



PUBLIC WORKS

October 26, 2012

Adrienne Dorrah
Department of Ecology
Toxics Cleanup Program
PO Box 47600
Olympia, WA 98504

RE: Comments on Fish Consumption Rate Technical Support Document 2.0

Dear Ms. Dorrah:

Thank you for the opportunity to comment on the FCR TSD 2.0. Revision of the current FCR in Washington State is an important undertaking which will affect businesses, municipalities, Tribes and fish consumers. Having good background information to utilize during this process will help everyone involved, and we applaud the changes made to version 1.0 to produce version 2.0. We have some further clarifications to the document attached to this letter. Please note that these comments were prepared with the assistance of Mr. Lincoln Loehr, Stoel Rives LLC.

Sincerely,


Heather Kibbey
Surface Water Management

Thank you for the opportunity

Comments re Ecology's public review draft Fish Consumption Rates Technical Support Document Version 2.0

Page xiii, Executive Summary, Problem statement, paragraph three, change the second bullet as follows:

- The Water Quality Standards for Surface Waters reference the National Toxics Rule (NTR)(~~57 FR 60848-60923~~) (40 CFR 131.36), which includes Water Quality Standards for human health protection based on a freshwater and estuarine fish consumption rate of 6.5 grams (0.22-ounce)-per day (which is about 1 seven ounce serving per month). For cancer risks, the NTR protects the 6.5 grams per day consumers at the one in a million theoretical life time cancer risk, while protecting 65 grams per day (10 seven ounce servings per month) consumers at the one in one hundred thousand risk level and protecting 650 grams per day (100 seven ounce servings per month) consumers at the one in ten thousand risk level. Hence, it protects a range of fish consumers over a range of risk levels. These values are ~~This value is~~ based on technical evaluations completed by the U.S. Environmental Protection Agency (EPA) in the mid-1980's.

The above changes provide a true representation of the NTR, as was understood by EPA and Ecology at its adoption. Failure to have brought this out in past discussions has led to significant misperceptions and fears of great risks imposed on high consumer groups and has had an unfortunate polarizing effect on various groups.

Page 1, Introduction, second paragraph, change the second bullet the same as shown above for page xiii.

Page 1, Introduction, third paragraph. This paragraph needs to also put in specific references to pages in the federal register notice finalizing the NTR that described how the criteria provide protection for 65 grams per day consumption rate at the 10^{-5} level [See City of Everett's comments to FCR TSD Version 1.0.]

Page 2, Table 2. For the column for 17.5 grams per day, change frequency of 8-ounce meals from "one" to "Two".

Page 12, last sentence in footnote 10. The sentence does not appear to make sense. Data based on 2-day averages would result in estimates at the upper end of the intake distribution to be overestimated, and those would be based on people who ate fish on both of the two days of the survey, which would then be counted as eating fish 30 days a month.

Page 21, Section 3.1, paragraph 3. The last sentence says,

Regional-specific fish dietary information indicates that Washington State's fish-consuming populations eat more fish than what is reflected in the rates used to establish regulatory standards and, as a result, Ecology wishes to consider whether Washington's fish-consuming populations are adequately protected.

The above is an incomplete representation. Regional-specific fish dietary information actually provides a consumption range that falls within EPA's human health criteria guidance in that average consumers of freshwater and estuarine finfish consuming between 6.5 grams per day and 65 grams per day are protected in the 10^{-6} to 10^{-5} risk range and high consumers as high as 650 grams per day are protected at the 10^{-4} risk level. While these issues will fall under a policy discussion, and the FCR TSD is trying to avoid policy and just provide consumption facts, the last sentence in the paragraph raises the concern that Washington's fish-consuming populations are not adequately protected, and, in accordance with EPA's HHC guidance, they may well be protected.

Page 26, Table 12. Add "* Language barriers" to the Weaknesses column.

Page 39, first complete paragraph, change second to last sentence to read:

In other words, someone who did not eat fish during the two days of the survey was assumed to consume no fish at all during the year, while someone who ate fish for those 2 days is assumed to eat fish for 365 days a year.

Page 40, Table 17. This table presents descriptive total fish consumption statistics from the USDA Continuing Survey of Food Intakes by Individuals (CSFII) for consumers only. I think that the study will also break out the different consumption rates for marine fish, as well as for freshwater/estuarine fish, and that should be presented.

Page 42, figures 1 and 2. The 90th %tile and the Mean plotted values need data labels.

