



DEPARTMENT OF
ECOLOGY
State of Washington

Concise Explanatory Statement

Chapter 173-201A WAC

**Water Quality Standards for Surface Waters
of the State of Washington**

Summary of rulemaking and response to comments

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Concise Explanatory Statement

Chapter 173-201A WAC Water Quality Standards for Surface Waters of the State of Washington

Water Quality Program
Washington State Department of Ecology
Olympia, Washington 98504-7600

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Glossary and List of Acronyms

BCF	Bioconcentration Factor
BW	Body Weight
CFR	Code of Federal Regulations
CSO	Combined Sewer Overflow
DI	Drinking water Index
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
EPA 2000 guidance	EPA, 2000. U.S. Environmental Protection Agency. <i>Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health</i> , (EPA-822-R-00-004)
FCR	Fish Consumption Rate
HHC	Human Health Criteria
mg/L	Milligrams Per Liter
NPDES	National Pollutant Discharge Elimination System Permitting Program
PBDEs	Polychlorinated Biphenyls
PCBs	Polychlorinated Biphenyls; manufactured chemicals which persist and accumulate in food chains
RCW	Revised Code of Washington
RL	Risk Level
SDWA	Safe Drinking Water Act
TMDL	Total Maximum Daily Load, or Water Clean-Up Plan
µg /L	Micrograms per liter
WAC	Washington Administrative Code (The Water Quality Standards for Surface Waters of the State of Washington are in Chapter 173-201A WAC)
WQS	Water Quality Standards (formally known as Chapter 173-201A, WAC)

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Introduction

The purpose of a Concise Explanatory Statement is to:

- Meet the Administrative Procedure Act (APA) requirements for agencies to prepare a Concise Explanatory Statement (RCW 34.05.325).
- Provide reasons for adopting the rule.
- Describe any differences between the proposed rule and the adopted rule.
- Provide Ecology's response to public comments.

This Concise Explanatory Statement provides information on The Washington State Department of Ecology's (Ecology) rule adoption for:

Title: Water Quality Standards for Surface Waters of the State of Washington

WAC Chapter(s): 173-201A

Adopted date: August 1, 2016

Effective date: September 1, 2016

Note: The Environmental Protection Agency must approve the rule before it can be used for Clean Water Act actions.

To see more information related to this rulemaking or other Ecology rulemakings please visit our web site: <http://www.ecy.wa.gov/laws-rules/index.html>

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Reasons for Adopting the Rule

This rulemaking addresses two specific areas of the water quality standards:

- 1) Development and adoption of new human health criteria.
- 2) Revision and expansion of some of the tools in the standards that help in implementation.

New Human Health Criteria

Human health criteria are numeric water concentrations for toxic substances that protect people who consume fish and shellfish from local waters and who drink untreated water from local surface waters. These criteria are calculated using a variety of different factors, including, but not limited to, chemical-specific toxicity factors for effects to humans, how chemicals move from water into fish and shellfish, as well as other factors. The new human health criteria will be used for federal Clean Water Actions, including: wastewater discharge permits, water pollution identification, and water cleanup plans.

Revised and Expanded Implementation Tools

The WQS contain a number of tools that relate directly to how the criteria are met, and are implemented in both permits and regulatory orders. Ecology updated two of the tools (compliance schedules and variance requirements) that were already in the WQS, and developed new rule language for intake credits and combined sewer overflow systems. These tools will be available for use in new and updated wastewater discharge permits, and will help entities stay in compliance with regulatory requirements as they effectively work to meet permit limits and control sources of pollutants.

Legislative background/federal law/statutory authority

All states are required to adopt surface water quality standards by a federal law: the Federal Water Pollution Control Act (hereinafter called the Clean Water Act). Surface waters include streams, lakes, river, bays, and marine waters.

States adopt water quality standards to:

- Protect public health or welfare.
- Enhance the quality of water.
- Serve the purposes of the Clean Water Act.

Section 303(c) of the Clean Water Act provides the federal legal basis for the water quality standards program. Section 303(c)(2)(b) specifically requires states to adopt criteria for toxic priority pollutants. The federal regulatory requirements governing the water quality standards program, the Water Quality Standards Regulation, are published by the federal government in the *Code of Federal Regulations* (CFR) at 40 CFR 131.

Washington state law gives Ecology authority and responsibility to protect the quality of Washington waters and implement federal Clean Water Act programs. This authority and responsibility, with regard to water quality standards, can be found in the Revised Code of Washington (RCW) Water Pollution Control Act: RCW 90.48.030, RCW 90.48.035, and RCW 90.48.260(1).

Differences between the Proposed Rule and Adopted Rule

RCW 34.05.325(6)(a)(ii) requires Ecology to describe the differences between the text of the proposed rule as published in the *Washington State Register* and the text of the rule as adopted, other than editing changes, stating the reasons for the differences.

The rule adopted on August 1, 2016 differs from the rule proposed on February 1, 2016. Ecology made these changes:

- In response to comments we received during the formal comment period.
- To ensure clarity and consistency.
- To meet the intent of the authorizing statute.
- To consider new information.

The following content describes the changes between the proposed and adopted rule language, and Ecology's reasons for making them. New language is underlined, and deleted language is in strikethrough.

- Example: New language
- Example: ~~Deleted language~~

Change to WAC-173-201A-020

Ecology clarified the definition of "intake credit" to be consistent with language in section WAC 173-201A-460(a).

Proposed rule language

"Intake credit" is a procedure for establishing effluent limits that take into account the amount of a pollutant that is present in waters of the state, at the time water is removed from the body of water by the discharger or other facility supplying the discharger with intake water."

Final rule language

"Intake credit" is a procedure for establishing effluent limits that takes into account the amount of a pollutant that is present in waters of the state, at the time water is removed from the same body of water by the discharger or other facility supplying the discharger with intake water."

Change to WAC-173-201A-240(5)

Based on public comment, Ecology moved language regarding criteria revision from the section that addresses only aquatic life protection ((5)(a)) to the more inclusive provision (5) that will include both aquatic life and human health.

Proposed rule language

(5) The following criteria, found in Table 240, shall be applied to all surface waters of the state of Washington. Values are $\mu\text{g/L}$ for all substances except ammonia and chloride, which are mg/L , and asbestos which is million fibers/L.

*(a) **Aquatic life protection.** The department may revise the following criteria in Table 240 for aquatic life on a statewide or water body-specific basis as needed to protect aquatic life occurring in waters of the state and to increase the technical accuracy of the criteria being applied. The department shall formally adopt any appropriate revised criteria as part of this chapter in accordance with the provisions established in chapter 34.05 RCW, the Administrative Procedure Act. ~~The department shall ensure there are early opportunities for public review and comment on proposals to develop revised criteria.~~*

Final rule language

(5) The following criteria, found in Table 240, shall be applied to all surface waters of the state of Washington. Values are $\mu\text{g/L}$ for all substances except ammonia and chloride which are mg/L , and asbestos which is million fibers/L. The department shall formally adopt any appropriate revised criteria as part of this chapter in accordance with the provisions established in chapter 34.05 RCW, the Administrative Procedure Act. The department shall ensure there are early opportunities for public review and comment on proposals to develop revised criteria.

*(a) **Aquatic life protection.** The department may revise the criteria in Table 240 for aquatic life on a statewide or water body-specific basis as needed to protect aquatic life occurring in waters of the state and to increase the technical accuracy of the criteria being applied. The department shall formally adopt any appropriate revised criteria as part of this chapter in accordance with the provisions established in chapter 34.05 RCW, the Administrative Procedure Act.*

Change to WAC 173-201A-240: Cadmium footnote indicators

Based on public comments, Ecology corrected footnote indicators for cadmium. The proposed rule language included an incorrect aquatic life criteria footnote indicator due to a transcription error.

Proposed rule language

		Aquatic Life Criteria – Freshwater	
Chemical	CAS#	Acute	Chronic
Cadmium	7440439	(I, c, dd)	(I, c, dd)

Final rule language

		Aquatic Life Criteria – Freshwater	
Chemical	CAS#	Acute	Chronic
Cadmium	7440439	(i, c, dd)	(j, c, dd)

Change to WAC 173-201A-240: Bis(2-Chloroisopropyl) Ether

After the rule proposal comment period closed, EPA notified Ecology that information from EPA on which Ecology had originally based the proposed criteria for Bis(2-Chloroisopropyl) Ether was in error. Ecology corrected the error, which includes changing the CAS # and removing the criteria from Table 240. Please see Key Decision Document (Publication no. 16-10-025) for documentation to support this change.

Proposed rule language

		Human Health Criteria for Consumption of	
Chemical	CAS#	Water & Organisms	Chronic
Bis(2-Chloroisopropyl) Ether	108601	1,100	7,400

Final rule language

		Human Health Criteria for Consumption of	
Chemical	CAS#	Water & Organisms	Organisms Only
Bis(2-Chloroisopropyl) Ether	39638329	-	-

Change to WAC 173-201A-510(4)(c)

Based on public comments, Ecology removed reference language from the proposed rule. This language was not needed and added confusion to this section. Additionally, the word “practicable” changed to “possible” to make the state language consistent with language in the federal regulations found at 40 CFR 122.47.

Proposed rule language

(d) Prior to establishing a schedule of compliance, the department shall require the discharger to evaluate the possibility of achieving water quality standards via nonconstruction changes (e.g., facility operation, pollution prevention). Schedules of compliance shall meet requirements in WAC 173-220-140 and shall require compliance with the specified requirements as soon as practicable.

Final rule language

(d) Prior to establishing a schedule of compliance, the department shall require the discharger to evaluate the possibility of achieving water quality standards via nonconstruction changes (e.g., facility operation, pollution prevention). Schedules of compliance shall require compliance with the specified requirements as soon as possible.

Change to WAC 173-201A-510(4)(b)

Based on public comments, Ecology changed the word “practicable” changed to “possible” to make the state language consistent within the rule, and also consistent with language in the federal regulations found at 40 CFR 122.47.

Proposed rule language

(b) Schedules of compliance shall be developed to ensure final compliance with all water quality-based effluent limits and the water quality standards ~~in the shortest practicable time~~.

Final rule language

(b) Schedules of compliance shall be developed to ensure final compliance with all water quality-based effluent limits and the water quality standards as soon as possible.

Change to WAC 173-201A-510(4)(e)

In 2009, the legislature directed Ecology to authorize compliance schedules longer than 10 years to implement TMDL requirements if certain conditions are met (RCW 90.48.605). Since the rule language no longer limits compliance schedules to 10 years, the proposed language in WAC 173-201A-510(4)(e) authorizing “a longer period of time” was unclear. Ecology reworded WAC 173-201A-510(4)(e) was reworded to improve clarity.

Proposed rule language

(e) When an approved total maximum daily load, ~~or TMDL~~, has established waste load allocations for permitted dischargers, ~~a longer period of time for a compliance schedule may be authorized if the department has determined that:~~

Final rule language

(e) When an approved total maximum daily load has established waste load allocations for permitted dischargers, the department may authorize a compliance schedule longer than ten years if:

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Response to Comments

Description of comments

Ecology received comments from 77 entities on the proposed rule. Comments ranged from short e-mail messages to lengthy (100 + page) submittals. Ecology grouped the comments according to major topics related to the rulemaking. While many comments required individual response, in some cases common themes emerged among the submittals. In these cases, Ecology summarized similar comments at the beginning of each major topic heading, and provided responses to the summarized comments. Ecology also indicated the specific commenter ID numbers associated with the specific summarized comment.

For individual comments, Ecology made an effort to include actual comments verbatim, however it was sometimes necessary to paraphrase or take only excerpts of lengthy comments.

Readers should note the following when reading the response to comments:

- 1) Each commenter has a unique identifying number, called the Commenter ID. These are found in the Commenter List and are organized in alphabetical order by last name, including organization affiliations where appropriate. The individual comment/response tables include the Commenter ID number(s) in the middle column above each comment (please note that the comment/response tables do not identify commenters by name).
- 2) The comments are grouped according to major topics, by Commenter ID number. Your comments might be found in a number of different topic areas. Please see the Commenter Index to find page numbers where your comments and Ecology's responses can be found.
- 3) Appendix B contains all of the transcribed hearing testimony, and Appendix D contains copies of all written comments. Please refer back to the original comment letter or testimony if you desire more context on the specific comment. Due to the size of this document, Appendix D is a separate document (Publication no. 16-10-027)
- 4) In some cases, the response will refer you to other topic sections of the Response to Comments. For instance, you will see the phrase "Please refer to the section on Fish Consumption Rate in this Response to Comments." In these cases, refer to other sections because relevant information to address the comment is also in those other sections.
- 5) Some comments include acronyms or abbreviations used for specific terms. The Glossary and List of Acronyms provides a full list of abbreviations and acronyms.

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Commenter List

The following table lists the names of organizations or individuals who submitted a comment on the rule proposal. Appendix A provides a full list of the pages where you can find Ecology’s response to each commenter’s comment(s).

Commenter ID	Commenter Name(s)	Commenter Organization
1	Allen, W. Ron	Jamestown S'Klallam Tribe
2	Andes, Fredric P.	Federal Water Quality Coalition
3	Barnes, Robert B.	Citizen
4	Barrow, Pamela	Northwest Food Processors Association
5	Beard, Alli	Spokane Riverkeeper
6	Bell, Nina	Northwest Environmental Advocates
7	Biller, Judith	Citizen
8	Brimmer, Janette K. and Matthew R. Baca	Waterkeepers Washington
9	Brooks, Kerry R.	Citizen
10	Durheim, Brian	Spokane Canoe and Kayak Club
11	Ellsworth, Matthew	American Exploration & Mining Association
12	First, Lee and Eleanor Hines	RE Sources for Sustainable Communities
13	Forsman, Leonard	Suquamish Tribe
14	Fougere, Merry	Spokane Riverkeepers
15	Frick, Brandy	Eastern WA University
16	Gering, Dave	Manufacturing Industrial Council
17	Goddard, Madeline Fong	Seattle Public Utilities
18	Gogins, Karen	Citizens for a Healthy Bay

Commenter ID	Commenter Name(s)	Commenter Organization
19	Hair, Marilyn	University of Washington
20	Hartsoch, Elizabeth	Citizen
21	Jefferson, Merle	Lummi Nation
22	Johnson, Ken	Weyerhaeuser
23	Johnson, Mary Lou	Spokane Riverkeeper
24	Joseph, Jason L.	Sauk-Suiattle Indian Tribe
25	Kaser, Valarie	Enrolled Makah Tribal member
26	Kieffer, B.J.	Spokane Tribe of Indians
27	Kistlet, Claude	Citizen
28	Knox, Janet	Pacific Groundwater Group
29	Loehr, Lincoln	Citizen
30	Loomis, Lorraine	Northwest Indian Fisheries Commission on behalf, and at the behest of the following member tribes: the Hoh Tribe, Jamestown S'Klallam, lower Elwha Kia lam Tribe, Lummi Nation, Makah Tribe, Muckleshoot Indian Tribe, Nisqually Indian Tribe, Nooksack Indian Tribe, Port Gamble S'Klallam Tribe, Puyallup Tribe of Indians, Sauk-Suiattle Indian Tribe, Skokomish Indian Tribe, Squaxin Island Tribe, Stillaguamish Tribe of Indians, Suquamish Tribe, Swinomish Tribal Community, Tulalip Tribe, Upper Skagit Tribe, Quinault Nation, and the Quileute Nation.
31	Lumley, Babtist Paul	Columbia River Inter-Tribal Fish Commission
32	Maines, Billy	EPA Region 10 Tribal Operations Committee
33	Maloney, Doreen	Upper Skagit Indian Tribe

Commenter ID	Commenter Name(s)	Commenter Organization
34	McCabe, Christian and Frank E. Holmes, Dallin Brooks, Jeffrey T. Miller, Gary Chandler, Steve Shestag, David Hulse, Barry Hullett, Kevin Rasler, Bernard P. Leber, Jr., Patrick W. Ortiz, Paul F. Perlwitz, Patrick Jablonski, Richard Garber, Laura Verity, Bryan S. Graham, Ken Johnson, and Kevin C. Scott	The Northwest Pulp & Paper Association, Western States Petroleum Association, Western Wood Preservers Institute, Treated Wood Council, Association of Washington Business, The Boeing Company, Alcoa Wenatchee Works, Intalco Aluminum Corporation, Inland Empire Paper Company, Kaiser Aluminum Washington, LLC, KapStone Kraft Paper Corporation, Nippon Paper Industries USA, Nucor Steel Seattle, Inc., Packaging Corporation of America, Ponderay Newsprint Company, Schnitzer Steel Industries, The Weyerhaeuser Company, and the Port Townsend Paper Corporation
35	McCaslin, Deborah	Valley View Sewer District
36	McCloud, Farron	Nisqually Indian Tribe
37	Menka, Nazune	Seattle University Native American Student Association President
38	Miller, James W.	City of Everett
39	Naylor, Char	Puyallup Tribe of Indians
40	Nelson, Rusty	Spokane Veterans for Peace
41	Nonemacher, Darcy	Washington Environmental Council
42	O'Neill, Catherine A.	Citizen
43	Oeinck, Robert	Citizen
44	O'Keefe, Gerry	Washington Public Ports
45	Oleson, Melvin	Citizen
46	Olivers, Clair	WA Assoc. of Sewer and Water Districts
47	O'Neill, Catherine	Seattle University School of Law

Commenter ID	Commenter Name(s)	Commenter Organization
48	Opalski, Daniel D.	U.S. Environmental Protection Agency, Region 10
49	Ortiz, Patrick W.	KapStone Kraft Paper Corporation
50	Otal, Nav	City of Bellevue
51	Passmore, Gary W.	Confederated Tribes of the Colville Reservation
52	Peck, Norman D.	Citizen
53	Quaempts, Eric	Confederated Tribes of the Umatilla Indian Reservation
54	Ressler, Sophia	Citizen
55	Rhodes, Mark	Citizen
56	Rigdon, Phil	Confederated Tribes and Bands of the Yakama Nation
57	Roskelley, John	Personal comment
58	Sanders, Theresa M.	City of Spokane
59	Savage, Vicki L.	Citizen
60	Schanfald, Darlene	Olympic Environmental Council
61	Schroeder, Carl	Association of Washington Cities
62	Schwartz, Jerry	American Forest & Paper Association
63	Seaman, Robert L	Ten Mile Creek Clean Water Committee
64	Sheldon, Melvin R.	The Tulalip Tribes
65	Shestag, Steven	The Boeing Company
66	Stone, Kenneth M.	Washington State Dept. of Transportation
67	Stucker, Kara	Citizen
68	Swanson, Robert	Citizen

Commenter ID	Commenter Name(s)	Commenter Organization
69	Tobin, Lisa D.	City of Auburn
70	True, Christie	King County
71	Visintainer, Mike	Silver Bow Fly Shop
72	White, Jerry Jr.	Spokane Riverkeeper
73	Wiggins, Margaret	Citizen
74	Wilke, Chris	Puget Soundkeeper
75	Windrem, Ken	Citizen
76	Woodruff, Charles	Quileute Tribe
77	Yanity, Shawn	Stillaguamish Tribe of Indians

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Comments and Responses

Ecology accepted comments between February 1, 2016 and April 22, 2016. This section provides comments that we received during the public comment period and our responses. We grouped comments into major topics related to the water quality standards rulemaking. In cases where we summarized similar comments, comments and responses appear at the beginning of each topic. (RCW 34.05.325(6)(a)(iii))

Major Topics for Response to Comments

- 1) Human Health Criteria
 - Fish Consumption Rate
 - Risk Level
 - Bioconcentration Factors
 - Body Weight
 - Drinking Water intake
 - Toxicity Factors
 - Relative Source Contribution
 - Lifespan
 - Inputs to the Equation
 - Toxics Table – Table 240
- 2) Specific Chemicals of Concern
 - PCBs
 - Arsenic
 - Mercury
 - Dioxin (2,3,7,8-TCDD)
 - Other Pollutants of Concern
- 3) Implementation Tools
 - (Use of) Implementation Tools
 - Variances
 - Compliance Schedules
 - Intake Credits
 - Combined Sewer Overflow Treatment Plants
- 4) Other Comments on Rule Revisions
 - Downstream Waters Protection
 - Tribal Treaty Rights
 - General Support of State Revisions
 - Don't Support State Rule Revisions
 - Miscellaneous

- 5) Preliminary Cost Benefit Analysis
- 6) Draft Implementation Plan
- 7) Draft Environmental impact Statement

Human Health Criteria

Fish Consumption Rate

Summary of Comments

Almost every comment letter received during the public comment period included comments on fish consumption rates (FCR), and the views expressed diverge widely among groups and individuals. These comments included issues of suppression, fish advisories, tribal treaty rights and environmental justice, the FCR of 6.5 g/day in the EPA's National Toxics Rule, statistics used to represent the FCR, and many other comments. Because of the breadth and number of the similar comments related to FCR, Ecology has developed a general comment/response to many of these comments.

Individual comments and responses on FCR are included in the table below this General Response section.

General Comment/Responses on FCR

1. General Comment: 1, 5, 8, 12, 13, 19, 30, 32, 36, 39, 41, 48, 53, 54, 70

The national average of 6.5 g/day is not protective of Washington consumers. Commenters also agreed with the decision by the state to identify tribes as a “highly exposed population” in the establishment of a fish consumption rate for Washington.

Response: Ecology agrees, and did not propose using the rate of 6.5 in the proposed rule. This value was used in the EPA's current National Toxics Rule and is not part Washington's proposed or final rule. Ecology appreciates the support for using tribal survey data to reflect the “highly exposed population” in Washington.

2. General Comment: 5, 6, 13, 32, 39, 48, 53, 77

The FCR of 175 g/day is only acceptable if paired with a cancer risk level of 10^{-6} .

Response: Ecology is proposing in this rule to use a cancer risk level of 10^{-6} .

3. General Comment: 1, 8, 10, 12, 13, 21, 24, 30, 36, 39, 42, 51, 52, 53, 76, 77

The FCR of 175 g/day should be increased because some regional tribal communities have higher rates of consumption that should be used in criteria calculations. The existing rate is grossly under-representative of fish consumption in Washington, especially for Tribal communities, thereby exposing tribal people to ongoing harm. Some commenters also feel that 175 g/day reflects a suppressed FCR for tribes that does not account for the suppression of fish consumption resulting from the

availability of fish and shellfish, habitat degradation, biological and chemical contamination, or access to fishing grounds.

Response: These higher FCRs for different groups represent statistics that are, in general, upper percentiles. Ecology is not using an upper percentile to represent the FCR. Ecology is using a FCR value that represents the averages of highly exposed populations, as represented by the FCR surveys of the three highest consuming tribes in Washington. The survey information used to develop 175 g/day was (1) from three Puget Sound tribes (the highest consuming tribes in Washington) that we have technically defensible data for, as per Ecology 2013) that consume both fish and shellfish, and (2) collected before the Puget Sound fish advisories for PCBs or mercury were enacted by the WDOH, and as such are representative of FCRs that were not suppressed by fears of toxics that might be elicited by these particular state fish advisories. Both of these factors add to the protectiveness of the criteria. In addition, the FCR includes all fish and shellfish consumed regardless of source (such as grocery store, overseas sources, etc....), and as such adds an additional layer of protectiveness because it reflects consumption from sources beyond Washington waters, which are the only waters that the criteria are applied to.

As the comments recognize, factors other than fears of toxics likely lowered the FCR from historic or unsuppressed rates, and those factors cannot be addressed by human health criteria. These include:

- *Habitat degradation and other factors that contributed to suppressed supply of local fish and shellfish.*
- *Consumer choice of non-fish/shellfish foods available at the time of the surveys and that may have replaced fish/shellfish in the diet because of lower price, more desirable to eat, etc....*
- *Fear of pollutants prior to the Puget Sound wide fish advisories for mercury and PCBs.*
- *Access to fishing areas.*

The National Environmental Justice Advisory Council (NEJAC 2002; page 48) describes suppression effects in the 2001 Suquamish survey (one of the three Puget Sound Surveys directly used to develop the FCR of 175 g/day), and characterizes the complexity and multiple causes of suppression:

“ A recent study of the Suquamish Tribe reports that approximately 2/3 of respondents (67%) indicated that their consumption patterns had changed over time, with 68% of these indicating that they ate less seafood (57%) or ate a different mix of species (11%) than twenty years ago.¹³⁰ “Most explanations for changes in consumption related to changes in family composition which affected harvesting patterns, accessibility/availability of finfish and shellfish, and restricted harvesting opportunities due to ‘red tides’ and increased pollution.”¹³¹ As one respondent elaborated:

We used to eat lingcod, sole, rockfish, flounder, and I caught Grunters for my grandfather. All of my brothers used to fish; now, only one of us can because the fish are diminishing in number . . . The water is not clean. Septics are malfunctioning . . . There’s pollution from the Navy, and the filling at Keyport had a big effect . . . Beaches are dug out . . . We need to reseed and enhance our

beaches in order to have the number of clams we need and are used to . . . We eat more geoduck now, because more are available to us, but we used to dry oysters and clams; they're good for teething . . ."

¹³⁰*The Suquamish Tribe, Fish Consumption Survey of the Suquamish Indian Tribe of the Port Madison Indian Reservation, Puget Sound (2001). Note that 31% of those who indicated that their consumption practices had changed indicated that they eat more fish now (at the time of the 2001 survey)."*

The human health criteria for toxics cannot increase abundance of fish and shellfish. However, the new human health criteria might, over time, result in reductions in fish advisories if the existing contamination in the system (e.g., already cycling in the biota and found in sediments) is not at such levels that source control of pollutants cannot sufficiently reduce concentrations in fish to such levels as to result in removal of fish advisories. With regard to abundance and availability, Washington supports and implements programs to improve aquatic habitat, and supports a significant hatchery program to provide additional fish and bivalves for harvest.

As a matter of clarity, the FCR used in the equations (175 g/day) is not intended to account for suppression from non-CWA-related situations, or to address aspirational or heritage rates. The FCR as proposed is an estimate of relatively current average consumption of the most highly exposed populations in Washington as documented in recent surveys, with added safety factors such as inclusion of marine species and addition of all fish and shellfish consumed regardless of source. In the future, if consumption rates increase to such an extent that the current criteria are not representative of average consumption rates of the high-consuming tribes or other populations in Washington, the criteria can be updated with consideration of new information. The triennial review public process is one opportunity to initiate this. For reference see: NEJAC, 2002. FISH CONSUMPTION AND ENVIRONMENTAL JUSTICE. A Report developed from the National Environmental Justice Advisory Council Meeting of December 3-6, 2001. November 2002 (revised).

4. General Comment: 1, 8, 12, 13, 21, 24, 30, 36, 39, 76

Many tribal representatives and others commented that the range in Ecology's FCR Technical Support Document that recommended a proposed range for a default FCR of 157 to 267 g/day is too low.

Response: *The 2011-2012 Draft Fish Consumption Rates Technical Support Document was a draft published for public comment, not a final document. The document was finalized in 2013, and included consideration of tribal comments. The final Fish Consumption Rates Technical Support Document (Ecology, 2013) contains information on fish consumption in Washington, but does not contain a recommendation on a FCR appropriate for human health criteria. This rulemaking used information from the final Technical Support Document and additional analyses, as well as an extensive public process, to develop the FCR of 175 g/day.*

5. General Comment: 1, 8, 12, 13, 24, 30, 39, 42, 53, 76, 77

The proposed fish consumption rate of 175 g/day is a minimum value that has not been endorsed by tribes as a stand-alone value, and several tribes have repeatedly stated that a fish consumption rate of at least 175 g/day is part of a package with other protective values used to derive human health criteria.

Response: Ecology understands and acknowledges that the tribes do not all endorse the FCR of 175, and that it is considered as interim by many. In the Decision Document Ecology states that the “Groups endorsing the use of this numeric value, at different times in the process, include EPA and several tribes.” This statement is correct, and does not imply continued support, or whether the proposed FCR should be considered interim or a value used in perpetuity. Ecology expects that as continued work to restore habitat is accomplished, average FCRs could increase over time, and with that increase the consideration of modification of the average FCR through the triennial review planning process and subsequent modification, via rulemaking, of the human health criteria might be appropriate. Ecology also acknowledges that for tribes the FCR of at least 175 g/day is part of a package with other protective values used to derive human health criteria. Comments on other inputs to the human health criteria equations are addressed in this Response to Comments.

6. General Comment: 18, 42, 54

Asian Pacific Islanders (API) should also be considered a high consuming population and API studies should be included in the determination of a FCR.

Response: Ecology compared the Asian Pacific Islander FCRs from Puget Sound, as summarized in Table 30 of Ecology’s Fish Consumption Rates Technical Support Document, Publication No. 12-09-058 (Ecology, 2013); see Table 30 on page 69 of the document. The percentile information from the API survey is comparatively lower than the percentile information for the Suquamish study (the tribe with the highest consumption rates): median = 74 g/day from the API study, median = 132 g/day from Suquamish study. Average (mean) values were not reported for the API study, but because the mid and upper percentiles are all lower than the Suquamish study, it is reasonable to infer that this population is consuming amounts of fish and shellfish that, at the average, are not greater than the tribal studies used to develop the value of 175 g/day.

7. General Comment: 30, 39, 42, 51

Ecology appears to advocate a policy of adopting an average statistic in selecting a fish consumption rate for Washington, rather than EPA’s approach to the selection of a FCR that reflects an upper percentile of fish consumption data for tribes, and many commenters disagree with Ecology’s assertion that an “average” value is appropriate.

Regulatory standards commonly utilize upper percentiles of data when estimating exposure, and setting subsequent standards or thresholds for toxicity.

Response: Ecology chose a value representative of the average FCR of the three highest tribal FCR surveys from Puget Sound Tribes, (see Fish Consumption Rates Technical Support Document (Ecology, 2013, and Decision Document) to represent the FCR in Washington. EPA 2000 guidance indicates that the average, the median, or an upper percentile, are all acceptable values for state use when highly exposed populations are the basis of the FCR in the human health criteria equations. The basis of the Washington decision to use a representative average is described in the Decision Document. The criteria equations, and EPA 2000 guidance for those equations, use a mix of average (e.g., body weight) and upper percentile (e.g., drinking water intake) values in calculation, not all upper percentiles.

8. General Comment: 4, 30, 34, 39, 42, 48, 65

Some commenters debated on whether anadromous fish (such as salmon) or other marine fish should or should not be included in the FCR.

Response: Ecology determined that, for some salmon, pollutants in the fish were linked to proximity to urban areas. Ecology made a protective decision to include all anadromous fish in the FCR based on this finding. Ecology is not changing this decision. The rationale for the decision to include salmon (and other marine fish/shellfish) in the FCR is explained in the Decision Document. As explained, Washington data on contaminants in salmon indicate that some salmon contain contaminant levels that are associated with Puget Sound and urban development, which is within the scope of areas regulated under the CWA. The decision to include 100% salmon (although many salmon put on most biomass outside waters regulated under the CWA) is a risk management decision that adds additional protection to the criteria beyond the levels recommended in EPA guidance (EPA 2000 guidance (page 4-26) states “EPA recommends the...use of fresh/estuarine species data only”), and offsets other inputs to the equation where risk management choices were made that are less stringent than EPA’s guidance (e.g. use of a RSC = 1). This decision (whether perceived as overly protective or appropriately protective) is part of the process of balancing the inputs to the equation to result in human health criteria that are protective of people who consume fish and shellfish from Washington waters.

9. General Comment: 51, 52

Some comments debated whether harvest uses, and Usual and Accustomed Waters, should be included in the FCR established for this rulemaking.

Response: The rule addresses harvest uses of all (including Usual and Accustomed) waters in Washington, by tribal members or other members of the public. The current rule assumes that the designated uses being protected are the uses of harvest and of drinking water. Harvest is considered to be harvest practiced by all people taking fish and shellfish from Washington waters. The current rule takes into account protection of fish and shellfish resources from toxics for all

waters of the state, including the Usual and Accustomed waters. The human health criteria equations also include the assumption that untreated drinking water from Washington surface waters is used. “Untreated” in regard to the human health criteria refers to specific treatment to remove toxics from water prior to drinking it, and not to other water treatments such as filtration to remove solids, or chlorination to kill pathogens.

In light of the need to address waters where part of the current harvest could represent subsistence (including Usual and Accustomed waters that cover much of the state) the FCR and body weight included in the criteria calculations were based on tribal fish consumption survey information.

10. General Comment: 42, 54, 74

The new criteria will not improve fish advisories.

Response: *The proposed rule will, over time, result in reductions to toxics discharged to Washington waters, but whether those reductions result in fish advisories being lifted is not known. In many areas the existing load of these persistent chemicals in the sediment and biota is already large and overshadows any discharges to the water column (e.g., see PCB Chemical Action Plan (Washington State Dept. Ecology, February 2015 Publication no. 15-07-002) information for Puget Sound sources and loading). In some cases, toxics enter Washington waters via air deposition or other diffuse sources that are not regulated under the Clean Water Act, and are difficult to reduce. In other cases the route of a chemical to the biota can be controlled, and source reductions can result in fish advisories being lifted (e.g., the DDT fish advisory in the Yakima River). Fish advisories for mercury will be addressed in the future human health criteria rulemaking for mercury.*

11. General Comment: 2, 4, 11, 34, 65

The proposed use of a fish consumption rate of 175 grams a day for the rule is arbitrary, capricious, and not based on substantial evidence in the record. The 175 g/day fish consumption rate used to derive the proposed human health criteria is not supported by technical information and is not necessary to protect the residents of Washington. It is also inconsistent with past EPA guidance and is in conflict with the Washington risk policy to protect the average consumption rate of the general population, including consumers and non-consumers, to a risk level of 10^{-6} . Ecology should provide a clearer explanation of the basis of the FCR of 175 g/day and address comments that the FCR is not based on data.

Response: *Ecology disagrees that the fish consumption rate of 175 grams a day for the rule is arbitrary, capricious, and not based on substantial evidence in the record. The rate of 175 g/day was developed based on data as clearly explained in the Decision Document, and on an extensive public process including the Governor’s Advisory Group, numerous public meetings and workshops, including the Delegates Table and Policy Forums. The decision to apply the risk level of 10^{-6} to a highly exposed population is within the flexibility allowed states under EPA guidance.*

The FCR of 175 g/day is representative of average FCRs (“all fish and shellfish,” including all salmon, restaurant, locally caught, imported, and from other sources) for highly exposed populations that consume both fish and shellfish from Puget Sound waters. This numeric value was used by the Oregon Department of Environmental Quality to calculate human health criteria in a 2011 rulemaking. 175 g/day is considered an “endorsed” value. Groups endorsing the use of this numeric value, at different times in the process, include EPA and several tribes (see comment/response above regarding concerns about risk level in the proposed rule). Average FCR values for various highly exposed groups that harvest both fish and shellfish from Puget Sound waters are found in Ecology, 2013.

The range of average (mean) values for the three highest Puget Sound tribal average values are taken from Table I of Ecology’s Fish Consumption Rates Technical Support Document, Publication No. 12-09-058) (Ecology, 2013) at page xvii in the Executive Summary. The three highest average (mean) values are from the Tulalip, Squaxin Island, and Suquamish tribal surveys, (average FCRs are, respectively, 82 g/day, 84 g/day, 214 g/day). The mean of the three tribal studies combined is 127 g/day. The value of 175 g/day was chosen as representative of the average value/values of these surveys. While 175 g/day is not a calculated value, it was chosen as part of the risk management process for this rule, and represents the best available science for purposes of this rulemaking.

12. General Comment: 2, 4, 11, 34, 65

The 175 g/day fish consumption rate used to derive the proposed human health criteria is not necessary to protect the residents of Washington, is inconsistent with past EPA guidance, and is in conflict with the Washington risk policy to protect the average consumption rate of the general population, including consumers and non-consumers, to a risk level of 10^{-6} . Some commenters also suggested that the FCR should be based on a median of the state’s general population, not on highly exposed populations, which is well within EPA guidance and supported by case law.

***Response:** The state made the risk management decision in 2014 to base the FCR on a representative average of highly exposed populations in order to ensure protection of all consumers in Washington from both cancer and non-cancer effects. The use of a median value, as suggested in the comments, is within EPA guidance, but is not reflective of EPA’s current recommended FCR for subsistence fishers (a highly exposed group). EPA’s 2000 guidance (pages 4-27 to 4-28) recommends that state criteria use an average intake rate of 142.4 g/day for subsistence fishers: “EPA believes that the assumption of 142.4 grams/day is within the average consumption estimates for subsistence fishers based on studies reviewed.”*

Ecology agrees that the FCR of 175 is likely greater than needed to protect the average general population of Washington, based on both consumers and non-consumers, from additional lifetime cancer risk at the 10^{-6} risk level. As commenters note elsewhere, the populations with the highest fish consumption (used to develop the FCR of 175 g/day) are a small percentage of the entire Washington population and for the Suquamish study, “contain values that may be highly

influenced by the consumption of just a few individuals”, (quote from Oregon DEQ Human Health Focus Group and the Fish Consumption Rates Technical Support Document (Ecology, 2013)). As such, use of this information helps ensure that all consumers are protected.

