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DEQ Initial Responses to Public Input from Workshop 2 Oregon Fish and Shellfish Consumption Rate Project

Overview

At Workshop 2 of the Oregon Fish and Shellfish Consumption Rate Project, held on May 16 in Lincoln City, workshop participants were asked to comment on “Key Issues” for this Project. Workshop participants discussed the “Key Issues” in small groups and as a large group. Many workshop participants raised additional issues for the Planning Team to consider. This document outlines the additional issues and questions raised at the May 16th workshop and DEQ’s initial response to these issues and questions; responses to similar issues and questions have been grouped where appropriate. As noted throughout this document, the Key Issues will be discussed in more depth at future workshops.

Key Issues presented at Workshop 2 (May 16)

The goal of bringing these issues in front of the public was to get input on whether these are the right issues and whether the issues are clearly articulated.

1. Based on the available survey data, which fish consumption rates are options to be considered as a basis for Oregon’s human health water quality criteria?
 - What level of EPA’s preference hierarchy does this data fall into (local, regional, national)?
 - Should Oregon use different fish consumption rates for basins or waterbodies that reflect consumption patterns in those areas?
2. What target population(s) will Oregon use as the basis for establishing Human Health water quality criteria? (e.g. tribal, general, anglers, etc.)
3. What percentage of the target population(s) will Oregon use as the basis for the human health water quality criteria?
4. How will anadromous fish be addressed in deriving the fish consumption rate? (e.g. classification of fish as marine, freshwater and estuarine; include marine or exclude marine)
5. How will the EQC weigh the fiscal and economic costs of implementing more stringent human health water quality criteria against the added public health benefits?
 - How could a fish consumption rate be effectively and equitably implemented to ensure that Oregon’s public health is protected?

Revisions to the “Key Issues” in Response to Public Comments

Based on the issues and questions raised by the public during Workshop 2, the Project Planning Team (staff from DEQ, the Environmental Protection Agency, and the Confederated Tribes of the Umatilla Indian Reservation) revised the key issues. The revisions, along with the rationale for their revision, appear below.

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1. Based on the available survey data, which fish consumption rates are options to be considered as a basis for Oregon's human health water quality criteria?
 - Key Issue #1 was changed to remove the sentence about EPA preference hierarchy. The Planning Team is considering EPA's preference hierarchy but for the sake of simplicity and clarity about the policy question being expressed here, the sentence was removed. We regarded the second sub-bullet as its own Key Issue (see below).
2. Should Oregon use different fish consumption rates for basins or waterbodies that reflect consumption patterns in those areas?
 - Key Issue #2 used to be a sub-bullet of Key Issue #1. The Planning Team felt it was a separate Key Issue that needed to be considered despite its relationship with Key Issue #1
3. What high fish consuming population(s) (e.g., tribal, general, anglers, etc.) will Oregon use as the basis for establishing Human Health water quality criteria?
 - Key Issue #3 was changed to reflect that there are numerous populations in Oregon that may be considered a "high fish consuming" population. The original sentence referred to a "target population". This effort may not necessarily target one population, but instead, will aim to protect numerous high fish consuming populations.
4. What percentage of the high fish consuming population(s) will Oregon use as the basis for the human health water quality criteria?
 - See explanation for Key Issue #3
5. How will salmon (an anadromous fish) be addressed (i.e. included or excluded) in deriving the fish consumption rate?
 - This Key Issue was changed to accurately reflect that the Planning Team is considering whether or not to include salmon in the fish consumption rate and not whether to include all marine fish in the fish consumption rate.
6. How could a fish consumption rate be effectively and equitably implemented to ensure that Oregon's public health is protected?
 - The Planning Team received a number of public comments on the economic analysis of an increased fish consumption rate. There was concern that the EQC would be "trading off" protection of people's health against costs of implementing more stringent water quality standards. This is a complex area. The question, "How will the EQC weigh the fiscal and economic costs of implementing more stringent human health water quality criteria against the added public health benefits?" has been revised to focus on how a rate would be implemented to protect public health. Water Quality Administrator Lauri Aunan has consistently stated that when a range of options and recommendations are presented for increasing the fish consumption rate, DEQ will need to understand and communicate to the Environmental Quality Commission what it will take for DEQ to implement the resulting revised criteria, and what it will take for the regulated community to implement the criteria.

