit of the resolution, which requested the study be assigned to the Environmental Quality Council, the WPIC created the HJ37 Special Committee on Selenium Standards in Lake Koocanusa[17] to "engage in additional, thoughtful, collaborative, and scientifically defensible analysis with state regulators to determine whether the 2020 site-specific standards for Lake Koocanusa are appropriate."[18]

The special committee held three public meetings in 2022. The special committee reviewed data assembled by the DEQ and heard the scientific statements from other experts, such as the EPA, U.S. Geological Survey, Confederated Salish and Kootenai Tribes, Kootenai Tribe of Idaho, Idaho Department of Environmental Quality, and the Montana Department of Fish, Wildlife and Parks.[19] These agencies and others comprised the Lake Koocanusa Monitoring and Research Working Group,[20] which first met in October, 2015,[21] to review data and create a methodology for the rule.

The department's rulemaking process has been challenged by local elected officials and Teck Coal Limited~~Resources~~. The company's four active mines are the primary source of elevated selenium levels. Specifically, they said, the rule was rushed, selenium levels may not be increasing, fish tissue samples relied upon by DEQ were unreliable because they were incorrectly collected,[1] and the statistical modeling used to set the selenium limits was incorrectly calibrated and did not follow best practices for modeling.[22]

[15] The board no longer has rulemaking authority per SB 233 (2021).
[16] Section 5-5-231, MCA.
[17] Special committee members were Sen. Walt Sales (presiding officer), Sen. Jill Cohenour, Rep. Willis Curdy, Rep. Steve Gunderson, Sen. Ryan Lynch, Rep. Rhonda Knudsen, Rep. Marilyn Marler, Sen. Mark Sweeney, and Sen. Cary Smith.
[18] HJ37 (2021).
[19] See various appendices

[1] Testimony from J. Kilpatrick, USGS and T. Selch, Montana FWP.

[20] Members also included the British Columbia Ministry of the Environment and consultants for Teck Resources Ltd.
[21] http://lakekoocanusaconservation.pbworks.com
[22] Teck Resources memo to HJ37 special committee, January 27, 2022.

The company cited the department's "misuse of fish tissue data," such as claiming alarming trends in selenium levels, collecting fish tissue data at the wrong time in a fish lifecycle, or not collecting enough background data.[23]

The department noted that selenium rules are meant to be preventative, i.e. before widespread problems occur. The department found increasing levels of selenium in the~~ir~~ fish tissue sampling. The Department of Fish, Wildlife, and Park continues to collect fish tissue samples.

A University of California-Davis research ecologist, Dr. Sam Luoma, who co-authored the selenium bioaccumulation model, testified to the special committee that the statistical modeling used to determine the quantitative limits for selenium was not correctly calibrated.[24] As Dr. Luoma noted, it is not credible to offer the selenium bioaccumulation model as support for DEQ's selenium water column standard. USGS publications also state that use of an overly high bioaccumulation rate results in a ~~Thus, the~~ model that overpredict~~sed~~ concentrations in the food web, resulting in a ~~and therefor the~~ standard set more stringent than necessary~~is too high, according to Samuel Luoma~~. Dr. Luoma also testified that DEQ's use of a variety of model inputs did not follow best practices for modeling.[25] [26]

The water column standard for Lake Koocanusa ~~rule~~ was appealed to the Board of Environmental Review, which has authority under § 75-5-203, MCA to decide petitions challenging water quality standards as more stringent than federal guidelines or regulations. ~~hears administrative appeals of certain DEQ actions~~.

Teck Coal Limited~~Resources~~ and the local officials specifically asked the Board of Environmental Review for a stringency review under state law.[27] Montana law allows the board to review a rule to determine if it was set more stringent that federal standards.[28] The board agreed the water column standard was more stringent than the ~~t~~ federal guideline~~standards~~.[29]

The board found~~ruled~~ that the rule was aimed "in a manner adverse to" Teck Coal Limited~~Resources~~ and would "impact discharge limitations for new projects in Lincoln County." [30] The board also ruled that "in order to have a valid and enforceable lake water column standard, new rulemaking must be initiated."[31]

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[23] Teck Resources Ltd., memo to HJ37 special committee for Feb. 28, 2022, meeting

[24] Testimony of Samuel Luoma, research ecologist (University of California-Davis) to HJ37 special committee, Feb. 28, 2022.