Specific Comments on Fish Consumption Rate	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 1</p> <p>Fish and shellfish remain staple foods in many Tribal households. The proposed FCR of 175 g/day is low compared to fish consumption rates at many tribes. Public health is impacted by toxic chemicals in the food chain. The rule proposed by the Department of Ecology may greatly diminish the protective benefit of a higher fish consumption rate. We recommend adoption of the criteria proposed by the EPA.</p>	<p><i>Please see #1, 3, 4, and 5 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 2</p> <p>The Department has calculated its new standards based on a fish consumption rate of 175 grams per day. Applying that value on a State-wide basis is improper. That high fish consumption rate is based on studies of groups that eat much more fish on a daily basis than the general population. In developing State-wide standards, the Department should focus on ensuring that consumers of fish in the general population are not exposed to unacceptable risks. By instead using the fish consumption rate of a sub-group that eats considerably more fish, the Department is deriving State-wide standards that are far more stringent than necessary.</p>	<p><i>Please see #11 and 12 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 4</p> <p>NWFPA does not support the inclusion of all fish and shellfish--regardless of sources and including anadromous fish. Ecology has chosen to include “all fish and shellfish (which includes the additional protective step of including local and non-local sources, such as salmon, restaurant,</p>	<p><i>Please see #4 of the “FCR” general response section above.</i></p>

<p>locally caught, imported, and from other sources).” Washington’s regulations will have no effect on contaminant levels in some of these fish and shellfish and minimal impact to fish such as salmon. Salmon species spend months to a year in freshwater and three to five years in saltwater habitats. While there is clearly consumer exposure to contaminants from market and non-resident fish, including them in the fish consumption rate (with the resulting toxics substances criteria) places the burden of contaminants in these fish on Washington dischargers. This would expand the scope of what the Clean Water Act is expected to control.</p>	
<p>Commenter ID: 4</p> <p>The proposed rule sets a fish consumption rate at 175 grams per day and is based on local “highly exposed populations” rather than the general population. The methods used and the decisions made by the Department of Ecology result in a rate that represents a value of nearly the 95th percentile of the highest consumers in the state. This consumption rate represents a policy decision rather than a current state-wide survey of fish consumption or current survey of highly-exposed populations. NWFPA is concerned about the data used to determine the fish consumption rate—the quality of surveys, age of surveys, as well as the assumption that short-term dietary surveys reflect long-term dietary behaviors.</p>	<p><i>Please see #11 and 12 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 5</p> <p>The rule change that the Washington Department of Ecology has proposed takes several steps in the right direction but fall short in helping us keep our Spokane River fishable for the public. Ecology's proposed rule has improved the fish consumption formula over the existing rule. The formula seems a more realistic consumption rate of 175 grams of fish per day while keeping the acceptable human health risk at one case of cancer in a million fish</p>	<p><i>Please see #1 and 2 of the “FCR” general response section above.</i></p>

<p>eating residents. These standards would make Washington's waters cleaner and its fish safer to eat.</p>	
<p>Commenter ID: 6 NWEA fully supports the use of the 175 grams/day fish consumption rate and the one-in-a-million cancer rate.</p>	<p><i>Please see #2 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 8 Ecology’s proposed 175 g/day fish consumption rate is insufficiently protective of the many Washington residents who eat fish in excess of that rate. The increase from 6.5 g/day is a step in the right direction, but survey data supports even stronger protection based on actual amounts of fish consumed by many members of the community affected by this rule. Waterkeepers advocates for Ecology and EPA to adopt more protective consumption rates in accordance with the law and surveys. Moreover, should the tribes decide that they can no longer accept such a compromise, Waterkeepers will also then discontinue its support.</p>	<p><i>Please see #1, 3, 4, and 5 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 10 Fish consumption rates are not realistic especially to those of us who depend on fish we have caught on a regular weekly basis.</p>	<p><i>Please see #3 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 11 A more robust rationale for the selected FCR is needed; this rationale should be added to the Key Decisions Overview, and the inaccurate description of the selected rate as an “average” value should be corrected. A more robust and defensible rationale based on the extensive efforts by Ecology to develop an FCR for Washington State should be provided. The selected FCR is stated to be representative of the “average” consumption of three high-consuming populations used in the Key Decisions Overview (Ecology 2016c) (see pages 4,</p>	<p><i>Please see #11 and 12 of the “FCR” general response section above.</i></p>

<p>18, 19, 23, 54). However, the average consumption by these groups is 127 g/day; the 175 g/day FCR proposed is 38% higher than the stated average value. The differences in these numbers may have big implications for some permittees.</p>	
<p>Commenter ID: 12</p> <p>The 175 grams per day fish consumption rate is a step in the right direction, but should be increased to be fully protective of our state’s population. Ideally, this rate should be set to 797 grams per day to be protective of our most sensitive populations. At the very least, it should be set to 250 grams per day as this would be satisfactorily protective of our state population. This will be more protective of not only humans, but also marine life in the Salish Sea.</p>	<p><i>Please see #1, 3, 4, and 5 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 13</p> <p>The State's proposed FCR of 175 g/day is less than most tribal subsistence rates, and is less than the mean FCR for Suquamish tribal members. The Suquamish Tribe and many of the other treaty tribes, agreed, however, that an FCR of 175 g/day (inclusive of anadromous fish) would be a step in the right direction, significantly reducing the potential for toxic chemicals to be discharged to state water bodies and allowing the State's rulemaking to proceed expeditiously. The tribes were clear that this was a compromise position that would benefit public health state-wide. The tribes were also clear that this compromise was based on the assumption that the State would not alter other exposure parameters to be less protective.</p>	<p><i>Please see #1, 2, 3, 4, and 5 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 18</p> <p>API and others eat more than 175g/day. We suggest you use EPA proposed value in the final rule.</p>	<p><i>Please see #6 of the “FCR” general response section above.</i></p>

<p>Commenter ID: 19, 41</p> <p>Supports the FCR increased to 175 gr/day.</p>	<p><i>Please see #1 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 21</p> <p>The proposed 175 g/day fish consumption rate is too low to adequately protect Lummi tribal members from toxic chemicals discharged into the environment.</p>	<p><i>Please see #3 and 4 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>In 2011-2012, the Washington Department of Ecology published a Technical Support Document that recommended a proposed range for a default FCR of 157 to 267 g/day. Tribes and others commented that this range is low.</p> <p>(Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Please see #4 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>Numerous studies document chemical uptake of persistent pollutants in fish. In particular, salmonids have been shown to accumulate toxic chemicals in freshwater, estuarine, and coastal marine areas of Washington. Water quality monitoring continues to yield additional information about the uptake of pollutants in Washington waters by salmonids and other fish species. Tribes support Ecology’s decision to include all fish in the fish consumption rate. Tribes support the Department of Ecology’s decision to include all species of salmon.</p>	<p><i>Please see #8 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>The Department of Ecology fails to acknowledge the need to address more than an “average” of the highly exposed population. Tribes agree with EPA’s approach to the selection of a FCR that reflects an upper percentile of fish consumption data for tribes, and disagree with Ecology’s assertion that an “average” value is appropriate.</p>	<p><i>Please see #7 of the “FCR” general response section above.</i></p>

<p>Regulatory standards commonly utilize upper percentiles of data when estimating exposure, and setting subsequent standards or thresholds for toxicity. The use of percentile values that protect over 90 percent of the population at risk are recommended.</p> <p>(Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	
<p>Commenter ID: 30</p> <p>The proposed fish consumption rate of 175 g/day is a minimum value that has not been endorsed by tribes as a stand-alone value. Several tribes have repeatedly stated that a fish consumption rate of at least 175 g/day is part of a package with other protective values used to derive human health criteria.</p>	<p><i>Please see #4 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>The proposed fish consumption rate of 175 g/day is lower than the rates of contemporary tribal fish consumption, unsuppressed fish consumption rates, or heritage rates. A FCR of 175 g/day represents a suppressed rate.</p> <p>(Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Please see #3 and 4 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>The state has correctly identified tribes as a “highly exposed population” in the establishment of a fish consumption rate for Washington.</p> <p>(Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Please see #1 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 32</p> <p>The Tribal Caucus commends that the Washington Department of Ecology (“Ecology”) for changes to the draft standards that were made from the</p>	<p><i>Please see #1 and 2 of the “FCR” general response section above.</i></p>

<p>previous version, particularly adoption of a consumption rate of 175 grams per day with a cancer risk of one in one million.</p>	
<p>Commenter ID: 34</p> <p>The proposed use of a fish consumption rate of 175 grams a day for the rule is arbitrary, capricious and not based on substantial evidence in the record. The 175 g/day fish consumption rate used to derive the proposed human health criteria is not supported by technical information and is not necessary to protect the residents of Washington Ecology should reject demands by EPA to base a FCR on “un-suppressed” fish consumption rates for northwest tribal members as claimed by EPA in its 2015 draft rule. EPA guidance accordingly does not require human health criteria to regulate pollutant levels in marine fish that do not accumulate pollutants in waters of the United States within the jurisdiction of a state. The default value of 17.5 g/day in EPA guidance thus reflects freshwater/estuarine fish and shellfish only. The range of consumption rates in the 2000 EPA guidance similarly do not include marine fish. Salmon, as a marine species, should accordingly be excluded from the consumption rate used to derive Washington’s criteria. The data on fish tissue samples from salmon in Puget Sound indicates that fish accumulate the predominant fraction of PCBs detected while in the ocean-phase of their life cycle. Including all salmon in the fish consumption rate is not likely to benefit public health for contaminants accumulated in marine waters beyond the jurisdiction of the state.</p> <p>(Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Please see #8, 11, and 12 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 36</p> <p>The Nisqually Tribe, along with the other regional Tribes, believes that the current 6.5 grams per day</p>	<p><i>Please see #1, 3, and 4 of the “FCR” general response section above.</i></p>

<p>under-represents tribal fish consumption and is not protective of the health of our tribal people. The proposed FCR of 175 g/day is low compared to fish consumption rates at many tribes.</p>	
<p>Commenter ID: 39</p> <p>Accurately determining the fish consumption rate is integral to regulators' ability to set protective human health water quality standards such that the level of toxic pollutants are low enough that fish remain safe to eat, even for people who eat greater amounts of fish than others. If a state sets the FCR lower than the amounts actually consumed, the human health water quality standards will not be protective for people consuming fish may ingest levels of toxins that will put them at increased risk for adverse health consequences. Failure to adopt human health water quality standards based on an accurate fish consumption rate, including a rate adequate to protect sustenance fishing by tribes and other cultures, is a failure to promulgate water quality standards that meet the requirements of the Clean Water Act.</p>	<p><i>Please see #1, 3, 4, and 5 of the "FCR" general response section above.</i></p>
<p>Commenter ID: 39</p> <p>Ecology has made the risk management decision to base the fish consumption rate used in the equation on "highly exposed populations." The state further concludes that the FCR should include "all fish and shellfish," including all salmon, restaurant, locally caught, imported, and from other sources" for highly exposed populations including tribes "that consume both fish and shellfish from Puget Sound waters".</p>	<p><i>Please see #1 and 8 of the "FCR" general response section above.</i></p>
<p>Commenter ID: 39</p> <p>Essential to setting levels that are sufficiently protective of all citizens of Washington State that consume fish, we agree with Ecology's proposed use of a fish consumption rate (FCR) of at least</p>	<p><i>Please see #2 of the "FCR" general response section above.</i></p>

<p>175 grams per day and a cancer risk level of 10..{i (one excess cancer in a million).</p>	
<p>Commenter ID: 39</p> <p>The 175 grams per day FCR is the negotiated value used in Oregon's updated human health criteria, which is based on the 90-95th percentile of Oregon fish consuming populations. This rate is in between 225 grams per day (mean of the Suquamish 15 Tribe's survey) and 125 grams per day (mean of the means of the Suquamish, Tulalip and Squaxin, Tribal FCR surveys). However, none of these values approximate the 95th percentile range of these tribal fish consumption studies. The mean of these studies at the 95th percentile range is about 448 grams per day. Still, these values don't come close to the historic, unsuppressed FCRs of the northwest's tribes, which are about 800-1000 grams per day. On par with these rates, EPA recently approved the Spokane Tribe's historic fish consumption rate of rate of 865 grams per day. Ecology's use of 175 g/day is arbitrary and capricious, and a violation of law.</p>	<p><i>Please see #3, 5, and 7 of the "FCR" general response section above.</i></p>
<p>Commenter ID: 39</p> <p>As important as the fish consumption rate is the acceptable cancer risk rate, or the "near zero" level recommended by EPA. The "near zero" level in Washington State has been set at 10^{-6}, a one in one million chance that the average fish consumer will get cancer sometime in his/her lifetime from eating fish. A 1×10^{-6} risk factor is generally considered protective by EPA.</p>	<p><i>Please see #2, of the "FCR" general response section above.</i></p>
<p>Commenter ID: 39</p> <p>The Puyallup Tribe agrees with the state's decision to explicitly account for salmon in the FCR for the development of the draft human health criteria. This decision is consistent with the 2000 Methodology's four preference hierarchy to use local data and/or data reflecting similar populations</p>	<p><i>Please see #8 of the "FCR" general response section above.</i></p>

<p>groups before considering the use of data from national surveys, or EPA default rates.</p>	
<p>Commenter ID: 39</p> <p>The simple fact is that the 175 g/day fish consumption rate was a negotiated rate reached after long discussions between Ecology and tribes in Washington. It was always clear that the tribes only meant for the 175 g/day to be an incremental step for this triennial review and was based upon a cancer risk rate of 10^{-6}. In fact, the fish consumption rate should be much higher to adequately protect the tribal subsistence right to take fish in their Usual and Accustomed fishing grounds. These rates as well as unsuppressed contemporary rates have been documented in Harper and Walker (2015).</p>	<p><i>Please see #2, 3, and 5 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 39</p> <p>Therefore, for the purposes of this triennial review, the Puyallup Tribe recommends a fish consumption rate of at least 175 grams per day¹, with a commitment in forthcoming triennial reviews, to review and adjust the fish consumption rate sufficiently to: 1) protect all tribal members throughout the State of Washington, including the subsistence use; and 2) fully protect treaty rights in tribal usual and accustomed fishing areas to fully exercise the right to _take fish in the quantities entitled to them explicitly under the Boldt decision U.S. v. Washington, 384 F.Supp. 312, (W.D. Wash., 1974).</p>	<p><i>Please see #3 and 5 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 39</p> <p>We agree with EPA that an FCR of 175 grams per day does not reflect unsuppressed consumption rates of Tribes, or heritage rates within the State of Washington.</p>	<p><i>Please see #3 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 42</p> <p>Ecology’s proposed human health criteria appropriately enlist an FCR that does not exclude</p>	<p><i>Please see #8 of the “FCR” general response section above.</i></p>

<p>anadromous species, such as salmon, from comprising the rate. This is an appropriate decision in view of the best available science and the relevant law. Ecology’s determination that it is not justified in excluding anadromous species from its calculation of the FCR is supportable on scientific and legal grounds. Ecology ought not alter this determination in the final rule.</p>	
<p>Commenter ID: 42</p> <p>Ecology’s proposed human health criteria enlist a FCR of 175 grams/day. Ecology characterizes this FCR as one that reflects the “average” of what it terms “highly exposed populations” affected by Washington’s WQS. While EPA’s proposed WQS enlist the same FCR, they do so based on a different rationale, focusing on the 95th percentile consumption rate of the tribal population. Ecology also characterizes its proposed 175 grams/day as an “endorsed value” and claims that “[g]roups endorsing the use of this numeric value, at different times in the process, include EPA and several tribes.” Ecology misportrays the various tribes’ and NWIFC’s positions, however. Among other things, the FCR does not stand alone; rather, it must be considered in concert with the other variables selected and approaches chosen. As noted above, the proposed 175 grams/day FCR is an apparent value; fish consumption at this rate is not actually supported for waters and fish contaminated with methylmercury, PCBs, dioxins, or arsenic. #8</p>	<p><i>Please see of the “FCR” general response section above.</i></p>
<p>Commenter ID: 42</p> <p>Ecology’s second proposed WQS enlist a FCR that reflects the “average” of what it terms “highly exposed populations” affected by Washington’s WQS, which Ecology defines to “include, among other groups, the following: tribes, Asian Pacific Islanders (API), recreational and subsistence fishers, immigrant populations, etc.” Ecology’s broad and open-ended definition of the target</p>	<p><i>Please see #7 of the “FCR” general response section above.</i></p>

population for protection is a source of concern inasmuch as the average FCR for such a broadly defined set of populations will surely be lower than an FCR that is adequately protective of tribal people exercising fully their rights to fish. To the extent that Ecology seeks to ensure protection of other groups (e.g., API populations) who may also have legally protected rights that are implicated by Washington’s WQS, it is worth noting that an approach that targets the tribal population exercising its fishing rights is likely also to be protective of these other groups (assuming currently available data about such groups’ fish consumption rates).

Commenter ID: 42

EPA has appropriately recognized the issue of suppression and recommended that human health criteria be derived by “selecting a FCR that reflects consumption that is not suppressed by fish availability or concerns about the safety of available fish.” Additionally, as EPA noted, “[d]eriving criteria using an unsuppressed FCR furthers the restoration goals of the CWA, and ensures protection of human health as pollutant levels decrease, fish habitats are restored, and fish availability increases.” A FCR selected from the 90th or even the 99th percentile of contemporary tribal consumption surveys will likely be considerably lower than historical fish intake levels and considerably lower than fish intake consonant with a more robust fish resource and full exercise of tribal fishing rights. Ecology fails to acknowledge the relevance of suppression to its derivation of the human health criteria set forth in its second proposed WQS. Ecology’s unwillingness to acknowledge or account for suppression is unsupportable.

(Please see original comment letter in Appendix A for more extensive discussion/description on the issue).

Please see #3, 5, and 7 of the “FCR” general response section above.

<p>Commenter ID: 42</p> <p>The fish consumption advisories that currently blanket the state's waters are due in large part to methylmercury and PCBs.</p>	<p><i>Please see #10 of the "FCR" general response section above.</i></p>
<p>Commenter ID: 48</p> <p>The EPA remains encouraged that Ecology is choosing to protect high fish consumers in Washington by deriving the state's human health criteria using local and regional fish consumption data. The EPA is also very supportive of the state's decision to include anadromous fish in the FCR used to derive the criteria, which is appropriate given the species that reside in Washington's nearshore and coastal waters, especially Puget Sound. The EPA acknowledges, however, that the tribes within the state have generally viewed 175 g/day as a compromise minimum value for current criteria-setting purposes, so long as it is coupled with a cancer risk level of 10^{-6}. Based on the EPA's review of existing data in Washington, in conjunction with consultation with the tribes, the EPA supports Washington's decision to derive the human health criteria using a FCR of 175 g/day and retaining a cancer risk level of 10^{-6}.</p>	<p><i>Please see #1, 2, and 8 of the "FCR" general response section above.</i></p>
<p>Commenter ID: 51</p> <p>The harvest and consumption of fish, and in some cases shellfish, remains at the heart of tribal communities, and is a cultural, nutritional, health, and economic necessity as well as a treaty right. The proposed FCR of 175 g/day is low compared to fish consumption rates at many tribes. To illustrate the point of the proposed fish consumption rate being low in comparison with that of tribes, the CTCR completed an extensive consumption and resource use survey for the Colville Indian Reservation with EPA, Westat, and Environment International in June 2012i. The results of this study indicate that Tribal Members who regularly consume fish eat an average of 384</p>	<p><i>Please see #7 and 9 of the "FCR" general response section above.</i></p>

<p>grams per day at the 90th percentile, and the 90th percentile of all adults who live on the Colville Reservation eat 394 grams of fish per day. Based on these results, the Colville Business Council has determined that maintaining water quality to ensure a fish consumption rate of 400 grams per day would protect the vast majority of persons residing on the Colville Indian Reservation and provide a minimal subsistence rate of consumption for Tribal Members. Neither does it consider current suppression of fish consumption or heritage consumption rates. Developing human health criteria based on an average fish consumption rate also ignores highly exposed populations such as the tribes.</p>	
<p>Commenter ID: 51</p> <p>Washington State is required to meet the provisions of the Clean Water Act to preserve the beneficial uses of water, including fishing, a use central to Native American cultures and populations within the state. The public health protections encompassed by these standards should protect not just Native Americans but everyone in Washington who eats fish. The proposed rules by the state of Washington do not achieve these requirements and will result in continued suppression of fish consumption by tribal Members who fish Washington waters.</p>	<p><i>Please see #3 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 52</p> <p>While I support use of the 175 g/day general fish consumption rate as a basis for chronic, long-term exposure risk calculations, use of higher rates for specific populations known to consume higher proportions of fish in their diets should be considered on a local (or specific point-of-harvest) basis where appropriate in setting water quality criteria.</p>	<p><i>Please see #3 and 9 of the “FCR” general response section above.</i></p>

<p>Commenter ID: 53</p> <p>As you know, the CTUIR ceded lands to the federal government in portions of what is now Washington State. We also have rights and interests in fish that originate in and traverse the State and in the waters that support them—waters that are not strictly confined to artificial jurisdictional boundaries or authorities. Many of those waters—in Washington and throughout the region—are already polluted, and some fish in them have been found to clearly contain various toxic contaminants. Miles of waterways have been listed as water-quality-limited under the Clean Water Act, and multiple advisories have been issued warning against eating certain fish species. 3 Rivers may no longer catch on fire, but water quality problems remain, and fish that inhabit our often less-than-pristine lakes, rivers and streams may present undue health risks. Water quality regulations should be developed, revised and implemented to confront and minimize these risks as much as possible, without excessive burdens on economic activity.</p>	<p><i>Please see #1, 3, and 5 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 53</p> <p>The CTUIR DNR specifically supports your decision to finally adopt a reasonable, compromise fish consumption rate (FCR) of 175 grams per day in conjunction with the commonly-used, widely-accepted cancer risk level of 1 in 1 million (10⁻⁶)</p>	<p><i>Please see #2 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 53</p> <p>175 grams per day is an initial, reasonable “floor” to use in the equation to revise State standards, one which has been adopted by Oregon and one which the CTUIR has found acceptable in establishing state-wide standards. It is, however, a significant compromise and does not accurately reflect the much higher levels of fish consumption by many tribal members that a number of consumption surveys have quantified. In fact, the CTUIR has</p>	<p><i>Please see #3 and 5 of the “FCR” general response section above.</i></p>

<p>adopted on-reservation standards based on a rate of 389 grams per day.</p>	
<p>Commenter ID: 54</p> <p>Currently, there are 17 of the 18 water bodies in the State of Washington with fish advisory consumptions. 17 of these are listed because they are either listed for PCBs, or mercury, or both. So, the point of making this -- improving this rule is that we're trying to make these fish safer -- safer for public -- We're trying to make fish public -- healthier for public consumption, but we're improving -- we're attempting to improve a rule and not even touching on the actual problem.</p>	<p><i>Please see #10 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 54</p> <p>Don't postpone, instead apply 175 g/day like the EPA rule.</p>	<p><i>Please see #1 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 54</p> <p>There's a lot of people in this state that don't have the choice and whose livelihood is based off of eating fish. Based on Ecology's own research, these groups are tribal members, Asian Pacific Islanders, and commercial and recreational fishermen, and this rule should be calibrated to protect these sensitive communities.</p>	<p><i>Please see #3 and 6 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 65</p> <p>Ecology claims that the 175 g/day fish consumption rate is representative of the average consumption rate found in surveys of Pacific Northwest tribal communities. This claim is plainly erroneous. As discussed in detail below, the surveys referenced by the Department indicate that average fish consumption rates of these groups are closer to 50 g/day.</p> <p>(Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Please see #11 and 12 of the “FCR” general response section above.</i></p>

<p>Commenter ID: 65</p> <p>Ecology’s failure to distinguish between the types of fish and shellfish consumed in Washington results in significantly overstating potential exposure to pollutants through fish consumption. Ecology’s decision to group together the consumption of all fish and shellfish in determining Human Health Criteria exacerbates the arbitrariness of relying upon high fish consumption rates. Given that the surveys of tribal and Asian Pacific Islanders, on which the Department has focused, show significant portions of shellfish consumption, the combination of the 175 g/day fish consumption rate assumption and the bioconcentration factors used, significantly overstate the risk presented by fish consumption in Washington, and resulted in the proposed unduly stringent Human Health Criteria.</p>	<p><i>Please see #8, 11, and 12 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 65</p> <p>It is also important to keep in mind that the Human Health Criteria are calculated assuming consistent fish consumption throughout a 70-year lifespan. The Department is, therefore, assuming that individuals consume an average of 175 grams of fish every day of their life. The available data cited by both EPA and the Department indicate that virtually no one eats that much fish.</p>	<p><i>Please see #11 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 65</p> <p>The Department has also failed to take into account how cooking and preparation methods can effect exposure, making Ecology’s Human Health Criteria unduly stringent. Ecology acknowledges that cooking and preparation methods may significantly affect exposure, but did not make appropriate adjustments in its analysis to reflect this reality. Some preparation and cooking methods may dramatically decrease concentrations of some chemicals, particularly hydrophobic chemicals such as PCBs. Ecology has failed to</p>	<p><i>Ecology cannot guarantee that people will cook in a manner that results in loss of pollutants. Ecology is following EPA’s approach of using uncooked weights in the calculation of the human health criteria. This is a protective assumption.</i></p>

<p>take cooking and preparation methods into account, and by doing so, overstates exposure from fish consumption.</p>	
<p>Commenter ID: 65</p> <p>The Department, ignores the vast majority of the state’s residents, and instead focuses on a small number of statistical outliers who reported consuming an extraordinary amount of fish during the short sampling periods of fish surveys of high consuming groups. The Department acknowledges that “[h]igh fish consumers make up a relatively small portion of the whole population, and may represent extreme upper percentiles in a distribution that includes both consumers and non-consumers of fish.” This is a huge understatement. Washington State has more than 7 million residents. In the four tribal studies upon which Ecology now relies to set statewide Human Health Criteria, fewer than 115 individuals claimed to eat 175 grams or more of fish per day during the short periods of the surveys. There is no data indicating that any of these individuals do so frequently, much less every day of their lives. The rationale the Department has provided is plainly incorrect, unsupported by the scientific data in the record, and therefore, arbitrary and capricious. The Department’s use of a 175 g/day fish consumption rate is also arbitrary and capricious because a significant portion of that rate is associated with the consumption of salmon and other anadromous fish. Even anadromous fish that are harvested in Washington do not spend most of their lifespan in Washington waters. The majority of their tissue mass gain occurs outside Washington waters. The Department’s decision to ignore the distinction between local and imported fish is unjustified, and compounds the arbitrary and capricious nature of its decision to use 175 g/day to develop the state’s new Human Health Criteria.</p>	<p><i>Please see #11 and 12 of the “FCR” general response section above.</i></p>

<p>(Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	
<p>Commenter ID: 65</p> <p>The proposed fish consumption rate of 175 g/day does not reflect the fish consumption patterns of Washington residents. In the absence of state-specific data, the Department must consider the extensive peer reviewed national data that are available. As recently as 2013, EPA emphasized that a fish consumption rate representing the 90th percentile of the general population is appropriate to use in establishing Human Health Criteria under the Clean Water Act. Washington should adopt an incremental approach based on sound science instead of simply adopting new Human Health Criteria based only on the eating patterns of extreme outliers. Given the lack of statewide data available at this time, Washington should use a fish consumption rate consistent with national data to revise the Human Health Criteria. Washington should then initiate an effort to collect sufficient data surrounding the fish consumption rates of both the general population and high consumers to develop a meaningful and scientifically sound fish consumption rate for the state of Washington. After doing so, Washington could further revise the Human Health Criteria, if warranted.</p> <p>(Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Please see #11 and 12 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 65</p> <p>Use of a 175 g/day fish consumption rate is wholly unjustified and out of step with the rate used by the United States Environmental Protection Agency (“EPA”) and virtually every other state in the nation. Contrary to the Department’s claims, only a very small number of individuals, if any, consume fish at this rate throughout their lifetime.</p>	<p><i>Please see #11 and 12 of the “FCR” general response section above.</i></p>

<p>Use of such an unreasonably high fish consumption rate results in proposed Human Health Criteria that are far more restrictive than necessary to protect Washington citizens.</p> <p>(Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	
<p>Commenter ID: 70</p> <p>The draft rule updates our fish consumption rate and defines water quality standards that are more protective than the standards in place today. This is a positive step towards enhanced water quality and achieving desired human health outcomes.</p>	<p><i>Please see #1 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 74</p> <p>175 g/day and 10^{-6} risk level will be empty progress if this rule proceeds as written in exempting certain chemicals like PCBs and mercury, which are precisely the two chemicals that are responsible for the vast majority of fish consumption advisories issued by the Department of Health. Even though there are many sources of these pollutants, including ones that would not necessarily be regulated by this rule, the existing fish consumption advisories are evidence that our waterways have lost any assimilative capacity for these chemicals and that it is time to act. How can Ecology, in good conscience, exempt the very chemicals that are poisoning us the most?</p>	<p><i>Please see #10 of the “FCR” general response section above. Please also see sections on PCBs and Mercury in the Response to Comments.</i></p>
<p>Commenter ID: 24, 76</p> <p>The proposed FCR of 175 g/day is low compared to fish consumption rates at many tribes.</p>	<p><i>Please see #3, 4, and 5 of the “FCR” general response section above.</i></p>
<p>Commenter ID: 77</p> <p>The state's proposed fish consumption rate of 175 grams per day is viewed as a compromise to the Stillaguamish Tribe, especially when compared to heritage rates and consumption without</p>	<p><i>Please see #3 and 5 of the “FCR” general response section above.</i></p>

<p>suppression due to decreased fisheries resources or closures from pollution.</p>	
<p>Commenter ID: 77</p> <p>The Stillaguamish Tribe only supports a fish consumption rate of 175 gpd as long as other provisions in the Human Health Criteria are based on best available science and are not less protective of our members. This proposal by the State of Washington does not incorporate best available science and fails to account for other sources of toxic chemicals. As a result a fish consumption rate of 175 gpd ceases to be protective of Tribal members when other aspects of the Human Health Criteria are unchanged or weakened.</p>	<p><i>Please see #2 and 3 of the “FCR” general response section above.</i></p>

Risk Level

Summary of Comment

Many comments addressed risk level, and the views that were expressed generally either supported use of a 10^{-6} risk level or urged use of a 10^{-5} risk level. Because of the number of the comments asserting that Ecology was not justified in changing from the newly proposed risk level in the first proposed rule (10^{-5}) to staying with the current risk level of 10^{-6} in the second proposed rule, Ecology has written a general response to address these comments.

Individual comments and responses on risk level are included in the table below this General Comment/Responses section.

General Comment/Response on Risk Level

1. General Comment: 2, 34, 38, 65

Ecology was not justified in changing from the risk level in the first proposed rule (10^{-5}) to the risk level in the second proposed rule (staying with the current risk level of 10^{-6}).

Response: The legislature directed Ecology to maintain the highest possible standards to insure the purity of waters of the State (RCW 90.48.010). Ecology has historically implemented this legislative directive by requiring that risk-based criteria for carcinogenic substances have an excess cancer risk less than or equal to one in one million (10^{-6}). WAC 13-201A-240(6). In 2014, Governor Inslee announced an innovative approach to regulating carcinogenic toxics that would have increased the cancer risk rate to 10^{-5} , coupled with a toxic reduction strategy that would have allowed the State to require the removal of toxic chemicals from consumer products that result in water pollution. The Governor believed this innovative approach would result in broader and more effective removal of both cancer and non-cancer causing chemicals from discharges than the traditional approach. Unfortunately, the legislature did not pass the legislation necessary to implement the Governor's innovative approach, thus Ecology will retain the 10^{-6} cancer risk rate that has historically been part of Washington's water quality standards.

2. General Comment: 8, 12, 36, 42, 77

Adopting a greater risk tolerance for high fish consumers would mean that the cancer risk for one segment of the population could be many times higher than for the general population. That proposal would value the health of the general population differently from the high consuming population. This would be unacceptable, a violation of the Clean Water Act, and a likely violation of state and federal civil rights law.

Response: It is not possible to assume that an equal amount of risk will be realized by the entire population of a state. Because exposures and sensitivities vary among groups and individuals, equal risk is not possible. All other factors being equal, people and groups who consume more fish and shellfish are inherently at greater risk from those contaminants than those who do not,

(assuming that contaminants are present in these items and that equal concentrations of contaminants are present in the consumed items). Regardless of the specific fish consumption rate used in the criteria calculations, or the final water quality criteria that are applied to waters, unequal risk among groups and individuals will always exist because of differences in fish consumption habits. This difference would exist even if criteria were not present. Therefore, it is not reasonable to assume that a given risk level chosen by a state reflects the actual risk across all populations, or among all individuals in the entire state. The human health criteria in this rule were developed to protect all consumers in Washington. Even though the human health criteria equations appear to directly stipulate risk, other factors (those within the human health criteria equations, and those not included in the human health criteria equations) complicate the ability to gauge an individual's or population's actual risk level. Direct quantification of risk for populations is described in EPA guidance (EPA, 2000) as follows: "EPA's Guidelines for Exposure Assessment (USEPA, 1992) describes the extreme difficulty in making accurate estimates of exposures, and indicates that uncertainties at the more extreme ends of the distribution increase greatly. On quantifying population exposures/risks, the guidelines specifically state: in practice, it is difficult even to establish an accurate mean health effect risk for a population. This is due to many complications, including uncertainties in using animal data for human dose-response relationships, nonlinearities in the dose response curve, projecting incidence data from one group to another dissimilar group, etc. Although it has been common practice to estimate the number of cases of disease, especially cancer, for populations exposed to chemicals, it should be understood that these estimates are not meant to be accurate estimates of real (or actuarial) cases of disease. The estimate's value lies in framing hypothetical risk in an understandable way rather than in any literal interpretation of the term 'cases.'" (EPA 2000, pages 2-1 to 2-1).

Specific Comments on Risk Level	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 2</p> <p>Initially, the Department had developed standards based on an incremental risk level of 10^{-5}. However, USEPA objected, and issued its own proposed standards for Washington State that reflected an incremental risk level of 10^{-6}. The FWQC filed comments on the USEPA proposal, raising concerns about use of that lower risk level. (A copy of those comments is attached as Appendix C to these comments.) Now, the Department, in the Proposed Standards, has changed its approach, using the 10^{-6} risk level recommended by USEPA. We continue to believe that the Department's original choice of a 10^{-5} risk level was appropriate, and that the change to a 10^{-6} risk level will provide no measurable improvement in protection of human health, with a substantial increase in cost to regulated parties and the public. Therefore, we recommend that the Department return to its original approach, and revise the Proposed Standards to reflect a 10^{-5} risk level.</p>	<p><i>Please see #1 of the "Risk Level" general response section above.</i></p>
<p>Commenter ID: 4</p> <p>The choice of risk level is a policy decision of the state. However, NWFPFA believes that the proposed 10^{-6} risk level, and application to an average fish consumption rate for highly exposed populations instead of the general population, is over-protective and not consistent with EPA guidance or evidence in the record. In its 2000 guidance, EPA states that it believes that both 10^{-6} and 10^{-5} may be acceptable risk levels for the general population and that highly exposed populations should not exceed a 10^{-4} risk level.</p>	<p><i>Ecology agrees with most points in this comment, but disagrees with the assertion that 10^{-6} is not consistent with EPA guidance or evidence in the record.</i></p>
<p>Commenter ID: 4</p> <p>When the proposed risk level is applied to the proposed fish consumption rate, the resulting numeric criteria are significantly more stringent than the current National Toxic Rule criteria and exceed the levels necessary to protect public health. These levels are, however, more</p>	<p><i>Ecology agrees that the combined use of a FCR of 175 g/day and a risk level of 10^{-6} will provide very high levels of protection for consumers in Washington.</i></p>

Specific Comments on Risk Level	
Commenter ID/Comment	Ecology Response
stringent than the allowable risk levels EPA uses in its safe drinking water regulations. It is also extremely conservative when applied to the general population of Washington State, who most likely consume much less than 175 grams per day and would be protected at a level of about 10 ⁻⁸ .	
<p>Commenter ID: 6</p> <p>NWEA fully supports the use of the 175 grams/day fish consumption rate and the one-in-a-million cancer rate.</p>	<i>Comment noted.</i>
<p>Commenter ID: 8</p> <p>The cancer risk rate is crucial to determining the in-the-water protections this rule will provide. The very point of protecting fish consumers under the Clean Water Act would be compromised by a rate of less than one in one million, because those who eat the most fish make up the exact population for whom these numbers matter most and the group for which Ecology must not compromise its consideration of cancer. Adopting a greater risk tolerance would mean that cancer risk for one segment of the population, high fish consumers, can be ten-times higher than for the general population. That proposal to value the health of one group of people differently from another would be unacceptable, a violation of the Clean Water Act, and a likely violation of state and federal civil rights law. This component of the equation is also important for considering discriminatory impacts of weakening the standards equation in this and similar ways. Traditional foods are crucial to the health of native people and to tribes. Reduced access to traditional foods has resulted in myriad health problems in tribal areas, including increased body weights.</p>	<i>Please see #2 of the “Risk Level” general response section above.</i>
<p>Commenter ID: 12</p> <p>The Clean Water Act demands that state and tribal water should support safe consumption of fish and shellfish, and that the standards need to be set to enable residents</p>	<i>Please see #2 of the “FCR” general response section above.</i>

Specific Comments on Risk Level	
Commenter ID/Comment	Ecology Response
to safely consume from local waters the amount of fish they would normally consume. Thus, under the Clean Water Act, equal protection is deserved for all people, including Tribal members, Asian Pacific islanders, commercial and recreational fishermen, all of whom eat the most fish in our state.	
Commenter ID: 12, 19, 41, 39 Support keeping 10^{-6}	<i>Comment noted.</i>
Commenter ID: 30 Tribes concur with Ecology’s decision to retain the cancer risk level of one-per-million (10^{-6}) currently in effect in the NTR criteria and adopted in Washington State Water Quality Standards. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).	<i>Comment noted.</i>
Commenter ID: 30 A cancer risk level of one-per-million is necessary to address the risk of additive toxicity from multiple chemical contaminants. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).	<i>Comment noted.</i>
Commenter ID: 30 A risk that is not zero is still a risk. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).	<i>Comment noted.</i>
Commenter ID: 34 The proposed incremental excess cancer risk level factor used in the rule is arbitrary, capricious and not based on substantial evidence in the record. Ecology has provided no justification for using a one in one million risk level coupled with a high fish consumption rate other than a policy decision by the Governor. It is a decision that succumbs to the pressure from EPA that	<i>Ecology disagrees that the proposed incremental excess cancer risk level factor used in the rule is arbitrary, capricious, and not based on substantial evidence in the record. (Please see “Inputs to the Equations” in this Response to Comments).</i> <i>Please also see #1 in the “Risk Level” general response section above. The risk management</i>

Specific Comments on Risk Level	
Commenter ID/Comment	Ecology Response
<p>lacks support under long-standing principles of the CWA, science and public health policy. Ecology has interpreted and publicly stated that its risk policy for human health criteria in the state Water Quality Standards, WAC 173-201A-240(6), is intended to apply to the per capita consumption rate of the general population. Criteria based on the existing state risk policy would be fully protective of tribal consumption without this dramatic change in risk policy. If Ecology used 17.5 g/day as the consumption rate for the general population in Washington, at a risk level of 10^{-6}, the resulting criteria would be protective to a consumption rate of 175 g/day at a 10^{-5} risk level and for a consumption rate of 1,750 g/day at a risk of 10^{-4}. If Ecology followed established guidance and science and applied a 10^{-6} risk level for the general population the resulting exposures at risk levels of 10^{-5} and 10^{-4} would not predict a single excess cancer risk for this population—a result that is more stringent than EPA guidance which calls for no excess cancer risk at the median consumption rate for high consuming populations at 10^{-4}. The risk level proposed by Ecology far exceeds what is required by a principled consideration of environmental justice. Ecology has not provided an adequate basis in the record for its decision to change course on this issue.</p> <p>(Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>rationale for remaining with the current risk level in the standards (10^{-6}) is outlined in the Decision Document. Ecology agrees that at the time the risk level of 10^{-6} was adopted into the water quality standards it was clear that the risk level would be paired (in the National Toxics Rule) with the average FCR of the general population, as well as a number of other average and upper percentile equation inputs. In this rulemaking the risk management decision was made to move from this approach to the use of a FCR that is representative of highly exposed populations (as represented by the three highest consuming tribal populations from Puget Sound; please see comments in FCR section of the Response to Comments). The use of a FCR of 175 with a 10^{-6} risk level provides very protective criteria for consumers in Washington.</i></p>
<p>Commenter ID: 36</p> <p>The State should also focus on the WQS and fish consumption being protective of the State's most vulnerable citizens including our children and our tribal communities.</p>	<p><i>Please see #2 of the “Risk Level” general response section above.</i></p>

Specific Comments on Risk Level	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 8</p> <p>Ecology should explain that the criteria provide a range of protection for a wide range of FCRs.</p>	<p><i>The Policy Forums discussed this concept and information supporting this point is in the record for this rule.</i></p>
<p>Commenter ID: 38</p> <p>We are sorry that some groups and EPA Region X have essentially forced Ecology to switch to 10^{-6} risk level (compared to the earlier proposed 10^{-5} risk level) based on 175 g/day fish consumption. The earlier proposal was well justified, complied with EPA guidance and reflects the City of Everett's position. The issue was politically charged and public opinion easily influenced by sound-bites rather than comprehensive understanding.</p>	<p><i>Please see #1 of the "Risk Level" general response section above.</i></p>
<p>Commenter ID: 38</p> <p>Part of the problem is that it is incorrect to assign a single risk value to the criteria. For cancer risk, the criteria represent a range of risks covering a range of fish consumption values. This is true for the current NTR criteria, EPA's National Recommended Water Quality Criteria, EPA's proposed criteria for Washington, the state's earlier proposed new criteria, and the state's current proposed criteria. Rather than saying the criteria are based on a one in a million cancer risk rate, the water quality standards need to state that the criteria provide a range of protection for a wide range of fish consumption rates. In the proposed rule Ecology should provide this explanation in order to prevent confusion in the future.</p>	<p><i>Ecology agrees that criteria actually provide a range of risk levels to fish and shellfish consumers in Washington, depending on the interplay of FCR, body weight, drinking water intake, and a number of other characteristics that might or might not be directly or indirectly included in the criteria equations. Use of a single risk level in the calculation is part of the deterministic approach to criteria calculation, and the decision to use this approach was made prior to the first proposed rule. Also discussed at that time was the possibility of using a probabilistic method to develop criteria. Ecology will not specify in the new standards that the criteria provide a range of risk, as that information is present in the rule record.</i></p>
<p>Commenter ID: 38, 44</p> <p>Support 10^{-5}.</p>	<p><i>Comment noted.</i></p>