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- In addition, as required by state law, a fiscal impact analysis will need to be developed. The Planning Team and the Fiscal Impact Advisory Committee will provide as much information as possible to the EQC about the fiscal impact of implementing more stringent criteria based on an increased fish consumption rate.

Responses to Issues and Questions Raised by Workshop Participants

Below are the issues and questions raised by participants at Workshop 2. Similar issues and questions have been grouped together. The responses were compiled by DEQ.

(1) TYPES AND SOURCES OF DATA; AVAILABLE DATA

- How will the EQC consider data from Washington, Alaska, San Francisco, CA?
- Will/should local data be used for a state-wide standard?
- How are we using qualitative fish consumption data?
- What level protection is based on what level of data?
- What is being done to gather information from tribes, tribal elders, and tribal treaty rights?
- Will the policy default to a highly protective rate, or will policy makers ask for more data?
- How substantial do data and analysis need to be in order to be used by the Commission to change fish consumption levels?
- If the CRITFC study is not considered sufficient information upon which to increase fish consumption levels, what level of data would be sufficient?
 - Given the existing time, can we get the best available information, or should the timing be changed?
- How do we include the higher consumption information? What is being done to gather the maximum amount of information?

Response

EPA's guidance on choosing a fish consumption rate for water quality criteria includes a preference hierarchy emphasizing the use of local, State or regional data where available¹. There are several local and regional studies on fish consumption rates available, as well as some national fish consumption data. The Human Health Focus Group, experts with experience in human health risk assessment and toxicology, is reviewing 9 such studies (see Table 1 below).

In two of the public workshops, personal accounts of fish consumption were encouraged, and in many cases, participants did share personal stories. These stories were informative and are considered qualitative data. The personal stories given by workshop participants become a part of the public record but are not part of the information the Human Health Focus Group is reviewing. As with all information gathered at the public workshops, this qualitative information will be included in the final Policy Options package to the EQC so that the EQC can consider this information in its decision making.

¹ EPA, 2000. Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health. EPA-822-B-00-004. Pp. 4-24-4-27

Table 1.

Fish Consumption Studies under Review by Human Health Focus Group	Year
Re-evaluation of the CRITFC survey data (Rhodes thesis)	2006
EPA Estimated Per Capita Fish Consumption in the United States	2002
Lake Whatcom residential and Angler Fish Consumption Survey	2001
Fish Consumption Survey of the Suquamish Indian Tribe of the Port Madison Indian Reservation, Puget Sound Region	2000
EPA Asian and Pacific Islander Seafood Consumption Study	1999
Consumption Patterns of Anglers who frequently fish Lake Roosevelt (WA)	1997
A Fish Consumption Survey of the Tulalip and Squaxin Island Tribes of the Puget Sound Region	1996
City of Portland Fish Consumption and Recreational Use Survey of Columbia Slough and Sauvie Island	1996
A Fish Consumption Survey of the Umatilla, Nez Perce, Yakama, and Warm Springs Tribes of the Columbia River Basin (CRITFC)	1994

(2) NON-LOCAL FISH

- How do we deal with consumption of “non-local fish” (i.e., fish that may be served in restaurants or purchased in a grocery store)?

Response

The fish consumption rate is intended to represent fish and shellfish caught and consumed from Oregon’s waters. In reviewing the 9 fish consumption studies, the Human Health Focus Group is noting how each survey accounts for personal/family harvest of fish and shellfish from local rivers versus the consumption of fish and shellfish bought in restaurants or supermarkets.

(3) INCLUSION OF CULTURAL VALUES

- How should cultural/other values be weighed?

