

Department of Ecology Water Quality Standards Public Rule-Making Meeting

July 22, 2014
Lacey, WA



Overview of Today's Meeting

Heather Bartlett, WQ Program Manager

1:45 p.m.	<p>What is expected to be in the Preliminary Draft Rule (<i>Kelly Susewind</i>)</p> <ul style="list-style-type: none">• Draft human health criteria, implementation tools language, and special chemicals.• Comparison of the newly proposed criteria with the federal National Toxics Rule (NTR) criteria (currently used by the State of Washington). <u>See handout</u>• Question and discussion session to ensure public understands the details of the Governor's direction to Ecology on the proposed criteria, and the suite of implementation tools that will be included in the preliminary draft.
3:15 p.m.	<p>Next Steps (<i>Melissa Gildersleeve</i>)</p> <ul style="list-style-type: none">• Materials we expect to have available to the public when the Preliminary Draft Rule package becomes available on September 30, 2014.• Anticipated rule process and opportunities for public involvement.• Helpful Resources
3:30 p.m.	<p>Meeting Adjourned (<i>Susan Braley</i>)</p>

Information on the Preliminary Draft Rule

Kelly Susewind, Special Assistant to Director

Background

November 2013 – Public meeting covering decision alternatives and likely direction on the Washington Surface Water Quality Standards.

July 2014 – Governor Inslee provides rule timeline and final direction on four key risk management issues needed for this rule-making:

- ▶ Risk level, fish consumption rate, “NTR overlay”, and arsenic approach – these are explained throughout today’s presentations

Today

We’ll walk through what you can expect to see in the preliminary draft rule released by September 30, 2014.

Water Quality Standards Changes

▶ Human Health Criteria: Calculation Variables

- Fish consumption rate
- Risk rate for carcinogens
- Relative source contribution for toxic effect chemicals
- Body weight
- Drinking water

▶ Challenging Chemicals

- Arsenic
- PCBs
- Mercury

▶ Implementation Tools

- Compliance schedules
- Variances
- Intake credits



Human Health Criteria Fish Consumption Rate

	Current	Alternative 1	Decision Alternative 2	Alternative 3
Fish Consumption Rate	6.5 grams/day	225 grams/day	175 grams/day	125 grams/day
Basis	National data	Washington data: Suquamish Fish Consumption Tribal survey	Negotiated value used in Oregon's updated Human Health Criteria	Washington data: Fish Consumption Rate surveys of 3 Puget Sound tribes
Target Population	Mean of General Population	Mean of Surveyed Suquamish Tribal Members	Highly Exposed Population	Mean of 3 Puget Sound Tribal Studies

Human Health Criteria Risk Level

Numeric	What it means, under specified exposure assumptions
10 ⁻⁶	...risk of one additional occurrence of cancer, in one million people beyond existing risk level (women 1:3 – men:1:2) – after 70 years of daily exposure
Decision 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
10 ⁻⁴	...risk of one additional occurrence of cancer, in ten thousand people beyond existing risk level (women 1:3 – men:1:2) – after 70 years of daily exposure

Increasing protection



For NTR human health criteria, the exposure assumptions are: **70 years** of daily exposure to **6.5 g/day** of fish and shellfish, and **2 liters/day** of untreated surface waters, for a **154 lb.** person.

Criteria Will Remain as Protective, or Become More Protective

Where the newly calculated criteria would be less protective than the existing criteria, we will adopt new criteria equal to existing criteria.

Human Health Criteria

Summary of Decisions for Preliminary Draft

(Except for arsenic)

Key Factors in Equation	Decisions
Fish Consumption Rate	175 grams/day
Body weight	80 kilograms
Drinking water intake	2 liters/day
Risk Level (cancer causing chemicals)	10^{-5}
Relative source contribution (threshold toxics – largely the non-carcinogens)	1

Steps to get the Proposed Criteria

Step 1 – Put all the chemicals through the human health criteria equation and calculate criteria.