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Commenter ID/Comment	Ecology Response
<p>Commenter ID: 39</p> <p>As we addressed in our letter of April 9, 2014 to Governor Inslee, while state managers often equate both cancer risk levels under consideration of 10^{-6} and 10^{-5} as de minimis or close to zero, and by extension equivalent in terms of effect, this simply is inaccurate. Only the excess cancer lifetime risk of 10^{-6}, currently used in the state water quality standards, is considered as the "safe dose" that is "negligible" in effect ("essentially zero"). This is considered "acceptable risk" - we agree.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 39</p> <p>Furthermore, EPA considers 10^{-6} is an appropriate risk level for the target population, which in this case are the Tribes of Washington. 2000 Methodology, at 2-1. The 10^{-6} cancer risk level is an agency wide practice throughout EPA's programs as well. Although the FCR of 175 grams per day does not represent a historic, unsuppressed rate, it can only be considered a reasonable value based on the Washington tribal consumption surveys which necessarily must be in conjunction with the 10^{-6} cancer risk level in order to be sufficiently protective for all tribes of the State of Washington to consume fish safely. Again, the FCR of 175g/day is a rate intended to be re-evaluated at the next triennial review by incorporating additional consumption data to reach an accurate historic consumption rate.</p>	<p><i>In this rulemaking, the risk level of 10^{-6} is used with a FCR of 175 g/day. Please see comments on suppression in the Fish Consumption Rate section of this Response to Comments. Also, please see the section on Tribal Treaty Rights in this Response to Comments.</i></p>
<p>Commenter ID: 42</p> <p>Individuals' circumstances of exposure are emphatically not "roughly the same" where the exposure pathway involves fish consumption. In fact, fish intake is highly variable, with differences in people's contemporary intake spanning as many as three orders of magnitude. Some people eat no fish at all; others eat 1453 grams/day. The 90th percentile intake rate for the general population is the source of the EPA's national default of 22 grams/day. 149 By contrast, the 90th</p>	<p><i>Please see #2 of the "Risk Level" general response section above. It is important to realize that no single input to the criteria equations defines the level of protection conferred on any specific individual or population. Ecology agrees that fish intake is highly variable across the state population, if national population data reflect Washington consumers. Note that the Lummi tribal FCR survey (Freimund et al 2012) focused on sampling only the assumed highest tribal consumers (based on</i></p>

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<p>percentile intake rate documented by recent surveys of the Suquamish and Lummi is 489 grams/day and 800 grams/day, respectively. Note that these are contemporary, suppressed fish consumption rates (FCRs); if unsuppressed historical or “heritage” rates were considered the variability would be even more marked. We cannot pretend that everyone’s chances of being subjected to a greater level of risk are roughly the same. In the Pacific Northwest, we know who it is that depends on fish, who it is that is the most exposed. We know, then, who will be left to bear the risk if the level deemed “acceptable” for a state such as Washington is permitted to shift to a less protective level: it will be tribal people. This is problematic as an ethical matter, and it changes the terms of the policy debate. We cannot pretend to be debating the appropriate risk level in the abstract, i.e., in terms of statistical lives.</p> <p>Previously, the state of Washington had deemed “acceptable” a risk level of 10^{-6}. This is the risk level that Washington found tolerable when it assumed that everyone was more or less equally likely to be on the receiving end of the risk of cancer when it employed the national general population default rate for fish intake in its calculations. Now, however, studies are available that demonstrate both that fish intake is highly variable and that tribal people are among the very highest consumers. Any shift away from Washington’s longstanding embrace of a 10^{-6} risk level would have an undeniable implication: namely, that Washington believes it to be “okay” for risk-producers to transfer the costs of their processes to identifiable people tribal people in the form of increased cancer risk.</p>	<p><i>characteristics of the highest tribal consumers in surveys of other Puget Sound tribes), not the full distribution of tribal consumers: “For the Lummi Seafood Consumption Study, a population of highest-level consumers was identified to be surveyed. As summarized in Table 2.1, the high-end consumers identified in the study of the Tulalip Tribes and the Squaxin Island Tribe (Toy et al. 1996) were male tribal members and tribal members of both genders in the age range 35 to 49 (Tulalip) and 50-64 (Squaxin). As shown in Table 2.2, the highest consumers identified in the study conducted of the Suquamish Tribe (Suquamish 2000) were male tribal members between 43 and 54 years old. Donatuto (2009) found that for the Swinomish Indian Tribal Community, male tribal members who were boat owners and were in a similar age range (40’s to 50’s) were the highest consumers. Based on this information, the Technical Advisory Committee concluded that even though the elder population of the tribes may adhere more closely to a traditional seafood-based diet, more seafood is available to the part of the population that owns fishing boats or works on fishing boats, and therefore that this population represents the highest level consumers of the Lummi community” (Freimund et al 2012) and “For this reason, the sample pool chosen for the Lummi Seafood Consumption Study was all male tribal members that were 20 years old and older in 1985 (45 years old and older in 2010) living on the Reservation or in neighboring Whatcom County” (Freimund et al 2012). Even though the risk level remains unchanged in the final rule, Ecology disagrees with the rationale presented that a higher risk level would be a decision to transfer risk to higher consumers. That rationale does not makes sense in light of the</i></p>

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	<i>other inputs to the equation, in particular the FCR that is based on the three Puget Sound tribal studies with the highest consumption rates for the full adult populations.</i>
<p>Commenter ID: 42</p> <p>Ecology's use of 10^{-6} for the cancer risk level is appropriate and ought to be retained in the final rule.</p>	<i>Comment noted.</i>
<p>Commenter ID: 48</p> <p>The EPA is very supportive of the state's decision to derive the human health criteria using a FCR of 175 g/day and retain a cancer risk level of 10^{-6}. Finally, many of Washington's rivers are in the Columbia River basin, upstream of Oregon's portion of the Columbia River. Oregon's criteria are based on a FCR of 175 g/day and a cancer risk level of 10^{-6}. Ecology's proposal to derive human health criteria for Washington using a cancer risk level of 10^{-6} along with a FCR of 175 g/day helps ensure that Washington's criteria will provide for the attainment and maintenance of Oregon's downstream WQS consistent with 40 CFR 131.10(b).</p>	<i>Comment noted.</i>
<p>Commenter ID: 48</p> <p>In addition, Ecology has moved language previously contained at WAC 173-201A-240(6), which pertains to protection from carcinogens at a one-in-one-million cancer risk level, to this section. Consistent with the comments above on the cancer risk level, the EPA is supportive of this language.</p>	<i>Comment noted.</i>
<p>Commenter ID: 56</p> <p>Yakama Nation was integral to the 1994 EPA Columbia River Tribal Fish Consumption Survey that confirmed Yakama People have at least a 100 times greater risk of cancer from eating a traditional diet that includes considerably more Columbia River fish than existing water quality standards assume. This information should have triggered an immediate response from Ecology and</p>	<i>The 1994 CRITFC FCR survey shows that (excluding the 7% non-consumers) the mean fish consumption rate for surveyed tribal adult fish consumers was 63.2 g/day. CRITFC consumption rates represent consumption from all sources. The representative average FCR of 175 used in the new human health criteria is approximately the same as the CRITFC 95th</i>

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<p>EPA, but two decades later there has been no improvement to Washington's human health criteria for establishing water quality standards. It is unjust for our people to be subjected to undue cancer and health risks resulting from exercising our treaty reserved right to harvest fish while industry continues to be permitted to discharge the chemicals responsible for these risks.</p>	<p><i>percentile value. The low risk level (10⁻⁶) and high FCR incorporated in the human health criteria calculation indicate that the new criteria are protective of highly exposed populations as represented by the CRITFC survey. Future permitting actions will consider the new human health criteria, and might result in decreases in toxins in fish. To further address your comment, please also see responses in the Risk Level and Fish Consumption Rate sections of this Response to Comments.</i></p>
<p>Commenter ID: 65</p> <p>Boeing also strongly disagrees with the Department's current proposal to develop Human Health Criteria based on a 10⁻⁶ cancer risk factor. In its January 2015 proposal the Department more appropriately used a 10⁻⁵ cancer risk factor, but has now changed its position without explanation, and decided to use a 10⁻⁶ risk factor. Consistent with long-standing EPA guidance, the Department has previously acknowledged that Human Health Criteria is adequately protective of highly exposed groups at a risk level of 1 in 10,000 or 10⁻⁴. When the 10⁻⁶ risk factor is combined with the 175 g/day fish consumption, the calculated Human Health Criteria would reduce cancer risk to less than 1 in 10,000 for individuals who consume up to 17,500 grams (almost 39 pounds) of fish per day. None of the data presented by Ecology indicates that any Washington resident, including the high fish consumers, consumes this amount of fish. The proposed criteria are orders of magnitude beyond what the Clean Water Act requires.</p>	<p><i>Ecology agrees that the combined use of a FCR of 175 g/day and a risk level of 10⁻⁶ will provide very high levels of protection for consumers in Washington. The CWA does not specify a risk level for carcinogens, but Ecology is confident that the proposed criteria are fully protective of harvest-related CWA uses in Washington. Please see #1 of the "Risk Level" general response section above.</i></p>
<p>Commenter ID: 65</p> <p>Ecology's proposal to use the 10⁻⁶ cancer risk level is unjustified, and when combined with the extremely high fish consumption rate, results in unjustifiably stringent</p>	<p><i>Ecology disagrees that there is no justification for a 10⁻⁶ risk level. The legislature has directed Ecology to maintain the highest possible standards to insure the purity of</i></p>

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Commenter ID/Comment	Ecology Response
<p>Human Health Criteria by using a 175 g/day fish consumption rate and a 10⁻⁵ cancer risk level, the resulting Human Health Criteria would allow an individual to eat 1750 grams (approximately 3.75 pounds) of fish every day for 70 years of his or her life without being exposed to more than a 1 in 10,000 (10⁻⁴) additional cancer risk.⁶ None of the data presented by Ecology indicates that any Washington resident, including the high fish consumers, consistently consumes such an extraordinary amount of fish. Unfortunately, the Department now proposes, without explanation, to use a 10⁻⁶ cancer risk factor to derive the new Human Health Criteria. Although the 10⁻⁶ risk factor may by itself be permissible under the Clean Water Act, when it is combined with an extremely high fish consumption rate, it results in Human Health Criteria that are arbitrary and capricious. Simply stated, when the 10⁻⁶ risk factor is combined with the 175 g/day fish consumption rate, the results are Human Health Criteria that would reduce cancer risk to less than 1 in 10,000 for individuals who consume up to 17,500 g (almost 39 pounds) of fish per day. None of the data presented by Ecology indicates that any Washington resident, including the high fish consumers, consumes this amount of fish. The proposed Human Health Criteria are, therefore, orders of magnitude beyond what the Clean Water Act requires, and serve no public policy objective.</p>	<p><i>waters of the State (RCW 90.48.010). Ecology has historically implemented this legislative directive by requiring that risk-based criteria for carcinogenic substances have an excess cancer risk less than or equal to one in one million (10⁻⁶). WAC 13-201A-240(6). The risk management rationale for remaining with the current risk level in the standards (10⁻⁶) is outlined in the Decision Document. EPA explained at Section 2.2 of its 2000 human health criteria guidance: Risk management is the process of selecting the most appropriate guidance or regulatory actions by integrating the results of risk assessment with engineering data and with social, economic, and political concerns to reach a decision. In this methodology, the choice of a default fish consumption rate protective of 90 percent of the general population is a risk management decision. The choice of an acceptable cancer risk by a State or Tribe is a risk management decision.” Also, please see responses to comments in sections on “Inputs to the Equations” and “Fish Consumption Rate” in this Response to Comments. Ecology agrees that the combined use of a FCR of 175 g/day and a risk level of 10⁻⁶ will provide very high levels of protection for consumers in Washington, even for the highest consuming populations. The CWA does not specify a risk level for carcinogens, but Ecology is confident that the proposed criteria are fully protective of CWA uses.</i></p>
<p>Commenter ID: 74</p> <p>We applaud Ecology for taking action to draft a new revised rule that recognizes the higher consumption rate of 175 grams a day while maintaining cancer risk rates of</p>	<p><i>Comment noted.</i></p>

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Commenter ID/Comment	Ecology Response
ten to the minus six, and for scrapping the earlier draft rule that called for raising the cancer risk rate by a factor of ten.	
<p>Commenter ID: 77</p> <p>The draft rule continues to put disproportional risk on Tribal members and other fish consumers.</p>	<p><i>Please see #2 in the “Risk Level” general response section above.</i></p>

Bioconcentration Factors (BCFs)

Summary of Comments

Many comments addressed bioconcentration factors (BCFs), and the views that were expressed generally either supported use of a BCF-based approach or urged use of EPA’s newer bioaccumulation factor (BAF)-based approach. Because of the number of comments asserting that Ecology should use EPA’s newer BAF-based approach, these comments are responded to in a general response below.

Individual comments and responses on BCFs are included in the table below this General Comment/Responses section.

General Comment/Responses on BCFs

1. General Comment: 8, 21, 30, 39, 42, 48

Ecology had no justification for using the BCF-based approach, the BCF-based approach is not based on good science, and Ecology should have used the newer BAF-based approach.

***Response:** The rationale behind the 2016 proposal is described in the Decision Document. Since the Decision Document was drafted, additional information has come to Ecology’s attention that reinforces Ecology’s concern with the new 2015 304(a) criteria documents and the equation inputs used in those documents. In particular, EPA published and posted a criteria document for the new, and non-priority pollutant, bis(2-chloro-1-methylethyl)ether, as a priority pollutant. EPA then proposed criteria for this chemical in draft regulations for Washington and Maine, asserting in the federal publications that the new criteria were for priority pollutants only. This situation reinforces the skepticism that Ecology has regarding the thoroughness of the process used to develop the new 2015 EPA criteria, and reinforces the concern over the single public review of the new 2015 criteria documents, particularly with regard to the bioaccumulation and bioconcentration factors used in calculating those criteria.*

Concern with these criteria has been expressed to EPA in Ecology's public comment on EPA's draft 304(a) criteria (8/6/2014 letter from Melissa Gildersleeve, Ecology, to EPA Water Docket), on EPA's draft regulation for Washington (12/21/15 letter from Maia Bellon, Ecology, to Gina McCarthy, EPA) and in the Decision Document. A significant part of the rationale has to do with the inapplicability of the new BAFs to Washington and the inadequacy of the public process EPA used in developing them. Ecology continues to assert that the BAFs used in the EPA's final 304(a) criteria should have been considered second draft BAFs because they differed so significantly from the first draft that was commented on by the public, and should have been published in the federal register for a second round of public review before finalization. Ecology continues to be puzzled by EPA's decision to rush ahead with finalizing the 304(a) criteria without another public review, which would have been a better approach and resulted in a more durable product. Ecology's comment letter to EPA on the draft proposed regulation and the Decision Document explains why the BAFs used in that proposal are inappropriate for Washington.

The CWA and CFR require EPA to use the "latest" available information (which might not always be applicable or best for all processes) and EPA uses this information to develop "nationally" recommended criteria. States are not given that requirement. States are given primacy to adopt standards, and under CWA and CFR are required to adopt criteria based on "use and value" of the resource. States make the decision on what science is most applicable for direct application to the state's resources. Ecology acknowledges that the requirement to use "latest" information puts EPA in a difficult situation in trying to develop criteria applicable to all states, but notes that guidance is guidance, and should not be treated as rule.

It should be noted that Florida, which just released a draft human health criteria rule, also declined to use the EPA national BAFs and, in order to use BAFs appropriately, found it necessary to develop Florida-specific BAFs. That type of intensive effort in Washington would necessitate another draft rule to be developed and published, which would significantly delay adoption of human health criteria in Washington. Ecology stands by the use of the BCF-based approach based on information in the record for this rulemaking. Please also see the section in this Response to Comments on Response to Comments.

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 2</p> <p>In addressing the issue of food-chain-related increases in contaminant levels, the Department has applied bioconcentration factors (BCFs), instead of using USEPA's preferred bioaccumulation factors (BAFs). We believe that this choice was appropriate, given a number of</p>	<p><i>Comment noted.</i></p>

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<p>scientific concerns that exist regarding USEPA's BAF methodology and the national BAF values that USEPA has derived. USEPA has not provided a methodology to allow states to develop state specific BAFs. Until greater certainty exists about how well the BAFs and BCFs used by USEPA in the 2015 criteria represent accumulation in fish living in surface waters in Washington, the State's decision to continue to use pre-2015 BCFs represents a sound science policy choice. The scientific basis for the BCFs and BAFs used by USEPA to derive the 2015 criteria is either unclear or incorrect for some chemicals. Please refer to Appendix A of comment letter for full discussion that was submitted. Until USEPA addresses each of these concerns, these BAFs should not be used. These issues provide additional justification for Washington's decision to not use USEPA's 2015 BAFs and BCFs when developing its proposed human health standards. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	
<p>Commenter ID: 8</p> <p>In attempting to justify its continued use of EPA's outdated 1980 guidance recommending use of BCF, instead of the 2000 EPA Guidance's clear command otherwise, Ecology misrepresents (or at least misunderstands) the nature of the Clean Water Act requirements and the relationship between bioconcentration and bioaccumulation. Ecology makes the following statement: "BCFs are more closely related to the specific environmental media (water) that is regulated under the Clean Water Act." This is a grossly irrelevant statement and one that does not square</p>	<p><i>Ecology disagrees. BCFs are in fact more closely related to the media (water) that is regulated under the CWA. Ecology agrees that designated uses must be protected, and the combination of inputs that Ecology used to develop the human health criteria result in criteria that are protective of the designated use.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>with the law. The Clean Water Act requirement to protect designated uses of the water must be met, and if sediment affects the concentrations of pollutants that can be in the water, that must be considered. Water quality standards set the standards for water bodies, regardless of the source of pollutants.</p>	
<p>Commenter ID: 8</p> <p>Similarly, Ecology’s statements trying to distinguish why it chooses to use the old, outdated BCF are wrong on the science. The use of BAF relative to BCF has nothing to do with how a pollutant got into a water body. Instead, these distinct factors consider how the pollutant got into fish or other aquatic organisms after getting into the water. The BCF considers only dermal and inhalation exposure of aquatic organisms, whereas BAF considers the BCF plus aquatic organisms’ exposure through the food they eat. How the pollutant got into the water initially before being taken up by the aquatic organism is irrelevant. Ecology should have simply looked to the 2000 EPA Guidance’s clear and scientifically-supported recommendation that states use a BAF, but instead chose, once again and in extremely garbled fashion, to reject EPA’s recommendation in favor of a weaker, less-protective approach.</p>	<p><i>Ecology is not using a rationale based on source of contaminants to support use of the BCFs. The rationale is discussed in the Discussion Document. Please see #1 of the “BCFs” general response section above.</i></p>
<p>Commenter ID: 11</p> <p>Ecology's use of bioconcentration factors (BCFs) over bioaccumulation factors (BAFs) is primarily based on the assumptions used to develop and apply BCFs, and is reasonable. Further consideration of EPA's recently developed BAFs is not needed.</p>	<p><i>Comment noted.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 21</p> <p>Washington State should as soon as practicable use the most current best available science provided by the U.S. Environmental Protection Agency (EPA) to analyze how pollutants accumulate in the food chain. Washington State should adopt the most updated revised national 304(a) criteria or at a minimum be consistent with the national guidance, including relative source contribution and bioaccumulation criteria.</p>	<p><i>Please see #1 of the “BCFs” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>Ecology appropriately emphasizes the need for sediment cleanup, but continues to segment this relationship to water quality in its regulatory responsibilities. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 30</p> <p>Ecology’s selection of older methods of accounting for aquatic organisms’ uptake of toxic chemicals (use of BCFs rather than BAFs) and older values for bioconcentration factors (where updated values have been calculated by EPA) lacks valid justification. Consistent with EPA’s updated 304(a) national recommendations, Ecology should utilize bioaccumulation factors to more accurately represent the presence of toxics in tissue. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Please see #1 of the “BCFs” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>PCBs tend to bioconcentrate in organisms at low trophic levels, and through the gills of fish that</p>	<p><i>Please see #1 of the “BCFs” general response section above.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>filter large amounts of water. However, PCBs also bioaccumulate in predatory organisms as the body burden of prey is transferred to the predator, including humans. A prerequisite for a substance's strong bioaccumulation factor is an affinity for fat and persistence in the environment, both of which typify PCBs. Therefore, bioaccumulation factors support the best representation of exposure, and should be utilized when developing criteria for persistent, bioaccumulative, toxic pollutants with high bioaccumulation tendencies such as PCBs. Ecology has little scientific evidence to support their decision that using BCFs for PCB uptake is most reflective of the exposure pathway for PCBs. BAFs have been widely used in the scientific community for the past 35 years to most accurately describe the net increase of PCBs in predator species. Ecology characterizes the choice of using a BCF or a BAF as a risk management decision; tribes disagree with this approach and indicate that the BAF method should be used for determining the impact of PCBs on human health, based on sound scientific principles.</p>	
<p>Commenter ID: 34</p> <p>The proposed use of Bioconcentration Factors (BCFs) is consistent with the Clean Water Act and EPA guidance for deriving human health criteria. As Ecology correctly points out, bioconcentration factors (BCFs) are based in science and have been acceptable for purposes of Clean Water Act criteria development at least since 1980. Historically, EPA relies on BCFs in developing recommended HHWQC and continues to recommend BCFs for many priority pollutants, including PCBs and 2378-TCDD, as evidenced by</p>	<p><i>Ecology too is concerned that the final BAFs (and some BCFs) incorporated into EPA's recent criteria documents were never published for public review in the federal register. The first BAFs EPA sent out for review did not follow EPA guidance, and the final BAFs were developed using a significantly different method with different results than the public commented on in the first draft.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>its most recent (2015) national recommended criteria. As part of the process of updating the national human health water quality criteria in 2014 and 2015, EPA developed new factors for representing bioaccumulation (a BAF or BCF) for each substance from either measured or predicted BAFs or BCFs from laboratory or field studies. EPA has provided these new default factors for states to consider using when deriving their own state-specific HHWQC. However, it is widely recognized that BAFs are influenced by several local environmental factors (e.g., food web structure, water temperature, dissolved carbon) that can have a large influence on the resulting value. Given the impact that these factors have on criteria values, and the potential implications for states and dischargers that may result, EPA should allow for substantive comment on the technical merits of EPA's choice of national default values and on the appropriateness of using those values in deriving HHWQC for specific states and water bodies. Accordingly, Ecology was correct to continue using BCFs in deriving its HHWQC.</p>	
<p>Commenter ID: 39</p> <p>Contrary to Ecology's arbitrary and capricious decision in the Proposed Rule, the Puyallup Tribe recommends the use of bioaccumulation factors in the derivation of the state's human health criteria to be more protective of human health consistent with EPA's updated 2015 13 nationally recommended criteria, EPA's draft Federal Water Quality Standards Rule (September 2015), and EPA's 2000 Methodology. This methodology represents the newest and best science from the agency given the duty by Congress to establish national recommendations of water quality</p>	<p><i>Ecology agrees that this method represents new science, but not necessarily the best science for criteria development. Please see the Decision Document section on the Human Health Equations. The population surveys that were used to derive the FCR of 175 g/day were from Puget Sound tribes, and shellfish were a significant portion of the diet. Trophic level 4 does not represent the basis of the FCR. BCFs and BAFs were discussed and considered during the rulemaking process. Please see</i></p>

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<p>standards. This approach accounts for variation in bioaccumulation of pollutants based on trophic position of the organism. The draft Federal Rule accounts for trophic level 4 exposure, while the 2015 Nationally Recommended Criteria account for three trophic levels of fish. We agree with EPA's use of trophic level 4 BAF from the draft Federal Rule in conjunction with at least 175 grams per day FCR, because the surveyed population of which the FCR is based, consumed almost exclusively trophic level 4 fish (i.e. predator fish species). This is an important and significant leap in quantitatively and thus precisely accounting for more exposure pathways than direct contact accounts for and therefore will be more accurate in representing exposures to pollutants that affect human health. Unlike bioconcentration, BAFs account for more exposure pathways than direct water contact. Ecology's risk management "policy decision" fails to account for chemical accumulation and biomagnifications as a result of multiple pathways, leading to a failure to protect designated uses by failing to accurately assess consumption of chemicals through consumption of fish. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>comments and responses in the Inputs to the Equations and Tribal Treaty Rights sections of this Response to Comments.</i></p>
<p>Commenter ID: 39</p> <p>Ecology has chosen to utilize bioconcentration factors (BCF) in the state's proposed human health criteria, which were used in the derivation of the National Toxics Rule criteria almost 15 years ago. Ecology's justification for the use of BCF is bizarrely based on a "risk management decision" that is wholly unsupported and contrary to EPA's</p>	<p><i>Ecology disagrees that the decision to use BCFs is arbitrary and capricious. BCFs and BAFs were discussed and considered during the rulemaking process. Please see the Decision Document for the rationale behind the use of BCFs. Please see #1 of the "BCFs" general response section above</i></p>

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<p>2000 Methodology and EPA's most recent (2015) Nationally Recommended Criteria. Ecology replaces the requirements to use the best available science and the overall hierarchy which calls for use of the most recent EPA data absent specific local data with a "policy decision" to utilize outdated national standards and 2000 Methodology. Ecology's decision to utilize BCF is arbitrary and capricious.</p>	<p><i>and the section on Inputs to the Equations in this Response to Comments.</i></p>
<p>Commenter ID: 42</p> <p>Ecology proposes to eschew use of a bioaccumulation factor (BAF) in place of a bioconcentration factor (BCF), despite the fact that the former represents the best available science. Moreover, because a BAF accounts for all sources that contribute to the uptake of contaminants by fish (which are in turn consumed by humans), including water, food, and sediment, whereas a BCF only accounts for accumulation directly from the water, the former is also most appropriate for local conditions in Washington, where, among other things, the sediments harbor significant bioaccumulative toxics. Ecology's failure to move to the use of BAFs is likely to impact tribes in particular, given the importance of many upper trophic level fish to tribal people, as emphasized by the NWIFC Comments. Ecology declines to enlist BAFs, despite the fact that EPA's AWQC Guidance has since 2000 recognized their greater accuracy in accounting comprehensively for the uptake of contaminants encountered by fish in the aquatic environment, and despite the fact that EPA itself published national default BAFs for 94 contaminants in early 2014, and incorporated these BAFs into EPA's proposed WQS for Washington in 2015. Ecology cites no plausible rationale for</p>	<p><i>Please see #1 of the "BCFs" general response section above.</i></p>

Specific Comments on Bioconcentration Factors (BCFs)

Commenter ID/ Comment	Ecology Response
<p>declining to make use of this newer science, instead, it claims that it needs more time and that EPA's embrace of this more scientifically defensible approach to accounting for actual contaminant concentrations in fish seems "rushed."</p>	
<p>Commenter ID: 48</p> <p>In Ecology's 2015 and 2016 proposed rules, the state derived human health criteria using BCFs. Ecology's stated rationale is pollutants from sources other than the water column can accumulate in fish that people consume, particularly if the pollutants have chemical properties that cause them to accumulate in fish dietary items. To account for bioaccumulation, the EPA's 2000 Human Health Methodology recommends use of BAFs that account for uptake of a contaminant from all sources by fish and shellfish, rather than BCFs that only account for uptake from the water column. The EPA's current 2015 304(a) recommendations replace BCFs with BAFs, where data are available. The EPA's national recommended BAFs are based on peer-reviewed, publicly available data and were developed consistent with the EPA's 2000 Human Health Methodology and its supporting documents. The EPA published supplemental information on development of the national recommended BAFs in January 2016. 17 BAFs account for biomagnification in the food chain, which is an essential pathway that Ecology is missing by using BCFs. Therefore, the EPA continues to strongly recommend that Ecology adopt final criteria that reflect the latest scientific information on BAFs, as described in the EPA's 2000 Human Health Methodology, the EPA's</p>	<p><i>The comment misinterprets the rationale behind Ecology's 2016 proposal to use BCFs. Ecology's rationale is not "that bioaccumulation factors (BAFs) account for uptake from sources other than water (e.g., sediment, other food sources), and therefore, are overprotective because some of those sources could contain pollutants that come from areas and waters outside of Washington's CWA jurisdiction (e.g., mercury from air deposition)." A significant part of the rationale has to do with the inapplicability of the new BAFs to Washington and the inadequacy of the public process EPA used in developing them. The rationale is described in the Decision Document.</i></p> <p><i>Please also see #1 of the "BCFs" general response section above.</i></p>

Specific Comments on Bioconcentration Factors (BCFs)

Commenter ID/ Comment	Ecology Response
2015 304(a) recommendations, and the EPA's September 2015 proposed federal rule for Washington, to calculate human health criteria that are protective of the designated use and based on sound science.	
<p>Commenter ID: 62</p> <p>Ecology was correct to continue using BCFs in deriving its HHWQC</p>	<i>Comment noted.</i>

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Body Weight

Summary of Comments

Many of the comments that addressed body weight urged Ecology to use a lower body weight, of either 70 kg, or a lower weight based on children or on Asian Pacific-Islanders. Ecology’s has provided a general response below.

Individual comments and responses on body weight are included in the table below this General Comment/Responses section.

General Comment/Responses on Body Weight

1. General Comment: 8, 30, 39, 42

Ecology should use a lower body weight, either 70 kg or a weight based on children or Asian Pacific-Islanders (API).

Response: Ecology is staying with the decision to use 80 kg body weight because this value is representative of the tribal surveys that the FCR was derived from, and is likely reflective of the general population. With regard to children's exposures, there are only two chemicals in the EPA criteria list with age dependent adjustment factors. These are trichloroethylene and methylene chloride (aka dichloromethane), and EPA did not use a children’s body weight in its updated 304(a) criteria for these chemicals. Ecology is following this approach. Please see the section in this Response to Comments on Fish Consumption Rates, in particular the comments and responses on use of the API FCR information.

Specific Comments on Body Weight	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 8</p> <p>As for other communities that consume high amounts of fish and shellfish, using an 80kg body weight significantly overstates weight, particularly for those in Asian-American/Pacific Islander communities, again resulting in reduced protections for those communities. A study of fish consumption by ten such communities in King County indicated an average body weight of 62 kg for men and women. Ruth Sechena et al., Asian and Pacific Islander Seafood Consumption Study at 62 (May 27, 1999), available at http://goo.gl/ptLiZZ. (copy attached). A dietary survey assessing fish consumption of Japanese and</p>	<p><i>Please see #1 of the “Body Weight” general response section above. Also, see the section in this Response to Comments on Fish Consumption Rates, in particular the comments and responses on use of the Asian-Pacific Islander FCR information.</i></p>

Specific Comments on Body Weight	
Commenter ID/Comment	Ecology Response
<p>Korean women found similar body weight results to the King County study of the Asian and Pacific Islander community for women (57 kg, according to a presentation by one of the study’s co-authors). Ami Tsuchiya et al., Fish intake guidelines: incorporating n-3 fatty acid intake and contaminant exposure in the Korean and Japanese communities, 87 Am. J. Clinical Nutrition 1867-75 (2008), available at http://ajcn.nutrition.org/content/87/6/1867.long. (copy attached). The mean weight of the participants in the Tsuchiya et al. study was 55 kg for the Japanese women and 59 kg for the Korean women. There is simply no support for Ecology’s contention that 80kg body weight results in a protective standard for all consumers of fish in Washington.</p>	
<p>Commenter ID: 8</p> <p>By assuming that people consuming fish weigh more than EPA assumed in the National Toxics Rule, which sets the current standards in Washington, concentrations of toxics will be permitted to be as much as 10% to 15% less protective.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 8</p> <p>Ecology’s reduced protections based on body weight is cherry-picking the one component of the standards equation that would lower protections from among the relevant recent default values found in EPA’s EFH. While body weight assumptions may increase, the 2011 EFH contains other values that would be more protective, such as those for life expectancy, drinking water intake, and relative source. Instead of simply adopting all EPA’s recommended values along with body weight, Ecology has instead chosen only to modify the one default (body weight) that is now less protective.</p>	<p><i>Ecology disagrees that it chose only to modify one default component that was less protective. Ecology did use the majority of the equation input recommendations from EPA (see comment letter 48 and EPA’s 304(a) recommended human health criteria), including those for lifespan (which does not affect criteria calculations), drinking water intake, most toxicity factors, and body weight. Note that the EPA’s 2011 Exposure Factors</i></p>

Specific Comments on Body Weight

Commenter ID/Comment	Ecology Response
	<p><i>Handbook is different from the EPA's 304(a) criteria documents. Please also see comments and response in the Inputs to the Equations section of this Response to Comments.</i></p>
<p>Commenter ID: 8</p> <p>Efforts in the Northwest to reinvigorate traditional foods and food systems would be undermined by the Ecology plan to use an increased body weight as one part of its efforts to weaken the water quality standards equation. The Northwest Indian Fisheries Commission outlined such an effort by the Muckleshoot Tribe. NWIFC, Muckleshoot food program fosters creative solutions (Feb. 8, 2012), available at http://nwifc.org/2012/02/muckleshoot-food-program-fosters-creative-solutions/. That program, which received USDA funding, and the CDC effort to promote traditional foods demonstrates the inefficiency and inequity of spending public funds to combat diabetes and other ills by encouraging traditional foods if states are permitted to allow contamination of those traditional foods.</p>	<p><i>Please see the sections in this Response to Comments on Risk Level, Fish Consumption Rate, and #2 General Comment/response under Tribal Treaty Rights for information on protection of fish and shellfish consumers in Washington.</i></p>
<p>Commenter ID: 8</p> <p>It is unjust in the extreme to use one of the results of taking away healthy subsistence foods for native communities—increased body weight—as a reason to then further weaken water quality health protections for eating those foods. Ecology's action in this regard is discriminatory.</p>	<p><i>Please see the sections in this Response to Comments on Risk Level, Fish Consumption Rate, and Tribal Treaty Rights for information on protection of fish and shellfish consumers in Washington.</i></p>
<p>Commenter ID: 8</p> <p>There is evidence that Ecology's decision came at the urging of industry polluters, not due to some scientific assessment. Ecology needs to distance itself from such efforts and ensure that it is applying EPA's best science</p>	<p><i>Ecology did not make the decision to alter the body weight based on industry urging, it made the decision based on new information. However, Ecology does thank</i></p>

Specific Comments on Body Weight	
Commenter ID/Comment	Ecology Response
recommendations and in a way that protects all consumers and is not discriminatory	<i>the regulated community for calling to our attention the new values in the EPA's 2011 Exposure Factors Handbook, which also resulted in increasing the drinking water intake value from 2 L/day to 2.4 L/day.</i>
Commenter ID: 30 Many tribes are emphasizing the importance of access to traditional foods in a healthful diet.	<i>Comment noted.</i>
Commenter ID: 30 The change in the body weight does not consider additional chemical concentration effects from the affinity of contaminants to fat tissue.	<i>Comment noted.</i>
Commenter ID: 30 The use of a body weight value of 80 kg may under-report exposure to women and children.	<i>Please see #1 of the "Body Weight" general response section above.</i>
Commenter ID: 30 Tribes recommend the use of 70 kg for calculating human health criteria.	<i>Please see #1 of the "Body Weight" general response section above.</i>
Commenter ID: 39 Ecology proposes 80 kilograms (176 pounds) for the body weight assumption to derive human health criteria This value is based on updated survey data and is consistent with the average adult body weights of the Tulalip and Suquamish Tribes. Although this body weight is consistent with two tribal surveys, it isn't consistent with or reflective of all of the regional contemporary tribal consumption surveys, particularly the older surveys like the CRITFC	<i>Please see #1 of the "Body Weight" general response section above.</i>

Specific Comments on Body Weight

Commenter ID/Comment	Ecology Response
<p>survey. We believe all of the tribal surveys should be considered when assigning the appropriate body weight for the target population of tribal subsistence fishers. When all surveys are considered, in addition with other data below, the relatively lower 70 kilogram (154 pounds) body weight is more appropriate.</p>	
<p>Commenter ID: 39</p> <p>The 80 kilogram body weight is not representative of the higher fish consuming Pacific Islander populations who, based on King County survey data, have lower average body weights. Thus, usage of an 80 kilogram body weight in the derivation of a human health standard would be under protective for this population as well. For these reasons, the Puyallup Tribe recommends a body weight of 70 kilograms in the derivation of state human health criteria.</p>	<p><i>Please see the section in this Response to Comments on Fish Consumption Rates, in particular the comments and responses on use of the Asian-Pacific Islander FCR information.</i></p>
<p>Commenter ID: 39</p> <p>To protect their most vulnerable, the Puyallup Tribe recommends the state use a body weight of 30 kg in a variety of circumstances to provide additional protection for children when the chemical of concern indicates health effects in children are of primary concern. EPA recommends this approach in the 2000 Methodology. 2000 Methodology, at 4-29. The exposure factor values provided in the 2000 Methodology for women of childbearing age and children should be used in these situations and the state rule language should reflect this recommendation to provide certainty for the protection of women and children throughout our state. In addition to the EPA guidance above, Washington should also be using the 30kg standard as a result of the need to protect Tribal Treaty Rights throughout waters in Washington State.</p>	<p><i>Please see #1 of the “Body Weight” general response section above.</i></p>

Specific Comments on Body Weight	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 42</p> <p>Ecology’s proposed human health criteria use a bodyweight of 80 kg. Ecology cites EPA’s 2015 national ambient water quality criteria, which enlist an updated average adult bodyweight of 80 kg (176 pounds) in place of the bodyweight of 70 kg (154 pounds) previously assumed nationally and in Washington. Ecology also suggests that this national figure is consistent with local tribal data relevant to Washington. Ecology’s choice is unsupportable when considered, as it must be, in context; Ecology should retain the former 70 kg bodyweight. Because the bodyweight variable resides in the denominator of the relevant risk assessment equations, an increase in its value means a decrease in the protectiveness of the resulting WQS. Ecology’s proposed change to 80 kg would render Washington’s WQS about 10-15% less protective than were it to retain a 70 kg value. Ecology should be mindful of the historical context and retain the 70 kg body weight as a value that is supportive of tribal members’ future health, including tribes’ ability to combat the scourge of diabetes and other diet-related illnesses in their communities. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Please see #1 of the “Body Weight” general response section above.</i></p>
<p>Commenter ID: 48</p> <p>In Ecology's proposed rule, the state derived human health criteria using a body weight assumption of 80 kg based on tribal survey data relevant to Washington and the EPA’s 2011 Exposure Factors Handbook. The EPA is supportive of Ecology assuming a body weight of 80 kg to derive human health criteria. A body weight of 80 kg is the EPA’s current default body weight assumption in its updated 2015 304(a) recommendations, which is the national mean based on a current survey of the U.S. population and described in the EPA's 2011 Exposure Factors Handbook.</p>	<p><i>Comment noted.</i></p>

Specific Comments on Body Weight	
Commenter ID/Comment	Ecology Response
Consistent with the EPA's guidance, Ecology is using local and regional specific data in deriving this value.	

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Drinking Water Intake

Summary of Comments

Comments received on drinking water intake were all individual and are listed below with responses.

Specific Comments on Drinking Water Intake	
Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 30</p> <p>Tribes concur with Ecology’s proposal to use updated national water quality criteria values for Drinking Water Intake as these criteria reflect best available science.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 39</p> <p>We agree with updating the drinking water intake rate to 2.4 liters per day, which is consistent with EPA’s proposed federal rules (September 2015) and EPA’s 2015 Nationally Recommended Water Quality Criteria.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 42</p> <p>Ecology’s proposed human health criteria use a drinking water intake (DWI) value of 2.4 liters/day. To its credit, Ecology improves upon its flawed first proposed WQS, which selected a DWI value of only 2 liters/day, citing an outdated version of EPA’s Exposure Factors Handbook. Ecology’s second proposed WQS enlist an updated DWI figure drawn from EPA’s 2011 Exposure Factors Handbook. However, the 2011 Exposure Factors Handbook arguably supports updated values even greater than this. Moreover, researchers have documented tribal drinking water intake needs at rates greater than the general U.S. population’s needs, e.g., at 4 liters/day for a Spokane Tribal exposure scenario</p>	<p><i>Comment noted.</i></p>

Specific Comments on Drinking Water Intake

Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 48</p> <p>In Ecology's 2016 proposed rule, the state derived human health criteria using a drinking water intake rate of 2.4 L/day. In the absence of reliable local or regional data, the EPA recommends that the state refer to the most current available national data, and is supportive of Ecology assuming a drinking water intake rate of 2.4 L/day to derive human health criteria. This is consistent with the EPA's 2015 updated 304(a) recommendations where the EPA used a drinking water intake rate of 2.4 L/day, which represents the per capita estimate of combined direct and indirect community water ingestion at the 90th percentile for adults ages 21 and older.</p>	<p><i>Comment noted.</i></p>

Toxicity Factors

Summary of Comments

All comments received on toxicity factors were individual and are listed below with responses. Please see additional specific comments on toxicity factors for arsenic and dioxin in the Arsenic and Dioxin sections in this Response to Comments.