Response:

The Environmental Quality Commission recognizes that fish are important to the culture, tradition and religion of tribal governments, and that tribal members consume fish at higher rates than the general population. At the workshops, both tribal and non-tribal members of the public have provided information about how fishing and the use of fish is an important aspect of their culture. This information will be included in the final policy options paper to the EQC so that the EQC can consider this information in its decision making.

(4) WQS IMPLEMENTATION ISSUES

- How do we consider upstream vs. downstream issues?
- Geographical division of standards – how would that work? Interesting in that this approach could take into consideration the specific, unique aspects of that region and the differences in types of fish.

Response

One of this project’s Key Issues of consideration is “Should Oregon use different fish consumption rates for basins or waterbodies that reflect consumption patterns in those areas?” The Planning Team will be seeking public input on this question at a future workshop. As with all information gathered at the public workshops, this information will be included in the final Policy Options paper to the EQC so that the EQC can consider this information in its decision making.

During the last triennial review of water quality toxics criteria (1999-2003), DEQ convened a Technical Advisory Committee and Policy Advisory Committee. These committees considered applying different fish consumption rates on regional levels. Possible inequities between permitted sources, the difficulty in implementing numerous sets of water quality criteria on one river, and protecting downstream uses were all issues discussed during this review (more information can be found at: <http://www.deq.state.or.us/about/eqc/agendas/2004/5.20-21.04.EQCAgenda.htm>). Oregon does have other water quality standards that differ by region or water body. For example, Oregon’s temperature standard varies depending on whether the waterbody is being used for fish spawning, migration, or juvenile rearing.

(5) PORTLAND SUPERFUND SITE

- How do we use the fish consumption rate from the Portland Superfund site statewide?

Response

Portland Harbor is a federal Superfund site spanning about 6 miles of the Willamette River from its confluence with the Columbia River to downtown Portland. Superfund sites contain uncontrolled hazardous waste and are a National priority for cleanup. EPA is leading cleanup of contaminated sediment on the river-bottom. DEQ is leading cleanup of contaminated land on the riverbanks of Portland Harbor. There is not one unique fish consumption rate used in the Portland Harbor project; instead, various fish consumption rates ranging from 17.5 g/day to 175 g/day are used to guide cleanup of contamination.

The Oregon Fish and Shellfish Consumption Rate Project is a separate effort focusing on fish consumption rates as it relates to the human health criteria for water quality standards. Water quality standards are used to protect the designated uses of Oregon’s waters. One of those designated uses, which is the focus of this project, is fishing. In order to protect people’s ability to fish and consume the fish they catch, DEQ needs to accurately represent how much fish Oregonians eat.

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One of the questions to be answered in the workshop process is “Should Oregon use different fish consumption rates for basins or waterbodies that reflect consumption patterns in those areas?” The Planning Team will be seeking public input on this question at a future workshop.

(6) HIGH FISH CONSUMING POPULATIONS

- Should we be targeting the more sensitive populations: pregnant women, those with poor health, children, others that may be at a higher risk?
- Are we going to be protecting the Native Americans – the greatest eaters of fish – how much weight is placed on that population?
- How is one population more important than another?
- Do people in human subpopulations suffering from disparate impacts only deserve protection if the government has provided funds to amass a significant body of data, such as the CRITFC study, concerning their actual fish consumption levels?
- Will the Commission consider the greater health protection provided to the Oregon population at large that would be a benefit of increasing the fish consumption level to provide greater protection to human subpopulations in Oregon?
- What does the Commission consider to be the maximum acceptable risk to a human subpopulation in Oregon?
- What justification is there for a policy of “lower yet adequate” protection of some of Oregon’s citizens? How is this different from “separate but equal”?
- Assuming that conservatism is built into EPA recommended criteria in order to address factors of uncertainty, does the Commission want to establish a fish consumption rate to preserve that conservatism or to undermine it for human subpopulations in Oregon?
- How will the Commission decide what percentile of fish consumers to protect and what populations to protect?
- Will the Commission honor EPA’s regulations implementing Title VI of the Civil Rights Act of 1964 that prohibit disparate impact (non-intentional) discrimination by recipients of federal funds, such as Oregon’s Department of Environmental Quality?