Step 2 – Compare those criteria with the existing criteria.

Step 3 – If the calculated criteria are less protective than existing criteria, then adopt new criteria equal to existing criteria.

Summary of Human Health Criteria

	Based on Cancer Effects (54 Fresh, 53 Marine)	Based on Non-cancer Effects (42 Fresh, 41 Marine)
Fresh Water Criteria	<p>11 More Protective</p> <p>40 Holding the Line</p> <p>2 New Chemicals</p> <p>Arsenic=drinking water</p>	<p>25 More Protective</p> <p>7 Holding the Line</p> <p>10 New Chemicals</p>
Marine Water Criteria	<p>43 More Protective</p> <p>7 Holding the Line</p> <p>2 New Chemicals</p> <p>Arsenic=drinking water</p>	<p>29 More Protective</p> <p>3 Holding the Line</p> <p>9 New Chemicals</p>

Challenging Chemicals: Arsenic

Existing criteria are for inorganic arsenic and WA's waters are frequently naturally higher than the criteria.

Decision:

- ▶ Adopt Safe Drinking Water Act regulatory level of 10 ppb
- ▶ Accompany with pollution prevention requirements for NPDES dischargers
- ▶ This has been done and approved by EPA in many other states
- ▶ This approach addresses the naturally occurring arsenic conditions in Washington.
- ▶ This approach will reduce unnecessary human-derived sources of arsenic pollution.

Challenging Chemicals: PCBs

Decision:

Criteria calculated at a risk level of 4×10^{-5} (to equal noncancer)

- ▶ Risk level of four additional occurrences of cancer, after 70 years of daily exposure, in one hundred thousand people.
- ▶ This is beyond the existing risk level (women 1:3 – men 1:2).
- ▶ Resulting calculated PCB criteria are 0.00029 ppb
- ▶ Apply the hold the line decision

Criteria concentrations will default down to the concentration of 0.00017 ppb currently applied in Washington.

Challenging Chemicals: Mercury

The current NTR criteria are for total mercury.

- ▶ EPA's recommended approach for mercury is to use methylmercury in tissue, this poses significant implementation challenges.
- ▶ Many sources of mercury are outside the scope of our Clean Water Act tools.

Decision:

- ▶ Defer adoption of new mercury criteria (stay under the NTR in interim).
- ▶ After EPA approves the revised standards from this rule adoption, develop and adopt a comprehensive mercury rule, including:
 - ▶ New criteria
 - ▶ Variances if appropriate
 - ▶ New mercury control measures

Tools to Help with Implementation

Ecology already has a number of tools that we use when issuing permits (e.g. mixing zones).

We are planning to expand those tools:

1. New language allowing intake credits for water quality based effluent limits
2. Additional language around compliance schedules
3. Clarifying language for variances

All Implementation Tools Will:

- Require facilities to address their contribution of pollutants
- Provide timelines and measurable permit requirements to the NPDES facility that will lead to reduction of the pollutant.
- Provide clear accountability
- Include public review process through either permit issuance or rule.

Implementation Tools: Compliance Schedule

- Applies only to existing discharges.
- Currently: Up to 10 years if needed.
- Requires final limits based on WQ criteria and interim limits that are either numeric or non-numeric (e.g., construction of facilities by a specific date; source identification and controls by specific dates).

Decision :

Require shortest timeframe possible on a case specific basis.

Implementation Tools: Variance

- Temporary waiver from meeting existing water quality standards.
- Currently can be granted for up to 5–years. May be renewed.
- A variance requires a WQS rule modification and USEPA CWA review and approval (including ESA consultation for ESA–applicable rule changes).

Decision :

- The timeframe for the variance will be specific to the actual variance. There will be no maximum timeframe in the general provisions.
- Ecology will not seek EPA approval of language that would allow the state to grant “programmatic approval” of variances.