Specific Comments on Toxicity Factors	
Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 13</p> <p>The Tribe does not agree with Ecology's approach for developing hhc for PCBs and dioxins, based only on non-carcinogenic health effects. Both PCBs and dioxins are also carcinogenic and bioaccumulative. Ecology's failure to develop criteria that fully account for all human health impacts of these highly toxic contaminants is a failure to protect the health of tribal members as well as a failure to protect treaty resources. The Tribe requests that Ecology revise the hhc for PCBs and dioxins to incorporate health protective variables and apply best available science.</p>	<p><i>Please see the "PCBs" and "Dioxins" sections in this Response to Comments.</i></p>
<p>Commenter ID: 30</p> <p>Tribes concur with Ecology's proposal to use RfDs found in the EPA IRIS or NRWQC documents</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 39</p> <p>In deriving human health criteria for carcinogens, the Puyallup Tribe recommends using the cancer slope factors recommended by EPA in the 2015 Nationally Recommended Criteria. EPA has updated the health risk factors, including the cancer slope factor and reference doses, using the most current toxicity information. EPA's Integrated Risk Information System (IRIS) is the primary recommended source for reference dose</p>	<p><i>In most cases, Ecology did use the toxicity factors in EPA's most recent 304(a) criteria. Because EPA has not yet developed cancer slope factors (CSFs) for 2,3,7,8-TCDD and inorganic arsenic, and did not update their 304(a) criteria for these chemicals, Ecology is not depending on the uncertain CSFs for these chemicals that were included in the older (yet still most current) EPA</i></p>

Specific Comments on Toxicity Factors

Commenter ID/ Comment	Ecology Response
<p>and cancer slope factor information. For some pollutants, more recent assessments may be found using other resources provided by EPA's Office of Water and other programs.</p>	<p><i>criteria. Please also see the "Arsenic" section in this Response to Comments.</i></p>
<p>Commenter ID: 39</p> <p>PTI recommends the State use the most recent reference doses used in EPA's IRIS database and 2015 § 304(a) Nationally Recommended Criteria for both the "water+ organism" and "organism only" criteria for non-carcinogens. Draft Nationally Recommended Water Quality Criteria, U.S. EPA, Office of Water, Washington D.C. Last updated on December 3, 2014. Available at: http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm#hhtable ("Draft Criteria"). The reference dose is EPA's maximum acceptable oral dose of a toxic substance, without the risk of "deleterious effects" over a lifetime. It is specific to the individual pollutant. EPA's 2000 Human Health Methodology recommends deriving human health criteria using the reference dose.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 48</p> <p>The EPA supports Ecology using the most current RfDs and CSFs that the EPA used in its 2015 304(a) recommendations to derive criteria that reflect the latest scientific information on human health toxicity. Ecology has used this approach with two exceptions - arsenic and 2,3,7,8-TCDD - for which the state is proposing not to use the CSFs consistent with the EPA's 304(a) recommendations.</p>	<p><i>Please see "Arsenic" and "Dioxin" sections in this Response to Comments.</i></p>

Relative Source Contribution (RSC)

Summary of Comments

Many comments were received on RSCs. Many comments asserted that Ecology should use the RSCs that EPA used to calculate its new nationally recommended human health criteria. Other comments expressed support for the approach of using a RSC = 1. Because of the number of comments asserting that Ecology should use EPA's approach, Ecology has developed a general response below.

Individual comments and responses on RSC are included in the table below this General Comment/Responses section.

General Comment/Responses on RSC

1. General Comment: 8, 11, 21, 30, 39, 42, 48, 51

Ecology should use the RSCs that EPA applied to calculate its new nationally recommended human health criteria.

Response: Ecology discussed RSCs extensively as part of the public process for this rule. EPA's recommended approach was considered as part of this discussion.

Choosing to have human health criteria account for sources of toxics that come from:

- 1) exposures from sources other than fish/shellfish and drinking surface waters (e.g., dermal exposures, inhalation exposures, or other food sources for example grains or livestock)
- 2) sources that cannot be regulated under the CWA (e.g., direct atmospheric deposition of a pollutant to the surface of a waterbody) is a policy decision.

EPA's rationale in its 2000 Methodology is based on policy: the desire to harmonize the CWA and the SDWA. This is not a decision about science. Ecology conducted an extensive public process to arrive at the final decision to use a RSC = 1.

Specific Comments on Relative Source Contribution	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 2</p> <p>In addressing the issue of non-water sources of contaminants, the Department has used a Relative Source Contribution (RSC) value of 1.0, rather than using other values that have been provided by USEPA. We believe that the Department's choice is the right one. Applying a lower RSC value is not</p>	<p><i>Comment noted.</i></p>

Specific Comments on Relative Source Contribution

Commenter ID/Comment	Ecology Response
<p>necessary, given the conservatism already built into other aspects of the standard-setting process, and leads to standards that are more stringent than is scientifically justified. Washington’s proposed use of a Relative Source Contribution Factor (RSC) of 1.0 results in protective human health standards and recognizes that selection of an RSC is a risk management decision. Because Washington’s proposed standards use a fish consumption rate that is nearly ten times higher than that used to derive USEPA’s 2015 national criteria, application of USEPA’s default RSC of 0.2 (which USEPA used for most of its 2015 national criteria) is inappropriate. Given the conservative nature of the assumptions that Washington used to derive the proposed standards, the use of a uniform RSC of 1.0 for all chemicals will be protective of high consumers (for whom most exposure is assumed to come from fish) as well as average consumers (for whom a majority of exposure may be from other sources, but for whom exposure from water is greatly overestimated because of the conservative assumptions used in the proposed standards). Therefore, use of an RSC of 1.0 represents a sound risk management decision. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	
<p>Commenter ID: 4</p> <p>NWFPA agrees with Ecology’s proposed use of an RSC of 1.0. The scope of the Clean Water Act is to address potential exposures from NPDES. Use of an RSC less than 1.0 would expand this scope.</p>	<p><i>Comment noted.</i></p>

Specific Comments on Relative Source Contribution

Commenter ID/Comment	Ecology Response
<p>Commenter ID: 6</p> <p>As far as its other excuses, first, the Safe Drinking Water Act (“SDWA”), cited by Ecology as an example of when one can factor in the cost of treatment, addresses a beneficial use that can be protected by treatment, so there is a connection between the two, unlike water quality in a stream. Second, the decision to allow such factors to be taken into account was established by Congress, not the EPA and not Ecology. Third, it is unclear why Ecology thinks that what it terms “direct regulatory levels that are enforced” is wrong as a method of protecting human health other than it undermines Ecology’s protectiveness of entities that pollute public waters and jeopardize the health of fish and water consumers. Moreover, given Ecology’s poor regulation of these pollution sources and its employment of mixing zones as a method of undercutting the so-called “direct regulatory levels that are enforced” it is unclear what Ecology is complaining about.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 6</p> <p>By focusing on the water pollution sources that are controlled under the Clean Water Act, this (the EPA) approach ensures that the mere fact that people are being exposed otherwise is not used to avoid their full protection. Ecology just does not like the use of the RSC in this fashion because it increases regulation of its pollution sources and Ecology views its job as protecting these polluters from the ravages of the public good known as the Clean Water Act. The agency’s failure to update these criteria over many years, the cynical ploys embodied in its first approach to rulemaking, and its failure to use the water quality standards and other authorities to actually clean up pollution over many</p>	<p><i>Comment noted.</i></p>

Specific Comments on Relative Source Contribution

Commenter ID/Comment	Ecology Response
<p>decades all point to its fundamental misunderstanding of its role. Its first obligation is to the public and the environment, not to the polluters.</p> <p>(Please see original comment letter for remainder of comment)</p>	
<p>Commenter ID: 6</p> <p>Ecology is not limited to the authorities of the Clean Water Act to clean up water pollution from other than NPDES-regulated sources, as it implies.³ Ecology has plenty of authority granted to it by state water pollution laws. Moreover, to imply that atmospheric deposition is not under Ecology’s control is misleading. See, for example, the Willamette River TMDL developed by the Oregon Department of Ecology.⁴ While it is not actually a TMDL in that it does not contain certain legally-required elements of a TMDL, it does contain an evaluation of mercury sources to this major river basin. For example, it concludes that 41.8 percent of the total mercury load to the basin is from “runoff of atmospherically deposited mercury [to land]” and 47.8 percent is from “erosion of mercury containing [native] soils.” Together the runoff and erosion result in nearly 90 percent of the total mercury loading to the mainstem Willamette River. Runoff and erosion are, as Ecology is well aware, sources of pollution that can be controlled by state legal authorities. This example demonstrates why Ecology’s whining about the limitations of the Clean Water Act as a basis for not properly establishing its water quality standards rings hollow.</p>	<p><i>Ecology relies on CWA-regulated sources to implement CWA water quality standards. Ecology expects that, as mercury criteria and control strategies are developed in future rulemaking, non-point sources and erosion control might be an important control mechanism, although certainly not the only approach that will be considered.</i></p>
<p>Commenter ID: 8</p> <p>Ecology refuses to use EPA’s recommendations regarding Relative Source Contribution (applicable</p>	<p><i>Please see #1 in the “RSC” general response section above.</i></p>

Specific Comments on Relative Source Contribution

Commenter ID/Comment	Ecology Response
<p>to non-carcinogens). EPA rightly points out that people’s burden of toxics, and relative risk, come from a variety of sources. Ecology pays no heed to EPA’s recommendation and uses a relative source contribution value for all its calculations of 1.0—that is, Ecology irrationally assumes, with no foundation in fact or research, that a person in Washington ingests toxics only from fish or shellfish and not from any other source. As Ecology admits, using .20 for the relative source contribution, as opposed to 1.0, would have made the resulting water quality standards more stringent. Overview at 25. Ecology does not provide evidence suggesting that it has good scientific data in Washington about sources of toxics or that sources of exposures are “well-known and documented.”</p>	
<p>Commenter ID: 11</p> <p>A relative source contribution (RSC) of 1 is reasonable for a fish consumption rate of 175 g/day, but the rationale for the selection of this RSC should be more developed in the Key Decisions Overview.</p>	<p><i>Ecology considers that the Decision Document, with other materials present in the rule record, appropriately and adequately documents the rationale. Please see #1 of the “RSC” general response section above.</i></p>
<p>Commenter ID: 11</p> <p>Ecology’s Key Decisions Overview (Ecology 2016c) includes strong rationale for the selection of an RSC of 1. However, the document did not discuss the history of the use of the RSC or the conservative nature of reserving exposure for other pathways. This rationale would provide important context and should be included in the RSC section of the Key Decisions Overview.</p>	<p><i>Ecology considers that the Decision Document, with other materials present in the rule record, appropriately and adequately documents the rationale. Please see #1 of the “RSC” general response section above.</i></p>
<p>Commenter ID: 21</p> <p>Use the RSCs that EPA has developed</p>	<p><i>Please see #1 of the “RSC” general response section above.</i></p>

Specific Comments on Relative Source Contribution

Commenter ID/Comment	Ecology Response
<p>Commenter ID: 30</p> <p>An RSC value of less than one is necessary to account for additional fish consumed by tribes, but not accounted for in the FCR.</p>	<p><i>Please see #1 of the “RSC” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>Ecology Must Utilize Default Relative Source Contribution Values as Recommended By EPA in Order to Accurately Account for Toxic Exposures and Set Criteria that Protect the Designated Uses.</p>	<p><i>Please see #1 of the “RSC” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>The RSC is part of Ecology’s selective adoption of specific updates to national water quality criteria that tend toward a direction of higher (less protective) chemical criteria.</p>	<p><i>Please see comments and responses in the “Inputs to the Equations” section of this Response to Comments</i></p>
<p>Commenter ID: 34</p> <p>The proposed Relative Source Contribution factor is consistent with the Clean Water Act and EPA guidance for deriving human health criteria. Ecology has appropriately proposed to use a RSC factor of 1.0 in deriving the proposed criteria where it is simultaneously using a fish consumption rate that includes all fish whether or not that fish is purchased from a store or a marine fish that does not accumulate pollutants in waters regulated by the state’s water quality standards. By using a fish consumption rate that reflects the 90th to 95th percentile of tribal consumption rates that includes all fish, there is no other source of water intake or fish consumption that should be accounted for in a RSC of less than 1.0. EPA Region 10 has endorsed the use of an RSC of 1.0 where a state is including all salmon in its criteria development methodology. Ecology has appropriately described the significant</p>	<p><i>Comment noted.</i></p>

Specific Comments on Relative Source Contribution

Commenter ID/Comment	Ecology Response
<p>differences between risk assessment in other programs such as the Safe Drinking Water Act (SDWA) and Superfund Cleanup Program from the Clean Water Act.⁷⁵ The SDWA uses a RSC of 0.2 and 0.8 of exposure but does so in terms of goals, not water quality criteria. The SDWA is using this range of RSC for establishing Maximum Contaminant Level Goals that are not by definition regulatory limits. This is in contrast to criteria in approved water quality standards that must be enforced through TMDLs and end of the pipe limits in NPDES permits. In this instance Ecology is proposing a RSC that is entirely consistent with EPA guidance and there is no basis for using a RSC value of less than 1.0.</p>	
<p>Commenter ID: 38</p> <p>We agree with the use of a Relative Source Contribution (RSC) of 1, and agree with Ecology's wanting to keep the criteria relevant to water exposures and the associated Clean Water Act (CWA) tools. We are pleased that Ecology eloquently voiced this position in their comments to EPA concerning EPA's proposed revisions to EPA's national recommended human health water quality criteria.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 38, 61</p> <p>Support approach in the draft rule.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 39</p> <p>Ecology has failed to provide scientific justification for deviating from EPA's scientifically supported use of RSC values of .2-.8. Ecology attempts to couch their reasoning as a well thought out state policy, directly contradicting EPA guidance.</p>	<p><i>Please see #1 of the "RSC" general response section above. With regard to your comment on arbitrary and capricious, please see comments and responses in the "Inputs to the</i></p>

Specific Comments on Relative Source Contribution

Commenter ID/Comment	Ecology Response
Ecology's determination to utilize a RSC of 1 is arbitrary, capricious, contrary to law, and violates Tribal Treaty Rights.	<i>Equations” and “Treaty Rights” sections of this Response to Comments.</i>
<p>Commenter ID: 39</p> <p>EPA developed chemical specific RSCs for non-carcinogens and non-linear carcinogens ranging from 0.2 to 0.8 following the exposure Decision Tree approach described in the 2000 Methodology. The Tribe recommends using the same RSCs to derive human health criteria for Washington. Where EPA did not update specific pollutants in the 2015 nationally recommended criteria, the Tribe recommends using an RSC of 0.2 to derive criteria for these pollutants, to ensure adequate human health protections.</p>	<i>Please see #1 of the “RSC” general response section above.</i>
<p>Commenter ID: 39</p> <p>EPA found that the most significant source of exposure to methylmercury was the ingestion of marine fish. Mercury Source Assessment, United Nations Environment Program, Inter-organization Program for the Sound Management of Chemicals, Geneva, Switzerland, 2013, available at http://www.chem.unep.ch/mercury/Report/Chapter4.htm. Thus, the RSC of 2.7×10^{-5} mg methylmercury/kg/day is recommended by EPA as an estimated exposure from marine fish intake. EPA's recommendation is based on the assumption that the fish consumption rate does not include fish of marine origin. However, as part of the re-evaluation of local and regional data and the selection of a fish consumption rate of 175 grams per day, Washington did take into consideration the consumption of salmon and regional consumption rates that included estuarine finfish and shellfish.</p>	<i>Ecology did consider marine fish in the public process discussing RSCs. Ecology made the very protective decision to include all fish and shellfish, regardless of source, in the human health criteria calculation. Using an RSC = 0 would imply that all other sources of exposure to a chemical add up to the reference dose, in which case the calculated criterion value would be zero (0).</i>

Specific Comments on Relative Source Contribution

Commenter ID/Comment	Ecology Response
<p>Therefore, in reviewing this information, it is not necessary to provide additional protection from ingestion of marine fish through the use of an RSC value. As a result, the exposure related to marine fish should be subtracted out, resulting in an RSC of zero. Ecology has failed to address this issue in the Proposed Rule.</p>	
<p>Commenter ID: 39</p> <p>PTI agrees with the Oregon DEQ rationale for Endrin that routes of exposure other than drinking water and fish tissue are unlikely in Washington State as endrin was banned in the US in 1980s, USFDA declared in 1995 that exposure to endrin from foods was no longer a concern, and it is not mobile in soil and volatilizes rapidly in air. Thus, 80% is recommended. Where it can be demonstrated that other sources and routes of exposure are not anticipated for the chemical in question, EPA recommends a ceiling of 80%. 2000 Methodology. Ecology has failed to address this issue in its proposed rule.</p>	<p><i>Please see #1 of the “RSC” general response section above.</i></p>
<p>Commenter ID: 39</p> <p>The RSC identifies or estimates the portion of a person's total exposure attributed to water and fish consumption and thereby accounts for potential exposure of toxics from other sources such as skin absorption, inhalation from ceremonial uses and sweats in sweat lodges, other foods, and occupational exposures. All of these exposure pathways must be accounted for in order for a water quality criteria to be protective. Setting a relative source contribution of 1 means that only contaminant sources from water and fish and shellfish are accounted for in the derivation of the</p>	<p><i>Please see #1 of the “RSC” general response section above. With regard to your comment on arbitrary and capricious, please see comments and responses in the “Inputs to the Equations” section of this Response to Comments</i></p>

Specific Comments on Relative Source Contribution

Commenter ID/Comment	Ecology Response
<p>critterion, discounting all other exposure pathways. Such an approach is arbitrary and capricious and has no sound scientific or defensible basis. The state's argument that only those sources that can be controlled under the Clean Water Act (i.e. water- and fish and shellfish) should be used in the derivation of the relative source contribution and thus the criterion is irrelevant. The derivation of the standard is based on protection of human health, not what pollutants can or can't be controlled under the authorities of the Clean Water Act.</p>	
<p>Commenter ID: 42</p> <p>Ecology's second proposed WQS eschew EPA guidance and instead enlist a relative source contribution (RSC) of 1. By contrast, EPA's proposed human health criteria enlist its recently updated chemical-specific values for relative source contributions for noncarcinogens and nonlinear carcinogens, which range from 0.2 (20 percent) to 0.8 (80 percent), and use an RSC of 0.2 for the remaining pollutants for which national values were not updated. As EPA explained: EPA recommends using a RSC for non-carcinogens and nonlinear carcinogens to account for sources of exposure other than drinking water and consumption of inland and nearshore fish and shellfish.¹⁵⁹ I support EPA's approach to the RSC, and agree with the rationale cited by EPA in support of its choice.</p>	<p><i>Please see #1 of the "RSC" general response section above.</i></p>
<p>Commenter ID: 48</p> <p>The EPA commends Ecology for incorporating anadromous fish, which spend significant portions of their lives in marine waters, in the proposed FCR. This is particularly appropriate since data show adult salmon in Washington can accumulate a substantial</p>	<p><i>Please see #1 of the "RSC" general response above.</i></p>

Specific Comments on Relative Source Contribution

Commenter ID/Comment	Ecology Response
<p>fraction of their contaminant body burden during their residence time in Puget Sound (O'Neill and West, 2009) and near coastal marine waters (O'Neill 2006) that are under the jurisdiction of the CWA. The EPA's human health criteria FAQs clarify that, where a state's FCR includes freshwater, estuarine, and all marine fish consumption, states can adjust the RSC upward to reflect a greater proportion of the reference dose being attributed to marine exposures. However, even when accounting for anadromous fish in the FCR, Ecology has not adequately justified using a RSC value of 1.0 to derive human health criteria for all non-carcinogens and nonlinear carcinogens, nor has it adequately explained why it is appropriate to disregard all other routes of exposure, including air, soil, other marine fish and shellfish, non-fish food, etc. Therefore, the EPA continues to strongly recommend that Ecology choose an appropriate RSC in the recommended range of 0.2 to 0.8 using the Exposure Decision Tree approach as described in the EPA's 2000 Human Health Methodology and consistent with the EPA's 2015 304(a) recommendations and September 2015 federal proposed rule to calculate human health criteria that are protective of the designated use and based on sound science.</p>	
<p>Commenter ID: 51</p> <p>For calculating criteria for water quality standards for all non-carcinogens, the state proposes to adopt a Relative Source Contribution (RSC) value of 1.0 (100%). The updated national water quality criteria for RSC is 0.2 (20%). Applying an RSC of 1.0 demonstrates Ecology's selective adoption of specific updates to national water criteria that consistently tend toward higher (less protective) chemical criteria.</p>	<p><i>Please see #1 of the "RSC" general response above.</i></p>

Specific Comments on Relative Source Contribution

Commenter ID/Comment	Ecology Response
<p>Commenter ID: 62, 65</p> <p>The Relative Source Contribution (RSC) of 1.0 proposed by Ecology is appropriate and consistent with EPA guidance.</p>	<p><i>Comment noted.</i></p>

Lifespan

Summary of Comments

Comments received on lifespan were all individual, and are listed below with responses.

Specific Comments on Lifespan	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 8</p> <p>Ecology also rejects EPA’s recommendation that life expectancy factors must be increased. The seventy years life expectancy relied upon by Ecology in its calculations is no longer best science. Rather, EPA recommends an average life expectancy for men and women combined of 78 years. Again, retaining the outdated life expectancy figure results in a less-protective water quality standard. Ecology excuses its arbitrary choice by claiming that lifespan is not an “explicit” part of the criteria equations. Overview at 16. While lifespan is not called out explicitly in the equation, it certainly affects the results, and, as Ecology acknowledges, a change would result in changes to the calculated results of the equation. Overview at 44. Likewise, these numbers matter for “discharge limits for episodic discharges.” Overview at 46. Yet, instead of using the most current guidance, Ecology simply accepts outdated 1994 and 2000 guidance documents. Ecology should use the 78-year lifespan.</p>	<p><i>Ecology disagrees that assuming a life expectancy of 78 years (rather than 70 years) would affect the calculated criteria. This comment refers to the EPA’s 2011 Exposure Factors Handbook, which is a general reference for exposure factors, but is not the same as the CWA 304(a) guidance documents. Increasing the life expectancy has no effect on the calculated criteria because, with water quality criteria, the exposure duration is assumed the same as the lifetime value. In addition, there is no explicit variable in the criteria equations for life span. Changing this value would only be relevant if the duration of exposure was assumed to be less than a lifetime, such as used in the MTCA risk equations. If this approach were used the equations could be modified to account for the differences in lifespan and duration of exposure. Note that EPA’s 304)(a) criteria also do not include an explicit input for lifespan, but EPA guidance is clear that 70 years is acceptable for a lifespan value. The difference between 70 and 78 years makes no difference in discharge limits for episodic discharges, as both values far exceed the ability to model effluent limits for episodic discharges with any degree of certainty.</i></p>

Specific Comments on Lifespan

Commenter ID/Comment	Ecology Response
<p>Commenter ID: 42</p> <p>Ecology proposes to retain a 70-year exposure duration among its “implicit” inputs to its risk assessment equation, based on an average 70-year life expectancy supported by earlier editions of EPA’s Exposure Factors Handbook. However, the 2011 Exposure Factors Handbook indicates that the updated average life expectancy nationwide, based on the most recent science then available, is 78 years. Moreover, local data published by the Washington Department of Health in 2013 document life expectancy for Washingtonians at 80.3 years, with recent trends “show[ing] that Washingtonians are living longer” than in previous times. Interestingly, were Ecology as keen to base its exposure duration on the “newer science and local data” for life expectancy, this change would almost exactly cancel out the change Ecology proposes to the bodyweight variable.</p>	<p><i>This comment refers to the EPA’s 2011 Exposure Factors Handbook, which is a general reference for exposure factors, but is not the same as the CWA 304(a) guidance documents. Increasing the life expectancy has no effect on the calculated criteria because, with water quality criteria, the exposure duration is assumed to be the same as the lifetime value. In addition, there is no explicit variable in the criteria equations for life span. Changing this value would only be relevant if the duration of exposure was assumed to be less than a lifetime, such as used in the MTCA risk equations. If this approach were used the equations could be modified to account for the differences in lifespan and duration of exposure. Note that EPA’s 304)(a) criteria also do not include an explicit input for lifespan, but EPA guidance is clear that 70 years is acceptable for a lifespan value. The difference between 70 and 78 years makes no difference in discharge limits for episodic discharges, as both values far exceed the ability to model effluent limits for episodic discharges with any degree of certainty.</i></p>

Inputs to the Equation

Summary of Comments

Many comments asserted that Ecology selectively chose inputs to the human health criteria equation that, apart from the fish consumption rate and risk level, would result in the least stringent criteria. Commenters also asserted that Ecology:

- made these choices at the behest of dischargers
- ignored best available science and rejected EPA guidance (EPA human health criteria guidance, EPA 2014 draft and 2015 final recommended national human health criteria, as well as EPA's 2011 *Exposure Factor's Handbook* are referenced in various comments)
- was unclear and unsound
- made choices that these choices were arbitrary and capricious

Many comments also asserted that Ecology has an obligation to use EPA recommended values, absent a scientific justifications to show otherwise. Specific parameters called out in this comment as providing less protection are bioconcentration factors (BCFs), relative source contributions (RSCs), body weight, drinking water intake, and life expectancy. Some commenters agreed with the decision making process on other inputs to the equations. Because of the breadth and number of the comments related to the topic of inputs to the equations, Ecology has developed general responses to many of these comments

Individual comments and responses on Inputs to the Equations are included in the table below this General Comment/Responses section.

General Comment/Responses on Inputs to the Equations

1. General Comment: 8, 30, 36, 39, 42, 51, 53, 64, 77

Ecology selectively chose inputs to the human health criteria equation (apart from the FCR and the risk level) that would result in the least stringent criteria, and it appears that Ecology made these choices at the behest of dischargers. Some commenters felt that the choices for most inputs to the human health criteria that would result in the least stringent criteria were arbitrary and capricious.

Response: Ecology disagrees that choosing inputs to the human health criteria equations were arbitrary and capricious. The rationale for choosing the inputs to the criteria is clearly explained in the Decision Document and in the sections of this Response to Comments addressing specific input variables. The input variables were chosen, in combination, to provide full protection for the designated uses addressed by the human health criteria. Please see #2 of the “Tribal Treaty Rights” general response section in this Response to Comments for further explanations of how Ecology used information to set criteria that are fully protective of designated uses.

Also, to address comments that Ecology made choices at the behest of dischargers, please see comment letters from dischargers, which demonstrate that all inputs to the criteria calculations are not universally supported by that stakeholder group. Ecology made decisions on the rule based on an extensive public process, federal and state laws and regulations, and with consideration of state and federal policy and guidance. Some of the choices made by Ecology are associated with an increased level of protection (stringency) such as the FCR, the risk level, toxicity factors, and drinking water intake. Some are associated with decreased protection, such as the relative source contribution. It is incorrect to infer that any one input defines the level of protection or stringency of a criterion. Please see the section on Risk Level in this Response to Comments.

Ecology disagrees with the assertion that this rulemaking was based on arbitrary or capricious decision-making. The public record for this rule is extensive, covering more than 4 years with multiple opportunities for public input and discussion. Ecology hosted a series of Water Quality Policy Forums on the rulemaking work between October 2012 and September 2013 to address the complex science and public policy issues and to enable all interested stakeholders to participate in the rule development process (see website at: <http://www.ecy.wa.gov/programs/wq/swqs/hhcpolicyforum.html>). Ecology also formed a Delegates Table that consisted of individuals representing the interests of their respective communities to participate and offer their perspectives on the proposed rulemaking and conducted several meetings between June 2013 and February 2014 (see website at <http://www.ecy.wa.gov/programs/wq/swqs/delegatetable.html>). An index of information and public processes related to the human health criteria and implementation tools rulemaking process with links to the numerous information sites can be found at <http://www.ecy.wa.gov/programs/wq/swqs/HHCinfoindex.html>.

Ecology's public process for this rule development is extensive, and Ecology considered the input from this extensive process when making decision regarding the inputs to the human health criteria equation, as well as other policy decisions made during the development of this rule. While different parties may disagree with the decisions Ecology made, those decisions were informed by Ecology's extensive public process and were not the result of arbitrary or capricious decision-making.

2. General Comment: 8, 13, 30, 31, 36, 39, 41, 42, 51, 53, 64, 77

Ecology ignored best available science and rejected EPA guidance (EPA human health criteria guidance, EPA 2014 draft and 2015 final recommended national human health criteria, as well as EPA's Exposure Factor's Handbook are referenced in various comment here). Ecology's decisions were unclear and unsound. Ecology has an obligation to use EPA recommended values, absent a scientific justification to show otherwise. Specific parameters called out in this comment as providing less protection are *bioaccumulation factors, relative source contribution, body weight, drinking water intake, and life expectancy.*

Response: Ecology disagrees with the assertion that best available science and EPA guidance were ignored and decisions made were unclear and unsound. Ecology agrees the best available science should be used in the support of regulatory actions. Ecology has used best available science in developing this rule. This is explained throughout the Decision Document and in the sections of this Response to Comments addressing specific input variables. The input variables were chosen to provide full protection for the designated uses addressed by the human health criteria. Ecology’s rule process has openly acknowledged scientific uncertainties in the inputs to the criteria equations (e.g., the use of uncertainty factors in reference dose development). EPA’s 2011 Exposure Factor’s Handbook is a general reference, and is not the same as the EPA’s CWA 304(a) criteria documents, which EPA develops under CWA requirement to assist states and tribes in water quality criteria adoption. Ecology has developed clear science and/or policy statements to support the final criteria, and has clearly stated the basis of these in materials supporting the proposed and new rule, in particular where new science is emerging or underway. In particular, this has been clarified for (1) arsenic, PCBs, and dioxin, where issues of toxicity factors, alternative approaches to criteria development, and risk levels have been addressed, and (2) the use of a bioconcentration-based approach over the EPA-recommended bioaccumulation factors in criteria calculation. For additional details, please see sections in this Response to Comments on Bioconcentration Factors, Relative Source Contribution, Body Weight, Drinking Water Intake, and Lifespan.

Ecology does not have an obligation to use EPA recommended values, absent a scientific justification to show otherwise. 40 CFR 131.11(b) says: “...In establishing criteria, States **should:** (1) Establish numerical values based on: (i) 304(a) Guidance; or (ii) 304(a) Guidance modified to reflect site-specific conditions; or (iii) Other scientifically defensible methods.” This language gives states the discretion to modify EPA’s guidance or use other scientifically defensible methods. Ecology chose to follow 40 CFR 131.11(b)(1)(ii) above, and use state-specific values for some inputs to the criteria equations. Ecology followed EPA 304(a) guidance on body weight, drinking water intake, and life expectancy (life expectancy does not affect criteria calculations). Ecology did not follow EPA’s most recent guidance on bioaccumulation factors and relative source contribution. Please see sections in this Response to Comments on Bioconcentration Factors, Relative Source Contribution, Body Weight, Drinking Water Intake, and Lifespan.

Specific Comments on Inputs to the Equation	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 8</p> <p>At every step, Ecology has selected the less protective option for the equation, often rejecting EPA’s best-science instruction and recommendations.</p>	<p>Please see #1 and 2 in the “Inputs to the Equations” general response section above.</p>

Specific Comments on Inputs to the Equation

Commenter ID/Comment	Ecology Response
<p>Commenter ID: 8</p> <p>Ecology Must Abandon Its Arbitrary, Selective, and Unscientific Tinkering with Components of the Water Quality Standards Equation. As with its earlier failed effort, Ecology adjusted some, but not all, components of the human health water quality standards equation in reference to EPA’s Exposure Factors Handbook (“EFH”). In so doing, Ecology picked only EPA recommendations that would weaken water quality standards while rejecting those that would strengthen the standards. Again, Ecology’s actions appear to be results driven and are not based on the best science or what will be most protective of the most residents of Washington. This is the hallmark of arbitrary agency action. The factors Ecology engineered in its standards equation are body weight, life expectancy, relative source contribution, and the use of bioconcentration as opposed to bioaccumulation factors. Each of these components affects the outcome of the human health criteria equation and the amount of concentrations allowed in Washington water. Each of these components is based upon EPA’s long work in developing the science that supports use of particular factors in order to protect designated uses, and EPA has provided the results of that science in its recommendations to states. Yet Ecology ignored the science and EPA recommendations based on that science in favor of a one-sided results-driven approach. For body weight, Ecology chose to adopt EPA’s recommendation, a choice that would drive the standard downward or in a less-protective direction. For life expectancy and source contribution however, Ecology rejected EPA’s recommendations, on thin “states-rights” grounds,</p>	<p><i>Please see #1 and 2 in the “Inputs to the Equations” general response section above.</i></p>

Specific Comments on Inputs to the Equation

Commenter ID/Comment	Ecology Response
<p>because those factors would strengthen the standards. On the bioconcentration as opposed to bioaccumulation issue, it appears from the Overview document that Ecology is confused about the science and the difference between these two factors as its discussion is muddled and inconsistent with the science and the Clean Water Act. Nonetheless, Ecology’s choice again drove the resulting standard away from EPA’s recommended approach and in a less-protective direction. Overall, Ecology’s justifications in how it calculated the standards are unclear and unsound.</p>	
<p>Commenter ID: 8</p> <p>Ecology’s selective rejection of other EFH recommendations further weakens protections and is arbitrary and contrary to best science. In sum, Ecology’s choices in this rulemaking appear to be dictated entirely by keeping the water quality standards from becoming more protective. Ecology’s actions are arbitrary and divorced from the science and the law and Waterkeepers Washington urges Ecology to reject this approach and redo the water quality standards with an approach that is protective of all Washington residents and consistent with the best science and recommendations from EPA.</p>	<p><i>Please see #1 and 2 in the “Inputs to the Equations” general response section above.</i></p>
<p>Commenter ID: 8</p> <p>The fish consumption rate does not exist in a vacuum and must be considered simultaneously with the other components of the human health water quality standards. Ecology’s decision to tinker with various components of the human health criteria equation negates much or all of the progress that may have occurred as a result of</p>	<p><i>Please see #2 in the “Inputs to the Equations” general response section above.</i></p>

Specific Comments on Inputs to the Equation

Commenter ID/Comment	Ecology Response
<p>finally using a fish consumption rate that moves toward a more accurate reflection of what residents of Washington actually eat.</p>	
<p>Commenter ID: 13</p> <p>While the current proposal incorporates a more reasonable FCR, and maintains the current cancer risk rate of 1×10^{-6}, the State has unfortunately chosen to carry forward several other parameter values that do not reflect EPA's revised national 304(a) criteria to account for bioaccumulation and cumulative exposure across multiple pathways. These choices effectively diminish the protectiveness of the proposed hhc. The Tribe requests that Ecology follow the most recent EPA guidance in updating all parameters related to hhc.</p>	<p><i>Please see #2 in the "Inputs to the Equations" general response section above.</i></p>
<p>Commenter ID: 22</p> <p>Agency decisions to retain a Relative Source Contribution value of 1.0 and to rely on a Bioconcentration Factor based approach in criteria calculations, are reasonable and supported by the best available science.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 30</p> <p>The RSC is part of Ecology's selective adoption of specific updates to national water quality criteria that tend toward a direction of higher (less protective) chemical criteria. As we state throughout our comments, Ecology has an obligation to use EPA recommended values, absent a scientific justifications to prove otherwise. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Please see #1 and 2 in the "Inputs to the Equations" general response section above.</i></p>

Specific Comments on Inputs to the Equation

Commenter ID/Comment	Ecology Response
<p>Commenter ID: 31</p> <p>EPA’s rule uses a FCR of 175 grams per day, a cancer risk level of 1 in 1,000,000, and other parameters from the 2015 304(a) human health recommended criteria update. In contrast, Ecology has chosen to adopt only some of the revised national 304(a) criteria and recommendations, generally to the detriment of the protectiveness of the standards.</p>	<p><i>Please see #2 in the “Inputs to the Equations” general response section above.</i></p>
<p>Commenter ID: 36</p> <p>In reviewing the impact on public health from toxic chemicals in the food chain, we have learned that many other provisions of the rule proposed by the Department of Ecology may greatly diminish the protective benefit of a higher fish consumption rate. Ecology proposes other human health criteria that do not incorporate best available science and fail to account for other sources of toxic chemicals</p>	<p><i>Please see #1 and 2 in the “Inputs to the Equations” general response section above.</i></p>
<p>Commenter ID: 38</p> <p>This proposed rule and the prior proposal are well thought out, the combined process was extensive, and the decisions made are well explained.</p>	<p>Comment noted</p>
<p>Commenter ID: 39</p> <p>Again, while the Tribe appreciates the opportunity to comment on the Proposed Rule, the Tribe requests that the State of Washington (or EPA) finalize a substantially more protective rule that uses best available science to meet the State's obligations under the Clean Water Act as fully described in the attached comments.</p>	<p><i>Please see #2 in the “Inputs to the Equations” general response section above.</i></p>

Specific Comments on Inputs to the Equation

Commenter ID/Comment	Ecology Response
<p>Commenter ID: 39</p> <p>EPA published final updated ambient water quality criteria for the protection of human health for 94 chemical pollutants. These updated recommendations reflect the latest scientific information and EPA policies, including updated body weight, drinking water consumption rate, fish consumption rate, bioaccumulation factors, health toxicity values, and relative source contributions.</p>	<p><i>Please see #2 in the “Inputs to the Equations” general response section above.</i></p>
<p>Commenter ID: 39</p> <p>Finally, there are several additional inputs that affect the outcome of the human health criteria equations for carcinogens and non-carcinogens, including body weight, relative source contribution or how much of the toxic pollutant loads come from fish relative to all other sources (the "relative source contribution" number), and the use of bioconcentration or bioaccumulation factors. Ecology has largely ignored the science of these "sufficient parameters or constituents (to protect the designated use" by often relying on state "risk management decisions" to the detriment of the protection of the public, including tribal members.</p>	<p><i>Please see #1 and 2 in the “Inputs to the Equations” general response section above.</i></p>
<p>Commenter ID: 39</p> <p>Furthermore, the Tribe is both disappointed and frustrated that Washington's proposed rule has failed to do all it can and is obligated to do under the Clean Water Act to protect the health of Tribal members and Washington citizens. There certainly has been ample opportunity to make revisions that reflect best available science, based on recent publication of EPA's Revision of Certain Federal Water Quality Criteria Applicable to Washington (September 14, 2015, "Draft Federal Rule") and</p>	<p><i>Please see #1 and 2 in the “Inputs to the Equations” general response section above.</i></p>

Specific Comments on Inputs to the Equation

Commenter ID/Comment	Ecology Response
<p>finalization in August 2015 of EPA's 304(a) Nationally Recommended Criteria. Tribal scientists have worked tirelessly with the State Department of Ecology to analyze the best available science to arrive at criteria that would protect the health of people as required under the Clean Water Act.</p>	
<p>Commenter ID: 39</p> <p>In addition to the use of regional fish consumption data, the Puyallup Tribe supported EPA's decision to update human health criteria for Washington using EPA's 304(a) Nationally Recommended Criteria that were updated in 2015. These criteria were developed by the agency with expertise (EPA) using the most recent and reputable science available today. By contrast, Washington State chose to selectively adopt only some of the revised criteria that were typically less protective. The EPA's federal rule provides more stringent criteria in about 80% of the pollutants included in the rule and therefore provides more protections of designated uses, including tribal reserved treaty rights to take fish in quantities safe for consumption.</p>	<p><i>Please see #1 and 2 in the "Inputs to the Equations" general response section above.</i></p>
<p>Commenter ID: 39</p> <p>It is also important to note that using 175 g/day for the fish consumption rate is a single variable in a long multi-variable equation used to derive water quality standards. The FCR of at least 175 g/day must not only be coupled with a cancer risk rate of 10^{-6}, but the other inputs into the derivation of the criteria must also be sufficiently protective and justified using a sound scientific rationale.</p>	<p><i>Comment noted.</i></p>

Specific Comments on Inputs to the Equation

Commenter ID/Comment	Ecology Response
<p>Commenter ID: 39</p> <p>While Ecology has proposed a 175 g/day fish consumption rate (a rate below what surveys show certain consumers such as members of Native American tribes eat) and protective 10⁻⁶ cancer risk rate, it uses other inputs selectively to weaken standards</p>	<p><i>Please see #1 in the “Inputs to the Equations” general response section above.</i></p>
<p>Commenter ID: 41</p> <p>It is essential for Ecology to follow a transparent, robust, and inclusive process to develop standards for implementing the standards to maximize water quality and human health benefits and improvements over time. More research and public education is needed on how other states, like Oregon, are implementing their water quality standards and the lessons that can inform Washington moving forward.</p>	<p><i>Please see #2 in the “Inputs to the Equations” general response section above. The Oregon process (human health criteria and implementation tools development and adoption) and subsequent implementation have been discussed during the Ecology rule-development.</i></p>
<p>Commenter ID: 42</p> <p>Ecology’s derivation of human health criteria for Washington is supportable in some of its particulars. However, when Ecology’s second proposed WQS are considered as a whole – as they must be – they fail to incorporate the best available science and fail to satisfy the relevant law.</p>	<p><i>Please see #2 in the “Inputs to the Equations” general response section above.</i></p>
<p>Commenter ID: 42</p> <p>While Ecology’s proposed WQS include an improved FCR and reinstate a more appropriate general cancer risk level, its proposal promptly undercuts these gains by several devices. Ecology selectively embraces new science and local data when to do so suits the end of rendering the standards less protective, but ignores it otherwise.</p>	<p><i>Please see #1 in the “Inputs to the Equations” general response section above.</i></p>

Specific Comments on Inputs to the Equation

Commenter ID/Comment	Ecology Response
<p>Commenter ID: 51</p> <p>The state also proposes to selectively adopt water quality criteria for bioaccumulation factors; body weight, and drinking water intake that systematically drive standards toward higher chemical criteria.</p>	<p><i>Please see #1 and 2 in the “Inputs to the Equations” general response section above.</i></p>
<p>Commenter ID: 53</p> <p>Other elements (besides FCR and risk level) in the Rule are unnecessarily and inappropriately weak and less stringent that they should be. We encourage you to reconsider them, and in certain instances further adjust them to more closely correspond to the recent updated EPA recommended criteria.²</p>	<p><i>Please see #1 and 2 in the “Inputs to the Equations” general response section above.</i></p>
<p>Commenter ID: 53</p> <p>The Rule can do more—it can and should be stronger. Instead, it undermines the benefits gained from a more accurate consumption rate and a suitable cancer risk level by including other provisions that appear designed to work to the advantage of dischargers and minimize their obligations to control or reduce pollution. The State proposes to selectively adopt the national revised 304(a) criteria and would exclude relative source contribution and bioaccumulation criteria. All sources of pollution would not be considered or accounted for, and updated scientific information is not utilized to examine accumulation of pollutants in the food chain.</p>	<p><i>Please see #1 and 2 in the “Inputs to the Equations” general response section above.</i></p>
<p>Commenter ID: 64</p> <p>Even though in this second proposal, Department of Ecology proposes a fish consumption rate of 175 grams per day and a cancer risk rate of one-per-</p>	<p><i>Please see #1 and 2 in the “Inputs to the Equations” general response section above.</i></p>

Specific Comments on Inputs to the Equation

Commenter ID/Comment	Ecology Response
<p>million (10^{-6}), many other provisions of the rule, as proposed by the Department of Ecology, would diminish the protective benefit of a higher fish consumption rate. Ecology proposes other human health criteria that do not incorporate best available science and fail to account for other sources of toxic chemicals, and we recommend instead, adoption of the criteria proposed by the EPA.</p>	
<p>Commenter ID: 77</p> <p>The State's proposal has updated some of the human health criteria to new national standards, particularly those that favor dischargers like body weight and toxicity factors, but this proposal has kept other factors at older values (such as relative source contribution and bio concentration factors) that fail to protect consumers.</p>	<p><i>Please see #1 and 2 in the "Inputs to the Equations" general response section above.</i></p>

Toxics Table-Table 240

Summary of Comments

There were few comments that were specific to the toxics table. Individual comments and responses on Toxics Table-Table 240 are included in the table below.