Response

The Oregon Fish and Shellfish Consumption Rate Project is being undertaken at the specific request of the Oregon Environmental Quality Commission and DEQ’s Director. The EQC directed DEQ to review the existing fish consumption rate of 17.5 grams per day because the EQC was concerned about whether that rate is appropriate for Oregon. One of DEQ’s strategic directions is to protect Oregonians and the environment from toxic pollutants. EQC and DEQ take seriously the fact that studies have shown that fish in the Columbia River basin and other basins in Oregon carry contaminant loads that pose a risk to human health.

One of the questions to be addressed in the workshop process is “What high fish consuming population(s) (e.g., tribal, general, anglers, etc.) will Oregon use as the basis for establishing Human Health water quality criteria?” The Planning Team will be seeking public input on this

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question at a future workshop. As with all information gathered at the public workshops, this information including public feedback data will be included in the final Policy Options paper to the EQC so that the EQC can consider this information in its decision making.

EPA, DEQ and CTUIR have entered into this process in full recognition of the Treaties which exist between the US Government and many of the Northwest Tribes. The substantial investment of technical staff time and elected official representation from CTUIR, as well as the regular participation in the Workshop process of many Oregon and even Washington tribes, gives us confidence that tribal priorities and interests will be voiced and considered. Further, given that tribal fish consumption rates from the CRITFC Fish Consumption Rate study provide the best available regional data to inform the ultimate EQC decision, we believe tribal fish consumption rates are well represented.

(7) MIGRATORY FISH

- How do we address migratory fish or fish with different life histories?
- How do we allocate sources of contaminants in fish to the life stages of fish?
 - Knowing that many fish spend part of life in the ocean – how do we account for this in setting standards – is it relevant?
- How should we consider the life histories of fish?

Response

EPA provides guidance to states that the fish consumption rate used as the basis for setting water quality criteria should be based on freshwater and estuarine finfish and shellfish. The water quality criteria apply to the waters of the State and used to regulate discharges to those waters. In deriving the national fish consumption rate, EPA classified some anadromous species as freshwater/estuarine (e.g. sturgeon, all trout species), and others marine (e.g. Pacific salmon, including chum, coho, king, pink and sockeye) as marine. Because EPA classified Pacific salmon species as marine, they are not included in EPA's default national fish consumption rates or recommended criteria.

One of the key issues to be addressed in the workshop process is “How will salmon (an anadromous fish) be addressed (i.e. included or excluded) in deriving the fish consumption rate?” The Planning Team will be seeking public input on this question at a future workshop. As with all information gathered at the public workshops, this information including public feedback data will be included in the final Policy Options paper to the EQC so that the EQC can consider this information in its decision making.

(8) ROLE OF ECONOMICS

- Should economic impacts be considered at all in making a decision about the fish consumption rate?
 - Should economic impacts be considered in determining the acceptable risk to human subpopulations when it is not considered in determining acceptable risks to Oregon's population as a whole? If so, what is the basis for considering economic impacts to sources of pollution to public

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waters when some human subpopulations suffer disparate impacts from that pollution?

- If economics are considered, will the economic benefits of improved public health be considered in evaluating the economic impacts of an increased fish consumption rate or will the Commission only consider the economic costs to sources of pollution?
- If economics are considered, will the overall economic and/or health status of human subpopulations suffering disparate impacts from pollution be considered in evaluating the economic impacts of an increased fish consumption rate?
 - If the Commission uses economics as the basis for changing or not changing the fish consumption level, how will it balance decreased risks to human health against projected increased costs to polluters? What type of economic analysis will the Commission use, i.e., will it follow economic principles and look at all costs or will it engage in a fallacious so-called economic evaluation that only considers costs to polluters? How will the Commission weigh dollar figures against human health impacts?
- Will the Commission adopt a “better safe than sorry” conservative approach to establishing acceptable risks to Oregon’s highest fish consumers or view high fish consumption by American Indians as experimental – namely that it is better public policy to see whether adverse health impacts arise and whether funding is available to link such health effects to increased toxic burdens from fish consumption than it is to prevent such adverse impacts?
- How do we factor the global exposure to risk – are we doing enough risk analysis?
- What parts of disease risk is attributable to this?
- Will there be economic analysis on the human health benefits of a new fish consumption rate?

