

Oregon Fish Consumption Rate Project

First Workshop: Background and Scope

March 13th and 14th, 2007

Question and Answer Document

What are water quality standards?

Water quality standards are the foundation of state/tribal water quality-based pollution control programs mandated by the Clean Water Act. Water quality standards define the goals for a waterbody by designating its uses, setting criteria to protect those uses, and establishing provisions to protect waterbodies from pollutants.

Water quality standards are applied through several water programs. Water quality standards are used in establishing limits in National Pollutant Discharge Elimination System (NPDES) permits, identifying impaired waters, establishing land management plans for nonpoint sources of pollution, and in developing Total Maximum Daily Load (TMDL) plans. Water quality standards can also be used for establishing limits in other regulatory clean-up programs, such as Superfund projects.

Although water quality standards can be used in efforts to clean up water bodies, they are not a remediation program per se. Instead, water quality standards, via criteria, establish the ceiling for discharges that can occur within a waterbody while still protecting the designated uses. When those criteria are not being met, it becomes necessary to develop a plan (TMDL) to meet the criteria, so uses are restored and protected.

What are water quality criteria?

The purpose of criteria is to ensure that designated uses (e.g. fish and aquatic life, contact recreation, wildlife and hunting, and fishing) are being protected. Water quality criteria can be narrative or numeric. Oregon Department of Environmental Quality (DEQ) is considering a revision of the numeric human health criteria. These criteria establish numeric limits for toxic chemicals discharged into the water to ensure that humans can safely swim and consume fish from the waters of the State.

What is the role of fish consumption rates in human health criteria?

Oregon's current numeric human health criteria are based on the Environmental Protection Agency's (EPA's) recommended Clean Water Act Section 304(a) Water Quality Criteria guidance values. EPA derived these values by considering the known toxicity of the regulated chemicals and the likely exposure people have to these chemicals. The criteria are intended to protect people when consuming fish from state and tribal waters. Therefore, one of the exposure parameters used in calculating the criteria is the amount of fish that people are consuming. EPA's current recommended Clean Water Act Section 304(a) Water Quality Criteria guidance values are calculated using the national fish consumption rate of 17.5 g/day. Assuming that 0.5 lbs of fish is a fish meal, the national rate represents approximately 0.5 fish meals/week. This

rate represents the 90th percentile of fish consumers based on national data¹. This means that 90 percent of the people who responded to the national fish consumption survey consume up to or below 17.5 g/day, while 10 percent of the people who responded to the national fish consumption survey consume more than 17.5 g/day.

The choice of the fish consumption rate used in deriving human health criteria is a risk management decision. The risk management decision specifically considers the population to protect in the human health criteria: the general population, tribal population, other sensitive populations (e.g. women and children), etc.

DEQ is considering raising the fish consumption rate because studies show that the Columbia River Tribes eat substantially more fish than the national average². EPA, in an August 15, 2005 letter to Environmental Quality Commission, has suggested that a rate of 105 to 113 g/day (approximately 3.5 fish meals/week assuming that 0.5 lbs of fish is a fish meal) might be more appropriate for some waters in Oregon given the data regarding the tribal fish consumption rates. An increase in the fish consumption rate would result in more stringent human health criteria.

How was the fish consumption rate considered during DEQ's 1999-2003 water quality standards review process?

From 1999 until 2003, DEQ performed a review of Oregon's water quality standards. This review included Oregon's human health criteria, which were based on a fish consumption rate of 6.5 g/day (approximately 0.2 fish meals/week assuming that 0.5 lbs of fish is a fish meal). This was consistent with EPA's old nationally recommended fish consumption rate prior to its update published in 2000.

Two separate teams reviewed the water quality standards and potential revisions: the Technical Advisory Committee (TAC) and the Policy Advisory Committee (PAC). When reviewing the human health criteria, the TAC and PAC both considered what would be the appropriate fish consumption rate to apply in the water quality standards: EPA's national fish consumption rate value (17.5 g/day), a value based on tribal data (389 g/day³), or EPA's recommended subsistence value (142.4 g/day). The TAC proposed that all three fish consumption rates be used: the 17.5 g/day (approximately 0.5 fish meals/week assuming that 0.5 lbs of fish is a fish meal) would be applied to low intensity fish consumption waters; the 142.4 g/day (approximately 4 fish meals/week assuming that 0.5 lbs of fish is a fish meal) would be applied to medium intensity fish consumption waters and the 389 g/day (approximately 12 fish meals/week assuming that 0.5 lbs of fish is a fish meal) would be applied to high intensity fish consumption waters. The PAC, upon reviewing the TAC's recommendations, had concerns about how this tiered system

¹ EPA's nationally recommended fish consumption rate is based on data from USDA's 1994-1996 Continuing Survey of Food Intake by Individuals (CSFII) Survey (1998).

² Columbia River Inter Tribal Fish Commission (CRITFC). 1994. A Fish Consumption Survey of the Umatilla, Nez Perce, Yakama, and Warm Springs Tribes of the Columbia River Basin. Technical Report 94-3.