Specific Comments on Toxics Table – Table 240	
Comment	Ecology Response
<p>Commenter ID: 22</p> <p>Table 240 Toxics Substances Criteria -The "Category" column could be deleted.</p> <p>Discussion - There is no compelling regulatory reason to present a qualitative identification of a Compound/Chemical by pollutant category. For example, there is scant value in identifying that Antimony is in the "Metals, cyanide and total phenols" Category.</p>	<p><i>Ecology is keeping this column in the toxics table because it refers to the chemical analytical category tied to 40 CFR 136 methods. This can be informative to both Ecology and the public in the planning and evaluation of monitoring information for these chemicals.</i></p>
<p>Commenter ID: 22</p> <p>WAC 173-201A-240(5)(a)-Text in this subsection could be repositioned to more accurately reflect Ecology's obligation and commitment with future aquatic life and human health criteria revisions. Discussion - Text in (S){a} addresses aquatic life protection criteria and reads "The department shall formally adopt any appropriate revised criteria as part of this chapter in accordance with the provisions established in chapter 34.05 RCW, the Administrative Procedures Act. The department shall ensure there are early opportunities for public review and comment on proposals to develop revised criteria." This commitment is not exclusive to aquatic life protection criteria discussion. It applies equally to human health protection criteria. Ecology should relocate this text to the parent (5) section to make this clear.</p>	<p><i>Ecology agrees with this comment, and repositioned the text of the final rule.</i></p>

Specific Comments on Toxics Table – Table 240

Comment	Ecology Response
<p>Commenter ID: 22</p> <p>WAC 173-201A-260(3) (h) - This subsection should be amended to establish an unambiguous regulatory process requiring amendment of WAC 173-201A to announce revisions to 40 CFR 136 analytical methodologies. Suggest language be added to this subsection to require a regulatory action to announce the incorporation of federal regulation changes into state regulation ("in effect on (date)" or "when adopted into WAC 173-201A"), in contrast to the passive/silent process existing in the current rule ("or superseding methods published"). This change would provide a reasonable "fair warning of a due process requirement" to the public. This is not an unfamiliar process for the Department of Ecology. Agency regulatory programs that have been delegated implementation authority from the EPA routinely update state rules through an "adoption by reference" process or equivalent. Finally, this requirement to provide notice of changed federal regulation requirements is demanded by Washington case law. Three Washington Supreme Court decisions have held that the adoption of future federal rules, regulations or statutes would be an unconstitutional delegation of legislative power. (State of Washington, Kirschner v. Urquhart, 50 Wash.2d 131. April 1957; Yelle v. Bishop, 55 Wash.2d 131. December 1959; State of Washington v. Readers Digest Association, 81 Wash.2d 259. Sep 1972.) 40 CFR 136 is an adopted federal regulation. As that federal regulation is revised a companion revision to WAC 173-201A must Note that</p>	<p><i>Ecology is required by federal regulation to use "sufficiently sensitive test methods" as per 40 CFR 122.21(e)(3), 122.44(i)(1)(iv), and 40 CFR 136.1(c). WAC 173-201A-260(3)(h) accurately states the federal requirement that analytical testing methods for numeric water quality criteria must be methods approved by EPA. The regulation does not specify a particular test method. If Ecology were to specify test methods in the water quality standards then each time a new method was placed into 40CFR136 the state would have to change the water quality standards in order to comply with the regulations cited above. This would be extremely cumbersome and resource intensive. Ecology specifies recommended testing methods used in Washington NPDES permits as part of its permitting guidance. Permit managers decide on the appropriate EPA approved test method on a case-by-case basis. That decision is made in an appealable document, typically a discharge permit, which gives interested parties the opportunity to challenge the decision Ecology makes on a case-by-case basis. Accordingly, Ecology does not believe it is necessary to add a column to Table 240 specifying currently approved methods or require additional rulemaking to incorporate test methods EPA may approve in the future.</i></p>

Specific Comments on Toxics Table – Table 240

Comment	Ecology Response
<p>EPAs 40 CFR 136 was last amended in 2012. There is a regulation amendment proposal pending (described at 80 FR 8956- 9075, February 19, 2015). In either the addition of a column in Table 240 or amendment of WAC 173-201A-260(3)(h), Ecology could simply add language to indicate the date of last revision of 40 CFR 136, and then update and adopt future federal rule changes by reference.</p>	
<p>Commenter ID: 38</p> <p>WAC 173-201A-240(5)(b) human health protection. Delete the third sentence which says: "The human health criteria In the tables were calculated using a fish consumption rate of 175 g/day." And replace it with the following: "The human health criteria for non-carcinogens are based on a hazard quotient of 1 and a fish consumption rate of 175 grams/day (11.6 pounds/month). The human health criteria for carcinogens covers a range of fish consumption rates and associated risk levels such that 17.5 grams/day (1.2 pounds/month) ts protected at one in ten million risk level, 175 grams/day (11.6 pounds/month) at one in a mil/ion risk level, and 1750 grams/day (116 pounds/month) at one in a hundred thousand risk level." The reason for this recommendation is to better convey information about the criteria. Table 240. Acute and chronic freshwater cadmium criteria have a reference to footnote "I". There is no footnote "I" at the end of the table. Either remove the reference, or identify the reference. Table 240. Acute marine copper criteria should have listed footnote "b" instead of "c". Table 240. There are 17 compounds</p>	<p><i>Comments noted. Ecology is choosing to remain with the level of detail in the proposed rule. Many criteria inputs are not specified in the section referred to, but are present in the rule record. With regard to cadmium, thank you for pointing out this transcription error. This will be corrected in the final version. With regard to copper, the footnotes are correct as indicated in the draft table, and will remain as written. With regard to cyanide, the footnotes are also correct and will remain as written. Note that the aquatic life criteria are not being modified in any way in this rulemaking, but have simply been moved to a different table. All aquatic life criteria and footnotes remain the same as in the current (prior) version of the rule. The new table contains all the priority pollutants as well as other toxic chemicals that have criteria in the Washington water quality standards. This format is in common use and helps to make Washington criteria more comparable to other state, federal, and tribal criteria lists. A dash in each empty cell was lost during transcription of this table. The dash will be reinserted to indicate that cells are not</i></p>

Specific Comments on Toxics Table – Table 240

Comment	Ecology Response
<p>included on the list for which there are no criteria. These compounds should be removed, as including them on the list serves no purpose. [Or, if there is a purpose, then there should be a footnote applied to each compound explaining the purpose for including it in the table.] Table 240. footnote "dd". Remove the second sentence which pertains to cyanide. Footnote "dd" is not used for cyanide. Footnote "ee" is used for cyanide and has the same observation as the sentence in "dd", which is appropriate. Table 240, footnote "B". Change to read, "This criterion was calculated based on an additional lifetime cancer risk of one in one million (1×10^{-6}) risk level for an average fish consumption rate of 175 grams/day. The criterion is protective over a range of fish consumption such that 17.5 grams/day is protected at one in ten million (1×10^{-7}) risk level and 1,750 grams/day is protected at one in one hundred thousand (1×10^{-5}) risk level. This better conveys that the criteria relate to a range of risk levels for a range of fish consumption rates. (See comment re WAC 173-201A-240(5)(b) above.) Table 240. footnote "E". Add ". ... which is a 2.3×10^{-5} risk level. "at the end of the last sentence. Table 240. footnote "G". The footnote pertains to the mercury criteria. Consider adding a sentence noting "The chronic aquatic life criteria are more stringent, are actually based on human health (see footnote 's'j and are more protective of human health than the criteria in 40 CFR 131.36. FF</p>	<p><i>inadvertently empty. With regard to your comments on footnotes B and E, Ecology is staying with the language in the proposed rule. The other information you recommend including is contained in the rule record.</i></p>

Specific Comments on Toxics Table – Table 240

Comment	Ecology Response
<p>Commenter ID: 48</p> <p>The EPA has no comments on Ecology's revisions to WAC 173-201A-240(3), (4), (5), and (5)(a). These revisions help clarify and organize the proposed rule. The rule language regarding duration of exposure, metals, and the obligation of dischargers to use all known, available and reasonable methods of prevention, control and treatment (AKART) help clarify and organize the proposed rule.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 61, 38, 22</p> <p>Table 240 Toxics Substances Criteria -A column should be added to Table 240 which specifies the "Approved Analytical Protocol(s)," and identifies the expectations for Detection and Quantitation Levels, and instructions and qualifications, as appropriate. Consistent with WAC 173-201A-260(3)(h) these analytical methods would reference to the 40 CFR 136 methods in effect on the date of WAC 173-201A adoption.</p>	<p><i>Ecology is required by federal regulation to use "sufficiently sensitive test methods" as per 40 CFR 122.21(e)(3), 122.44(i)(1)(iv), and 40 CFR 136.1(c). If Ecology were to specify test methods in the water quality standards then each time a new method was placed into 40CFR136 the state would have to change the water quality standards in order to comply with the regulations cited above. This would be extremely cumbersome and resource intensive. Ecology specifies recommended testing methods used in Washington NPDES permits as part of its permitting guidance. Ecology provides guidance that identifies the expectations for detection and quantification of chemicals using EPA's 40 CFR 136 methods.</i></p>

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Specific Chemical of Concern

PCBs

Summary of Comments

Many comments addressed PCBs. Because of the number of comments asserting that, for a variety of reasons, Ecology should change inputs used to calculate the criteria, Ecology has developed general responses to many comments.

Individual comments and responses on PCBs are included in the table below this General Comment/Responses section.

General Comment/Responses on PCBs

1. General Comment: 6, 8, 26, 30, 31, 39, 41, 42, 48

Many waterbodies are currently under fish consumption advisories because of PCB contamination, and the PCB human health criteria are not sufficient to protect the uses of these waters for fishing. The PCB criteria will not reduce pollution and will not drive the technological development needed to reduce pollutant discharges.

Response: Please refer to the responses addressing fish advisories that are in the FCR section of this Response to Comments. With regard to pollution controls, Ecology disagrees that the current criteria will not drive pollution reduction. Because of issues associated with analytical detection levels PCBs are very infrequently detected in routine effluent monitoring, making the usual path to effluent limits calculation largely ineffective for PCBs. Even lower PCB criteria could not change this situation. PCB source control efforts from a water perspective are most effectively driven by 303(d) listings and associated source control work, either required by TMDLs or prior to TMDL finalization. Source control work on the Spokane River demonstrates this. Clean-up of both upland and sediment sites, and groundwater, are important contributing factors to reductions in PCBs. Please see Osterberg and Pelletier's 2015 Puget Sound Regional Toxics Model...; Page 94, (for PCBs and PBDEs) (at <https://fortress.wa.gov/ecy/publications/documents/1503025.pdf>) for information on effects of waters and contaminated sediments on tissue levels in Puget Sound organisms.

2. General Comment: 6, 30, 32, 39, 42, 51, 55, 77

Ecology used a dramatically higher cancer risk rate for PCBs without justification.

Response: A chemical-specific risk level was developed for PCBs that raises the risk level to 4×10^{-5} with calculated criteria concentrations of 0.00029 ug/L. A chemical-specific risk level approach is not unusual. For instance, Oregon adopted arsenic criteria based on risk levels of 10^{-4} and 10^{-5} . These were both approved by EPA, and decisions on risk level are specifically called

out by EPA in its 2000 human health criteria guidance as being state risk management decisions. The final risk level for this criterion, after defaulting back to the National Toxics Rule concentration of 0.00017 ug/L, is 2.3×10^{-5} , which provides protection levels that are within levels acceptable in EPA guidance. In the case of PCBs, the rationale for the chemical specific risk level is spelled out in the 2015 Decision Document and that rationale has not changed. This was a Governor's risk management decision, made as part of a public process, and based on the knowledge that PCBs come from many sources and that human health criteria are not the best tool to control this group of chemicals. PCBs that end up in surface waters originate from many different sources, and Ecology is currently supporting efforts to address many of these other sources, including development of a Chemical Action Plan for PCBs and considerable source control and clean-up work .

3. General Comment: 1, 5, 10, 12, 18, 23, 24, 30, 32, 34, 36, 39, 41, 42, 48, 51, 54, 55, 64, 68, 72, 76, 77

Ecology should not use a chemical-specific cancer risk level for PCBs, and instead should use a 10^{-6} cancer risk level and updated bioaccumulation factors in EPA's draft Federal Rule to calculate the PCB human health criteria in order to result in criteria that are protective of the designated uses, including the tribal subsistence fishing use as informed by treaty-reserved fishing rights, and based on sound science.

Response: Ecology considered using the 10^{-6} risk level for PCBs but after consideration did not decide to pursue a change in course for the proposed risk level for this specific chemical. EPA did not alter its approach with regard to bioconcentration of PCBs. EPA's current national recommended human health criteria for PCBs continues use of the older BCF of 31200. This BCF is used in EPA's proposed rule for Washington. Ecology considered effects of PCBs when developing the proposed criteria, and supports efforts to reduce sources of PCBs. The broad and intense public process used to develop this rule included extensive discussion about PCBs and proposed criteria. A clear rationale for the risk management decision for PCBs is provided in the Decision Document as well as in other materials supporting this rule.

Use of a state-specific cancer risk level and chemical-specific risk level is aligned with EPA human health criteria guidance, and this approach has been approved by EPA in the past. This approach is protective of the designated use of harvest in Washington, which applies to all consumers, as explained in the Decision Document and elsewhere in the rule record. Apart from the risk level (which is a risk management/policy decision left to states) all the inputs to the PCB criteria calculation are the same values used by EPA to calculate its proposed rule for Washington, which includes body weight, bioconcentration factor, drinking water intake, fish consumption rate, and cancer slope factor. There are no revised input variables from EPA national recommended PCB criteria to use in this calculation. EPA did not develop revised bioaccumulation factors for PCBs. The PCB criteria were calculated using the EPA criteria equations for carcinogens. The new Ecology PCB criteria are consistent with 304(a) national recommended criteria for PCBs except for the FCR (which was raised) and the risk level (which

was raised), and both of these changes are explicitly allowed for in EPA 2000 human health criteria guidance. The rationale and calculation of the state criteria is explained in the Decision Document. Please also see the sections in this Response to Comments on Tribal Treaty Rights and Fish Consumption Rates.

Specific Comments on PCBs	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 6</p> <p>For PCBs, Ecology’s proposal is to continue to regulate this pollutant on the basis of standards that are over a decade and a half old and to completely ignore the facts on fish consumption. After explaining how PCBs are—like most toxics—difficult to measure, control, and clean up, Ecology engages in a twisted manipulation designed to produce an outcome that is identical to the currently-applicable criteria. Clearly this risk level did not come out of thin air; it was identified through back-calculation to produce the end result. As such it does not represent a sound evaluation of the policy choices but, instead, the lengths to which Ecology will go to maintain the status quo.</p>	<p><i>Please see #1 and 2 in the “PCBs” general response section above. The commenter may not agree with the approach, but this approach was made as part of a very extensive and open public process, which included consideration of alternatives.</i></p>
<p>Commenter ID: 8</p> <p>Ecology chose to leave the standards exactly the same as under the plainly inadequate NTR, with no steps forward even with a somewhat more accurate fish consumption rate. Ecology proposes to allow a dramatically higher cancer risk rate for PCBs—rather than one in one million; it proposes allowing a one in 25,000 cancer risk for PCBs alone. Ecology does so with no explanation for why it would allow a significantly increased cancer risk—forty times more—for fish-consuming residents of Washington for this known carcinogen and produces no scientific evidence to support its decision to allow the public to be at increased risk from PCBs relative to other</p>	<p><i>Please see #1 and 2 in the “PCBs” general response section above.</i></p>

Specific Comments on PCBs

Commenter ID/Comment	Ecology Response
<p>pollutants. And, when Ecology applied the dumbed-down PCB formula, the resulting standard for allowing PCB's in Washington's waters ended up (not surprisingly) being less protective, or weaker, than the current inadequate NTR standard. At that point, to make it "come out" Ecology applied an "anti-backsliding" concept reminiscent of the 2015 proposed rule to keep the PCB water quality standard exactly where it is now—the under-protective NTR criterion. Ecology offers no rational explanation for singling out PCBs for this special, arbitrary treatment, and there is no explanation. The entire exercise appears to be one geared to ensuring the standard ends up where Ecology wanted to land—at a standard unchanged—and that Ecology tinkered with the math and methodology until it got there.</p>	
<p>Commenter ID: 11</p> <p>Many, if not most, Washington State water bodies could qualify as impaired based on the current PCB criteria and listing policy. Information showing that 70% of all freshwater fish samples state-wide exceed the "fish tissue equivalent concentration-listing trigger" were presented in the Ecology Policy Forums (Ecology 2013b). Ecology completed its state water quality assessment and 303(d) list (which would provide the most recent PCB 303(d) listings) and submitted it to EPA on September 28, 2015. Ecology should update its discussion on PCBs in Washington State surface waters in the Key Decisions Overview (Ecology 2016c) with information from that submittal package.</p>	<p><i>Materials in the rule record (including this Response to Comments, which includes most of those items pointed out) provide additional information supporting the PCB approach. The water quality assessment that was recently submitted to EPA includes 188 proposed listings for PCBs based on tissue. This is based on marine and freshwater, with freshwater listings made using the new NHD segmentation system. The current list includes 158 listings for fresh and marine waters for PCBs based on tissue, with freshwater listings made using the older segmentation system.</i></p>

Specific Comments on PCBs	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 11</p> <p>The section entitled Challenging Chemicals: PCBs in the Key Decisions Overview (Ecology 2016c) should discuss the preponderance of PCB-listed waterways, the Governor’s directive (Office of the Governor 2014) as it pertains to unregulated sources of chemicals, and PCB source identification work on the Spokane River.</p>	<p><i>Materials in the rule record (including this Response to Comments, which includes those items pointed out) provide additional information supporting the PCB approach.</i></p>
<p>Commenter ID: 11</p> <p>The selected PCB criteria are reasonable for this ubiquitous legacy chemical, but additional rationale should be presented in the Key Decisions Overview.</p>	<p><i>Materials in the rule record (including this Response to Comments) provide additional information supporting the PCB approach.</i></p>
<p>Commenter ID: 12</p> <p>Currently, the EPA has put forward PCB standards that are more protective and more up to date. The more protective EPA guidelines should be followed to ensure public health and safety.</p>	<p><i>Rationale for risk management and technical decisions supporting the final rule are described in the Decision Document. These decisions do not mirror the EPA national approaches in all regards, and were appropriately made to address Washington-specific circumstances. Please see #3 in the “PCBs” general response section above.</i></p>
<p>Commenter ID: 18</p> <p>Use EPA proposed value in final rule.</p>	<p><i>Please see #3 in the “PCBs” general response section above.</i></p>
<p>Commenter ID: 21</p> <p>Ecology should update its water quality standards for polychlorinated biphenyls (PCBs) consistent with the EPA 304(a) guidance.</p>	<p><i>Please in the “PCBs” general response section above.</i></p>

Specific Comments on PCBs

Commenter ID/Comment	Ecology Response
<p>Commenter ID: 26</p> <p>Elevated levels of PCBs in fish tissue cause many fish consumption advisories within the State, and are also the cause of many 303d listings. Given this it is unacceptable that Ecology proposes to readopt its current PCB surface water quality criteria of 170pg/L. This standard is currently failing to protect for the designated use of harvest in the state waters and readopting it will not assist in protecting fish and the people that consume those fish. Currently, the Tribe’s fish are heavily impacted by pollution that originates in Washington State, and they do not meet the Spokane Tribe’s standards. Sadly the fish do not even come close to meeting the State’s inadequate standards.</p>	<p><i>Please #1 in the “PCBs” general response section above. Please see the section on “Fish Consumption Rate.” (In particular, the General Response related to fish advisories, in this Response to Comments.)</i></p>
<p>Commenter ID: 30</p> <p>Ecology must update PCB criteria in order to better protect human health, by incorporating revised human health criteria variables into criteria calculation. Ecology apparently calculates PCBs as a non-carcinogen only, without justification, then back calculates the potential cancer risk level at 4×10^{-5}. Although it does not meet their own selection of a cancer risk level of 10^{-6}, they consider this risk level to be good enough, since it is, “consistent with the level of risk/hazard in the toxicity factor used by the WDOH in developing fish advisories,” and because it, “is more protective than the maximum risk recommended in EPA guidance.” In other words, Ecology is using a threshold of fish health advisories and maximum risk as the level of protection for this chemical. The approach of determining that a criterion is not adequately protective, but then address this lack of protection by taking no further</p>	<p><i>Please see #1, 2, and 3 in the “PCBs” general response section above.</i></p>

Specific Comments on PCBs	
Commenter ID/Comment	Ecology Response
<p>action, is confusing, contrary, and defaults to the criteria defined in the 1999 revisions to the National Toxics Rule (NTR), which utilizes an inaccurate FCR and underestimates exposure. Tribal fishery and cultural resources have been and continue to be greatly impacted by this bioaccumulative carcinogen and tribes cannot support Ecology’s proposal to implement a status quo standard, which is based on several outmoded human health criteria variables as discussed in these comments. PCBs are bioaccumulative carcinogens, which directly threaten tribal treaty-reserved resources and the tribal members that are economically, nutritionally, culturally and spiritually sustained by them. Washington’s standards should be updated for PCBs using variables more accurately reflecting exposure, consistent with EPA 304(a) guidance, and affording better protection of designated uses and human health, i.e. a 1 in 10⁻⁶ cancer risk level and full consideration of relevant bioaccumulation factors. Ecology needs to fully consider the health impacts of this bioaccumulative carcinogen and take the steps necessary to provide protection and build a safer future. Setting stronger regulations will drive technological innovation in the direction of removing this contaminant from Washington’s waters to improve protection of the health of future generations.</p>	
<p>Commenter ID: 30</p> <p>Exposure to PCBs also presents elevated risks to breast-feeding infants. Oregon DEQ, working with toxicologists from EPA Region 10 and the Oregon Health Authority, analyzed the breast-feeding exposure pathway associated with Superfund sites, and stated that, “Our main</p>	<p><i>The citation from the Oregon Department of Environmental Quality included in this comment leaves out important information from the ODEQ. Additional ODEQ information dealing with breastfeeding is as follows: "EPA has included this exposure example in its</i></p>

Specific Comments on PCBs

Commenter ID/Comment	Ecology Response
<p>conclusion is that PCB risks to breastfeeding infants will be 25 times the risk to the mother, assuming long term exposure to the mother.” Ecology’s decision document fails to account for the elevated risk from the breast-feeding exposure pathway. Tribes and the general public need to know that Ecology has first and foremost fully considered the most recent evidence of the human carcinogenic and endocrine disrupting impacts of PCBs when making key decisions on setting human health-based criteria. It is not sufficient to default to the status quo, when stronger measures are needed to protect the health of tribal members and all Washington citizens that consume fish from Washington waters.</p>	<p><i>guidance for a few years, although it is still not commonly considered. Working with EPA Region 10, DEQ found that breastfeeding is an important pathway for some bioaccumulating chemicals, particularly polychlorinated biphenyls (PCBs). The PCB non-cancer risk to an infant is generally 25 times the risk calculated for the mother. This result makes the acceptable PCB concentrations nearly equivalent for non-cancer and cancer endpoints. Consequently, including this risk pathway on all sites will not substantially affect cleanup decisions...”</i> <i>(http://www.deq.state.or.us/lq/cu/healthsummary.htm). When calculating the new PCB criteria Ecology looked at both cancer and noncancer toxicity factors provided by EPA. EPA did not provide an alternative non-cancer reference dose to address the breast-feeding exposure pathway, and EPA's proposed regulation for human health criteria for Washington does not discuss this or use a reference dose. EPA IRIS is currently examining the non-cancer effects of PCBs, and the current IRIS 2015 multiyear agenda (https://www.epa.gov/iris/iris-agenda) has the status as "draft development." Ecology is not aware of any state that has used a reference dose to address the breast-feeding exposure pathway in PCB criteria development. When EPA finalizes its IRIS PCB non-cancer assessment that information would be</i></p>

Specific Comments on PCBs	
Commenter ID/Comment	Ecology Response
	<i>appropriate to consider for updating the PCB standards.</i>
<p>Commenter ID: 30</p> <p>Origination from Non-point Sources is not justification for inaction on PCB criterion. Some source assessments have shown that a significant portion of PCB loading may originate from non-point sources. This fact does not alleviate the need to take action to reduce or eliminate as much PCB as possible from municipal and industrial point sources that sequester these pollutants, and provide key interception points to implement removal technologies. Source assessment studies have also shown that concentrations of PCBs in surface waters increase as water flows downstream and become impacted by human activities. To the maximum extent possible, regulations should limit the obvious impacts of human activities on water quality.</p>	<p><i>Please note that the final rule does contain a state criterion for PCBs. We agree that nonpoint sources can be an important source. The agency is focusing on these nonpoint sources by funding local toxics reduction specialists and developing a Chemical Action Plan for PCBs.</i></p>
<p>Commenter ID: 30, 39, 26</p> <p>As part of rule revisions for PCBs, commenters believe that Ecology must require the use of EPA Method 1668C for all PCB monitoring and enforcement purposes in these revisions. Ecology should no longer recommend method 608 as a quantitation limit. Washington should recognize that analytical techniques for PCBs have evolved beyond method 608 and the state should require the use of EPA Method 1668C as part of a comprehensive effort to limit the release of PCBs into the environment or at a minimum provide a clear scientific basis for failing to utilize the updated method.</p>	<p><i>Ecology uses Method 1668 for some non-compliance monitoring, but federal regulations require use of methods in 40 CFR 136 for monitoring compliance with effluent limits. Method 1668 is not in 40 CFR 136.</i></p>

Specific Comments on PCBs	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 31</p> <p>Substantial portions of the Columbia River are currently under fish consumption advisories because of this contaminant and clearly the state’s current water quality standards are not sufficient to protect the uses of these waters for fishing. Retaining the status quo for the state’s water quality standards for PCBs does not serve to reduce pollution in the waters that we share and will never drive the technological development needed to reduce pollutant discharges.</p>	<p><i>Please see #1 in the “PCBs” general response section above.</i></p>
<p>Commenter ID: 32</p> <p>Ecology proposes to use a dramatically lower cancer risk rate for PCBs—rather than one in one million, it proposes one in 25,000 cancer risk for PCBs alone without explained why cancer risk originating from PCBs is less concerning than cancer risk for other chemicals such that it would allow a forty times greater risk. It is not clear what justification exists for this disparity in treatment. As Ecology knows, PCBs are still introduced into the environment from products such as yellow pigments, hydroseed, and other commercially available products. The State could certainly address these products through products bans (such as the state-enacted PBDE ban</p>	<p><i>Please see #2 in the “PCBs” general response section above.</i></p>
<p>Commenter ID: 34</p> <p>Ecology has appropriately proposed a separate approach for polychlorinated biphenyls in light of the potential costs that would be incurred in implementing a more stringent and unnecessary criterion. Available data indicate that most state waters would not meet the EPA proposed criteria and that most NPDES wastewater treatment plants</p>	<p><i>Comment noted.</i></p>

Specific Comments on PCBs	
Commenter ID/Comment	Ecology Response
<p>will have to apply membrane filtration treatment and additional treatment technologies to address PCBs. EPA, in its draft rule documentation, identified 406 NPDES permits administered by Ecology including 73 so-called major permits. If Ecology were to follow the same approach on Puget Sound that it has on the Spokane River, this would amount to a range of compliance costs from nearly \$6 billion to over \$11 billion for just the major permits identified by EPA. A more stringent PCB criterion is also likely to impact how stormwater is managed as PCB concentrations have been detected in stormwater throughout the state.³⁹ Ecology has appropriately proposed to maintain a protective standard for PCBs by adopting the current NTR PCB criterion. The uncertainties about PCB toxicity and potential expense of compliance for more stringent standards justifies this approval. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	
<p>Commenter ID: 34</p> <p>Ecology should adopt a criterion for polychlorinated biphenyls based on its risk assessment not the NTR. Ecology is well within EPA guidance to address the unique challenges of PCBs through a chemical specific risk management decision. EPA has approved state standards using alternative risk methodologies—most recently for the state of New Jersey. The methodology used by Ecology to derive the PCB criteria is scientifically defensible. Ecology is more than justified to treat PCBs differently in deriving new criteria and should consider adopting a total PCB criterion consistent with the methodology and risk management decisions</p>	<p><i>Ecology agrees that many technical issues surrounding PCBs need to be resolved, but considers that there is enough certainty (fairly recent and comprehensive cancer slope factor and traditionally used and CWA-approved BCF) to move forward with adoption of the proposed criteria, which are the same as the National Toxics Rule criteria. Please #3 in the “PCBs” general response section above</i></p>

Specific Comments on PCBs	
Commenter ID/Comment	Ecology Response
<p>made by Ecology in its prior proposed rulemaking. Ecology should not adopt a new PCB criterion for Washington as long as EPA does not have the ability for the reasons set forth in the above letter to revise PCB regulations under the TSCA or the national recommended water quality standards under section 304 of the CWA. EPA affirmed as recently as August 3, 2015, that revising PCB regulations “presents both policy and scientific challenges.” Ecology should not adopt a criterion more stringent than the National Toxics Rule (NTR) PCB criterion as long as the outstanding technical issues are unresolved and in light of the ongoing PCB loading attributable to EPA authorization of PCB concentrations in manufactured products and in hatchery fish. EPA has concluded through TSCA and its general hatchery permit for federal and tribal hatcheries that these levels of PCBs do not pose a threat to human health or the environment. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	
<p>Commenter ID: 39</p> <p>The Puyallup Tribe recommends Washington's standards should be updated for PCBs using the 10⁻⁶ cancer risk level and updated bioaccumulation factors in EPA's draft Federal Rule because PCBs are bioaccumulative carcinogens. Using these inputs, the criterion is about 23 times more protective than the state proposal. Ecology needs to fully consider the health impacts of this bioaccumulative carcinogen and seriously evaluate opportunities for product substitution on the myriad materials that contain PCBs. Ecology's failure to implement those items above is not based upon science but a policy decision. Absent</p>	<p><i>Please see #1, 2, and 3 in the “PCBs” general response section above. Ecology disagrees that this rule is arbitrary, capricious, contrary to law, or violates treaty rights. Please also see comments and responses in the Tribal Treaty Rights and Inputs to the Equations sections of this Response to Comments.</i></p>

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a sound scientific justification for Ecology's position on PCB's the Proposed Rule is arbitrary, capricious, contrary to law, and violates Tribal treaty rights.	
<p>Commenter ID: 41</p> <p>Concern that the current draft rule does not set a course to reduce the number of PCB polluted waters as soon as possible. An important step is to have strong limits in the WQS, and narrow and appropriate application of implementation tools on a case-by-case basis to provide flexibility only where meeting WQS is not feasible.</p>	<p><i>Please see 1 and 3 in the "PCBs" general response section above. Implementation tools (variances and compliance schedules) are only used when necessary, and are always used in a time frame that is as short as possible.</i></p>
<p>Commenter ID: 48</p> <p>For PCBs, Ecology has proposed human health criteria that are the same as those currently in effect under the NTR (as revised in 1999): 0.00017 µg/L for both the criteria for water & organisms and organisms only. In developing the proposed criteria, Ecology used a chemical-specific cancer risk level of 4 x 10⁻⁵ or 0.00004, which exclusively applies to PCBs. Ecology states that it chose this cancer risk level for consistency with the level of risk that the Washington Department of Health uses to develop fish advisories for PCBs. 18 When Ecology used the 4 x 10⁻⁵ cancer risk level along with its other proposed inputs to calculate PCB criteria, the resulting criteria of 0.00029 µg/L were less stringent than the currently effective 1999 NTR values. However, the state proposed to adopt criteria equivalent to the 1999 NTR criteria for PCBs. Ecology's rationale for this decision is that PCBs are a chemical of concern in Washington and, therefore, Ecology made a chemical-specific</p>	<p><i>Please #1 and 3 in the "PCBs" general response section above</i></p>

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<p>decision not to increase the criteria concentrations above current criteria levels. The EPA does not support Ecology using a chemical-specific cancer risk level for PCBs. Instead, the EPA continues to strongly recommend the state calculate human health criteria for all carcinogenic pollutants, including PCBs, using a 10⁻⁶ cancer risk level, in order to result in criteria that are protective of the designated uses, including the tribal subsistence fishing use as informed by treaty-reserved fishing rights, and based on sound science. The EPA recognizes that PCBs provide unique challenges due to the fact that they are pervasive, widespread, and long-lasting. However, this does not warrant setting the human health criteria at less stringent levels. The EPA is available to work with Ecology to further discuss PCBs and how they can be addressed through the state's implementation tools.</p>	
<p>Commenter ID: 53</p> <p>Several toxic chemicals or substances are specifically “set aside” and treated independently, regulating them at either current levels and maintaining the insufficient “status quo” (PCBs)</p>	<p><i>Total PCBs has criteria unchanged from the National Toxics Rule criteria concentrations. PCBs and arsenic both have chemical-specific approaches applied to them. In particular, with regard to PCBs, a chemical-specific risk level was developed for this chemical. This approach is not unusual. For instance, Oregon adopted arsenic criteria based on risk levels of 10⁻⁴ and 10⁻⁵. EPA approved both these, and EPA specifically calls out decisions on risk level in its 2000 human health criteria guidance as being a state risk management decision.</i></p>

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<p>Commenter ID: 54</p> <p>Apply 175 g/day to PCBs like EPA rule.</p>	<p><i>Ecology used 175 g/day in its calculation of the PCB criteria, as well as a chemical-specific risk level, but made a chemical-specific decision to stay with the lower-concentration criterion that is currently in the National Toxics Rule rather than increase the concentration of the PCB criterion. Please #3 in the “PCBs” general response section above and see the Decision Document for further explanation.</i></p>
<p>Commenter ID: 61, 69, 50, 65</p> <p>Support the approach in draft rule.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 62</p> <p>Ecology correctly decided to retain the current National Toxics Rule (NTR) criteria for polychlorinated biphenyls (PCBs)</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 72</p> <p>WDOE proposes maintaining the National Toxics Rule (NTR) standard of 170 pg/L while the EPA suggests a more conservative 7.3 pg/L. Additionally, the downstream, Spokane Tribal standard is 1.3 pg/L. The NTR was developed in 1993 and is not an appropriate standard for 2016. We should be issuing standards that will mark progress and exert pressure to clean up our waterways and protect the public.</p>	<p><i>Please see #3 in the “PCBs” general response section above. Additionally, please see the section on “Downstream Protection” in this Response to Comments.</i></p>
<p>Commenter ID: 75</p> <p>The total PCBs is based upon all 209 congeners as proposed, and then taking a relationship factor of what may be toxin and isn't toxin. The World</p>	<p><i>Ecology is using the most recent cancer slope factor (CSF) combined with a cancer risk level to calculate the PCB criteria. The approach Ecology is using was developed by EPA in 1996 and</i></p>

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<p>Health Organization and the European Union simply picks 12 of the toxic chemicals that are in the 209 to establish standards for PCBs. I recommend that the DOE also take that type of approach to determine the toxins that are needed and remove those from our system.</p>	<p><i>accounts for toxicity from total PCBs, as well as accounting for the effects on congener profiles by accumulation of PCBs into tissue. The World Health Organization approach does not include all the congeners that are found in fish tissue in Washington waters. The decision to use the EPA cancer slope factor is a science-policy choice that adds protection to the criteria.</i></p>

Arsenic

Summary of Comments

Many comments addressed arsenic. Because of the number of comments asserting, for a variety of reasons, that Ecology should not use the Safe Drinking Water Act (SDWA) Maximum Contaminant Level (MCL) of 10 ug/L as a human health criteria, Ecology has developed general responses for many comments.

