

Crooked River Watershed Council- DEQ fish consumption rate proposal

Public Comment augmentation of previous comments; March 21, 2011

The council would like to augment our written and verbal comments delivered to DEQ staff at the Bend hearing. To reiterate our position, we fully support water quality in Oregon. While we do not believe it would be beneficial to oppose or otherwise challenge fish consumption rate as self-reported by tribes and Columbia River Inter-Tribal Fish Commission, we do want to provide a few key reference points. First, annual per capita beef consumption in the U.S. is 61.2 pounds as reported by the USDA Economic Research Service in 2008. For pork, the number is 51 pounds (2005), and for chicken, 90.6 pounds (2007). At 142 pounds, the proposed fish consumption rate is significantly higher than any one of these.

Our concerns for adopting this standard are multi-fold. Primarily we are concerned about impacts to landowners that to date have not been identified or quantified with any detail. We were presented with information from DEQ staff at the Bend hearing suggesting that nothing would change for landowners that use agricultural chemicals for weed and pest control. We have little to no confidence that these statements will be verified in practice as new limits are placed on compounds found on the list of toxic materials. The DEQ should provide more certainty as to these impacts prior to adopting the proposed fish consumption rate.

The second concern we have is for the science and methodology used to arrive at the proposed rate. We note from the various studies used to derive this number that specific EPA guidance was not applied. This causes concerns about the reliability, application, and inferences about the data used. For example, EPA's fish contaminant study conducted in 1996-1998, specifically points out that whole fish processed to determine contaminant levels were not scaled as per EPA guidance. This could skew results in ways that are unpredictable at best, and invalid at worst.

Additionally, from the same study, the following statements are made, "The Columbia River Basin is very large and the number of samples which could be analyzed was relatively small. Due to limited resources, composites were analyzed (with the exception of white sturgeon) instead of individual fish as being a better estimate of the average concentrations of chemicals from a study site." And, "The number of fish in each composite are listed in Volume II, Appendix A-2. It is assumed that by compositing, the error in representativeness would be reduced. However, by using an average of individual fish the true variability in individual fish tissue samples was lost. Thus, the actual residues in individual fish from the Columbia River Basin may be higher or lower than the concentrations reported in this study." We conclude these statements to mean the study results are more qualitative than quantitative with no defined confidence interval. Statistical power and thus inferences made from this study are limited.

While the council fully supports protection of all Oregonians through appropriate water quality standards development and application, we also believe there are more effective methods of protecting sub populations that consume fish at relatively high rates. Given our knowledge about the general behavior of the chemicals of interest (DEQs list) and how they are incorporated into the bodies of fish, it seems likely that we could gain better protection by recommending certain preparation, cooking and selection methods. Fish do not accumulate toxins in even proportion across their entire body mass. Fats (lipids) are the primary body element that attract and bind with complex, organic chemicals, and certain body parts of fish accumulate disproportionately higher rates of contaminants. All this information could be used to formulate consumption recommendations for those that adhere to a high fish diet.

While we support protection of human health, the rationale and need for this change would be more compelling if actual human health impacts from eating high rates of fish were documented. Correlating impacts to consumption rates and developing robust statistics, such as regression analysis or correlation coefficients, for these types of data would generate deeper and wider support. In fact, it could be that applying this approach would yield the need for a much higher consumption rate in Oregon

We have several questions that we feel need to be sufficiently addressed before DEQ proceeds with adoption:

- 1- The survey of regional tribal diet that was conducted as part of EPA's fish contaminant study (1998) results indicate that the average daily fish consumption for adults (63.2 g/day) of CRITFC's member tribes was much higher than the national average for adults (6.5 g/day). Based on this information, how did we get to 175g/day?
- 2- How will this change in fish consumption rate and all the water quality standards implications thereof be perceived by the general public? Will a perception evolve that leads the public to believe fish are not safe to eat or use in numerous beneficial applications such as pet food products, for example?
- 3- What are the costs of compliance with new standards developed applying the new fish consumption rate if adopted as proposed?
- 4- What are the direct and indirect impacts to non-point sources (primary producers of agricultural-related products)?
- 5- How will current regulation in ODA and ODF practices be changed, and how will the need for any change be determined?

Thank you for your consideration of our concerns, suggestions, and need for more detailed economic impact implications.

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