[25] I.b.i.d.

[26] In a written response, the department stated that Luoma's assertions account only for selenium in zooplankton, a primary food source for fish in the system. A proper model should also be calibrated for piscivorous fish, such as burbot and chub, that eat other fish (DEQ memo to HJ37 special committee, March 9, 2022). The department reviewed 13 modeling scenarios through the monitoring working group (DEQ memo to HJ37 special committee, March 9, 2022), and two independent selenium experts reviewed the modeling (Testimony of John Kilpatrick, director (Wyoming-Montana Water Science Center (USGS)) to HJ37 special committee, Feb. 28, 2022. Testimony indicated that the zooplankton remains the predominant part of the food chain impacting the model. Evidence also indicated that the model could not be validated to existing data for Lake Koocanusa, indicating improper calibration.

[27] Notice of schedule for implementation of review by the Board of Environmental Review, *In the Matter of*

Petitions of Teck Coal Limited and the Board of County Commissioners of Lincoln County, Montana, for Review of ARM 178.30.632(7)(a) Pursuant to Mont. Code Ann. Section 75-5-203—Stringency Review of Rule Pertaining to Selenium Standard for Lake Koocanusa, June 30, 2021.

[28] Section 75-5-203, MCA

[29] Final agency action and order of the Board of Environmental Review, *In the Matter of Petitions of Teck Coal Limited and the Board of County Commissioners of Lincoln County, Montana, for Review of ARM 178.30.632(7)(a) Pursuant to Mont. Code Ann. Section 75-5-203—Stringency Review of Rule Pertaining to Selenium Standard for Lake Koocanusa*, April 19, 2022. This ruling does not apply to the fish tissue standards.

[30] I.b.i.d.

[31] I.b.i.d.

It is unclear when and if new rulemaking will occur. [32] The DEQ responded to the BER ruling with ~~a~~ written findings based on the previous rulemaking record, offered in support of the standard, but did not initiate rulemaking~~response, as also provided for in the same section of state law.[33] The rule remains in effect~~. DEQ also filed a motion with the Board asking it to amend its order and delete the directive that new rulemaking is required. That motion remains pending before the Board and is expected to be decided during the Board's October 14th meeting.

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It is also unclear how ~~what effect~~ a Montana administrative rule could be directly enforced against ~~would have on~~ a Canadian entity like the coal company, but DEQ has asserted that it intends to complete an assessment of Lake Koocanusa using the standard and then pursue a waste load allocation for Canada that would, presumably, be enforced against the coal company. It is also unclear ~~—or~~ what effect a downstream state (Idaho) rule may have on an upstream one.

Idaho has similar fish tissue standards, but the state's water column standard is 1.5 micrograms/L for selenium (i.e.: identical to the federal guideline), which is greater than the Lake Koocanusa standard of 0.8 micrograms/L.

Although t~~T~~he British Columbia Ministry of the Environment has discussed~~proposed~~ a water column selenium guideline slightly higher than Montana's and a whole-body fish standard lower than Montana's, British Columbia's water quality guideline for selenium in Lake Koocanusa is 2.0 micrograms per liter.[34] These guidelines do not have direct legal standing, but must be considered in provincial decisions, such as land use decisions, best management practices, and discharge authorizations.[3536]

Meanwhile, Teck Coal Limited~~Resources~~ is expanding its water treatment capacity to meet water quality management measures required by the Elk Valley Water Quality Plan, which was approved by the British Columbia Minister of Environment in 2014. The Elk Valley Water Quality Plan and Teck Coal's permit require compliance with the water quality guideline of 2.0 micrograms per liter selenium in Lake Koocanusa. The company has five water treatment plants, and its process reportedly removes 95 percent of the selenium and nitrate in the water.[37] The company is also managing water flows to control selenium release at its source, through water diversions and geo- synthetic covers. Between 2020 and the end of 2022, Teck will quadruple its water treatment capacity. [38]

The company states that Montana's water quality standard "may not be achievable with existing technology," and that they are "taking steps to challenge this standard."[39]

COMMITTEE RECOMMENDATIONS

At the time of the drafting of this report, neither the WPIC nor the special committee have offered recommendations on this issue.