Individual comments and responses on arsenic are included in the table below this General Comment/Responses section.

General Comment/Responses on Arsenic

1. **General Comment: 8, 9, 10, 12, 13, 18, 21, 23, 24, 25, 30, 32, 36, 39, 41, 42, 48, 51, 53, 55, 64, 68, 76, 77**

Ecology should adopt the arsenic criteria in EPA's proposed regulation for Washington.

Response: Ecology will not adopt the EPA proposed value for Washington. There is considerable scientific uncertainty in assessing carcinogenicity of arsenic. Without a reliable toxicity factor for cancer Ecology cannot calculate arsenic criteria based on cancer. EPA agrees that new cancer-based criteria for arsenic cannot be calculated at this time. In a May 6, 2016 filing with the United States District Court for the Western District of Washington, EPA stated that it will withdraw its proposed arsenic criteria for Washington because "extensive additional scientific analysis is necessary before revised criteria" for arsenic can be promulgated. Puget Soundkeeper Alliance et. al. V. U.S.E.P.A., Case No. 2:16-cv-00293-JLR, EPA's Motion for Summary Judgment (May 6, 2016) at 13. As EPA explained in the Declaration of Elizabeth Southerland, Director of the Office of Science and Technology with EPA's Office of Water, "EPA did not update its CWA section 304(a) recommended criteria" for arsenic in 2015, and "EPA recognizes that there is substantial uncertainty surrounding the toxicological assessment of arsenic with respect to human health effects." Declaration of Elizabeth Southerland (May 5, 2016) at 7.

In addition to an uncertain cancer slope factor, the accumulation factor used on its development of its current 304(a) criteria is based on total arsenic, and will need to be modified in order to accurately address accumulation of inorganic arsenic into tissues. The bioconcentration factor (BCF) of 44 L/kg used in EPA's 304(a) criteria is based on total arsenic. This value does not accurately reflect the uptake of inorganic arsenic, the most toxic form of arsenic, and the form to which EPA applies its 304(a) criteria. Most of the arsenic in fish and shellfish tissues is in the organic form, which is much less toxic than the inorganic form (see: EPA 1997. Arsenic and fish consumption. EPA 822-R-97-003.). EPA (1997; page 10) estimated the percentage of inorganic arsenic in tissue: "the maximum inorganic arsenic in fish and shellfish used for this estimate is 4% ...The median inorganic arsenic value for the fish and shellfish data... is 0.4%. No inorganic arsenic was detected in 23 of 42 fish samples and 18 of 50 shellfish samples. Therefore, the median value reflects the higher inorganic arsenic concentrations found in shellfish and is a

conservative value.” A BCF specific to inorganic arsenic is not available in EPA’s criteria documents, but applying the data above to the current BCF of 44 indicates that the BCF of 44 could be adjusted downward by a large amount if inorganic arsenic only were considered. A new BCF for arsenic, as well as a new CSF, will be required for in order to calculate criteria for arsenic using the human health criteria equations.

2. General Comment: 1, 5, 6, 8, 13, 30, 32, 39, 42, 48, 51, 53

A SDWA MCL is not appropriate as a criterion because the SDWA includes consideration of cost and feasibility.

Response: The SDWA is based on science and feasibility. This does not invalidate use of a SDWA MCL for use in CWA programs. EPA uses SDWA values as CWA 304(a) criteria for both asbestos and copper, and has approved use of the arsenic SDWA MCL as a CWA criterion for many states. Nothing in the CWA prohibits use of SDWA regulatory values, or of cost, in the state adoption of standards. In fact, the CWA and the Code of Federal Regulations explicitly direct states to adopt standards taking into account “use and value” of the resource. EPA’s 2000 guidance (page 2-4) specifies that many factors apart from science can be taken into consideration in state risk management decisions: “Risk management is the process of selecting the most appropriate guidance or regulatory actions by integrating the results of risk assessment with engineering data and with social, economic, and political concerns to reach a decision.”

The EPA went through an extensive process to evaluate science and feasibility to derive and finalize the SDWA arsenic MCL, and that MCL development is based on consideration of newer science than the older CSF included in EPA’s 304(a) criteria for arsenic. Given the real problems with assessing risk from exposures to arsenic from tissue ingestion (no CSF for inorganic arsenic), and also with translating that to a water criterion value (no accumulation translator (BCF) for inorganic arsenic), and given the extensive process carried out by EPA to develop a protective MCL appropriate for drinking water exposures, it makes sense to use the best value available for the arsenic human health criteria, which at this point is the SDWA MCL. The EPA 304(a) criteria values could not be determined to be scientifically defensible at present given the input values for bioconcentration factor and cancer slope factor. Apart from the approach of adopting the MCL, there are no other defensible criteria values available at the current time.

3. General Comment: 6, 11, 14, 30, 39

The pollution minimization language attached to the numeric arsenic criteria should not only be applied to dischargers to freshwaters, and that this approach was based on the Oregon approach.

Response: Ecology is proposing the new specific pollution minimization AKART requirement to surface freshwaters with the drinking water use because the new arsenic criterion is based on the SDWA MCL – which is a drinking water standard. All dischargers are required to follow AKART,

thus dischargers to waters without the drinking water use (in general these are marine and estuarine waters) might also have specific but different requirements associated with arsenic that are developed on a permit-by-permit basis, but these requirements could be different from the one specifically written in the new arsenic criteria language. Ecology's proposed pollution minimization language did not develop as an outgrowth of Oregon's proposed approach. Any interpretation in that regard is mistaken.

4. General Comment: 8, 13, 30, 39, 42, 48, 53

The MCL of 10 ug/L is not protective of tissue ingestion.

Response: *Although Ecology acknowledges the large amount of uncertainty in the CSF and the BCF, using the CSFs and BCF in comparative criteria calculations helps to illustrate why the organism ingestion exposure route is largely irrelevant when considering risk levels between 10^{-4} and 10^{-6} , and why the only relevant exposure routes for those waters with drinking water as a designated use (most freshwaters in the state) is the drinking water exposure route.*

The same inputs to the organism + water criteria equation for carcinogens that EPA used in its proposed rule for Washington results in the hypothetical criterion (0.0045) with the hypothetical 10^{-6} risk level in the table below. If that criterion concentration is held constant, but the risk level is increased due to changes in the FCR, the small effect of the FCR on the criteria can be seen. Using the EPA inputs and holding all variables other than FCR and risk level constant, it takes 2,240 g/day of fish + 2.4 L/day of drinking water to raise the risk level to 10^{-5} while staying at the same hypothetical water concentration. It takes 22,900 g/day of fish + 2.4 L/day of drinking water to raise the risk level to 10^{-4} while staying at the same hypothetical water concentration. FCR survey data from Washington indicate that no one, even high consuming individuals from the surveys of the highest consuming populations, eat this much fish and shellfish on average on a daily basis over a lifetime. These increases in FCR are possible because the BCF for arsenic is low, and most of the risk is conferred by the exposure to 2.4 L/day of drinking water. In addition, the use of a BCF that was calculated for total arsenic instead of inorganic arsenic provides a large and unaccounted for protective factor in this example. Since virtually no risk is associated with the exposure to organisms, a criterion based on drinking water protection is appropriate and protective for waters with designated uses of domestic water supply.

Hypothetical criteria value (ug/L) ¹	Risk level	Fish consumption rate (g/day)	Fish consumption rate (pounds/day)	Body weight (kg)	Cancer slope factor ³	Drinking water intake (L/day)	BCF for total arsenic (not inorganic) (L/kg) ⁴
0.0045 ²	10 ⁻⁶	175	0.39	80	1.75	2.4	44
0.0045	10 ⁻⁵	2,240	4.94	80	1.75	2.4	44
0.0045	10 ⁻⁴	22,900	50.49	80	1.75	2.4	44

Footnotes:

¹ Criteria values were held constant, only the FCR and risk levels were changed in the calculations.

² This is EPA's proposed criteria in its proposed regulation for Washington, which was calculated with the variables shown in this row of the table.

³ This CSF was used for illustrative purposes only. Scientific uncertainty precludes its use in criteria development.

⁴ This is the BCF for total arsenic in tissues from EPA's most recent CWA 304(a) criteria document for arsenic. Most arsenic in tissues is in the organic form (see: EPA 1997. *Arsenic and fish consumption*. EPA 822-R-97-003.) A BCF (or BAF) that expresses total or inorganic arsenic in water to inorganic arsenic in tissue would be much lower than the 44 L/kg used here. In that case, the possible FCRs in the table would be even greater. Uncertainty in this value precludes its use in criteria development.

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<p>Commenter ID: 6</p> <p>What is really pathetic in Ecology's proposal is its so-called "pollution minimization requirements." In our earlier comments, perhaps we were too subtle about what was wrong here: "We are concerned, however, that the way that Ecology has drafted this language will be treated by EPA as not a water quality standard because it is written as a rule that affects dischargers. In addition, while Oregon's rule focused exclusively on waters used for domestic water supply that was because Oregon had up to that</p>	<p><i>Please see #3 in the "Arsenic" general response section above. Regardless of how EPA treats the pollution minimization language, the placement of the language in the criteria table footnotes is clear indication that it is considered by Ecology an intrinsic part of this arsenic criterion and must be implemented in permits as part of the criterion and part of the permit development process.</i></p>

Specific Comments on Arsenic	
Commenter ID/Comment	Ecology Response
<p>point publicly and incorrectly claimed that arsenic was only a human health concern when consumed as drinking water, not as contaminated fish, Ecology has no such justification. Specifically, Ecology has not misled the public into thinking that only drinking water is a concern so why is Ecology restricting the discharge of arsenic from direct and indirect industrial sources to only waters because of that designated use. This is nonsensical. On what basis has Ecology limited the AKART requirement from any direct or indirect industrial discharge to surface waters that is adding arsenic to only waters that are designated for domestic water supply?</p>	
<p>Commenter ID: 6</p> <p>With regard to arsenic, Ecology states that the use of the SDWA MCL is “based on scientific information.” It is not. The MCL, as Ecology itself admits, factors in the cost of treatment, not allowed under the Clean Water Act. The fact that EPA has—contrary to its own guidance—approved other states’ standards’ using the MCL is no reason to do so. As Ecology is no doubt aware, NWEA has sued EPA for approving Idaho’s use of the MCL.</p>	<p><i>Please see #2 in the “Arsenic” general response section above.</i></p>
<p>Commenter ID: 8</p> <p>For arsenic Ecology is proposing a 555-fold increase in the permitted amount of arsenic in Washington’s fresh water. Ecology attempts to justify this change by citing the higher concentrations of naturally-occurring arsenic in some parts of the western United States. While some waters in Washington may in fact have</p>	<p><i>Please see #1, 3, and 4 in the “Arsenic” general response section above. The proposed criteria (as are the National Toxics Rule criteria) are not “permitted” values. They are ambient concentrations. The criteria are used to set permit limits and to assess the quality of surface waters. Ecology believes that the comment on natural conditions is misinterpreted.</i></p>

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Commenter ID/Comment	Ecology Response
<p>higher naturally-occurring arsenic, not all do and Ecology makes no attempt to distinguish nor to determine what natural levels might be to ensure that human-caused pollution does not add to the risk. Ecology also seems to suggest that by simply adopting the “drinking water standard,” it has met its Clean Water Act section 304 obligations. Ecology’s understanding of the law is incorrect. EPA has directly addressed this issue and has made plain that Safe Drinking Water Act (“SDWA”) standards are not to be used as a substitute for Clean Water Act section 304(a)(1) human health standards and that it is not scientifically-supportable to do so: The section 304(a)(1) criteria also [should] include fish bioaccumulation and consumption factors in addition to direct human drinking water intake. As noted by EPA, drinking water standards are simply standards that a municipal entity has to meet “at the tap” for a community water supply, and that statute, unlike the Clean Water Act requirements for ambient water quality standards, allows cost and other factors to be taken into account. Nowhere does the Clean Water Act allow for cost and technology and economic feasibility to be considered when setting standards. Those factors might come into consideration in permitting or other regulatory decisions but have no place in setting the standards to be met for human health and to protect designated uses such as catching and consuming fish and shellfish. Ecology’s misapplication of a drinking water standard from a different statutory paradigm fails completely to develop a standard based upon BAF and consumption of the toxic in fish—there is no discussion or justification by Ecology for how or why a drinking water standard will protect fish</p>	<p><i>Ecology does not assume that natural concentrations of arsenic are consistent across state waters. Concentrations vary over geographic areas and with different analytical techniques (e.g., total arsenic vs dissolved arsenic, total arsenic vs inorganic arsenic). Arsenic data collected in Washington waters indicate that arsenic concentrations are above the current National Toxics Rule levels at all areas that are sampled. The presence of naturally high concentrations in Washington waters is a function of geology and, for marine and estuarine waters of the state, mixing with seawater. Furthermore, Ecology is not proposing arsenic criteria based on natural conditions. Consideration of the naturally high concentrations of arsenic in Washington waters, as well as historic anthropogenic inputs to the Washington environment, is relevant information to consider when adopting criteria. Ecology agrees with the assessment of EPA’s CWA 304(a) criteria guidance documents and criteria values. Ecology agrees that EPA 304(a) guidance documents do not take treatment, cost, and other feasibility factors into consideration. This is made clear in EPA guidance for its own nationally recommended criteria, but this is not the case for states. Section 304(a) of the CWA directs EPA to develop guidance values “reflecting the latest scientific knowledge “and 40CFR131.11 specifies that EPA guidance values are “based on the latest scientific information” and that “this information is issued periodically to the States as guidance for</i></p>

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<p>consumers, the point of Ecology’s rulemaking exercise here. Ecology’s recommendation regarding arsenic is based on incorrect interpretation and application of the Clean Water Act and the SDWA and lacks a scientific and statutory underpinning. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>use in developing criteria.” However, neither the CWA nor the CFR require that states use the 304(a) guidance values or EPA’s guidance documents. Instead, Section 303(c)(2) of the CWA and 40CFR131.2 both direct states to adopt criteria taking into account the “use and value” of the resources. EPA’s nationally consistent approval of the SDWA arsenic MCL as a CWA criterion for human health protection reinforces (1) states’ primacy in this issue as well as (2) the appropriateness of the arsenic MCL for CWA use.</i></p>
<p>Commenter ID: 11</p> <p>Language about the use of all known and available reasonable treatment (AKART) from b) Human health protection in WAC 173-201A-240 Toxic substances should be removed. The sentence “Dischargers have the obligation to reduce toxics in discharges through the use of AKART” should be removed. This removal would be consistent with language in a) Aquatic life protection. The use of AKART is discussed elsewhere in the rule as it pertains to meeting WQC.</p>	<p><i>Ecology disagrees that this language should be removed. Please see #3 in the “Arsenic” general response section above. This specific pollution minimization language was developed to address the arsenic human health criteria, so is not relevant to or in need of consistency with the aquatic life criteria.</i></p>
<p>Commenter ID: 11</p> <p>Some additional support should be included in the EIS and inconsistent language corrected. The EIS (Ecology 2016a) states on page 25 that surface water samples would infrequently exceed Ecology’s 2016 MCL based on proposed HH WQC for arsenic, and would frequently exceed Washington State’s current National</p>	<p><i>The specific language in the EIS is critical to understand the particular sentence cited. The EIS (page 25) specifies that levels of inorganic arsenic (not total) in surface waters infrequently exceed 10 ug/L. This is correct. The sentence further specifies that inorganic arsenic (not total) frequently exceeds the National Toxics Rule criteria. This is also correct. The note at the bottom</i></p>

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<p>Toxics Rule (NTR)-based criteria. This section should also state that EPA’s proposed 2015 HH WQC for arsenic for Washington State would almost always be exceeded, as should the “usability” table in the EIS (Ecology 2016a).</p>	<p><i>on the usability table, sentence one, specifies that Alternatives 1 and 2 are criteria levels that are below natural concentrations of arsenic in many waters of the state. We did not add your suggested language “would almost always be exceeded” but did address this concern by adding the following language: Alternative 2 would also be found above the criteria values a greater number of time than Alternative 1, but detection levels do not allow for a reliable estimate of the difference.</i></p>
<p>Commenter ID: 11</p> <p>The selected arsenic criteria represent a reasonable approach for this abundant, naturally occurring element;</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 13</p> <p>Under the State's proposed rule, the human health criteria for arsenic would become significantly less protective than the current standard. The Tribe does not believe that the use of the arsenic drinking water standard is appropriate as it does not meet the intent of the CWA to protect designated uses for surface water. The Tribe requests that Ecology adopt EPA's proposed criterion for arsenic.</p>	<p><i>Please see #1, 2, and 4 in the “Arsenic” general response section above.</i></p>
<p>Commenter ID: 14</p> <p>Please tighten rules for tighter limits on arsenic.</p>	<p><i>The arsenic standard is not necessarily weaker, as it is based on a total arsenic measure instead of an inorganic arsenic measure. Ecology expects that the pollution minimization requirement accompanying the numeric criterion will</i></p>

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	<i>drive additional arsenic controls. Please see #3 in the “Arsenic” general response section above.</i>
<p>Commenter ID: 18 Use EPA proposed value in final rule.</p>	<i>Please see #1 in the “Arsenic” general response section above.</i>
<p>Commenter ID: 21 Ecology should adopt the EPA proposal for arsenic in the EPA's 2015 proposed rule for human health criteria applicable to Washington state.</p>	<i>Please see #1 in the “Arsenic” general response section above.</i>
<p>Commenter ID: 30 Ecology must reconsider use of the Safe Drinking Water Act (SDWA) arsenic standard of 10 ug/L and recalculate standards that reflect protection of designated uses. Ecology’s proposal to use the SDWA standard for Arsenic is not protective of the designated uses, and therefore is not compliant with the CWA The SDWA is not an appropriate CWA surrogate. Standard setting under the SDWA is based on different goals than CWA. EPA’s Arsenic rule is a negotiated technology-based standard that sets levels of contaminants far exceeding both MCLG and the level that was feasible. The SDWA standard does not account for arsenic exposure via bioaccumulation of fish and subsequent fish consumption, and therefore does not protect the fishable designated use or human health.</p>	<i>Please see #1, 2, and 4 in the “Arsenic” general response section above.</i>

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Commenter ID/Comment	Ecology Response
<p>Commenter ID: 30</p> <p>Ecology should adopt the EPA proposal for arsenic, and focus on a strategy that would monitor and minimize the discharge of any additional arsenic into Washington waters from pesticides, products containing arsenic, or municipal treatment systems.</p>	<p><i>Please see #1 in the “Arsenic” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>Ecology’s proposed footnote requiring AKART and a pollution minimization plan is a positive step, but is not a mitigating factor for a less stringent standard. It is noted that Ecology does state - through the use of a footnote in the arsenic standard - that facilities will be required to implement all known, available, and reasonable methods of prevention, control, and treatment (AKART) implemented through the development of pollutant minimization plan, regardless of the relaxing of arsenic criteria. The footnote is an important reminder of state legal requirements that permittees must comply with when developing effluent limits. However, the footnote is not mitigation for excessively relaxing the arsenic standard, because it introduces no new regulatory requirements. The requirement to apply AKART has long been established by state law, and all discharge permits are required to meet these minimums.</p>	<p><i>Please see #3 in the “Arsenic” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>Increasing allowable arsenic concentrations sets the stage for violations of the CWA’s anti-backsliding laws. The National Discharge Elimination System (NPDES) is designed to ratchet down on pollution discharges over time,</p>	<p><i>Ecology disagrees with the suggestion that the revised human health criteria set the stage for violations of anti-backsliding requirements in the Clean Water Act. Ecology will comply with anti-backsliding requirements when Ecology</i></p>

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<p>with the goal of eliminating pollution and restoring the nation’s waters. Although the anti-backsliding provisions of the CWA are subject to some exceptions (such as availability of new information), nothing in the law expressly provides for changes in regulation that are intended to make compliance easier for the regulated community. By setting revised standards that are significantly less protective than those previously codified, Ecology is setting the stage for development of subsequent effluent limitations “which are less stringent than the comparable standards,” because the standards that they will ultimately be based on will now allow in excess of a hundred times more arsenic than previously authorized. Moreover, these new allowances for pollution are not based on new science demonstrating that arsenic is somehow less harmful and therefore larger doses are now considered acceptable. In fact, it is quite the opposite Ecology acknowledges that the SDWA-based standard is above natural background concentrations, and is not based most recent update of the IRIS cancer potency factor (1998).</p>	<p><i>uses the human health criteria to develop effluent limits in NPDES permits. Please see #1, 2, and 3 in the “Arsenic” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>Uncertainty regarding the cancer potency factor for arsenic is not a reason to use a technology based standards for designated use protection. The predominant justification for not using the AWQC guidance for calculation of an arsenic standard is the purported “uncertainty” surrounding the cancer potency factor (CPF). Ecology notes that EPA is reexamining the existing CPF in the IRIS database, and therefore the existing CPF should not be used until</p>	<p><i>Please see #1, 2, and 4 in the “Arsenic” general response section above.</i></p>

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<p>updates are completed. Ecology further points out that neither the California toxics rule, nor the SDWA arsenic standard used the most recent CPF (1998). The presence of some uncertainty is not justification to increase arsenic pollutant concentrations and subsequent potential exposures. If there is in fact a lack current scientific consensus, it is best to apply the precautionary principal, i.e. if an action or policy has a suspected risk of causing harm to human health, then the burden of proof that the action is not harmful falls on those taking an action. Additionally, it is worth noting that despite purported uncertainty surrounding CPFs in the California Toxics Rule and SDWA, both Oregon’s, EPA’s national recommended 304(a) criteria, and EPA’s proposed human health criteria applicable to Washington, have utilized an arsenic CPF to calculate criteria using EPA’s 2000 AWQC guidance methodology. Ecology should strongly consider following a similar approach.</p>	
<p>Commenter ID: 32</p> <p>For arsenic, the draft standards propose a 555-fold increase in the permitted amount of arsenic in fresh water. This is justified by citing the higher concentrations of arsenic in the Region. The draft standards suggest that adopting the “drinking water standard,” meets the State’s Clean Water Act obligations. This is incorrect. EPA has directly addressed this issue and has made plain that Safe Drinking Water Act (“SDWA”) standards are not to be used as a substitute for Clean Water Act section 304(a)(1) human health standards.</p>	<p><i>Please see 1 and 2 in the “Arsenic” general response section above.</i></p>

Specific Comments on Arsenic	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 34</p> <p>Ecology has appropriately proposed a criterion for arsenic based on the MCL for arsenic under the Safe Drinking Water Act. The arsenic criteria proposed by Ecology based on the Maximum Contaminant Level (MCL) for arsenic under the Safe Drinking Water Act (SDWA) is the same approach approved by EPA for many states including California, Idaho and Alaska. This approach is protective of public health and recognizes both the high natural background of arsenic in Washington waters and the technical difficulty of regulating arsenic for the protection of human health under the Clean Water Act. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 38</p> <p>We find the reasons for replacing the National Toxics Rule (NTR) arsenic criterion with the drinking water MCL are well stated by Ecology and are very compelling. If it's good enough to drink, it should be good enough to discharge into the natural environment.</p>	<p><i>Ecology points out that in many cases what can be safely ingested by humans might not be safe for aquatic life. For instance, most people can easily drink carbonated beverages and milk, yet immersion in these liquids would quickly cause death to most aquatic life. In the case of arsenic Ecology agrees that both human health and aquatic life will not be negatively impacted by the SDWA-based MCL for arsenic.</i></p>
<p>Commenter ID: 38, 50, 61, 62, 69, 65</p> <p>Support using the MCL of 10 ppb as new arsenic criteria.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 39</p> <p>As the agency with expertise in developing water quality standards using best available science, we agree with and recommend EPA's</p>	<p><i>Please see #1, 2, and 3 in the "Arsenic" general response section above. If known discharges of arsenic are taking place into the Puyallup River watershed then</i></p>

Specific Comments on Arsenic

Commenter ID/Comment	Ecology Response
<p>draft arsenic WQC as published in EPA's Draft Water Quality Standards Federal Rule (September 14, 2015) and recommend it be incorporated into the State's Rule. EPA's draft WQC is more protective of human health, about 500-2000 times more stringent than the state's proposed standard for arsenic. We agree with and recommend this approach because arsenic is designated by EPA as a human carcinogen and there are several known dischargers of arsenic for which there are little to no controls in place to reduce and remove loadings in the Puyallup River watershed. At this time, amendments should be based on the sound science and only those that have the current best available science in place be included in any updates incorporated into the state rule. Additionally, the state notes the AKART (i.e. pollution minimization plan) requirement to be applied in addition to the criterion. Yet AKART requirements are already required under state law so such a requirement does not provide any additional protections to human health. Based on low level arsenic monitoring in the watershed, background concentrations are at about 1 ppb. Through the Puyallup Tribe's direct experience with regulating arsenic, the Tribe has found cost-effective remedies such as product substitutions lead to significant improvements in water quality. Arsenic is discharged by POTWs, yet few have effluent limits for arsenic. Surprisingly, arsenic is also in a variety of compounds such as scalers, which control biological growth, and other products that don't include the word "arsenic" on the label. To address this, pollutant minimization plans including interim, enforceable benchmarks and timelines should be included in discharge</p>	<p><i>coordination with Ecology's Water Quality or Toxics Clean-up Programs is advised. If arsenic is coming from dischargers that would be affected by the new pollution minimization language in the arsenic footnote, then those discharges will be evaluated for specific pollution minimization requirements at their next permit reissuance. Other sources can be evaluated using the existing AKART requirements.</i></p>

Specific Comments on Arsenic	
Commenter ID/Comment	Ecology Response
permits and monitoring should be required in permits. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).	
<p>Commenter ID: 39</p> <p>Ecology's decision on its treatment of arsenic is not protective of tribes nor is it based upon sound science, and relies on an incorrect interpretation of the SDWA and CWA. As such, it is arbitrary, capricious, contrary to law, and violates Tribal treaty rights.</p>	<p><i>Ecology disagrees that the proposed arsenic criteria are not based on sound science. Please #1 and 2 in the "Arsenic" general response section above. Please also see additional responses in sections of this Response to Comments addressing Tribal Treaty Rights and Inputs to the Equations.</i></p>
<p>Commenter ID: 39</p> <p>The Safe Drinking Water Act MCL is not protective of the designated uses of the State of Washington's waters, namely for "water+ organisms" (or those waters designated for drinking water and fishing uses). The Safe Drinking Water standard is a technology standard and is not a human health based standard. Drinking water standards are based on technological and cost considerations that have nothing to do with section 304(a)(1) criteria. Under the Clean Water Act, the state is required to protect designated uses. Use of a SDW A criterion of 10 ppb does not protect the ingestion of water + organism, or tribes whose main route of exposure of arsenic is via ingestion of fish and shellfish. For most of the population, uptake of arsenic through food is the major source of exposure. Among foods, the highest concentrations of arsenic are generally found in</p>	<p><i>Please see #4 in the "Arsenic" general response section above.</i></p>

Specific Comments on Arsenic	
Commenter ID/Comment	Ecology Response
fish and shellfish, existing primarily as organic compounds.	
<p>Commenter ID: 39</p> <p>The State offers no scientific rationale on the subject of their use of the Safe Drinking Water Act maximum contaminant level (MCL) for the proposed arsenic criterion, other than to say there is state precedent. Ecology also cites naturally high backgrounds of arsenic in the Western states somehow justifies significantly adjusting the standard to be less protective than the existing standard. We find this argument to be a red herring in that re-stating the condition of state waters is irrelevant for the purposes of deriving a human health standard. The question about natural background is one of implementation, not for setting standards.</p>	<p><i>Please see #1, 2, and 4 in the “Arsenic” general response section above. Ecology disagrees that draft criteria lists and other material supporting the draft arsenic criteria have not been clear or complete. Ecology provided clear and unambiguous criteria comparisons and information to support the draft rule. The Decision Document describes the rationale for adoption of the Safe Drinking Water Act MCL, and it is based on several different factors, not simply implementation.</i></p>
<p>Commenter ID: 42</p> <p>As for arsenic, Ecology similarly seeks to justify its more lenient standards; in this case, Ecology borrows a standard from an entirely different statute (the Safe Drinking Water Act), one that allows human health concerns to be “balanced” against competing considerations, such as feasibility and cost. Under the CWA, however, WQS are health-based standards.</p>	<p><i>Please #1 and 2 in the “Arsenic” general response section above.</i></p>
<p>Commenter ID: 46</p> <p>We support the use of the Drinking Water Standard for Arsenic as reasonable to address this substance commonly found in our environment. Arsenic, in particular, is present in bedrock throughout the state.</p>	<p><i>Comment noted.</i></p>

Specific Comments on Arsenic

Commenter ID/Comment	Ecology Response
<p>Commenter ID: 48</p> <p>For arsenic, Ecology proposed to adopt a criterion of 10 µg/L, which is the Maximum Contaminant Level (MCL) for arsenic under the Safe Drinking Water Act. Ecology also proposed requirements relating to arsenic pollution minimization. Arsenic is the only pollutant for which Ecology proposed human health criteria less stringent than the values currently in effect under the NTR (0.018 µg/L for water & organism and 0.14 µg/L for organisms only). Ecology has not provided an adequate rationale to explain how 10 µg/L is scientifically defensible for ambient waters, and protective of the state's designated uses. The EPA recognizes that developing human health criteria for arsenic may be challenging, particularly because naturally occurring levels in Washington could exceed the EPA's recommended criteria. Additionally, the EPA notes that the Agency's IRIS program is currently reassessing the toxicity of arsenic, and is targeting the end of 2017 for completion of that effort. The results of the IRIS reassessment will be helpful for states and the EPA to develop updated human health water quality criteria for arsenic in the future. The EPA is available to work with Ecology to explore other options for deriving protective arsenic criteria, including the consideration of any relevant information released as part of the EPA's arsenic reassessment.</p>	<p><i>Please see #1, 2, and 4 in the "Arsenic" general response section above.</i></p>
<p>Commenter ID: 52</p> <p>Sec. 173-210A-240(5)(b) states, in part, that arsenic (As) is to be evaluated as total As. In cases where organo-arsines are present, the</p>	<p><i>Ecology agrees that a total arsenic measure can overestimate the amount of inorganic arsenic (most toxic form) in a sample. The arsenic criterion is expressed</i></p>

Specific Comments on Arsenic	
Commenter ID/Comment	Ecology Response
<p>contribution of those organo-arsines should be subtracted from the total As value, as they bias bioavailable As toxicity upwards. This is a known contributor to false positives in urinary arsenic testing. Failure of an As criterion should allow the option to rebut the failure through identification of the contribution of organic arsenical compounds, with due consideration of the few toxic organo-arsines. Footnote dd of Table 240: As water column seasonal budgets are known to closely parallel phosphorous (P) budgets in lentic systems that undergo seasonal stratification and overturn, and As dynamics can be accurately estimated with relatively few data points if P dynamics are known. This factor should be considered in determining whether As seasonal partitioning is known. As level fluctuations should be evaluated especially carefully in peat-bog lakes, as unusual dynamics may exist (e.g. Des Moines Creek Regional Stormwater Detention/Retention facility S. of SeaTac Airport). Since As is known to associate with soil fines, the distinction between suspended and dissolved As may be an important consideration.</p>	<p><i>as total because its basis is the SDWA MCL. Further considerations of factors that could affect toxicity are not part of this criterion: total arsenic is the measure that defines the criterion. Ecology agrees that the issue of how to handle suspended sediments is important.</i></p>
<p>Commenter ID: 53</p> <p>Several toxic chemicals or substances are specifically “set aside” and treated independently, actually weakening existing provisions (arsenic). Changing the arsenic standard to that for drinking water is a poor choice and fails to account for accumulation in fish tissue; EPA’s proposed arsenic standard for Washington is more stringent.</p>	<p><i>Please see #1, 2, and 4 in the “Arsenic” general response section above.</i></p>

Specific Comments on Arsenic	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 72</p> <p>Arguably, the arsenic standard would actually become weaker. Arsenic is a chemical of great concern as our river receives metal tainted waters from Coeur d'Alene Lake.</p>	<p><i>The arsenic standard is not necessarily weaker, as it is based on a total arsenic measure instead of an inorganic arsenic measure. Please see #1 and 2 in the "Arsenic" general response section above.</i></p>

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Mercury

Summary of Comments

Many comments addressed mercury. Ecology has developed general responses below.

Individual comments and responses on mercury are included in the table below this General Comment/Responses section.

General Comment/Responses on Mercury

- General Comment: 1, 5 6, 8, 9, 10, 12, 13, 18, 21, 23, 30, 32, 50, 53, 54, 55, 39, 41, 42, 48, 64, 68, 72, 77

Ecology should adopt methylmercury criteria in this rulemaking.

Response: Ecology agrees that the state should develop and adopt a criterion for methylmercury in tissues, but disagrees that it should happen in this rulemaking. Ecology has explained that it will develop both the criteria and an implementation/ regulatory strategy for methylmercury at the same time. Ecology considers this is a reasonable approach given that the state does currently have human health-based standards for mercury in its state water quality standards: the chronic aquatic life criteria for mercury are based on human health effects. Given that the approach taken by Ecology is to develop both the criteria and an implementation/regulatory strategy at the same time, work on this project can proceed in a less confusing process if it is the sole focus of a rulemaking. To try to accomplish this dual task combined with adoption of criteria for 97 other chemicals (the current human health criteria rulemaking) would simply result in a public process that is too confusing to be effective.

In addition, because Ecology did not propose adoption of a human health criterion for methylmercury in the draft rule it would not be possible to add that chemical to the water quality standards at this point without going out with another draft rule. That approach would substantially delay the final adoption of human health criteria and implementation tools, likely by at least another 6 months. Ecology has committed to adoption of human health criteria into the state standards, and has heard clearly from the public and EPA that adoption should not be subject to further delays.

- General Comment: 13, 39, 42

Mercury is responsible for many fish advisories in Washington.

Response: Risks from mercury, as demonstrated by fish advisories, is a concern in Washington. The future rulemaking to address mercury criteria, implementation, and sources will help determine what options the state has to reduce mercury from entering waterbodies. Because atmospheric deposition has been found to be an important source in other states, in Washington the use of best management processes to reduce erosion of soils over the landscape might be one of the best tools available. This has been an effective approach in Oregon's Willamette Valley. As part of the future rulemaking, Ecology expects to develop more information on how and whether

reducing CWA-regulated sources of mercury in Washington will result in lifting of fish advisories. Note that Ecology developed a Chemical Action Plan for Mercury as part of its efforts to reduce persistent, bioaccumulative, and toxic (PBT) chemicals. Work under that Ecology initiative is ongoing. Please also see the section on Fish Consumption Rates (in particular the General Response on fish advisories) in this Response to Comments.

Specific Comments on Mercury	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 6</p> <p>With regard to mercury, Ecology’s regulatory cowardice is demonstrated in full form, which is really all that needs to be said.</p>	<p><i>Please see #1 in the “Mercury” general response section above.</i></p>
<p>Commenter ID: 8</p> <p>For methylmercury (a highly toxic metal with neurotoxic effects), applying the updated fish consumption rate and the proper factors from EPA’s EFH recommendations would have resulted in a more protective water quality standard. Instead, Ecology simply proposes to put off any new regulation, leaving the inadequate mercury standard as is. Overview at 63-66. Again, EPA has already found that the mercury standard, as part of the NTR, is inadequate to protect designated uses, necessitating a new, more stringent, standard. To justify its failure to act, Ecology asserts it is simply too difficult to complete a mercury standard. This assertion that “it is too hard” is neither supported, nor supportable. First, Ecology’s complaint rings hollow given the years and years that Ecology has supposedly been working on this. Second, Ecology could simply rely on a correct equation and accept the result—it is, after all, already engaged in that task for many other chemicals and it simply requires doing a single calculation. Third, Ecology could look to other states that apparently were able to address mercury or look to EPA’s proposed standard. For example the State of Minnesota has a protective fish consumption and mercury standard. Ecology’s “too hard” complaint</p>	<p><i>Please see #1 in the “Mercury” general response section above. In most cases, Ecology uses the inputs EPA uses in its 304(a) criteria calculations, and does not directly use the many possible values provided in EPA’s Exposure Factors Handbook. In the future process to adopt human health criteria for methylmercury Ecology will consider additional possible equation inputs from the Exposure Factors Handbook. Part of that rule process will also be to review and evaluate mercury reduction approaches used by other states as they implement methylmercury criteria.</i></p>

Specific Comments on Mercury	
Commenter ID/Comment	Ecology Response
is baseless and certainly finds no support in the Clean Water Act.	
<p>Commenter ID: 13</p> <p>The Tribe does not support Ecology's proposal to delay updating the hhc for mercury, a contaminant that is continually identified as a leading concern in fish health advisories. The Tribe requests that the State utilize EPA guidance and update the hhc for mercury as required by the CWA.</p>	<p><i>Please see #1 and 2 in the “Mercury” general response section above.</i></p>
<p>Commenter ID: 14</p> <p>Please tighten rules for tighter limits on mercury.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 18, 50, 53</p> <p>Use EPA proposed value in final rule.</p>	<p><i>Please see #1 in the “Mercury” general response section above.</i></p>
<p>Commenter ID: 21</p> <p>Ecology should use the updated EPA guidance to develop an updated methyl mercury Standard.</p>	<p><i>Please see #1 in the “Mercury” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>Northwest Indian Fisheries Commission requests that Ecology not defer updating criteria for Mercury. Ecology should utilize EPA guidance in combination of with the application of regional FCRs, to develop a methylmercury standard. Methylmercury is extremely harmful to human health, and fish consumption is the major exposure pathway. Water quality standards development should not be delayed due to implementation considerations. EPA guidance requires states to update their mercury standards, and use local fish consumption data in doing so. Ecology already uses fish tissue as a basis for 303(d) listings, which</p>	<p><i>Please see #1 in the “Mercury” general response section above.</i></p>

Specific Comments on Mercury	
Commenter ID/Comment	Ecology Response
demonstrates the feasibility of developing and implementing a tissue-based standard.	
<p>Commenter ID: 32</p> <p>Applying a revised fish consumption rate and the proper factors from EPA’s EFH recommendations would have resulted in a more protective water quality standard. Instead, Ecology simply proposes to put off any new regulation and will leave the current mercury standard as is. To justify its action, Ecology asserts it is simply too difficult to complete a mercury standard at this time. This assertion that it is too difficult is not a legitimate basis for failing to adopt a proper standard (particularly given that EPA has proposed a mercury limit for Washington).</p>	<p><i>Please see #1 in the “Mercury” general response section above. In most cases, Ecology uses the inputs EPA uses in its 304(a) criteria calculations, and does not directly use the many possible values provided in EPA’s Exposure Factors Handbook. In the future process to adopt human health criteria for methylmercury Ecology will consider other possible equation inputs (in particular body weight) from the Exposure Factors Handbook.</i></p>
<p>Commenter ID: 34</p> <p>Ecology has appropriately proposed to defer action on a methylmercury criterion (MeHg) for the state of Washington. EPA has acknowledged unresolved technical issues and delayed action on updating mercury criteria in its 2015 recommended human health water quality criteria. Washington already has in place criteria for mercury based on human health protection that are more stringent than the NTR criteria. The NTR criteria are 0.14 µg/L (organisms and water) and 0.15 µg/L (organisms only), 40 C.F.R. § 131.36(b), compared to the Washington chronic freshwater criterion of 0.012 µg/L, WAC 173-201A-240, Table 240(3). In future actions on MeHg, Ecology should consider the protective effect selenium has on potential mercury health effects as many toxicologists have advocated that traditional risk assessments of mercury in fish without concomitant information on tissue selenium levels is scientifically flawed and</p>	<p><i>When Ecology moves forward with criteria for methylmercury, information on its interactions with selenium with regard to toxicity will be considered.</i></p>

Specific Comments on Mercury	
Commenter ID/Comment	Ecology Response
<p>misleading.⁶³ Recent reports have explained the mechanisms of this protective effect.⁶⁴ When the molar ratio of selenium to mercury in fish tissue exceeds 1.0 in freshwater and marine fish, a protective effect can be assumed. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	
<p>Commenter ID: 39</p> <p>Ecology has chosen not to update the criteria on Methylmercury, unbelievably ignoring the fact that EPA, in its proposed Federal Rule (September 2015), already made a determination that Ecology's existing standards under the NTR are not protective of designated uses and therefore are not compliant with the CwA. Considerable new data has been provided since the State's last update, and been adopted by EPA. Yet Ecology has chosen not to utilize the best available data, without any sound scientific rationale. Exposure to methyl mercury is usually through ingestion of fish and shellfish. The CRITFC survey revealed that methylmercury exposure risks to tribal women (consuming at the CRITFC average rate of 389 grams/day) compared to women in the general population (consuming at EPA's default rate of 17.5 grams/day) are shocking, evidencing that women consuming at the tribal consumption rate are exposed to methylmercury at levels nine to thirteen times the EPA's reference (safe) dose. Based on these facts, it is clear that the criterion should be updated to include the tissue-based limit in the 2001 EPA recommendations and include the revised FCR of 175 grams per day.</p>	<p><i>Please see #1 and 2 in the "Mercury" general response section above.</i></p>
<p>Commenter ID: 39</p> <p>The state's reasoning for not updating the methylmercury criteria because of the absence of an</p>	<p><i>Please see #1 in the "Mercury" general response section above. Also, please see responses to comments on "Tribal Treaty</i></p>

Specific Comments on Mercury	
Commenter ID/Comment	Ecology Response
<p>implementation plan has no merit, is without sound scientific rationale and, therefore, arbitrary and capricious. Furthermore, the Proposed Rule is contrary to law and violates Tribal treaty rights regarding its failure to update the methylmercury criteria. The development of criteria is distinct from how the criteria get implemented under Sections 401 and 402 and other implementing regulations of the CWA. The problems that come from regulating methylmercury due to implementation issues are distinct from development of criteria. Ecology can address the difficulties through use of the April, 2010 EPA guidance for implementing the methylmercury criteria and work via a public process on closing data gaps, including questions regarding mixing zones, variances, and other provisions.</p>	<p><i>Rights” and “Inputs to the Equations” sections.</i></p>
<p>Commenter ID: 48</p> <p>Ecology decided to defer the adoption of human health criteria for methylmercury to allow time to develop a comprehensive implementation plan in a future state rulemaking. Therefore, the state proposes to leave the NTR human health criteria for total mercury in effect for Washington. Ecology has not provided sufficient rationale for why the state is not considering the latest scientific information and not proposing adoption of methylmercury criteria, beyond the difficulties anticipated in implementation. In 2001, the EPA updated its 304(a) recommended methylmercury criterion for protection of human health after considering the latest science and data regarding health effects from intake of mercury and the primary routes of exposure. The 2001 methylmercury criterion is expressed as a fish tissue concentration and replaced the EPA’s previous recommended water column concentration for total mercury. 20 Regarding implementation of a fish tissue criterion for methylmercury, the EPA published guidance in 2010 to</p>	<p><i>Please see #1 in the “Mercury” general response section above. Ecology expects that future work on a criterion for methylmercury will be an intense process, and looks forward to working with the EPA to develop, in particular, methods to assess compliance with a tissue-based criterion, which will include complex considerations of how to integrate the Washington FCR with consumed species at different trophic levels</i></p>

Specific Comments on Mercury	
Commenter ID/Comment	Ecology Response
<p>assist states and tribes.²¹ The EPA recognizes that there are unique challenges with implementing fish tissue criteria as opposed to water column criteria. The EPA recommends that Ecology consider the information available in the EPA's methylmercury criterion implementation guidance and is available to offer assistance in determining how best to implement a methylmercury fish tissue criterion in Washington. The EPA continues to recommend that Ecology adopt methylmercury criteria consistent with the EPA's 2001 304(a) recommendations that are protective of the designated use and based on sound science.</p>	
<p>Commenter ID: 50, 61, 62, 69, Support Ecology's decision to defer action on mercury.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 72 The standards for mercury continue to stay the same. Mercury is a powerful toxin that biomagnifies in our waters and poses a risk to anglers and their families.</p>	<p><i>Please see #1 in the "Mercury" general response section above.</i></p>

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Dioxin (2,3,7,8-TCDD)

Summary of Comments

Many comments expressed concerns with the use of the non-cancer reference dose instead of cancer slope factor to calculate the dioxin criteria, and whether the proposed criteria are protective of designated uses. Ecology has developed a general response to many of these comments.