Implementation Tools: Variance

The preliminary draft rule will define the factors that must be addressed in a variance (application requirements, permit limits, interim reviews, public process, etc...)

- A specific interim public review schedule will be contained in each variance that is granted.
- The requirement for the interim review will be spelled out in the variance section's general provision language in this preliminary draft rule.

Human Health Criteria Details on the Tables

A comparison of the newly proposed criteria with the federal National Toxics Rule (NTR) criteria (the criteria currently used by the State of Washington)

please see handouts:

- 1 – Simple comparison of existing with the proposed
- 2 – More detailed chart with a number of variables

Simple Chart Picture

1	CHEMICAL	FRESHWATER		MARINE		Carcinogen
		NTR (Current Criteria)	Proposed Criteria	NTR (Current Criteria)	Proposed Criteria	
2						
3	1,2-Dichlorobenzene	2,700	614	17,000	740	No
4	1,3-Dichlorobenzene	400	91	2,600	110	No
5	1,4-Dichlorobenzene	400	91	2,600	110	No
6	2,4-Dichlorophenol	93	26	790	34	No
7	2-Methyl-4,6-Dinitrophenol	13	11	765	32	No
8	3,3'-Dichlorobenzidine	0.040	0.031	0.077	0.033	Yes
9	4,4'-DDD	0.00083	0.00036	0.00084	0.00036	Yes
10	4,4'-DDE	0.00059	0.00025	0.00059	0.00025	Yes
11	4,4'-DDT	0.00059	0.00025	0.00059	0.00025	Yes
12	Acrolein	320	1.0	780	1.1	No
13	Aldrin	0.00013	0.000057	0.00014	0.000058	Yes
14	Anthracene	9,600	3,310	110,000	4,571	No
15	Bis(2-Chloroisopropyl) Ether	1,400	1,316	170,000	7,403	No
16	Chlorobenzene	600	121	21,000	880	No
17	Dieldrin	0.0001	0.00001	0.0001	0.00001	Yes
18	Diethyl Phthalate	23,000	1,000	23,000	1,000	No
19	Dimethyl Phthalate	313,000	1,000	313,000	1,000	No
20	Di-n-Butyl Phthalate	2,700	1,000	2,700	1,000	No
21	Endrin	0.0001	0.00001	0.0001	0.00001	Yes
22	Endrin Aldehyde	0.0001	0.00001	0.0001	0.00001	Yes
23	Ethylbenzene	3,100	1,000	3,100	1,000	No

