



IDAHO
CONSERVATION
LEAGUE

208.345.6933 • PO Box 844, Boise, ID 83702 • www.idahoconservation.org

June 23, 2017

Paula Wilson
DEQ State Office
Attorney General's Office
1410 N. Hilton
Boise, ID 83706

Submitted via email: paula.wilson@deq.idaho.gov

Re: Docket No. 58-0102-1701, Update to Selenium Criteria. Second Comment Period.

Dear Ms. Wilson;

Since 1973, the Idaho Conservation League (ICL) has been Idaho's voice for clean water, clean air and wilderness—values that are the foundation for Idaho's extraordinary quality of life. The Idaho Conservation League works to protect these values through public education, outreach, advocacy and policy development. As Idaho's largest state-based conservation organization, we represent over 25,000 supporters, many of whom have a deep personal interest in protecting Idaho's water quality and aquatic life.

Our detained comments are attached.

Please contact me if you have any questions at 208-345-6933 x 24 or jhayes@idahoconservation.org

Sincerely,

Justin Hayes
Program Director

“New” Selenium Inputs

In our prior comments we discussed our belief that annual pulses (increases) in selenium concentration observed during periods of high flow should be treated as “new inputs” when implementing these new selenium standards. At the last rulemaking meeting, DEQ discussed our comments and dismissed our concerns.

We raise this issue again here because we believe that it is critically important with regard to this proposed rule.

While it is the case that the activities that placed the selenium in locations that result in contamination of water bodies frequently occurred a number of years ago, the annual pulses induced by runoff have the characteristics of ‘new’ inputs rather than steady releases. As a result, the concentration of selenium in many water bodies in SE Idaho is highly variable throughout the year.

The annual pulses of selenium observed in the water mean that if fish tissue concentrations will not attain “steady state” conditions and thus fish tissue data – especially data collected significantly after the pulse has moved through the waterway – can not be relied upon for the purposes of this standard. And, as a result, water column values must be used when applying to water bodies that display this characteristic.

Our review of information related to how fish excrete/expel selenium from their bodies and how long selenium stays in the fish’s body support our concern that high pulses of selenium in a waterway can result in increased selenium in fish tissues. This can result in harm to the fish, especially reproductive success. This may be especially true for Yellowstone cutthroat trout (YCT) which are spring/early summer spawners.

Fish tissue data collected later in the year – when selenium concentrations are lower and the selenium burden of the fish has declined as a result of biological processes (included egg development and excretion) and time – will not be representative of a ‘steady state’ fish tissue concentration. The article Assimilation and retention of selenium and other trace elements from crustacean food by juvenile striped bass¹ supports that selenium is accumulated and excreted by certain fish at rates that would call into doubt the assumption that a water experiencing changing concentrations of selenium would result in steady state fish tissue data.

DEQ’s prior response to our comments on this matter was, essentially, these pulses are not ‘new inputs’ because no ‘new activity’ occurred which resulted in additional selenium being released.

We strongly disagree with this conclusion. The ‘new activity’ at play here is the spring runoff. This new (though predictable) activity, the annual occurrence of spring runoff results in a new input of selenium to the water body and a corresponding increase in

¹ Limnol. Oceanogr., 47(3), 2002, 646–655 2002, by the American Society of Limnology and Oceanography, Inc. Assimilation and retention of selenium and other trace elements from crustacean food by juvenile striped bass (*Morone saxatilis*). By Stephen B. Baines, Nicholas S. Fisher and Robin Stewart

selenium concentrations. That aside, we would argue that the increase in selenium in the water body is sufficient to be thought of as a “new input” – irrespective of its “cause.”

DEQ also asserted that a runoff-induced pulse of selenium should not be considered as a ‘new input’ because it was a “known annual pattern.” The fact that it is a known annual pattern does not diminish the fact that it results in a very real increase in selenium in the water body. Rather, that fact that it is a known annual pattern underscores the importance of appropriately addressing it – because it is going to keep happening and causing a negative environmental impact. It is not a fluke event. It must be accounted for.

DEQ further stated that it “expect[ed] bioaccumulation in fish to remain relatively stable.” However, DEQ provided no information to support this claim.

We ask that the DEQ thoroughly address this issue and, if the DEQ continues to maintain that these pulses should not be treated as “new inputs,” the DEQ provide scientific studies to back up its conclusions and regulatory and legal cites to justify its actions.

Non-Sturgeon Waters

We do not see the need for this portion of the criteria. As we noted at the last rulemaking, there is an effort underway to develop site specific criteria for waters where there is interest in relaxing selenium standards. There does not appear to be a constituency asking DEQ to develop a complicated sturgeon/non-sturgeon selenium criteria scheme in Idaho. Doing so seems to needlessly complicate this rulemaking.

If DEQ persists in this non-sturgeon effort, we will note that it is necessary for selenium bearing waters flowing out of non-sturgeon waters and into sturgeon bearing waters to be protective of sturgeon. The maps that DEQ presented at the rulemaking appeared to make some effort at this downstream issue by applying sturgeon criteria to significant portions of upstream non-sturgeon HUCs. It is not clear that this effort would be sufficient in all cases and we believe that the DEQ will need to undertake a review of all HUCs in the state to determine that this is appropriate in each instance.

We note also that because the Services considered the EPA criteria (developed with the sturgeon data) when making determinations about the criteria’s impact on ESA fish, the Services will need to undertake consultation to determine that selenium levels allowed in non-sturgeon waters will not harm ESA fish present in the non-sturgeon waters and also ESA fish downstream from non-sturgeon waters.

Site Specific Criteria – subsection of Blackfoot River

Egg-Ovary too high

As we discussed at the rulemaking, we oppose the 25.3 Egg-Ovary number in this criteria. The 25.3 number is the average of the level seen as protective for cutthroat (26.2) and the number seen as protective for rainbow (24.5). This average number is not protective a rainbows.

Further, the 25.3 egg-ovary number is not protective of sculpin. The protective sculpin number was reported to be >19.4. This was discussed at length at the rulemaking. Proponents of the site specific criteria argued that because the sculpin number was unbounded that it was appropriate to assume that 25.3 was sufficient. This is illogical.

The proposed egg-ovary number of 25.3 is inappropriate because it is not protective of rainbow and sculpin – both fish present in this water body.

Lack of water column number

This site specific criteria does not include a water column number. Rather, at the rulemaking, the proponent seemed to state that it would be calculated when necessary using relevant downstream data. We oppose this. This criteria needs to have a water column number clearly stated in the rule so that it can be used when appropriate fish tissue data is not available. It is inappropriate to adopt a rule that allows for a standard to be calculated later.

This proposed site specific criteria's fish tissue numbers were crafted by deleting the data related to fish that are not present in the water way. Irrespective of the merit, or lack thereof, of this approach, it at least follows the general logic and flow of the EPA criteria. The utilization of a very different approach related to the water column deviates wildly from the EPA's approach. The proponents have not provided adequate justification for this departure.

Further, as we discussed at the rulemaking, we believe that the 303d and the TMDL regulations require that each pollutant (other than those with narrative criteria) have numeric criteria.

Criteria vs site specific criteria

If there are going to be site specific criteria adopted in this rule, we believe that they should structured and operate in the same manner as the criteria. That is to say that think that they should all contain identical information in the footnotes. The differences make very difficult to understand how to utilize the germane criteria.