(9) BENEFITS ANALYSIS

- Will there be economic analysis on the human health benefits of a new fish consumption rate?

Response

State law requires an analysis of fiscal impacts as part of any rulemaking. The economic analysis proposed for this project is intended to function as the fiscal impact analysis [per ORS 183.335(b)(E)] in the event EQC decides to move forward with rulemaking. The fiscal impact requirement under State law is not a comprehensive cost benefits analysis- it only focuses on economic costs associated with a rule change.

As discussed on the July 17, 2007 workshop, performing an analysis of the economic benefits of increased fish consumption rates is less certain and requires more data than estimating the economic costs. We do not have the data or staff resources needed to produce an economic benefits analysis.

Although we will not be including a quantitative economic benefits analysis within our economic analysis, we are open to receiving information about the economic benefits of an increased fish consumption rate that others may have. Information we receive about economic or other benefits

of an increased fish consumption rate will be provided to the EQC to help inform their final decision.

(10) IMPLEMENTATION & REGULATORY FLEXIBILITY

- If the intent of changing fish consumption levels underlying Oregon’s criteria is to actually protect human health, how can Oregon assure implementation of the criteria to reduce toxic contamination?
- How is the fish consumption rate discussion/decision considering other pollutants?
- Are there any unintended consequences of choosing a high level of fish consumption that should be addressed? If so, what are they and what are options for addressing them? On what basis would regulatory flexibility be justified?
- What is an appropriate process to use that allows technology to keep up?
 - What is the role of WQBEL if technology does not exist to meet the water quality standards?
- Is there a role for adaptive management?
- How will DEQ enforce the standard, if it is adopted?

Response

Implementation and enforcement of a revised fish consumption rate is the topic of discussion for a future Workshop. All of the above questions relating to implementation will be open for discussion at that workshop. It is also anticipated that the Fiscal Impacts Advisory Committee will discuss issues related to implementation. As with all information gathered at the public workshops, information from this workshop will be included in the final Policy Options paper to the EQC so that the EQC can consider this information in its decision making.

(11) MECHANISMS FOR TOXICS REDUCTION

- What does Oregon need to do to identify and control the major sources of contamination, including air deposition and other non-water media sources?
- How is the fish consumption rate discussion/decision considering other pollutants?
- Cleaner water is the overall goal, and the fish consumption rate is only one piece in a much larger picture
- How does the Clean Water Act fishable/swimmable goal influence our discussion?
- Is developing a strict water quality standard the best use of all resources?
- Is this the best way to protect human health?
- Is there another way that is more fiscally savvy?
- Should there be more focus on toxics reduction at their source?
- How does the water quality review process handle emerging contaminants or other substances that are not currently regulated?

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The Oregon Fish and Shellfish Consumption Rate Project goals include developing 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. The Project facilitator will be working with interested members of the Core Team to plan workshop #6 on Toxic Reduction Efforts

As with all information gathered at the public workshops, information from this workshop will be included in the final Policy Options paper to the EQC so that the EQC can consider this information in its decision making.

(12) IMPACTS ON RISK POLICY

- If we change the risk assumptions associated with fish consumption, how will they impact the other programs that have a risk policy?
 - How do they interact with the Portland Superfund site, and/or other places in Oregon, etc.?

Response

Risk policy is program specific. For instance, the acceptable cancer risk for DEQ's cleanup program is stipulated by State statute as one in a million, and sites cleaned up under DEQ's authority must be protective to that level. The State statute enabling DEQ's Air Toxics program also stipulates a one in a million level for benchmarks for carcinogenic air toxics. The Clean Water Act, which is implemented by the State, has flexible risk policies. The EPA provides guidance for the acceptable risk for cancer versus non-cancer causing chemicals. For cancer, the acceptable risk is anywhere between one in 10,000 and one in a million. When the EQC adopted revised water quality toxics criteria in 2004, the criteria were based on a cancer risk level at one in a million. The Oregon Fish and Shellfish Consumption Rate Project does not include either a task or the time to revisit this risk policy decision in the context of this project.