A legislative response that changes a water quality standard may be subject to EPA approval or disapproval in accordance with the ~~, including repealing the selenium rule, may be limited due to the authority of the EPA and the primacy of the~~ federal Clean Water Act. This would depend on the specific terms of a Legislative response.

At the time of this report-writing, the special committee was set to meet again in September ~~July 5~~ to discuss the legal status of the rule.

Based on the testimony heard and the evidence reviewed, the committee makes the following

recommendations:

a. There is no evidence of increasing selenium levels in Lake Koocanusa. Neither water quality data presented by DEQ nor fish tissue data presented by FWP reveal alarming trends in selenium concentrations for Lake Koocanusa.

b. DEQ did not use the model correctly when developing the site-specific water quality standard. Had DEQ used the proper bioavailability level, the model results predict a protective selenium level between 1.5 and 3.0 micrograms per liter. As noted by USGS, use of the wrong bioavailability level causes significant overpredictions, leading to a falsely low standard. Evidence revealed that DEQ juggled coefficients when using the model, leading to unsupportable and unreliable results. Like Dr. Luoma, the Board of Environmental Review also noted that DEQ altered model inputs in the model scenarios. Board Order, p. 11.

c. The operation of Libby Dam was not, but should have been, considered when setting a water quality standard for selenium in Lake Koocanusa.

d. Setting the water quality standard for Lake Koocanusa at 0.8 micrograms per liter sets a bad precedent for Montana's surface waters, many of which currently have levels higher than that, some greater than 13 micrograms per liter.

e. Implementation of a 0.8 microgram per liter selenium standard at Lake Koocanusa may bring unwanted federal regulation to Montana in the form of International Joint Committee or other federal and international involvement.

f. There is no downstream liability to the state of Idaho because Idaho's newly adopted selenium standards are identical to the federal guidelines; therefore, for the Kootenai River, the standards from Montana to Idaho are the same. Additionally, there is no liability because Idaho has recognized that Montana does not have any regulated selenium discharges within Montana's portion of the Kootenai watershed.

[32] The Board no longer has authority to set or revise water quality standards. DEQ now has authority to set and revise water quality standards and may initiate rulemaking to do so at any time. Additionally, all water quality s~~S~~tandards are~~may be~~ reviewed during the statutorily required ~~DEQ's~~ triennial review, which has historically resulted in changes only based on new federal criteria and the requirements of the Montana Agricultural Chemical Groundwater Protection Act. ~~of water quality standards, and/or if new data shows a different standard is warranted.~~

[33] Section 75-5-203, MCA.

[34] Meeting notes from the Lake Koocanusa Monitoring and Research Working Group, Nov. 18, 2021.

[35] I.b.i.d.

[36] British Columbia Ministry of Environment, *Fact Sheet Water Quality Guidelines* (2016)

[37] Teck Resources Ltd., *Fact Sheet: Elk Valley Water Quality Plan* (2022). The company is not treating all runoff from its mining sites; however , compliance with its permit is measured by comparing instream water quality from all runoff sources to the Site Performance Objective and Compliance Limits.

[38] I.b.i.d.

[39] Teck Resources Ltd., *2021 Annual Report (2022)*, 22-23.

APPENDIX A:
WATER POLICY INTERIM COMMITTEE MEMBERS

Before the close of each legislative session, the House and Senate leadership appoint lawmakers to interim committees. The members of the Water Policy Interim Committee, like most other interim committees, serve one 20-month term. Members who are reelected to the Legislature, subject to overall term limits and if appointed, may serve again on an interim committee. This information is included in order to comply with 2-15-155, MCA.

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