Page 47, figures 3 and 4. The 90th %tile and the Mean plotted values need data labels.

Pages 53-55, figures 5, 6, 7, and 8. The 90th %tile and the Mean plotted values need data labels.

Pages 59-60, figures 9 and 10. The 90th %tile and the Mean plotted values need data labels.

Page 67, figure 11. The 90th %tile and the Mean plotted values need data labels.

Page 67, figure 11. Why are the grams/day plots higher for the non-anadromous (harvested in KC) than for the grams/day plots for All fish (harvested in KC). Seems like the former should be less than or equal to the later, not greater.

Page 73, figures 12 and 13. The 90th %tile and the Mean plotted values need data labels.

Page 93, an additional option needs to be added for agencies to address the variations in fish consumption rates, regardless of geographic components. That is to adopt a range of fish consumption rates and a corresponding risk range. This recognizes that risks are not and cannot be constant for all fish consumption rates. We suggest adding a bullet item as follows:

- *A range of fish consumption rates coupled with a risk range.* Regulatory agencies may adopt a range of fish consumption rates with an associated range of risk levels. When one examines the history of the decisions by the state and EPA in the National Toxics Rule human health criteria applied to the state, recognition of different risk levels for different consumption rates is clearly what was done.¹ Similarly, EPA's guidance for setting human health criteria clearly recognizes this reality.² Consequently, it is correct to say that no carcinogenic human health criteria are based on a single fish consumption rate or a single risk level. Consider the following examples:
 - The current Water Quality Standards for Surface Waters applicable in Washington are based on a risk range of 10^{-6} to 10^{-4} over a fish consumption rate range of 6.5 grams/day to 650 grams/day. Any consumption rate between these values will be protected proportionally (e.g., 65 grams per day protected at 10^{-5}).
 - EPA's National Recommended criteria are based on a risk range of 10^{-6} to 10^{-4} over a fish consumption rate range of 17.5 grams/day to 1,750 grams a day.
 - Oregon's human health criteria are based on a risk range of 10^{-7} to 10^{-5} over a fish consumption rate range of 17.5 grams/day to 1,750 grams a day.

The importance of this representation is it gets away from the distortion in perception from basing criteria on a single fish consumption rate.

Page 94-95, Section 6.4 Salmon. The TSD identifies four different ways to consider salmon in the fish consumption. The TSD should include one other approach among its options.

- *Salmon (and other anadromous fish) consumption rates are discounted 70 to 80% and then included with freshwater and estuarine fish consumption to identify a more relevant fish consumption rate.* The premise for this fifth approach is that it is incorrect to not count salmon at all, and it is incorrect to count salmon the same as other freshwater and estuarine fish. Rather, it is appropriate to weight the salmon to reflect their relevant exposure to state waters contributing to whatever body burdens the salmon have. Different species will vary, but overall, it seems reasonable to weight salmon and all other anadromous fish consumption rates at about 20% to 30% of the total salmon consumption rate.

¹ See Everett's comments re the FCR TSD version 1.0 for details and citations.

² When these exposure parameter values change, so does the relative risk. For a criterion derived on the basis of a cancer risk level of 10^{-6} , individuals consuming up to 10 times the assumed fish intake rate would not exceed a 10^{-5} risk level. Similarly, individuals consuming up to 100 times the assumed rate would not exceed a 10^{-4} risk level. (EPA human health criteria guidance, 2000.)

Page 99, Section 6.8 Acceptable risk levels. The first paragraph continues the misnomer that Washington's current Water Quality Standards are based on an acceptable cancer risk of 1 in 1 million. As we have emphasized time and again throughout these comments, Washington's standards are based on a 10^{-6} risk level for a fish consumption rate of 6.5 grams per day with the understanding at the time of adoption that it was protective at a 10^{-5} risk level for 65 grams a day, and as such is a range of risk levels over a range of fish consumption rates. This needs to be clearly stated.

Page B-15, change second bullet from "1,000 to 454" to "100 to 454".

Page C-11, graph at bottom of page. Change "PCBs" at top of graph to read "PCBs in Chinook fillets" and identify the year of the data.

Page C-12, graph. Identify the year of the data.

Page C-13, section on hydrodynamic conditions of Puget Sound. The second sentence says that, "The circular pattern of currents combined with reduced current velocity at the sills results in the contaminants being circulated for longer periods of time." The sentence is incorrect because the current velocity is increased at the sills, not decreased. It is also incorrect to describe a circular pattern of currents.