(13) RISK FROM CURRENT vs. LEGACY POLLUTANTS

- How do we compare risk from legacy pollutants vs. currently discharged pollutants?

Response

Legacy pollutants are those that are no longer in active use and are outlawed from production. Two examples are DDT and PCBs. Many local risk assessments have shown that fish tissue still contains elevated levels of legacy pollutants and in many cases legacy pollutants are the main risk drivers for people consuming fish.

Raising the fish consumption rate will not solve the problem of legacy pollutants already present in river sediment. It will also not clean up the fish already living in the river. It will not address the problem of such pollutants reaching Oregon waters from remote, global sources. DEQ is concerned with legacy pollutants in Oregon's waters and fish. Through other DEQ programs, we have sponsored pesticide collection events where large amounts of legacy pesticides have been

collected. Finally, the Project facilitator will be working with interested members of the Core Team to plan workshop #6 which will focus on Toxic Reduction Efforts. As with all information gathered at the public workshops, information from this workshop will be included in the final Policy Options paper to the EQC so that the EQC can consider this information in its decision making.

(14) SINGLE VERSUS MULTIPLE POLLUTANTS

- Given that criteria are set on the basis of the risk to human health created by individual pollutants, yet pollutants rarely occur individually, is a more conservative approach to setting fish consumption levels warranted than is provided by the national average?
- How do we consider multiple exposures to multiple chemicals/stressors?
 - What are the additive, synergistic effects?

Response

EPA has established guidance for estimating risk/impacts associated with cumulative (additive) and aggregate (multiple pathways) exposures. This guidance will be considered when the Planning Team develops the Policy Options Paper for presentation to the EQC. Ultimately, the EQC will make the policy decision on which fish consumption rate should be the basis for Oregon's human health water quality criteria. Any information regarding cumulative and multiple risks and exposures provided through the workshops and rulemaking process will be included in the staff reports to the EQC so that the EQC can consider this information in its decision making.

(15) BALANCING RISK & BENEFITS

- How do we balance the human health benefits with risk of eating fish?
 - How do we quantify the balance and put the issue in perspective?

Response

It is generally known there are health benefits to eating fish.^{2,3} However, this project will not be comparing the benefits of fish consumption to the health risk from consuming contaminated fish. The EQC and DEQ take seriously the fact that studies have shown fish in the Columbia River basin and other basins in Oregon carry contaminant loads that pose a risk to human health. The EQC has asked DEQ to gather and present the EQC with information through the public workshop process that will inform the EQC and the public about risk exposure and public health impacts from proposals to increase the fish consumption rate and decrease water quality human health criteria to more protective levels.

² Teutsch, S.M. and Cohen, J.T. (2005). Health trade-offs from policies to alter fish consumption. *American Journal of Preventative Medicine* **29**, 324.

³ Cohen, J.T., Bellinger, D.C., Connor, W.E., Kris-Etherton, P.M., Lawrence, R.S., Savitz, D.A., Shaywitz, A., Teutsch, S.M. and Gray, G.M. (2005b). A quantitative risk-benefit analysis of changes in population fish consumption. *American Journal of Preventative Medicine* **29**, 325-334.

(16) SHELLFISH

- How do we emphasize and account for shellfish?

Response

The Planning Team is now aware that some members of the general public do not realize that the fish consumption rate represents freshwater and estuarine finfish and shellfish. The shellfish component may be particularly important for Oregon's coastal population. In response, we have changed the name of the project to the Oregon Fish and Shellfish Consumption Rate Project and will continue to emphasize that shellfish are included in the fish consumption rate in future workshops.

(17) COMMUNICATION

- How can we more effectively communicate the issues (what the fish consumption rate represents), so more people understand what it means for them?

Response

Water quality standards and the fish consumption rate are complex, technical and scientific formulas and analyses, and can be difficult to communicate.