³ This value is based on data from the CRITFC, 1999 study. It represents the 99th percentile of adult fish consumers and non fish consumers throughout the year (Table 7 of the study, p. 80).

would be implemented, and could not come to consensus on what the appropriate fish consumption rate should be for calculating the human health criteria.

DEQ recommended to the EQC that it adopt EPA's most recent recommended Clean Water Act Section 304(a) Water Quality Criteria guidance values for the numeric human health criteria. These values are based on a fish consumption rate of 17.5 g/day, which represents the 90th percentile of the national fish consumption rate. EQC adopted these criteria, consistent with DEQ's recommendation, and the revised human health criteria were submitted to the EPA on July 8, 2004 for its review and approval.

What is the current status of these revised criteria?

Under the Clean Water Act, EPA is to review and either approve or disapprove water quality standards submitted by states and authorized tribes. EPA has not yet taken any action on the revised human health criteria DEQ submitted to EPA on July 8, 2004. EPA is still in the process of reviewing these criteria.

How is EPA handling this issue regionally?

EPA recognizes that there are other states and tribes within Region 10 that have populations known to consume fish at a rate greater than EPA's recommended national default fish consumption rate of 17.5 g/day. In considering the appropriate fish consumption rate to apply in state or tribal water quality standards, EPA has laid out the following preference hierarchy regarding fish consumption rates: (1) use of local data; (2) use of data reflecting similar geography/population groups; (3) use of data from national surveys; and (4) use of EPA's default intake rates⁴.

EPA has national guidance on considering and choosing appropriate fish consumption rates within the *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health* (2000, EPA-822-B-00-004). EPA is not developing regional guidance for fish consumption rates used in deriving human health criteria. However, EPA has discussed subsistence fish consumption issues with other Region 10 states (Oregon, Washington, Idaho and Alaska). EPA has and will continue to support the states and tribes within Region 10 in developing human health criteria based on local fish consumption rates where that data is available.

What will be DEQ's process for reviewing the fish consumption rate during this triennial review?

During this triennial review process, DEQ has decided to try a different approach in reviewing the numeric human health criteria than the TAC/PAC process of the 1999-2003 triennial review.

⁴ EPA, 2000. Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health. EPA-822-B-00-004.

DEQ, along with the Confederated Tribes of the Umatilla Reservation of Oregon (CTUIR) and EPA, will hold a series of facilitated workshops open to the public. Goals for the workshops are:

- Provide a forum for participants to identify critical issues, discuss implementation challenges and propose alternative actions.
- Develop recommendations and supporting documentation to present the EQC with (1) a range of options to increase the fish consumption rate and (2) options for pollution control strategies that can help reduce the risks associated with consuming contaminated fish and decrease the toxics levels present in fish.

DEQ, CTUIR and EPA will seek out broad participation from tribal governments, technical experts and stakeholders such as other state agencies (i.e. Oregon Department of Human Services); toxicologists; economists; municipalities; industries; other identifiable fish consuming populations; commercial fishers and environmental groups. Each facilitated workshop will focus on a specific theme involved with revising the fish consumption rate, including:

- A review of Oregon’s water quality standards and local fish consumption data;
- An overview of the human health risk associated with the fish consumption rate and human health criteria;
- Impact on the NPDES permitting process in revising the fish consumption rate;
- Economic impact of revising the fish consumption rate; and
- Implementation of the water quality standards using a revised fish consumption rate.

Each workshop will provide a forum for both presenting information and further discussions regarding the topic at hand. DEQ, CTUIR and EPA will work together to answer questions raised as best as possible. At the end of these workshops, DEQ, with help from EPA and CTUIR, will develop recommendations for revising the fish consumption rate and documentation to support those recommendations for the EQC. At that point, it will be EQC’s decision about whether or not to recommend an option for rulemaking.

The following is a tentative schedule for workshops:

<u>Workshop</u>	<u>Tentative Date:</u>
Background and Scope	March 13 (Portland)/March 14 (Coos Bay), 2007 (dates certain)
Review of Water Quality Standards and Fish Consumption Data	May 15, 2007
Human Health Risk	July 10, 2007
NPDES Permitting Impact	September 11, 2007
Economic Impact of Raising the Fish Consumption Rate	November 13, 2007
Implementation of a Raised Fish Consumption Rate	January 8, 2008

<u>Workshop</u>	<u>Tentative Date:</u>
Open Q&A	March 11, 2008
DEQ Presents the Issue Paper	June 17, 2008

Who should I contact if I have further questions about this process or would like to be notified about future meetings?

Questions and requests to be included in future notifications should be sent DS Consulting, (503) 248-4703.

Agency contacts are as follows:

DEQ: Jordan Palmeri, (503) 229-6766

CTUIR: Rick George, (541) 966-2351

EPA: Becky Lindgren, (206) 553-1774

Requests to be added to the email list and additional information about the Oregon Fish Consumption Rate Project can be accessed at the following website:

<http://www.deq.state.or.us/wq/standards/toxics.htm>