Individual comments and responses on dioxin are included in the table below this General Comment/Responses section.

General Comment/Response on Dioxin

1. General Comment: 8, 21, 24, 30, 36, 39, 42, 48, 51, 64, 76, 77

Ecology should use a cancer slope factor to calculate the dioxin criteria, or show that the proposed criteria are protective of designated uses.

Response: Without a reliable toxicity factor for cancer Ecology cannot calculate dioxin criteria based on cancer. EPA agrees that new cancer-based criteria for dioxin cannot be calculated at this time. In a May 6, 2016 filing with the United States District Court for the Western District of Washington, EPA stated that it will withdraw its proposed dioxin criteria for Washington because “extensive additional scientific analysis is necessary before revised criteria” for dioxin can be promulgated. *Puget Soundkeeper Alliance et. al. V. U.S.E.P.A., Case No. 2:16-cv-00293-JLR, EPA’s Motion for Summary Judgment (May 6, 2016) at 13.* As EPA explained in the Declaration of Elizabeth Southerland, Director of the Office of Science and Technology with EPA’s Office of Water, “EPA did not update its CWA section 304(a) recommended criteria” for dioxin in 2015, and “IRIS does not currently contain a quantitative carcinogenicity assessment” for dioxin. Declaration of Elizabeth Southerland (May 5, 2016) at 7. These statements indicate that the existing science does not allow either Ecology or EPA to adopt new cancer-based dioxin criteria for Washington. Please refer to the Decision Document for further information.

With regard to cancer risk, if one were to assume that either the EPA proposed criteria for dioxin or the current National Toxics Rule criteria for dioxin are protective of human health in Washington, then a comparison of the EPA proposed criteria (5.8 and 5.9×10^{-10} ug/L) and the National Toxics Rule criteria (1.3 and 1.4×10^{-8} ug/L) with the Ecology human health criteria (6.4×10^{-8}) indicates at most an approximate two orders of magnitude difference. If the EPA proposed criteria were “correct” and indeed reflected a 10^{-6} risk level, then the Ecology value would be protective in the 10^{-4} risk range, which is an allowable risk level under EPA 2000 guidance. If the National Toxics Rule criteria were “correct” and indeed reflected a 10^{-6} risk level, then the Ecology value would be protective in the 10^{-6} risk range, which is also an allowable risk level under EPA 2000 guidance. With regard to non-cancer effects, the Ecology human health criteria, based on the most recent 2012 IRIS non-cancer assessment, is calculated to be protective of non-cancer effects. With regard to protection of Washington consumers via controls on dioxin discharges, the new Ecology criteria will provide as much control of dioxin sources as the EPA proposed or National Toxics Rule criteria: effluent monitoring data from major NPDES

dischargers in Washington, using EPA approved methods, indicates that dioxin is rarely detected in discharges. In addition, if dioxin were detected in a discharge, and a water quality-based effluent limit was required, compliance with the water quality-based effluent limit would be assessed at the quantitation level for EPA Method 1613B, which is 5 pg/L (5 X 10⁻⁶ ug/L), well above any of the proposed or current criteria levels.

Specific Comments on Dioxin (2,3,7,8-TCDD)	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 8</p> <p>Ecology has also proposed human health criteria for dioxins that are lower than the NTR standards, far lower than EPA’s proposal, and 25 times less protective than Oregon’s. Ecology reaches this result by calculating 2,3,7,8-Tetrachloro-dibenzo-p-dioxin (2,3,7,8-TCDD) only based on its non-cancer health effects. Overview at 30. This is unacceptable given that EPA has determined that 2,3,7,8-TCDD is, along with other dioxin-like compounds, carcinogenic to humans. Ecology’s proposal is contrary to EPA’s guidance and should be redone based on cancer risk.</p>	<p><i>Please see #1 in the “Dioxin” general response section above.</i></p>
<p>Commenter ID: 21</p> <p>Ecology should align its dioxins criteria, in particular 2,3,7,8-Tetrachloro-dibenzo-p-dioxin (2,3,7,8-TCDD), with the EPA’s 2015 proposed rule for Washington.</p>	<p><i>Please see #1 in the “Dioxin” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>Ecology Must Recalculate Dioxin Criteria and Apply Best Available Science Although the EPA has determined 2,3,7,8-Tetrachloro-dibenzo-p-dioxin (2,3,7,8-TCDD) and other dioxin-like compounds to be carcinogenic to humans, Ecology has elected in its draft rule to calculate human health criteria for 2,3,7,8-TCDD based only its non-cancer health effects,</p>	<p><i>Please see #1 in the “Dioxin” general response section above. Use of the TEF/TEQ approach is generally considered during implementation activities. For instance, Ecology’s Policy 1-11 Assessment of Water Quality for the Clean Water Act Section 303(d) and 305(b) Integrated Report (2012) uses TEFs/TEQs as follows in the water quality assessment:</i></p>

Specific Comments on Dioxin (2,3,7,8-TCDD)

Commenter ID/Comment	Ecology Response
<p>resulting in a less protective criterion for this highly toxic chemical than the existing NTR. As rationale for this change, Ecology cites “recent scientific information and uncertainty surrounding assessment of carcinogenicity,” and the fact that the toxicity factors for dioxin have “been under review for many years.” 215 While the EPA has not formally updated the cancer slope factor for dioxins, it has published a draft cancer slope factor which is more than five times higher than the previously published value, which would result in more stringent, not less stringent, criteria.216 By treating TCDD as a non-carcinogen, the criteria do not account for the additive carcinogenic effects of other dioxin-like compounds. In its 2002 compilation of national recommended water quality criteria, EPA included the following guidance: The section 304(a) water quality criteria for dioxin contained in this compilation is expressed in terms of 2,3,7,8-Tetrachloro-dibenzo-p-dioxin (2,3,7,8-TCDD) and should be used in conjunction with the national/international convention of toxicity equivalence factors (TEF/TEQs) to account for the additive effects of other dioxin-like compounds (dioxins). By applying the TEF/TEQ approach, “the other highly toxic dioxins will be properly taken into account”.217 This approach is also consistent with the treatment of dioxin mixtures in the state’s Model Toxics Control Act (“MTCA”; WAC 173-340).The result of the approach proposed by Ecology is draft human health criteria for dioxins that are among the least protective in the country. The criteria are 2.5 times less protective than the existing national recommended criteria, and 25 times less</p>	<p><i>2,3,7,8-TCDD Toxic Equivalents</i></p> <p><i>The 17 PCDD/F congeners have different levels of toxicity compared to 2,3,7,8-TCDD, the most toxic form. To assess the cumulative risks to human and environmental health, the congener concentrations are expressed as toxic equivalents (TEQs). The TEQ is calculated by multiplying each congener result by its congener-specific toxicity equivalent factor (TEF) and then summing to obtain the overall TEQ. Calculated TEQ values will be assessed using the 2,3,7,8-TCDD criterion and criterion tissue equivalent concentration. An exceedance of the criterion, or criterion tissue equivalent concentration, will result in a Category 2 determination.</i></p>

Specific Comments on Dioxin (2,3,7,8-TCDD)

Commenter ID/Comment	Ecology Response
<p>protective than those adopted by the State of Oregon.</p>	
<p>Commenter ID: 39</p> <p>The State of Washington proposes using the old 1992 NTR value for the dioxin criterion, ignoring more recent advancements on the subject. But for Governor Inslee's no backsliding provision, the criterion would be even less protective than the NTR. The Tribe recommends using the most recent Nationally Recommended Criteria Recommendation for dioxin which was published in 2002. At this time, we recommend using the same q1 or cancer slope factor, BCF, and cancer risk level but to update the FCR in the derivation. EPA is currently working on updating the BCF and when the final revised criteria are published by EPA, we recommend the state follow suit. The section 304(a) water quality criteria for dioxin contained in this compilation is expressed in terms of 2,3,7,8-Tetrachloro-dibenzo-p-dioxin (2,3,7,8-TCDD) and should be used in conjunction with the national/international convention of toxicity equivalence factors (TEF/TEQs) to account for the additive effects of other dioxin-like compounds (dioxins). The Tribe agrees with EPA to use the 1998 WHO TEF scheme because it is based on more recent data and is internationally accepted. (See: Update to the Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans, BP A/625/3-89/016, March 1989 and Van den Berg M., 1998). By applying the TEF/TEQ approach, the other highly toxic dioxins will be properly taken into account.</p>	<p><i>Please see #1 in the "Dioxin" general response section above. Use of the TEF/TEQ approach is generally considered during implementation activities. For instance, Ecology's Policy 1-11 Assessment of Water Quality for the Clean Water Act Section 303(d) and 305(b) Integrated Report (2012) uses TEFs/TEQs as follows in the water quality assessment:</i></p> <p><i>2,3,7,8-TCDD Toxic Equivalentts</i></p> <p><i>The 17 PCDD/F congeners have different levels of toxicity compared to 2,3,7,8-TCDD, the most toxic form. To assess the cumulative risks to human and environmental health, the congener concentrations are expressed as toxic equivalentts (TEQs). The TEQ is calculated by multiplying each congener result by its congener-specific toxicity equivalent factor (TEF) and then summing to obtain the overall TEQ. Calculated TEQ values will be assessed using the 2,3,7,8-TCDD criterion and criterion tissue equivalent concentration. An exceedance of the criterion or criterion tissue equivalent concentration will result in a Category 2 determination.</i></p>

Specific Comments on Dioxin (2,3,7,8-TCDD)	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 48</p> <p>Regarding 2,3, 7 ,8-TCDD, Ecology made the decision to use the most recent IRIS non-cancer reference dose, which was finalized in 2012, for the human health criteria calculation. Ecology states that this is warranted given the uncertainty surrounding the assessment of carcinogenicity and the length of time this toxicity factor has been under review. Ecology needs to provide a rationale for how the resulting criteria for 2,3, 7 ,8-TCDD are scientifically defensible and protective of human health in the state.</p>	<p><i>Please see #1 in the “Dioxin” general response section above.</i></p>

Other Pollutants of Concern

Summary of Comments

Many comments expressed concerns with other pollutants. The individual comments and responses are listed below.

Specific Comments on Other Pollutants of Concern	
Commenter ID/Comment	Ecology Response
<p>Commenter ID: 1</p> <p>The Department of Ecology's proposal will allow the criteria for several highly toxic chemicals including PCBs, arsenic, and dioxin to remain at status quo or to get substantially worse.</p>	<p><i>Please see the “PCBs,” “Arsenic,” and “Mercury” sections in the Response to Comments.</i></p>
<p>Commenter ID: 5</p> <p>Currently the EPA has put forward PCB standards that are more protective and more up-to-date. We feel strongly that the EPA guidelines should be followed. Additionally, we</p>	<p><i>Please see the “Arsenic” and “Mercury” sections in this Response to Comments.</i></p>

Specific Comments on Other Pollutants of Concern

Commenter ID/Comment	Ecology Response
<p>feel the EPA standards for both arsenic and methylmercury should be adopted. We understand that these toxins are tough to capture but feel strongly that inaction is not a solution. Using the older National Toxics Rule criteria is not adequate and leaves the public vulnerable to higher levels of these toxins over time.</p>	
<p>Commenter ID: 5 We commend Ecology for listening to the public and changing their proposed rules to be more realistic and more protective of human health. However, we encourage Ecology to review and revise their rule with regards to mercury, PCBs and arsenic. The proposed rule is not strong enough with regards to these toxins. All these toxins bio-accumulate and bio-magnify in the food chain in such a way that makes Spokane River fish problematic to consume.</p>	<p><i>Please see the “PCBs,” “Arsenic,” and “Mercury” sections in the Response to Comments.</i></p>
<p>Commenter ID: 6 Ecology Proposes to Violate the Clean Water Act The Clean Water Act requires that “[w]henver a State reviews water quality standards, ... such State shall adopt criteria for all toxic pollutants listed pursuant to section 1317(a)(1) of this title for which criteria have been published under section 1314(a) of this title[.]” CWA § 303(c)(2)(B). Ecology is reviewing its water quality standards in this proposed rulemaking yet it is failing entirely to consider, let alone “adopt criteria” for all toxic pollutants for which criteria have been published. Ecology has failed to adopt aquatic life criteria since it first did so on November 25, 1992, with the exception of ammonia, chronic marine copper, and chronic marine cyanide. At a minimum, EPA has revised its recommended</p>	<p><i>This rulemaking is only for the human health criteria and implementation tools. Aquatic life-based criteria updates will happen at a later date.</i></p>

Specific Comments on Other Pollutants of Concern

Commenter ID/Comment	Ecology Response
<p>criteria for aquatic life for the following pollutants: acrolein, ammonia, arsenic, carbaryl, cadmium, chromium (III), chromium (VI), copper, diazinon, dieldrin, endrin, gamma-BHC (Lindane), mercury, nickel, nonylphenol, parathion, pentachlorophenol, selenium, tributyltin, and zinc. These revised criteria obligate Ecology to update its aquatic life criteria accordingly.</p>	
<p>Commenter ID: 8 While Ecology has proposed a 175 g/day fish consumption rate (a rate below what surveys show certain consumers such as members of Native American tribes eat) and protective 10^{-6} cancer risk rate, it uses other parts of the calculation to weaken standards and is severely under- or non-protective for three of the most important pollutants: mercury, arsenic, and PCBs.</p>	<p><i>Please see the “PCBs,” “Arsenic,” and “Mercury” sections in the Response to Comments.</i></p>
<p>Commenter ID: 9 Include mercury, arsenic and lead standards. Any amount of these is not acceptable.</p>	<p><i>Please see the Mercury and Arsenic sections in this Response to Comments. EPA has not yet developed human health criteria for lead for surface waters. Lead in drinking waters is regulated under the SDWA.</i></p>
<p>Commenter ID: 10, 23 PCB's, arsenic and mercury are not address enough or at all in the standards proposed.</p>	<p><i>Please see the “PCBs,” “Arsenic,” and “Mercury” sections in the Response to Comments.</i></p>
<p>Commenter ID: 12 Additionally, the EPA standards for both arsenic and mercury should be adopted. While we recognize the difficulty in cleaning up these toxics, inaction is not a solution. Using the older National Toxics Rule criteria is not adequate and</p>	<p><i>Please see the “Arsenic” and “Mercury” sections of the Response to Comments.</i></p>

Specific Comments on Other Pollutants of Concern

Commenter ID/Comment	Ecology Response
leaves the public vulnerable to higher levels of these pollutants over time.	
<p>Commenter ID: 12</p> <p>PCBs and mercury are the cause of over 90 percent of the fish consumption advisories in Washington. These contaminants need to be taken seriously and strong standards are necessary.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 12</p> <p>The newly proposed legislation does not have strong enough standards concerning PCBs, mercury, and arsenic. In fact, the standards recommended by Ecology are weaker than what the EPA currently recommends.</p>	<p><i>Please see the “PCBs,” “Arsenic,” and “Mercury” sections in the Response to Comments.</i></p>
<p>Commenter ID: 22</p> <p>Ecology must be commended for the practical and good science-based proposals for the setting of numeric criteria for total PCBs and total arsenic, and for choosing to retain the current National Toxic Rule numeric criterion for mercury.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 23, 68</p> <p>The proposed rule is not strong enough with regards to these toxins. The Spokane River has issues with all of these toxins and the rule should update and tighten the standards on these pollutants.</p>	<p><i>Please see the “PCBs,” “Arsenic,” and “Mercury” sections in the Response to Comments.</i></p>
<p>Commenter ID: 24, 76</p> <p>The state's proposal will allow the criteria for several highly toxic chemicals including PCBs, arsenic, and dioxin to remain at status quo or to get substantially worse.</p>	<p><i>Please see “PCBs,” “Arsenic” and “Dioxin” sections in this Response to Comments.</i></p>

Specific Comments on Other Pollutants of Concern

Commenter ID/Comment	Ecology Response
<p>Commenter ID: 32 EPA has proposed standards for these toxics (PCBs, arsenic, mercury) that are more protective. The Tribal Caucus believes these standards should be adopted.</p>	<p><i>Please see the “PCBs,” “Arsenic,” and “Mercury” sections in the Response to Comments.</i></p>
<p>Commenter ID: 34 We strongly support the proposed water quality criteria for polychlorinated biphenyls (PCBs), arsenic and mercury</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 36 Additionally, the State's proposal will allow the criteria for several highly toxic chemicals including PCBs, arsenic, and dioxin to remain at status quo or to get substantially worse.</p>	<p><i>Please see the “PCBs,” “Arsenic,” and “Mercury” sections in the Response to Comments.</i></p>
<p>Commenter ID: 38 Appreciate the PAH criteria use revised CSFs that are not all equal to benzo(a)pyrene.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 38 Thanks Ecology for reasonable approach for the three problem chemicals.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 38, 61 CAPs are the best way to address certain persistent, bioaccumulative toxicants, as opposed to the narrow scope of the CWA which focusses on NPDES permits and TMDLs</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 39 Proposed rule is significantly under-protective for three of the most problematic pollutants in Washington State: mercury, arsenic, and PCBs.</p>	<p><i>Please see the “PCBs,” “Arsenic,” and “Mercury” sections in the Response to Comments.</i></p>
<p>Commenter ID: 39 So too does the State abdicate its responsibility to address some of the most persistent and</p>	<p><i>Please see the “PCBs,” “Arsenic,” and “Mercury” sections in the Response to Comments.</i></p>

Specific Comments on Other Pollutants of Concern

Commenter ID/Comment	Ecology Response
<p>dangerous chemicals in our waters - PCB, methylmercury, and arsenic. This is a wholly unacceptable concession to Washington's most egregious polluters. With ever increasing pollution loads and resulting impacts, tribal people and the fishery don't have the time to wait for the State to get it right. (See Russ Ladley's analysis of the Coho Run, attached at the end of this cover letter for reference.)</p>	
<p>Commenter ID: 41 Concern that the approaches for arsenic, PCBs, and mercury do not include 10^{-6} and 175 g/day.</p>	<p><i>Please see the “PCBs,” “Arsenic,” and “Mercury” sections in the Response to Comments.</i></p>
<p>Commenter ID: 41 WEC supports comment from NWIFC on arsenic, PCBs, and mercury.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 42 Ecology exempts four contaminants from the general parameters for deriving human health criteria discussed above, in Part VI: methylmercury, PCBs, dioxins, and arsenic. Dubbing these the “challenging chemicals,” Ecology tackles them by postponing action (methylmercury) or by seeking out creative devices to justify standards that protect fish intake at only the status quo 6.5 grams/day (one meal per month) rate (PCBs) or at less than this rate (dioxins and arsenic), if one were to hold the cancer risk level constant. The flaws in Ecology’s different devices for these contaminants are outlined above, in Part I, and elaborated at greater length in the NWIFC Comments. Ecology’s rationale in each case does not hold up, in view of the science or the law. Moreover, for each of these contaminants, there is a scientifically defensible and legally supportable basis for deriving a much more</p>	<p><i>Please see the “PCBs,” “Arsenic,” and “Mercury” sections in the Response to Comments.</i></p>

Specific Comments on Other Pollutants of Concern

Commenter ID/Comment	Ecology Response
<p>protective standard one that would actually make progress toward attaining “fishable waters” and honoring tribes’ rights to take fish. Each of these contaminants has serious adverse health effects (please see the NWIFC Comments for a catalogue of these impacts); together, they are the reason for the vast majority of the fish consumption advisories that apply to Washington waters and warn people away from consuming fish in quantities that would otherwise be healthful. Where Ecology should be redoubling its efforts to clean the waters and enable advisories to be lifted, Ecology instead has bent its energies toward justifying the contaminated status quo or worse. Rather, Ecology should adopt the current human health criteria in EPA’s proposed WQS for Washington, except insofar as these do not incorporate an appropriate value for bodyweight and/or FCR (see, e.g., EPA guidance on deriving a methylmercury criterion), in which case Ecology should work with and consult the affected tribes in order to identify appropriate substitute values for these inputs.</p>	
<p>Commenter ID: 42 Remarkably, Ecology proposes to make no progress for two of the contaminants of greatest concern methylmercury and PCBs and actually to regress (i.e., set standards that are more lenient) for two other of the contaminants of greatest concern dioxins and arsenic.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 42 So, while the apparent fish consumption rate for Ecology’s second proposed WQS is 175 grams/day at 1 in 1 million (1×10^{-6}) excess cancer risk (for carcinogens) and at safe</p>	<p><i>Please see the “PCBs,” “Arsenic,” “Dioxin,” and “Mercury” sections in the Response to Comments.</i></p>

Specific Comments on Other Pollutants of Concern

Commenter ID/Comment	Ecology Response
<p>thresholds (for non-carcinogens), the actual fish consumption rate protected by Ecology’s second proposed rule is much lower if as is most often the case in the real world one of these four toxic substances contaminates the relevant waters. Where PCB or methylmercury contamination is a concern, people will still only be able to eat fish at a rate of 6.5 grams/day (one fish meal per month) if they are not to exceed a 1 in 1 million excess cancer risk or not to exceed levels deemed safe, respectively. For both of these toxic substances, EPA’s proposed WQS set forth standards that are markedly more protective than those proposed by Ecology. Where dioxins are a concern, people are placed in even worse straits: Ecology proposes to reclassify these toxic substances as non-carcinogens, thereby justifying much more lenient standards than would be required were they treated as carcinogens. Yet dioxins are recognized by the Agency for Toxic Substances & Disease Registry as among a handful of hazardous substances “known to be a human carcinogen,” 18 and EPA has long treated members of this chemical family as among the most potent carcinogens (as reflected, e.g., in its chemical slope factor (CSF) for 2,3,7,8 TCDD indicating orders of magnitude greater potency than other carcinogens). While EPA is in the process of revisiting the precise figure for this CSF, it has nonetheless recognized the ongoing need to recognize the considerably potency of this human carcinogen and EPA’s proposed WQS for Washington reflect this recognition. Ecology, by contrast, has seized upon EPA’s ongoing evaluation of the CSF as justification for ignoring dioxins cancer-causing effects altogether. Rather, by treating dioxins as a non-</p>	

Specific Comments on Other Pollutants of Concern

Commenter ID/Comment	Ecology Response
<p>carcinogen, Ecology is able to propose standards that are two orders of magnitude less protective than EPA’s proposed WQS and, indeed, less protective than even the current, woefully underprotective Washington WQS.</p>	
<p>Commenter ID: 46 We support the use of the Drinking Water Standard for Arsenic, Copper, and Asbestos as reasonable to address these substances commonly found in our environment. Arsenic, in particular, is present in bedrock throughout the state.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 48 The EPA recommends Ecology consider adopting human health criteria for the non-priority pollutants for which the EPA developed 304(a) recommendations. Although the state's existing narrative criterion for toxic pollutants at WAC 173-201A-240(1) provides coverage for these pollutants, the EPA recommends that states use numeric criteria instead of narrative criteria when available, consistent with 40 CFR 131.11 (b). In the event Ecology has data or information suggesting that any of these pollutants do not warrant concern in Washington's waters, the EPA understands that Ecology could choose not to adopt human health criteria for those select non-priority pollutants but believes Ecology should explain the rationale for not choosing to adopt such criteria.</p>	<p><i>Ecology is not adopting human health criteria for non-priority pollutants. As per 40 CFR 131.2(d), toxic pollutants are "those pollutants listed by the administrator under section 307(a) of the Act." EPA has published this list of pollutants (the priority pollutant list) at 40 CFR 423, Appendix A. The CWA requires states to adopt criteria for toxic pollutants for which criteria have been published under 304(a) (see CWA 303(c)(2)(b)). Ecology's rationale for this approach is fully explained in the Decision Document. In addition, Ecology notes that EPA followed this same approach in its draft regulation for Washington.</i></p>
<p>Commenter ID: 51 Unacceptably, the state's proposal would allow the criteria for several highly toxic chemicals including PCBs, arsenic, and dioxin to remain at status quo or become weaker, that is, less protective.</p>	<p><i>Please see the “PCBs” and “Arsenic” sections in this Response to Comments.</i></p>

Specific Comments on Other Pollutants of Concern

Commenter ID/Comment	Ecology Response
<p>Commenter ID: 52 It is my assumption that toxicity for the various dichloroethylene and dichloroethane isomers is based solely on their individual carcinogenicity. It is my opinion that an additional correction factor should be included based on their further breakdown into vinyl chloride, which has considerably higher cancer potency. In most instances the dis are penultimate breakdown daughters of tetrachloroethylene and/or the tris, with the final and extremely persistent ultimate breakdown daughter being vinyl chloride.</p>	<p><i>There is no correction factor for breakdown to vinyl chloride. Ecology depended in almost all cases on the toxicity factors used by EPA in its 304(a) guidance documents. The specific cancer slope factors and their sources can be found in EPA's 304(a) criteria documents available at the EPA web site at: https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table.</i></p>
<p>Commenter ID: 54 Completely ignoring PCBs and mercury, and keeping them at inadequate levels, is unacceptable and it doesn't help protect the communities that are living off of this fish; so, I would like to just urge Ecology to not punt PCBs and mercury, which is what they're doing in their current rule, and instead apply the 175 grams a day fish consumption rate to PCBs and mercury like the EPA rule is suggesting that we do.”</p>	<p><i>Please see the “PCBs” and “Mercury” sections in this Response to Comments.</i></p>
<p>Commenter ID: 55 Ignores PCB, mercury and arsenic. The proposed rule is not strong enough with regards to these toxins. The Spokane River has issues with all of these toxins and the rule should update and tighten the standards on these pollutants.</p>	<p><i>Please see the “PCBs,” “Arsenic,” and “Mercury” sections in the Response to Comments.</i></p>
<p>Commenter ID: 64 The state's proposal will allow the criteria for several highly toxic chemicals including PCBs, arsenic, and dioxin to remain at status quo or to get substantially worse.</p>	<p><i>Please see the “PCBs,” “Arsenic,” and “Mercury” sections in the Response to Comments.</i></p>

Specific Comments on Other Pollutants of Concern

Commenter ID/Comment	Ecology Response
<p>Commenter ID: 70</p> <p>King County is also appreciative of the state's recognition and approach to addressing the unique nature of ubiquitous chemicals in the waste stream (such as PCB, mercury and arsenic) and the challenges the state faces in managing these chemicals. We continue to urge the state to take a comprehensive and holistic approach to the control of these chemicals through stronger chemical action planning, product stewardship and non-point pollution controls.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 77</p> <p>The State's proposal will allow criteria for several highly toxic chemicals including PCBs, arsenic and dioxin to remain at status quo or get substantially worse. Methylmercury, a new standard implemented by EPA, is deferred indefinitely.</p>	<p><i>Please see the "PCBs," "Arsenic," and "Mercury" sections in the Response to Comments.</i></p>

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Implementation Tools

Use of Implementation Tools

Summary of Comments

Some comments support the revisions and additions of implementation tools to implement the water quality standards, while other comments noted that implementation tools should be adjusted to support accountability and attainment of water quality standards, and should not serve to help dischargers avoid compliance.

Individual comments and responses on implementation tools are included in the table below this General Comment/Responses section.

General Comment/Responses on Implementation Tools

1. General Comment: 8, 9, 39, 42, 74, 77

Implementation tools are a way to avoid compliance with the water quality standards and are nothing more than an off-ramp to complying with the Clean Water Act.

Response: Ecology does not view implementation tools as a way to avoid compliance or to provide off-ramps to the Clean Water Act. There are legitimate circumstances where a discharger can eventually meet the permit limit or a waterbody can eventually meet the criteria and designated use, but a longer period may be needed, or a different approach is needed to ensure that water quality is protected and the discharger remains in compliance while efforts are taken to control or abate pollution. The various implementation tools are consistent with EPA requirements and the revisions are supported by EPA.

2. General Comment: 1, 8, 9, 36, 39, 42, 51, 64, 74, 76, 77

Ecology's proposed implementation tools should be adjusted so that they are directed towards accountability and attainment of water quality standards and not a set of tools to help dischargers avoid compliance.

Response: Part IV and V of the water quality standards (WAC 173-201A) provide rules on tools for application of the criteria and uses, and implementation of the standards. Ecology does not view these sections as tools to help dischargers avoid compliance; rather, there are legitimate circumstances where determining compliance using tools other than numeric criteria are necessary to implement the standards in a reasonable manner that protects water quality but also does not unreasonably regulate dischargers. Please also see responses in the Variance and Compliance Schedule sections of this Response to Comments for more details on the use of those tools.

Specific Comments on Use of Implementation Tools

Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 1, 36, 51, 64, 76</p> <p>Ecology's proposed implementation tools should be adjusted so that they are directed towards accountability and attainment of water quality standards, and not a set of tools to help dischargers avoid compliance.</p>	<p><i>Please see #2 in the "Implementation Tools" general response section above.</i></p>
<p>Commenter ID: 6</p> <p>Many of the approaches to real implementation of pollution controls already exist if Ecology, and other state agencies, has the political will to put them to use. Therefore, we consider Ecology's approach of ignoring real implementation tools for non-NPDES sources to be a major gap in its multi-year effort to partially update the water quality standards. If Ecology chooses not to improve its regulation of un- and underregulated sources, it should double its efforts to properly and fully regulate those sources that it currently is compelled to regulate under the Clean Water Act. Anything less is a violation of the federal statute, see e.g., 40 C.F.R. § 122.44(d)(1)(ii), and will render Ecology's overall efforts to protect water quality inadequate.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 6</p> <p>The Clean Water Act requires that "[w]henver a State reviews water quality standards, ... such State shall adopt criteria for all toxic pollutants listed pursuant to section 1317(a)(1) of this title for which criteria have been published under section 1314(a) of this title[.]" CWA § 303(c)(2)(B). Ecology is reviewing its water quality standards in this proposed rulemaking yet it is failing entirely to consider, let alone "adopt criteria" for all toxic pollutants for which criteria have been published. Ecology has failed to adopt aquatic life criteria since it first did so on November 25, 1992, with the exception of ammonia, chronic marine copper, and chronic marine cyanide. At a minimum, EPA has revised its recommended criteria for aquatic life for the following</p>	<p><i>This current rulemaking is for the human health criteria and implementation tools. Aquatic life-based criteria updates are scheduled to start at a later date.</i></p>

Specific Comments on Use of Implementation Tools

Commenter ID/ Comment	Ecology Response
<p>pollutants: acrolein, ammonia, arsenic, carbaryl, cadmium, chromium (III), chromium (VI), copper, diazinon, dieldrin, endrin, gamma-BHC (Lindane), mercury, nickel, nonylphenol, parathion, pentachlorophenol, selenium, tributyltin, and zinc. These revised criteria obligate Ecology to update its aquatic life criteria accordingly.</p>	
<p>Commenter ID: 8</p> <p>Despite having proposed only modest changes to some human health water quality standards, Ecology’s Proposed Rule contains new and expanded off-ramps and loopholes that would allow polluters many avenues of delaying and avoiding compliance with clean water standards. These off-ramps will allow polluters to escape compliance with potentially all water quality standards, not just the few toxics standards that have become ever-so-slightly more stringent. There is no factual or legal justification for any of Ecology’s off-ramps, in particular the expanded variance loophole and extremely long compliance plans. Rather, it is plain that Ecology is working with polluters to use the handful of slightly more stringent human health water quality standards as a stalking horse or excuse for relieving polluters from the application of many different water quality standards.</p>	<p><i>Please see #1 and 2 in the “Implementation Tools” general response section above. Also, see responses in the “Variance” and “Compliance Schedule” sections of this Response to Comments.</i></p>
<p>Commenter ID: 8</p> <p>In addition to expanding harmful off-ramps, Ecology failed to look at any implementation rules that would reduce toxic pollution such as, for example, banning mixing zones (areas of waterbodies at the end of a polluter’s pipe that are allowed to violate water quality standards) for bioaccumulative toxics that are a concern for human health as in EPA’s requirements for the Great Lakes Initiative, 40 C.F.R. Pt. 132. Ecology should reexamine its mixing zone policy instead of focusing on</p>	<p><i>This rulemaking has not included proposed changes to mixing zone language. Please see #1 and 2 in the “Implementation Tools” general response section above. Also, see responses in the “Variance” and “Compliance” Schedule sections of this Response to Comments.</i></p>

Specific Comments on Use of Implementation Tools

Commenter ID/ Comment	Ecology Response
<p>policies designed to allow polluters to escape compliance with protective water quality standards.</p>	
<p>Commenter ID: 8</p> <p>Likewise, the intake credits, compliance plans, and variances proposed would undo much or all of the progress made through the minimal strengthening of the underlying rule. Moreover these proposed compliance off-ramps would go further and actually weaken compliance with other, existing water quality standards.</p>	<p><i>Please see #1 and 2 in the “Implementation Tools” general response section above. Also, see responses in the “Variance” and “Compliance Schedule” sections of this Response to Comments.</i></p>
<p>Commenter ID: 8</p> <p>Plainly, discharges of pollutants into our nation’s water have not been eliminated, and the nation and the state of Washington must do better. Almost thirty years after the deadline set by Congress, the nation still uses its waters as disposal sites for a vast number of pollutants, including toxic pollutants in toxic amounts. The proposed rulemaking presents a valuable and important opportunity for the state of Washington to advance protections for water and human health by setting more protective water quality standards than Washington’s currently outdated standards, but Waterkeepers Washington finds that under the current proposal, the Washington Department of Ecology (“Ecology”) has missed that opportunity and may move backwards with the proposed compliance off-ramps.</p>	<p><i>Please see #1 and 2 in the “Implementation Tools” general response section above. Also, see responses in the “Variance” and “Compliance Schedule” sections of this Response to Comments.</i></p>
<p>Commenter ID: 9</p> <p>Please reduce time allowed for polluters to meet the Standards.</p>	<p><i>Please see #1 and 2 in the “Implementation Tools” general response section above.</i></p>
<p>Commenter ID: 11</p> <p>There are no Implementation Tools available to new or expanding dischargers; this should be clarified in the Key Decisions Overview and identified in the CBA.</p>	<p><i>Information on how implementation tools can be applied to new and expanding dischargers is part of the rule record, and in particular was</i></p>

Specific Comments on Use of Implementation Tools

Commenter ID/ Comment	Ecology Response
	<i>discussed with reference to the Pinto Creek Decision. Ecology realizes the importance of this issue, and will address it in guidance.</i>
<p>Commenter ID: 11, 69, 50</p> <p>Support proposed implementation tools.</p>	<i>Comment noted.</i>
<p>Commenter ID: 13</p> <p>The Tribe believes that it is possible to improve water quality by establishing protective human health criteria and to assist dischargers in maintaining economic health by establishing responsible compliance tools. We support revising the compliance tool language to clearly define their use and application, to define time frames, and to ensure measurable progress in achieving the highest level of water quality as soon as possible.</p>	<i>Please see responses in the “Variance” and “Compliance Schedule” sections of this Response to Comments.</i>
<p>Commenter ID: 13</p> <p>Through participation in Governor Inslee’s advisory group and recommendations submitted by the NWIFC, the Suquamish Tribe has provided input regarding the development of compliance and implementation tools. The Tribe has repeatedly expressed support for reasonable and responsible tools as the key to providing businesses and municipalities the flexibility needed to meet the economic and technical challenges of achieving water quality criteria. The Tribe, however, has also been clear that compliance or implementation tools do not take precedence, and cannot be used in lieu of, protective human health criteria.</p>	<i>Comment noted.</i>