DEQ's website contains project information, background and presentations at <http://www.deq.state.or.us/wq/standards/toxics.htm>. DEQ, EPA and CTUIR staff are available to respond to questions. We are always open to specific suggestions for how we can more clearly communicate what the fish consumption rate represents.

(18) CRITFC STUDY

- Will the Commission consider that the Columbia River Inter-tribal Fish Commission (CRITFC) study omitted the fish consumption levels of the Tribes' highest consumers, those who could be considered "subsistence" level fishers within the tribal community?

Response

The Human Health Focus Group is providing a technical review of the CRITFC study. Any finding they make on the CRITFC study and other studies being reviewed will be presented in a report to the EQC.

(19) REGIONAL RESPONSE

- Where are Washington and Idaho?
- How does Oregon's work interact with / affect Washington, Idaho, other states?

Response

In the past, DEQ has requested that EPA address the fish consumption rate as a regional approach including Washington and Idaho. EPA declined to take this on as a regional priority. Idaho submitted its revised water quality standards to EPA recently with a fish consumption rate of 17.5 grams/day and EPA has yet to act on these standards. Washington's rate is 6.5 grams/day. Both states are tracking the issue in Oregon.

(20) OUTREACH & EDUCATION

- What are the public outreach/education requirements for Oregonians?
 - How aware are folks of the risk of eating fish with contaminants?

Response

The Oregon Department of Human Services (DHS) is responsible for setting fish advisories for waterbodies that contain fish unsafe to eat. DHS conducts public outreach, places signs near the rivers or lakes, and has a website (<http://www.oregon.gov/DHS/ph/envtox/fishconsumption.shtml>) and brochures aimed towards educating people about the public health concerns of eating contaminated fish.

(21) EXPOSED POPULATIONS

- What are the exposed population assumptions?

Response

Although this question could be asking a couple different things, the exposure assumption that DEQ uses to calculate the human health water quality criteria are: 70 years for the length of time an individual is exposed to a chemical; 70 kg for the body weight of the exposed individual; 2 liters of drinking water a day; and the amount of fish one consumes, which is currently 17.5 grams/day under the existing WQS. The current fish consumption rate is based on EPA's national default fish consumption rate, which reflects the 90th percentile of consumers and nonconsumers based on a national USDA food intake survey. The fish exposure assumption, of course, is the focus of this project. More information about the assumption variables can be found on the DEQ website for this project (<http://www.deq.state.or.us/wq/standards/fish.htm>).

(22) DAMS

- How have dams affected the behavior and life cycles of fish?

Response:

It is generally known that hydroelectric dams have affected the life cycle of many different species of fish. The details of the dams' effect on the life cycle of those fish are not part of this project. For more information, please refer to the Oregon Department of Fish and Wildlife (<http://www.dfw.state.or.us/fish/>), National Marine Fisheries Service (NOAA) and Portland District of the US Army Corps of Engineers (<https://www.nwp.usace.army.mil/home.asp>) for more information.

(23) DEQ IMPLEMENTATION RESOURCES

- Does DEQ have staff/resources to apply more stringent water quality criteria?

Response

This question will need to be answered by DEQ as a part of the workshop where implementation issues are discussed. It will also be covered in the official fiscal impact statement required by state law to be developed as part of a formal rulemaking.

(24) NON-PERMITTED SOURCES

- What is being done for non-permitting sources?

Response

DEQ has increasingly tightened limits on pollution into Oregon's waters over time, based on improved science and technology. Science can now detect very small amounts of toxic chemicals that formerly could not be detected. As a result we expect that pollution from industries and city sewage treatment plants will continue to be reduced. At the same time, most of the toxic chemicals in Oregon's rivers are not from industries and sewage treatment plants, but from "all of us." Heavy metals and oil run off from roads and parking lots. Pesticides and fertilizers run off from lawns, gardens and farm fields.

