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Sent via email to 303d@ecy.wa.gov

Subject: WQP 1-11, 303(d) listing policy

Thank you for the opportunity to provide comments on Ecology's policy for listing impaired waters under section 303(d) of the Clean Water Act.

I have offered comments on both the listing policy and the numerous proposed 303(d) lists on behalf of various clients and also simply out of an interest in the list and my understanding of the state's water quality standards going back to the mid 1990's. It is from that background that I offer these comments and suggestions.

I have concerns with the following aspects of the current WQP 1-11 and the lists of "impaired waters" that have been adopted over the years. Listings based on fish tissue concentrations and on sediment chemistry or bioassay should be removed. If sediment listings are not removed, they should at least be simplified, such that listings may be just for PAHs instead of listing separately for each and every PAH that is a concern. A listing statement for PAHs can include in its description which PAHs are of concern. Listings based on temperature or dissolved oxygen must include a reasonable and responsible judgment as to the natural conditions provisions of the criteria. Some professional judgment call must be made. It is wrong to list a water body as impaired for temperature or dissolved oxygen without making that judgment call, and a judgment call that says Ecology is unsure should only justify a Category 2, not a Category 5.

The following pages discuss these concerns in more detail.

Sincerely yours,

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Fish Tissue listings.

Ecology has calculated and printed numeric values for tissue concentrations that are called “fish tissue criteria” or “fish tissue equivalent criteria”. Ecology has used these as a basis for listing water bodies as impaired for violating narrative human health criteria. This in turn can lead to TMDL developments and Clean Water Act permits imposing human health criteria directly as effluent limits, without any dilution benefits. PCBs is an example where this has happened.

Ecology can and should discontinue using fish tissue concentrations as a basis for listing water bodies as impaired for water quality under CWA Section 303(d). The state never had a rule-making adopting specific numeric fish tissue criteria, or adopting a method for translating fish tissue concentrations to a narrative criteria. Other states do not list water bodies as impaired based on fish tissue concentrations.

It is appropriate that Ecology monitors chemical concentrations found in the tissues of aquatic organisms. The Department of Health utilizes that data to develop fish consumption advisories where appropriate. Most of these are for Mercury and PCBs. The sources of Mercury and PCBs are not easily controlled, and most do not related to Clean Water Act regulated sources. These parameters are ill-suited to the Clean Water Act tools that must be implemented when waters are listed as impaired under CWA 303(d). Our state has another mechanism that can be implemented, and makes more sense. That is the development of Chemical Action Plans, and the state has already developed CAPs for Mercury and PCBs. In each case, the CAPs developed by Ecology did not find CWA sources to be very significant

I suggest that where there are fish consumption advisories, Ecology could list as Category 2, which could mean unsure if the impairment is related to CWA sources amenable to CWA controls. An outcome of such a listing could be evaluating the need for a CAP or CWA controls. If a CAP is developed then the water body could be classified as Category 4. If CWA controls would be a significant part of a remedy, then maybe a Category 5 should be considered.

Sediment quality based listings

Sediment chemistry or bioassays should not be used as a basis for listing as a water quality impairment. The listing process is intended to force TMDLs. Sediment exceedances can drive cleanups under the state’s Model Toxics Control Act and Sediment Management Standards. The CWA tools of listing as impaired, and developing TMDLs are not needed to drive sediment cleanups, or even to drive NPDES permit decisions that evaluate possible effects of discharges on sediments.

I served on Ecology’s advisory committee when Ecology developed the sediment management standards rule (late 1980’s, early 1990’s). When the state adopted the rule, EPA Region X insisted that the standards be submitted to EPA for review and approval as “water quality standards”. That didn’t make much sense, and at the time, EPA didn’t have any of their own recommended sediment criteria that the state could even be compared to. Perhaps EPA’s approval of sediment management standards as “water quality standards” is one reason why Ecology continues to use sediment quality as a basis for 303(d) listing as impaired for water quality. I do not know of other states that have adopted numeric sediment quality criteria, or that use sediment quality data for 303(d) listing purposes. To say that sediment quality represents water quality is like saying soil quality represents air quality.

Ecology should stop 303(d) listings for sediment quality. There is no requirement in CWA Section 303(d) to list impaired sediments. The existing SMS and MTCA rules are sufficient to address sediment cleanup concerns.

If Ecology chooses to continue listings for sediment quality, then it is possible to simplify the listings for the numerous different PAHs by just listing for PAHs. These co-occur, so rather than listing 5 or 10 different PAHs separately, it's possible to just list once, and then explain in the comments which individual PAHs exceed the applicable standard.

Judgments regarding natural conditions must be made for temperature and dissolved oxygen

I have over the years consistently commented on the need to consider the natural condition considerations incorporated into temperature and dissolved oxygen standards in making 303(d) listing decisions. Thankfully, Ecology did back off from listing many marine waters for temperature, recognizing it was the natural condition.

There should be three different outcomes from making a judgment regarding the natural condition and human allowance part of the temperature and dissolved oxygen standards.

- If Ecology determines that natural conditions account for the observed quality, then the water body is not category 5 impaired, but instead meets standards.
- If Ecology makes a reasonable judgment that human causes result in more than a 0.3 degree C increase over the natural condition, or more than a 0.2 mg/L decrease of dissolved oxygen under the natural condition, then the water body should designate as category 5 impaired.
- If Ecology is unsure whether human causes exceed the allowed amount, then it should be category 2. An "unsure" judgment should not default to category 5.

About 10 years ago (plus or minus a few years) I provided Ecology with a logic matrix to go through for each station to help make reasonable judgment calls. That matrix led to the three choices described above. Ecology responded at that time by giving instructions to the regions to evaluate stations with something like my matrix. The one difference is that Ecology instructed the regions to default to category 5 if they were unsure about a station. In essence, three different evaluation results, but only two possible outcomes. In that evaluation process, Ecology changed a few stream temperature listings to category 1 (meets criteria) based on natural condition. Ecology made no judgment calls that a water body exceeded due to human causes. Ecology essentially said they were "unsure" about all the rest of the stations, and Ecology defaulted to category 5 (impaired) for all cases where they were unsure.

I have not searched through my files to find this history. It is in one of many boxes in my attic. I believe I can find it. Based on the long history on this topic, I am not optimistic that Ecology will make this change, but if Ecology is willing to consider it seriously, I am available and willing to meet with Ecology staff to develop this approach.