

Washington Proposed Rules - Preliminary Draft Rule Package, Water Quality Standards for Human Health Criteria, and Implementation Tools

2014 TOXICS REDUCTION CONFERENCE
Water Quality - Human Health - Sediment
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This presentation will:

- Briefly summarize the process and Governor Inslee's risk management decisions
 - Briefly explain how we approached communication
 - Discuss the Preliminary Draft Rule Package - Released September 30, 2014
 - Discuss implementation tools and economic impact
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Rulemaking web site:

<http://www.ecy.wa.gov/programs/wq/swqs/Currswqsruleactiv.html>

Process: **Adopt Human Health Criteria** and revise and add Implementation Tools to the WA Water Quality Standards

Washington Administrative Code 173-201A

- Winter 2011 begin public meetings on implementation tools only
- **Oct 2012 – Nov 2013** Public meetings/workshops w/HHC
- **July 2014** WA Governor Inslee provided a rule-making timeframe and key risk management decisions (risk level, fish consumption rate, “NTR overlay”, and arsenic) (NTR is current federal rule for WA)
- **July 2014** Public meeting to announce information about the Preliminary Draft Rule
- **Sept 2014** Preliminary Draft Rule and Supporting Documents

Next step: **Formal** draft rule January 2015

How we approached communication

Wanted tools and processes that allowed people access to information

➤ reduce travel and maximize information and exchange.

Technology: Webinars with conference lines, or, conference calls alone

15 Public meetings/workshops over 18 months (very intense):

➤ **Policy Forums:** 7 day-long public forums, education and discussion (webinars)

➤ **Delegates Table:** 7 half to day-long meetings - a core group of stakeholders discussing policy

➤ **Summary Workshop:** 1 day-long presentation to summarize the key policy decisions, alternatives, and likely directions of decisions (webinar)

Meetings as requested (many meetings...)

Goals included:

1. **Differentiate** the policy questions from the science information (FCR example on the next slide)
2. Provide enough information that people could understand **why policy issues were policy**, and the **role that science, economics, and feasibility could play in supporting those decisions** (depended on EPA guidance to differentiate science, science policy, and risk management)
3. Provide information to help support the policy **discussions and decisions**.

Challenges:

- Highly charged environment - from the beginning
- Divergent views on many of the critical issues (e.g., FCRs)
- Great complexity of the issues

1. Differentiate the policy questions from the science information

One example: The fish consumption rate used in HHC equations;

What we had:

- FCRs based on surveys of various populations
- Surveys differ in having have more, or less, statistical description and data in the individual reports
- Common misunderstandings of basic statistics like mean, median, and percentiles
- Expectation from some that the “FCR is a science decision.”

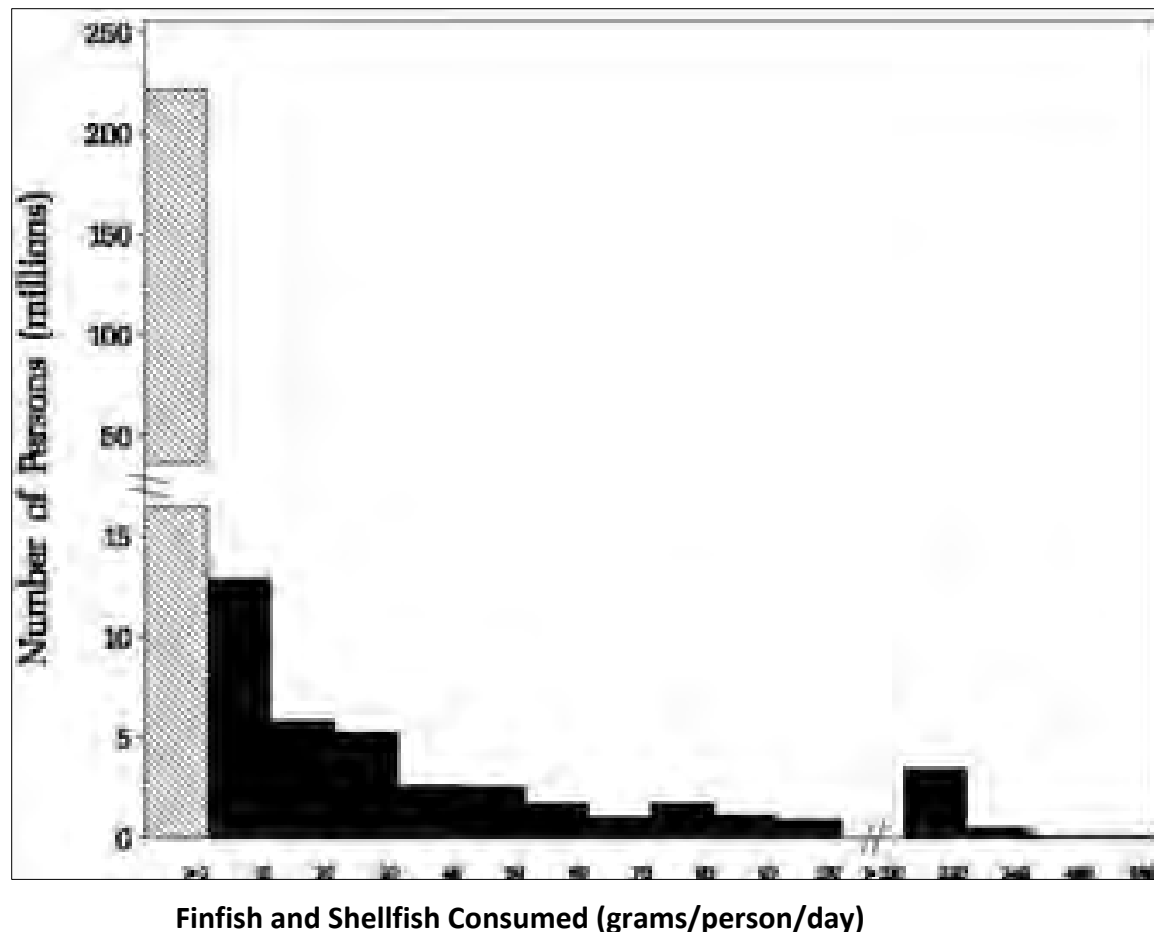
The risk management /policy questions here include:

- What population is the focus of the FCR in the HHC equation?
- What fish/shellfish are counted?
- What statistic (or distribution) represents the population of focus?

National per capita adult FCR data: consumers + non-consumers, over half the data set are zeros

USEPA 2002: Histogram of uncooked fish consumption for U.S. Population: Freshwater/Estuarine and shellfish.

Freshwater/Estuarine Finfish and Shellfish



Crosshatch = Persons reporting zero consumption

Black = Persons reporting > zero consumption

Figure from: USEPA 2002. *Estimated per capita fish consumption in the United States*. EPA-821-C-02-003. (Page 5-8, Section 5.1.1.1, Figure 1)

Policy/risk management questions and decisions for draft rule

1. Which chemicals to develop (calculate) and adopt numeric HH criteria for? (96 priority pollutants)
2. Calculation approach: Deterministic or probabilistic?
3. Criteria statewide or broken out by geographic region?
4. “Scope of the CWA” decisions
 - a. How are salmon accounted for? (Salmon are all in – all sources of fish and shellfish are in)
 - b. Should criteria account for other non-CWA sources of contaminants? (No) Relative Source Contribution (RSC = 1)

Policy/risk management questions and decisions for draft rule

5. What level(s) of risk or hazard?

Risk level for carcinogens (10^{-5} ...risk of one additional occurrence of cancer, in one hundred thousand people beyond existing risk level (women 1:3 – men 1:2) – after 70 years of daily exposure

Hazard Quotient for non-carcinogens (HQ = 1)

6. What focus population and statistic is the state risk level or hazard quotient applied to?

Focus Population: Highly exposed populations (3 Puget Sound tribal studies supply information on fish consumption rate)

Statistic: Arithmetic mean (*for purposes of the fish consumption rate only*)

Policy/risk management questions and **decisions for draft rule**

7. What values should be used for other inputs to the criteria equations?

- Fish consumption rate = **175 g/day** - a value that is *representative* of the mean of 3 Puget Sound tribal studies
- Body weight = **80 g/day** (local WA data)
- Drinking water intake = **2 L/day** (no change from current)
- Toxicity values = **RfDs and CSFs** from USEPA IRIS (in almost all cases)
- **BCFs or BAFs**

8. **Additional decision - Governor Inslee's "NTR overlay:"** Criteria will not increase in concentration (arsenic is the exception). If calculated criteria are above the current criteria in the federal National Toxics Rule, WA will adopt current values from federal rule (concentrations will not go up)

Washington's preliminary draft rule package and the accompanying support materials

Governor's direction: **September 30 preliminary draft rule** package released

➤ **Draft rule language**

➤ **Rationale document** explaining considerations leading to draft criteria - the basis of the risk management decisions – **tried to be explicit**

➤ **Preliminary Cost Benefit Analysis**

➤ Also available – numerous spreadsheets explaining specific inputs to each chemical's criteria calculations, other materials

Other **decisions** to support the preliminary draft rule:

Challenging Chemicals

- Arsenic – Go with **SDWA MCL-based value of 10 ppb**
- PCBs – a state specific risk level = 4.0×10^{-5} – but “**NTR overlay**” brings criteria back to current federal rule value
- Mercury – **stay with current value in federal rule for now**, work on comprehensive criteria and implementation package after this rule is approved

Implementation Tools

- Compliance schedules - modified
- Variances - modified
- Intake credits - new

Implementation Tools

Implementation Tools:

- Compliance schedules – modified so length can be fit to each individual situation, still “as soon as possible”
- Variances – modified “recipe” for single and multiple discharges, and for stretches of waters. No variances in this rule-making.
- Intake credits – new, will be applicable in specific situations. This new tool is for water quality-based intake credits, and is fundamentally different from the technology-based intake credits that people are used to seeing.

None of these requirements change the goal of meeting WQS, and none of them change the requirement to get there as soon as possible. These tools add predictability to timelines for planning and acting, and they will probably act to postpone consideration of use changes.

Economic Impact

Preliminary Cost Benefit Analysis – benefits exceed costs in this analysis.

- Evaluates effects of proposed HHC **changes** on permit limits
- Examines existing priority pollutant scan data for individual permitted discharges to surface water (NPDES)
- Given the constraints of 40 CFR 136 approved analytical methods it appears that no current permits would be affected by this pathway.
- 55 additional 303(d) listings based on current data
- Costs and benefits of future discharge limits and reduced health effects – hypothetical future discharge scenario based on current discharger situation
- Effects of future changes in analytical methods and subsequent changes in requirements via permits or listings cannot be quantified.

Questions/Comments