All criteria values are expressed as ug/L unless noted otherwise

Red Font indicates Carcinogen

Criterion is More Protective than NTR

Criterion is Less Protective than NTR

Criterion is for Newly Proposed Chemical

Criterion Holding the Line are not Shaded

Detailed Chart Picture

FRESHWATER		Scenario 1 (NTR)	Scenario 2	Scenario 3	Governor's Proposal	Compared to NTR, does the criteria go up, down, or stay the same?			What Factor does Gov's Proposal go down compared to NTR?	Change in TOX from NTR?	
					Lowest of NTR or Scenario 3	Scenario 2	Scenario 3	Gov's Propos		yes(L)	
										yes(H)	
	BW →	70	80	80							
	DI →	2	2	2							
	FCR →	6.5	175	175							
	RL ↓	1 x 10 ⁻⁶	1 x 10 ⁻⁶	1 x 10 ⁻⁵							
8	1,1,2,2-Tetrachloroethane	0.17	0.14	1.4	0.17	down	up	same	1.0	no	1,1,
9	1,1,2-Trichloroethane	0.60	0.50	5.0	0.60	down	up	same	1.0	no	1,1,
10	1,1-Dichloroethylene	0.057	1,342	1,342	0.057	up	up	same	1.0	yes(H)	1,1-
11	1,2,4-Trichlorobenzene	NC	36	36	36	--	--	--	--	--	1,2,
12	1,2-Dichlorobenzene	2,700	614	614	614	down	down	down	4.4	no	1,2-
13	1,2-Dichloroethane	0.38	0.40	4.0	0.38	up	up	same	1.0	no	1,2-
14	1,2-Dichloropropane	NC	0.44	4.4	4.4	--	--	--	--	--	1,2-
15	1,2-Diphenylhydrazine	0.040	0.016	0.16	0.040	down	up	same	1.0	no	1,2-
16	1,2-Trans-Dichloroethylene	NC	703	703	703	--	--	--	--	--	1,2-
17	1,3-Dichlorobenzene	400	91	91	91	down	down	down	4.4	no	1,3-
18	1,3-Dichloropropene	10	10	10	10	up	up	same	1.0	no	1,3-
19	1,4-Dichlorobenzene	400	91	91	91	down	down	down	4.4	no	1,4-
20	2,3,7,8-TCDD (Dioxin)	0.00000013	0.00000064	0.00000064	0.00000013	up	up	same	1.0	yes(H)	2,3,
21	2,4,6-Trichlorophenol	2.1	0.26	2.6	2.1	down	up	same	1.0	no	2,4,
22	2,4-Dichlorophenol	93	26	26	26	down	down	down	3.5	no	2,4-
23	2,4-Dimethylphenol	NC	87	87	87	--	--	--	--	--	2,4-
24	2,4-Dinitrophenol	70	71	71	70	up	up	same	1.0	no	2,4-
25	2,4-Dinitr	All criteria values are expressed as ug/L unless noted otherwise									
26	2-Chloror	Red Font indicates Carcinogen									
27	2-Chloror	Criterion is Lower Compared to NTR									
		Criterion is Higher Compared to NTR									
		Criterion is for New Chemical									
		Criterion remaining the same are not shaded									
		Change in TOX indicates a new toxicity factor is used to calculate the numerical criterion and whether it drives the numerical criterion value lower (L) or higher (H)									
		*Based on Drinking Water MCL									
		**PCB Scenario is 4 x 10 ⁻⁵ resulting in a criterion of 0.00029 ug/L; since it is higher than NTR, the NTR is used.									

Questions and Discussion

Please identify yourself before asking questions.

Thank you!

September 30, 2014

Materials in the Preliminary Draft Rule Package

Melissa Gildersleeve, Watershed Management Section Manager

The package will include:

- Preliminary Draft Rule language
- Preliminary Draft Cost Benefit Analysis
- Preliminary Draft Small Business Economic Impact Statement
- Support papers for key topics
- Scoping Notice under the State Environmental Policy Act for a Draft Environmental Impact Analysis

Next Steps to a Final Rule

- File a formal Draft Rule (CR102)
 - Hold hearings on the draft rule
 - Solicit and review comments on the draft rule
 - Develop a responsiveness summary on the comments received
 - This will happen in early winter 2015
- Formally adopt the final rule (CR103)
 - This will happen after the 2015 legislative session.
 - Rule adoption must be completed no later than 180 days after the filing of the CR102, in accordance with Administrative Procedures Act.

Important Process Steps to be Aware of after Washington Adopts New Rules

- The state needs EPA federal approval before the rules become effective for federal actions.
- If EPA issues a disapproval, Washington has 90 days to resubmit or EPA will start federal promulgation.

Helpful Resources

- November 6, 2013 Public Meeting
 - Presentation on rule alternative for human health criteria, challenging chemicals, and implementation tools
<http://www.ecy.wa.gov/programs/wq/swqs/hhcpolicyforum.html>
- 7 Policy Forums (2012 – 2013)
 - Technical and policy information
<http://www.ecy.wa.gov/programs/wq/swqs/hhcpolicyforum.html>
- 7 Delegates' Table meetings (2012–2014)
 - Feedback from Stakeholder representatives
<http://www.ecy.wa.gov/programs/wq/swqs/delegatetable.html>

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Thank you!