The Oregon Department of Agriculture and the Oregon Department of Forestry are the lead agencies working with farmers and forest land owners to reduce pollution from agricultural and forestry operations. DEQ works with these agencies to provide information and assistance. DEQ also develops partnerships with people and organizations to identify pollution problems and reduce pollution, such as with the Pesticide Stewardship Program. DEQ believes that more can and should be done to address "non-point" sources of pollution.

The Oregon Fish and Shellfish Consumption Rate Project goals include developing recommendations and supporting documentation to present the EQC with options for pollution control strategies that can help reduce the risks associated with consuming contaminated fish and decrease the toxics levels present in fish. The Project facilitator will be working with interested members of the Core Team to plan workshop #6 on Toxic Reduction Efforts. As with all information gathered at the public workshops, information from this workshop will be included in the final Policy Options paper to the EQC so that the EQC can consider this information in its decision making.

(25) OTHER STUDIES

- Will there be an opportunity to use other studies/listings and/or changed circumstances for future changes?

Response:

As required by the Clean Water Act, DEQ conducts triennial reviews of its water quality standards. This means that every 3 years DEQ assesses the greatest needs for reviewing, revising, or developing new standards based on new science or circumstances within limited resources. New information may be presented to DEQ for consideration during a triennial review.

(26) PROJECT FEASIBILITY

- Can this be done during the allotted time frame?

Response:

Our goal is to present the EQC with options and recommendations by October 2008. It is our intent to complete this project within that timeframe. To meet our time line, we need to manage the scope of work very carefully. Taking on work outside the project plan increases the likelihood that the project will not meet its deadlines. In addition, projects can be, and this project has been, affected by circumstances such as staff and manager turnover and funding issues.

(27) AQUATIC ORGANISMS

- How do we consider the effects on aquatic organisms, not just on human health?

Response

Oregon has adopted separate aquatic life criteria that are based on the effects of pollutants on aquatic life. These criteria were adopted by the EQC in 2004 as part of the last triennial review. Both the aquatic life and human health criteria are currently undergoing EPA review. The Oregon Fish and Shellfish Consumption Rate Project is reviewing only the human health criteria, not the separate aquatic life criteria.

(28) ROLE OF EQC

- Is EQC the right decision making body?

Response:

Under the federal Clean Water Act, states are expected to develop and adopt their own water quality standards to meet state conditions and needs. The EQC has the authority and responsibility to adopt and revise water quality rules under Oregon Revised Statutes 468.020.

(29) TRIBAL TREATY RIGHTS

- What, if any, value does the Commission place on preserving the treaty rights of Columbia River Tribes, and other Oregon Tribes, based on the fact that fish consumption is integral to their culture?
- What role does the Commission believe American Indian treaty rights should play

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in establishing the fish consumption level in Oregon? If the Commission believes those treaty rights should or must be honored, does it believe that it can weigh economic implications of a changed fish consumption rate against treaty-protected fishing rights?

- Will the Commission take into account that if Oregon's policies intended to restore salmon and other depressed fish populations to healthy levels are successful, tribal fish consumption levels will likely increase upward towards treaty levels, or does the Commission want to assume that Oregon's fish policies will not be successful and that future tribal fish consumption levels will remain at the depressed levels they are today.
- What types of data are needed to make findings on fish consumption levels? Why should the Commission not use the fish consumption levels determined by a federal court (620 grams/day average adult, salmon only, for the Yakama Nation) in setting Oregon's fish consumption levels?
- Will the Commission consider sources of information, some of which were used to support the *Boldt* decision and of a similar quality, concerning historic fish consumption rates by American Indian Tribes?

Response

EPA, DEQ and CTUIR have entered into this process in full recognition of the Treaties which exist between the US Government and many of the Northwest Tribes. The substantial investment of technical staff time and elected official representation from the Confederated Umatilla Tribes, as well as the regular participation in the Workshop process of many Oregon and even Washington tribes, gives us confidence that tribal priorities and interests will be front and center. Further, given that tribal fish consumption rates from the CRITFC Fish Consumption Rate study provide the best available regional data to inform the ultimate EQC decision, we believe tribal fish consumption rates are well represented.