Specific Comments on Use of Implementation Tools

Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 21</p> <p>Ecology should modify its rule related to variances, compliance schedules, and other implementation provisions so that any such implementation provisions that could affect the amount of time that permittees would be allowed to continue to violate the water quality standards will only be authorized after consultation with the EPA and affected tribal governments and concurrence in writing from these partners.</p>	<p><i>Variances are rule-changes and consultation is part of the process. Compliance schedules and intake credits are implemented in permits, which are developed as part of a public process, and the rule allowing this implementation is the current rule, where tribal consultation has been part of the process. Please also see responses in the “Variance” and “Compliance Schedule” sections of this Response to Comments.</i></p>
<p>Commenter ID: 22</p> <p>Adoption of the proposed numeric criteria will exacerbate the already difficult management challenges facing Ecology's Water Quality Program. We encourage the agency to be especially pragmatic in creating implementation measures that will support efficient, timely, confident and realistic delivery of Clean Water Act programs. The coming promulgation of more stringent HHWQC will stress Ecology's ability to implement CWA programs. These impacts can be somewhat mitigated with thoughtful revisions to the Water Quality Program Policy 1-11 and Permit Writers Manual. The NPDES Permittee Coalition has identified technical/science and regulatory policy issues embedded in the current Policy 1-11 which should be reconsidered. A more robust and data-driven process should help reveal where Ecology's limited resources can best be applied for early and important water quality improvement. The Permit Writers Manual should include clear direction on what it will take to obtain a variance or intake credit.</p>	<p><i>Comment noted.</i></p>

Specific Comments on Use of Implementation Tools

Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 26</p> <p>In 2009, Washington State passed Substitute Senate Bill 6036. The legislation outlined very specific instances when compliance schedules would be allowed to exceed ten-(10) years. The implementation tools as drafted by Ecology would far exceed what the legislature outlined in 2009. Accordingly, the Spokane Tribal Natural Resources Department strongly opposes the implementation tools as written in the draft revisions.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 34</p> <p>We also strongly support the three implementation tools proposed by the Department of Ecology—variances, intake credits and expanded compliance schedules. The much more stringent water quality standards will force NPDES permittees to rely on these implementation mechanisms to maintain compliance. There are concerns on whether the Department and permittees will be able to administratively deliver these important permitting tools.</p>	<p><i>Please see responses in the “Variance” and “Compliance Schedule” sections of this Response to Comments.</i></p>
<p>Commenter ID: 35</p> <p>The Valley View Sewer District is supportive of the State’s well thought through set of implementation tools.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 38</p> <p>CAPs should be used in lieu of TMDLs. There should be a new section of the rule that acknowledges that non-TMDL implementation tools should be allowed and encouraged, especially where traditional TMDL and CWA tools will both be very useful.</p>	<p><i>TMDLs are Clean Water Act - required and cannot be replaced by CAPs.</i></p>
<p>Commenter ID: 39</p> <p>In addition to the proposed human health criteria lacking the strength to provide acceptable and measurable improvements to the water quality we all depend upon, the</p>	<p><i>Please see #1 and 2 in the “Implementation Tools” general response section above. Also, see responses in the “Variance”</i></p>

Specific Comments on Use of Implementation Tools

Commenter ID/ Comment	Ecology Response
<p>State proposes going even further in allowing polluters "off ramps" from meeting water quality standards for undetermined periods of time, through undefined variances, from compliance with the already weak standards through implementation tools that are ambiguous at best, leaving open the possibility that polluters will escape compliance all-together resulting in continued long-term degradation and pollution of already impaired waters.</p>	<p><i>and "Compliance Schedule" sections of this Response to Comments.</i></p>
<p>Commenter ID: 39</p> <p>The so-called implementation tools or allowances for polluters not to meet water quality standards would undo much of the progress made through the minimal strengthening of the underlying rule. Moreover these proposed tools would be far reaching, weakening compliance with other, existing water quality standards as well.</p>	<p><i>Please see #1 and 2 in the "Implementation Tools" general response section above. Also, see responses in the "Variance" and "Compliance Schedule" sections of this Response to Comments.</i></p>
<p>Commenter ID: 42</p> <p>Despite its efforts to fashion standards that do little or nothing (or worse) to enhance the quality of the state's waters or to ensure that fish are fit for human consumption, Ecology additionally proposes several additional mechanisms, termed "implementation tools," that enable delayed compliance with the standards – perhaps for years.</p>	<p><i>Please see #1 and 2 in the "Implementation Tools" general response section above. Also, see responses in the "Variance" and "Compliance Schedule" sections of this Response to Comments.</i></p>
<p>Commenter ID: 42</p> <p>Ecology's proposed WQS include a suite of what it calls "Implementation Tools" – i.e., mechanisms by which compliance with Washington's WQS can be delayed for some additional number of years. The rationale for these tools offered by Ecology is the need for "more time" for the sources of contamination to be addressed – as if the contaminated state of Washington's waters and fish had</p>	<p><i>Please see #1 and 2 in the "Implementation Tools" general response section above. Also, see responses in the "Variance" and "Compliance Schedule" sections of this Response to Comments.</i></p>

Specific Comments on Use of Implementation Tools

Commenter ID/ Comment	Ecology Response
<p>been only recently discovered to be a concern. As I have argued elsewhere, the delay to date has been unconscionable; to augment the mechanisms by which sources might add to the time before which they must comply with WQS compounds this error. 171 Ecology is referred to the NWIFC Comments for a more detailed discussion of the particular problems with its various proposed implementation tools.</p>	
<p>Commenter ID: 44</p> <p>How can Ecology propose to use waivers and variances to achieve compliance when the processes to secure these tools are wholly untested and inherently contentious?</p>	<p><i>The implementation tools being revised or added by Ecology are designed to be protective of water quality and contain requirements that must be met before the tools can be used. In the case of variances, Ecology must first adopt the variance into standards through a public process and then EPA must take an approval action. These checks and balances will ensure rule adherence.</i></p>
<p>Commenter ID: 46</p> <p>WASWD supports the inclusion of implementation tools, including the addition of Intake Credits and the modest revisions to the existing language for Compliance Schedules and Variances, as essential to achieving compliance with the new limits. These tools need to be practical and widely available in order to provide a reasonable framework for compliance.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 50</p> <p>Agree with Ecology's position on application of new human health criteria to stormwater discharges given episodic nature of stormwater.</p>	<p><i>Comment noted.</i></p>

Specific Comments on Use of Implementation Tools

Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 53</p> <p>Implementation provisions, such as variances and compliance schedules, would allow water quality standards to be violated for possibly lengthy and unspecified periods. The CTUIR DNR acknowledges the need for some flexibility and accommodation in applying any new standards. However, they cannot come at the cost of inadequate assurance that standards will be met and compliance will result within a reasonable time frame.</p>	<p><i>Please see responses in the “Variance” and “Compliance Schedule” sections of this Response to Comments.</i></p>
<p>Commenter ID: 58</p> <p>New tools, such as variances, should help communities meet the standards if the tools are in fact applied when needed.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 65</p> <p>We appreciate the Department’s recognition that implementation tools must be provided with any revision to Human Health Criteria. Unfortunately, the proposed Implementation Tools rule does little to ensure that these tools will provide any meaningful relief from more stringent permitting requirements. The general language of the proposed rule provides little clarity and even less assurance that the tools will be available to particular existing dischargers and provide meaningful relief. Furthermore, the Implementation Tools rule does not provide any tool or ability for a new or expanding business to gradually come into compliance with the more stringent requirements.</p>	<p><i>Please see responses in the “Variance” and “Compliance Schedule” sections of this Response to Comments.</i></p>
<p>Commenter ID: 70</p> <p>We also appreciate the state's update of implementation tools since they are key components of successful control. These tools will ensure that the improved standards</p>	<p><i>Comment noted.</i></p>

Specific Comments on Use of Implementation Tools

Commenter ID/ Comment	Ecology Response
effectively achieve the desired maximum practical pollution reductions and public benefit.	
<p>Commenter ID: 74</p> <p>This new rule will actually be a step backwards in terms of protecting human health if we keep the same standards for mercury and PCBs while simultaneously adding implementation loop holes such as intake credits and unlimited timelines for variances and compliance schedules. I also understand that this would weaken the other water quality rules by applying the same unlimited timelines and variances to other water quality rules.</p>	<p><i>Please see #1 and 2 in the “Implementation Tools” general response section above. Also, see responses in the “Mercury,” “Variance,” and “Compliance Schedule” sections of this Response to Comments.</i></p>
<p>Commenter ID: 77</p> <p>The state also proposes implementation tools that allow more leniency for dischargers to comply with water quality standards for longer periods of time. These tools, such as variances and compliance schedules, allow dischargers to violate water quality standards for long unspecified time periods which put Tribal members at greater risk. Implementation tools should be geared to direct dischargers towards accountability an attainment of water quality standards, not to delay or avoid compliance.</p>	<p><i>Please see #1 and 2 in the “Implementation Tools” general response section above. Also, see responses in the “Variance” and “Compliance Schedule” sections of this Response to Comments.</i></p>

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Variations

Summary of Comments

Several comments question the legal authority to use variations, whether the new rule language provides enough detail, and whether a variance is an off-ramp to meeting water quality and will lead to continued degradation of waterbodies in Washington. Other commenters noted that variations would be needed to be able to comply with newer more stringent criteria that cannot be met with current technology or are legacy pollutants that cannot be controlled by an individual discharger, and that Ecology should make it easier to obtain where a legitimate need exists.

Individual comments and responses on variations are included in the table below this General Comment/Responses section.

General Comment/Responses on Variations

1. General Comment: 6, 8, 13, 23, 30, 34, 39, 55, 68, 72

Several comments question whether Ecology has the legal authority to issue variations, and whether they are allowed under the Clean Water Act. They also question whether the new language in the draft rule is consistent with federal requirements.

Response: The federal regulations allow variations at 40CFR131.14. Ecology has worked with EPA to ensure that the new water quality standards language on variations is consistent and aligned with the federal regulations on variations (40CFR131.14), including language on timeframes and interim uses and criteria. Variations are formal rulemakings that must be approved by the EPA for Clean Water Act compliance before they are used. Variations require the best attainable condition to be maintained during the term of the variance.

2. General Comment: 6, 8, 21, 23, 30, 39, 55, 68, 72

Variations are a way to avoid compliance with the water quality standards and are nothing more than an off-ramp to complying with the Clean Water Act. Granting a variance will lead to increased risk to water quality. Also concerns that not having a set time limit for a variance in the rule will lead to lasting impacts to water quality.

Response: Ecology does not view variations as a way to avoid compliance or to provide off-ramps to the Clean Water Act. There are legitimate circumstances where a discharger can or might eventually meet the permit limit or a waterbody can or might eventually meet the original criteria and designated use, but a longer period is needed. The new language is consistent with the new EPA variance regulation at 40CFR131.14, and was developed as a tool to help effect source control and meeting water quality standards. Ecology has revised the variance section to include more detail because we recognize that new, more protective criteria may be difficult to meet in situations where technology is not yet available or feasible to remove the pollutant, or in cases where either (1) a persistent pollutant resides and is cycling within the aquatic ecosystem of the

water body and cannot be removed without degrading the system, or (2) when the main sources of the pollutant are not within the scope of the state's jurisdiction to control through water quality protection. In addition, other criteria and uses may not be possible to attain in the short term and variances could be applicable to these circumstances as well. EPA has dictated that state variance procedures, as part of state water quality standards, must be consistent with the substantive requirements of 40 CFR 131.14. Variances will go through a public process to be adopted into state standards and then approved by EPA. This rigorous process will include consulting with any affected tribes.

The premise of all variances is that water quality will not be allowed to degrade further during a variance, and that the best attainable condition will be maintained during any variance (see 40CFR131.14). Ecology is confident that continual improvements in water quality during implementation of a variance will result in lasting improvements. Without a variance to allow adequate time to work towards compliance, the only other alternative would be a use change, which could have lasting and permanent negative effects to a waterbody because the uses and associate criteria would be removed or downgraded from the waterbody.

3. General Comment: 8, 13, 23, 30, 34, 39, 55, 68, 72

Some commenters feel that the language in the rule is not detailed enough to be able to determine that the variance being requested has appropriate conditions to attain the water quality criteria in question and are concerned that variances will be given without good public process.

Response: When considering whether to grant a variance, the information supporting it must be robust enough to support a formal rulemaking process. This necessitates a "finding" on Ecology's part. This information needs for a rulemaking could vary from situation to situation. EPA has a comprehensive list of specific requirements for state submittal of a variance at 40CFR131.14(b).

The details for a given variance will be dealt with in the specific variance conditions and information that will go through public review. Each variance will be issued for the shortest time possible to reach the highest attainable use. This will be a different process for each variance, and will follow the requirements in the new water quality standards variance language as well as new federal language at 40CFR131.14. In each case, the information available will likely differ, so the assessment of the timeframe will be based on all information brought out during the public process surrounding the rulemaking. If the highest attainable use is reached prior to the end of the variance, then the variance will be discontinued. The mandatory 5-year reviews will help track this.

Because variances are water quality standards rule changes, any requirements in the federal regulations will apply to them without being specified in this state rule. This rule is written to be applicable to different situations. Each case is considered a unique case, and variances that are adopted will need to include relevant information from each case. The requirements for each variance will be determined when variances are developed and successfully (or unsuccessfully) taken to state rulemaking, and then reviewed by EPA for Clean Water Act compliance and, if

needed, ESA compliance. Because these are formal rulemakings the federally recognized tribes in Washington will be notified of the rulemakings and offered the opportunity to formally consult with the state. Ecology is not authorized to grant variances without formal rulemaking and EPA approval. During the first phase of the rulemaking, this approach was discussed extensively at public forums that were held. That discussion and the process of working through many different scenarios resulted in the approach in this proposed rule, which balances the need to be applicable to different situations with the need for strict requirements, including accountability and enforceability, in the rule language. Existing antidegradation language in federal and state regulation requires protection of existing uses and is not repeated in the new variance language.

4. General Comment: 8, 23, 30, 39, 55, 68, 72

Some question how Ecology will determine that progress is being made and that the variance is improving water quality.

***Response:** The feasibility of attainment will be determined and must be finalized through a formal rulemaking. Requirements in a variance for effluent limits and BMPs will be specified in the variance, and will be developed as part of a public process. Ecology will use EPA regulations and guidance, as well as guidance developed by Ecology, to help with this determination.*

Requirements are contained in 40CFR131.14, with timelines defined in 40CFR131.14 (B)(iv).

The new rule language does not specify how to determine reasonable progress for a specific variance because that will be defined by the conditions and requirements in the specific variance, which will go through a full public review for rulemaking and must be approved by EPA. A variance will be based in part on compliance with variance-driven permit requirements, which are defined out in 40CFR131.14. Likewise, monitoring requirements will be defined in the specific variance.

5. General Comment: 13, 21, 30, 39, 72

Some commenters question whether downstream waters will be protected and want to ensure that tribes are consulted with.

***Response:** Requirements for downstream protection are found in the water quality standards at 173-201A-260(3)(b) and 240(1)(b). The new language on variances contains specific language at WAC173-201A-420(4) that requires Ecology to provide notice and consult with tribes or other states that have jurisdiction over adjacent and downstream waters of the proposed variance. Also, see specific Downstream Waters section of this Response to Comments for more details.*

6. General comment: 6, 13, 39, 48

Ecology does not explain when it is appropriate to use a compliance schedule or when a variance is the appropriate tool.

Response: *Compliance schedules are tools used in Ecology discharge permits, orders, or other directives that allow time for dischargers to make needed modifications to treatment processes in order to meet permit limits or requirements. On the other hand, a variance is a time limited designated use and criterion as defined in 40 CFR 131.3, that must be adopted by the state and approved by EPA. Decisions on which path to follow will be driven by the specific circumstances of the situation in question. Because a variance will require significant effort to develop and then must go through rulemaking and EPA approval, Ecology will want to make sure it is the most appropriate tool before proceeding, as opposed to using a compliance schedule as part of a permitting process.*

Specific Comments on Variances	
Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 4</p> <p>NWFPA supports inclusion of a specific process for obtaining and maintaining a variance to comply with the Clean Water Act. We are concerned about the resource burdens these new regulations may pose to NPDES permittees. However given the stringency of the new criteria, variances may be a necessary implementation tool for many permittees.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 5</p> <p>The increased availability and/or potential use of variances in the proposed rule is unacceptable. Ecology policy should be pushing dischargers to lower the output of dangerous chemicals at the end of pipe. Precisely because the nature and the amount of the pollution in the water body can be excessive and challenging.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 6</p> <p>Ecology also fails to ensure through its proposed rule language that this review will be meaningful. There is nothing to ensure</p>	<p><i>The 5-year review is conducted by Ecology as part of a mandatory public process and the results submitted to EPA. See 40CFR131.14(b)(v).</i></p>

Specific Comments on Variances	
Commenter ID/ Comment	Ecology Response
<p>that sufficient data are collected and analyzed to determine if pollutant loads have increased or decreased, any changes in the status and population health of designated uses, nothing at all with regard to threatened and endangered species or candidate or sensitive species, nothing to account for any changes in EPA’s recommended criteria for the pollutants at issue that could cast doubt on assumptions made in the issuance of the original variance, etc. In short, there is no reason to believe that this review will be anything but an exercise in paperwork, intended to preserve the status quo of pollution in Washington’s waters rather than to ensure that new criteria for toxics are met.</p>	
<p>Commenter ID: 6</p> <p>Ecology has not proposed a rule that is consistent with federal regulations. As temporary changes to water quality standards, variances are issued pursuant to the provisions in EPA’s rules that apply to removing or altering use designations. 40 C.F.R. § 131.10. While these designated use removal provisions require the use of “all cost-effective and reasonable nonpoint source controls,” § 131.10(h)(2), Ecology’s rules do not. Yet, EPA has stated repeatedly that variances are subject to the “same substantive and procedural requirements as removing a designated use.” Handbook at 5.3; 14 EPA Interim Economic Guidance Workbook, EPA-823-B-95-002; March 1995 [hereinafter “Economic Guidance”] at 1-3; see also CSO Guidance at 34. This use provision applies to issuance of a variance as a temporary</p>	<p><i>Please see #1 and 2 in the “Variance” general response section above.</i></p>

Specific Comments on Variances	
Commenter ID/ Comment	Ecology Response
<p>removal of designated uses governed by the same EPA regulations. ANPRM at 36760. The BMP requirements of 40 C.F.R. §131.10(h)(2) apply to all nonpoint sources in the consideration of a variance application. EPA has supported this position by noting that in issuing variances, the economic impacts that can be considered are only those that result from treatment beyond that required by technology-based regulations. This includes both technology-based limits on point source discharges as well as BMPs to nonpoint sources.</p>	
<p>Commenter ID: 6</p> <p>Ecology proposes no cap on a variance, let alone three or five years. It does include a five year review, which it refers to as “mandatory,” but as there are no consequences for Ecology’s failure to conduct a five-year review, there is nothing mandatory about it. (Clearly the consequences of a failure to conduct such a review should be the automatic sunseting of the variance.) The review focuses on whether a permittee has been in compliance with the conditions of a variance and also “to evaluate whether the variance is still necessary.” How will Ecology define “necessary.” This ambiguity should be removed to ensure that the findings—also missing from the review—are consistent with federal regulations and the original premise of the variance.</p>	<p><i>The new language in the Washington water quality standards is consistent with and cites EPA's new regulation at 40CFR131.14 that requires a five-year review.</i></p>
<p>Commenter ID: 6</p>	<p><i>The new language in the Washington water quality standards is consistent with and cites</i></p>

Specific Comments on Variances

Commenter ID/ Comment	Ecology Response
<p>EPA has consistently defined variances as lasting for three years, sometimes up to five.¹ Where it has allowed variances to exceed three years, EPA has not allowed them to be longer than five years.² Where a variance is allowed to go beyond three years, a three-year review from the date of the last triennial review submission to EPA is required.³ The reason for this is simple; it corresponds to EPA’s requirement that water quality standards that do not support the Act’s uses must be reviewed every three years.⁴ Where five year variances have been allowed, such as the Great Lakes Initiative (GLI) rules, EPA has additionally required a re-opener clause in associated NPDES permits to ensure that the triennial review is meaningful.⁵ Likewise, for the same reason, the variance holder should be required to obtain information that can be used in that review, as discussed further in the “reasonable progress” discussion below. So, for example, EPA’s policy on conditions of a variance for CSO-affected waters emphasizes the importance of obtaining new information.⁶ In a similar vein, the GLI also explicitly notes that a renewal of a variance is subject to all of the same findings and procedures as an original variance.⁷ In this way, the GLI rules ensure that more, rather than less, information is the basis upon which any extensions to variances will be allowed.</p>	<p><i>EPA's new regulation at 40CFR131.14. This new federal regulation does not give a maximum timeframe for a variance. The new federal language and the new water quality standards require a review of each variance every 5 years. This does not renew the variance (the variance does not expire after 5 years) but instead is needed to continue the variance. In the case that a variance expires and needs to be renewed, the renewal would go through a full public process to be adopted into the standards and subsequently approved by EPA. Ecology does not anticipate that this renewal process would require less information; however, it would be built upon the information provided from the initial variance approval.</i></p>
<p>Commenter ID: 6</p> <p>Given that the federal regulations do not specifically cite to variances, although we agree they pertain to variances, merely citing</p>	<p><i>The federal regulations allow variances at 40CFR131.14. The 5-year mandatory review included in Ecology's language is also included in the federal regulation. The new</i></p>

Specific Comments on Variances

Commenter ID/ Comment	Ecology Response
<p>the federal regulations is not particularly helpful. Worse, the basis for maintaining a variance and obtaining a variance renewal is “reasonable progress” which is not defined anywhere. If, in fact, reasonable progress must be made during the variance period, as required by proposed subsection (1)(d), that implies that if reasonable progress is not being made, Ecology will withdraw the variance. The only problem is that the rules do not contemplate such an action. While Ecology has included a “mandatory interim review” every five years in proposed subsection (8), there is no requirement to obtain data to ensure that the review has enough information with which to make findings and specifically whether it will have any information to determine whether the polluters covered by the variance will have made any reasonable progress. Without requiring the collection of data, both aspects of this rule will fail to be anything than an empty and meaningless exercise in bureaucracy. Will the variance itself establish how to measure “reasonable progress,” so that the polluters and the public know what to hold polluters to at the time of the interim review? If not, how is anybody to determine that variances are not merely methods of maintaining the status quo of unsafe pollution levels? How will Ecology make a determination that a variance can be renewed under subsection (8)(e) that is other than an entirely arbitrary, and likely political, finding?</p>	<p><i>rule language does not specify how to determine reasonable progress for a specific variance because that will be defined by the conditions and requirements in the specific variance, which will go through a full public review for rulemaking and must be approved by EPA. A variance will be based in part on compliance with variance-driven permit requirements, which are defined out in 40CFR131.14. Likewise, monitoring requirements will be defined in the specific variance.</i></p>

Specific Comments on Variances

Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 6</p> <p>In proposed WAC 173-201A-420(6)(c) it is unclear why Ecology is including “unpermitted dischargers” as being covered by a variance. There is no need for the variance to apply to any pollution source without an NPDES permit and, in fact, applying the variance to unpermitted dischargers could well undermine the ability of Ecology to take the actions necessary to achieving water quality that does not require a variance.</p>	<p><i>Ecology is including “unpermitted dischargers” because, under a water body variance, unpermitted dischargers will likely require BMPs (or other approaches) to help water bodies meet water quality standards, and they will need to be part of the solution to improve water quality. Ecology believes this language strengthens the link to controlling unpermitted discharges as part of the variance, rather than weakens controls.</i></p>
<p>Commenter ID: 6</p> <p>In proposed WAC 173-201A-420(7) for monitoring and reporting requirements, language should be included that requires the monitoring be sufficient to ensure the usefulness of the mandatory interim review in (8). Otherwise the requirements of both (7) and (8) are pointless.</p>	<p><i>Because of the variation in specific variance situations, Ecology has determined it is more appropriate to provide additional language on monitoring requirements (as well as other aspects of variances) in guidance, and not in this rule. It should be noted that when variances are issued, they are part of a formal rule change that will include monitoring requirements, and as any permits that contain these variance requirements are issued, they are issued through a public process. Both the rulemaking and permitting public processes will provide an opportunity to determine and weigh in on the monitoring approaches that are appropriate for specific variances.</i></p>
<p>Commenter ID: 6</p> <p>Proposed subsection (3)(e) refers to the submission of “a schedule for the development and implementation of a pollutant minimization plan,” which itself is a multi-part process: (1) a schedule (2) to develop a plan and (3) to implement a plan.</p>	<p><i>If desired a discharger may submit a pollution minimization plan with the variance request or application. However, in many cases pollution minimization is an iterative process: a pollution control technique or approach could be used, and its use could lead to a next-step based on success or lack of success. Delaying a variance in order to wait for a</i></p>

Specific Comments on Variances

Commenter ID/ Comment	Ecology Response
<p>Why is the plan development not part of the submission of the variance proposal? Why is there a delay in offering up what little a polluter is going to do during the variance if approved? Why does the public not get to see that plan when it is commenting on the variance proposal and why does EPA not see it when it is determining whether the variance should be approved as a temporary change to standards? Why is the schedule of implementation of the plan not before both the public and EPA?</p>	<p><i>full-blown plan to be available does not make sense. Ecology considers that it does make sense to incorporate the plan into the initial permit work (where most pollutant minimization requirements reside), where it will be subject to timeline requirements and receive Ecology review as the same time that actions to attain standards are ongoing. Permits are developed as part of a public process. If the variance lasts for longer than 5 years, then the 5-year mandatory review will include review of the pollutant minimization plan work, as well as other work being done to meet standards. These items will all be available for public review. Reports submitted to Ecology as part of permit requirements are uploaded to the WQP's PARIS database, which is available to the public.</i></p>
<p>Commenter ID: 6</p> <p>Proposed subsection (4)(a) does not explain how its consultation process with downstream states will ensure that the result of a variance is consistent with the requirements of 40 C.F.R. 131.10(b), which requires that a state’s standards “provide for the attainment and maintenance of the water quality standards of downstream waters.” Simply consulting is not the same as compliance with basic standards-setting rules.</p>	<p><i>Federal regulations on variances are found at 40CFR131.14. Requirements for downstream protection are found in the water quality standards at 173-201A-260(3)(b) and 240(1)(b). The new language on variances contains specific language at WAC173-201A-420(4) that requires Ecology to provide notice and consult with tribes or other states that have jurisdiction over adjacent and downstream waters of the proposed variance.</i></p>
<p>Commenter ID: 6</p> <p>Proposed subsection (5) purports to establish the period during which the variance would</p>	<p><i>The details outlined in your comment will be dealt with in the specific variance that will go through public review. Each variance will be issued for the shortest time possible to reach</i></p>

Specific Comments on Variances

Commenter ID/ Comment	Ecology Response
<p>be in effect but instead, says nothing other than it is “temporary,” and that it will be for the “minimum time estimated to meet the original standard.” This says nothing about how Ecology will determine what this minimum time will be or even whether Ecology, rather than the polluters, will propose the minimum time period. For example, if the basis is the economic difficulties associated with using treatment to meet the standard, on what basis will Ecology determine those economic difficulties will cease. Providing no cap whatsoever on the length of a variance is inconsistent with the statute and EPA regulations and guidance.</p>	<p><i>the highest attainable use. This will be a different process for each variance, and will follow the requirements in the new water quality standards variance language as well as new federal language at 40CFR131.14. In each case, the information available will likely differ, so the assessment of the timeframe will be based on all information brought out during the public process surrounding the rulemaking. If the highest attainable use is reached prior to the end of the variance, then the variance will be discontinued. The mandatory 5-year reviews will help track this.</i></p>
<p>Commenter ID: 6</p> <p>Proposed WAC 173-201A-420 is unclear on what a variance is varying from. It starts in subsection (1) discussing criteria, notes that it applies to specific parameters in subsection (1)(b), but talks about variances to “standards” in subsection (2) and “uses and parameters-specific change[s] to the standard(s).” Changing the criteria on a purportedly temporary basis is one thing but in subsection (2) Ecology is talking about changing the designated uses as well. Yet Ecology makes no mention of the requirements of 40 C.F.R. §§ 131.10(g) and (h)(1) which prohibit the removal of a designated use that is an existing use. Not only should this prohibition be made explicit if Ecology is going to include language in its variance rule about removing designated uses, it must provide a meaningful process by</p>	<p><i>Allowing temporary changes to a designated uses is allowed under federal regulations (see 40CFR131.14(b)(vi)). Note that this is a variance, not a use change. Variances would not remove any use (whether existing, designated, or both). Please see other responses to your other comments regarding existing uses.</i></p>

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<p>which existing uses will be identified. The rest of the rule, including for example subsection (6) regarding the required contents of a variance, is completely silent on the matter of existing uses. There is no discussion in the rules about how Ecology will determine existing uses considering that it requires looking backwards in time to 1975. There are certainly no assurances that Ecology will take this federal requirement seriously. There are multiple references to designated uses in the variance section; we have not cited them all but our comments apply to all of them.</p>	
<p>Commenter ID: 6</p> <p>Proposed WAC 173-201A-420(1)(a) says that a variance may be considered where the “attainable use cannot be reliably determined.” It is unclear what Ecology means by this statement. Why does the rule not explain what that means? And why does it not establish that the only issue is not attainability but whether the use is an existing use protected under Tier I of the antidegradation policy? Where will Ecology draw the line between an attainable use that can be or cannot be “reliably determined”? With any use there are always a myriad questions about precisely what, when, where. As a matter of policy, Ecology should establish that its use designations mean something. Yet this language opens the door for variances based on questions about science that plague every undertaking and implies that Ecology will be handing variances out like cookies.</p>	<p><i>The determination of attainability is guided by 40CFR131.10. The rule language cites 40CFR131.14, which refers to 40CFR131.10. The text from the federal regulations is not included in the rule because it is extensive and is specifically referenced: see new WAC 173-201A-420(1)(c). Please see the new 40CFR131.14(b)(vi). Existing uses cannot be removed as per 40CFR131.10. "Existing uses are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards." 40CFR131.3(e). Ecology interprets this to mean that the best use that has occurred in a waterbody on or after November 28, 1975, is the existing use. This could mean that the existing use occurred in 1975 (if water quality has declined), occurs now (if water quality is improving over time), or might have occurred sometime in between. In most cases, existing uses have not been defined. In a variance situation, if existing</i></p>

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	<p><i>uses are known and are currently not being met, then variances could be a tool used to help maintain compliance with limits as efforts to maintain existing use is being accomplished. With regard to designated uses that are not existing uses, in those cases the determination of attainable will be made through a public process with opportunities to examine and discuss this issue. These will be critical discussions that affect the length of a variance. Variances will not be handed out "like cookies", given that: 1) granting a variance is likely to be a resource-intensive task, 2) not all applicants will be successful, and 3) a variance is a formal rulemaking that requires EPA approval,</i></p>
<p>Commenter ID: 6</p> <p>Rather than the proposed subsection (7)(c) provision that “allow[s]” Ecology to reopen and modify permits on the basis of the interim review, the rule should include a provision that requires Ecology to reopen such permits on this basis. See, e.g., GLI Pt. 132, App F, Procedure 2 §F.4. What is the point of having a mandatory review but no mandatory reopener? Subsection (2)(a) refers to a variance as applying “at the point(s) of compliance for the individual facility.” We suggest that this point of compliance should be the end-of-pipe, without a mixing zone. As the variance will be tailor-made for the specific discharger, no mixing zone is needed, and dispensing with the concept of mixing will allow much more clear evaluation of the impacts of the discharge, the pollution reduction results over</p>	<p><i>Ecology disagrees that opening the permit should be required as a part of subsection (7)(c). A mandatory review does not necessitate reopening the permit. As a matter of practice, however, Ecology plans to coordinate the interim reviews with permit reissuances as much as possible, so it is likely that these two processes will coincide. With regard to mixing zones, Ecology will draft more detailed guidance to address the use of mixing zones in a variance and your comment will be considered during guidance development.</i></p>

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<p>time, and any revision to the variance over time.</p>	
<p>Commenter ID: 6</p> <p>Subsection (3) contains the requirements for submission to obtain a variance. The rule does not, however, contain any requirements pertaining to how Ecology will make a decision whether to issue a variance and what conditions will be included. There is no requirement, for example, for Ecology to make findings, based on the required submissions. Taking one point at random, while the applicant must show that treatment is not technically, economically or otherwise feasible, Ecology is not required to find that treatment is not technically, economically or otherwise feasible in order to issue a variance. This makes no sense at all and leaves the issuance of variances more at the whim of the agency than not. There is no indication of the level of protection that Ecology will seek to provide even when it issues a variance that will allow a level of protection nor normally allowed or desirable for permanent standards. We suggest that the proposed variance rules should include a requirement that the permittee characterize the extent of any increased risk to human health and the environment from granting the variance compared to the underlying water quality standards, see GLI Pt. 132, App F, Procedure 2 §C.2.b), and a requirement that the State conclude that such an increased risk is consistent with protection of public health, safety, and welfare, see GLI Pt. 132, App F, Procedure 2§C.2.b. These provisions will</p>	<p><i>When granting a variance the information supporting it must be robust enough to support a formal rulemaking process. This necessitates a "finding" on Ecology's part. The information needs for a rulemaking could vary from situation to situation. EPA has a comprehensive list of specific requirements for state submittal of a variance at 40CFR131.14(b). Ecology disagrees that variances will lead to increased risk. The premise of all variances is that water quality will not be allowed to degrade further during a variance, and that the best attainable condition will be maintained during any variance (see 40CFR131.14).</i></p>

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ensure against the granting of variances that undo what little Ecology has managed to accomplish in these new proposed criteria.	
<p>Commenter ID: 6</p> <p>Subsection (3)(b) refers to the feasibility of attainment without establishing how Ecology will make that determination. This rule merely states that “one or more of the conditions found in 10 C.F.R. 131.10” can be the basis, presumably in reference to 40 C.F.R. § 131.10(g)(1)-(6). But that statement does not illuminate Washington citizenry with regard to how Ecology will make feasibility findings. For example, with regard to attainability, 40 C.F.R. 131.10(d) states that uses are attainable if they can be achieved through effluent limits issued pursuant to CWA § 301(b) and “reasonable best management practices for nonpoint source control.” This does not explain how Ecology will determine what nonpoint BMPs are “reasonable” and which ones are not reasonable. The rules do not explain how long variances can continue on the basis of purported infeasibility when uses are, actually, attainable. At what point in time does the exception become the rule? There is no guidance established in Ecology’s variance rule on how it will determine the length of time for variances. There is no guidance on how Ecology will determine that treatment options are not economically feasible or to what degree Ecology will check the assertions made by polluters that treatment options are not technically feasible.</p>	<p><i>The feasibility of attainment will be determined and must be finalized through a formal rulemaking. Requirements in a variance for effluent limits and BMPs will be specified in the variance, and will be developed as part of a public process. Ecology will use EPA regulations and guidance, as well as guidance developed by Ecology, to help with this determination. Requirements surrounding this are contained in 40CFR131.14. Timelines are defined in 40CFR131.14 (B)(iv). EPA has developed spreadsheets to determine economic feasibility (widespread and substantial, as per 40 CFR131.10(g)(6) and the state of Oregon has developed state-specific guidance on this factor. Ecology will evaluate these tools as it develops an approach to determine economic feasibility. Any determination for a variance based on economics is part of a formal rulemaking and must have EPA approval.</i></p>

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<p>Commenter ID: 6</p> <p>Subsection (3)(d) refers to “[s]ufficient water quality data and analyses to characterize receiving water and discharge water pollutant concentrations,” but leaves much—too much—to the imagination. What is “sufficient” other than in the mind of beholder? How will Ecology determine what is sufficient? How does this sufficiency finding pertain to the designated and existing uses, the criteria, the quality of the discharge, seasonal variability, other sources of the same pollutant, the effect of multiple pollutants, downstream effects, downstream uses affected by sources found far upstream, bioaccumulation that can only be measured in tissue or lipid bags, sediment deposition, quantitation limits, etc.? There are a myriad of issues that relate to the sufficiency of gathered data and nothing in these rules gives the least bit of a hint as to how Ecology will address any of them. In addition, it is wholly unclear what Ecology means by the sufficiency of “analyses” that are required in this proposed rule. Or what it means by “receiving water” and if that is incorrectly limited to the immediate area of a given discharge. And how sufficiency is or is not tied to determinations of reasonable potential.</p>	<p><i>Ecology agrees that these are important factors to determine, and plans to develop guidance to assist with these determinations. This information will be considered during the development of the variance, and requirements are likely to differ based on the type and extent of the variance. The size of a receiving water will be determined based on the specific situational information associated with the proposed variance.</i></p>
<p>Commenter ID: 6</p> <p>Subsection (6) describes what a variance will include. What it will not include under Ecology’s proposal is a replacement criterion, rendering this rule inconsistent with requirements that apply to the establishment of water quality standards. Because a</p>	<p><i>Both the new state rule language and the new federal language on variances indicate that interim criteria may be developed for the term of a variance. Development of interim criteria will be addressed in both guidance and during the rulemaking needed to grant each variance.</i></p>

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<p>variance is a change to water quality standards, it follows that a criterion cannot simply be removed but must be replaced. In fact, it is contrary to the requirements of sections 301(b)(1)(C) and 402(a)(1) of the CWA to issue a variance to an effluent limit, necessitating the change to the criteria. This is true of both the individual and multiple source variances. For example, in Michigan, EPA settled a lawsuit challenging EPA’s approval of a multi-source variance for mercury with an agreement the state would establish the waste load allocations for permit holders on an individual basis. See Nat’l Wildlife Fed’n v. Johnson, No. 06-12423 (E.D. Mi. Nov. 30, 2007) (consent decree). Ecology must not only provide for a replacement criterion, it must explain how it will derive replacement criteria where there are multiple polluters covered by one variance and how it will evaluate those criteria during the review process (all sources may not have the same outcome).</p>	
<p>Commenter ID: 6</p> <p>Subsection (6) is inconsistent with subsection (2). The first states that variances can pertain to “geographic area[s]” whereas the latter states that variances can pertain to individual sources discharging to individual waters, multiple dischargers to “any water body,” and a “stretch of water.” It is unclear why the variance need only specify a geographic area. Subsection (6) hints at the notion that there might be “measurable milestones” but does not require any measurable milestones by the use of the word “any,” thereby</p>	<p><i>Variances can be applied to dischargers or to waterbodies. In each case, the geographic region must be defined. Ecology agrees that a failure to ensure change renders the idea of a variance as "temporary" to be fruitless. The intent of the language is to ensure change and bring about water quality improvements. Permit requirements based on variances (whether variances are issued for individuals, multi-dischargers, or waterbodies) will be implemented with milestones as needed to maintain the highest attainable condition (40CFR131.14((b)(ii)). The new water quality</i></p>

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<p>eliminating any assurance that a variance will, in fact, lead to any change in the status quo. A failure to ensure change renders the idea that a variance is a “temporary” change to water quality standards null and void.</p>	<p><i>standards language, used in conjunction with 40CFR131.14, is a strong tool to improve water quality.</i></p>
<p>Commenter ID: 6</p> <p>Subsection (7) is troubling for other reasons. It allows “effluent limits that are sufficient to meet the original water quality standard upon expiration of the variance” but fails to explain why the establishment of such an effluent condition would not instead be subject to a compliance schedule, the correct tool for any circumstance where a permittee know precisely how and when it can meet the standards. It also states that Ecology may use “achievable effluent conditions” without any explanation of what findings Ecology must make to determine this outcome. Without requiring such findings and simply stating that Ecology may use something that requires work or something that represents the status quo, the likely outcome will be the result that requires no work: the status quo versus the more stringent reductions that are achievable. There is no reason that the rules should avoid setting a hierarchy of outcomes in terms of permit conditions. We agree that monitoring and reporting requirements must be included in the permit conditions but in the absence of anything specific about what level of monitoring is required, this will likely be subject to huge abuse in the negotiated dance engaged in by permit writers and permittees.</p>	<p><i>Please see #6 in the “Variance” general response section above. It may become clear during the term of the variance that the water quality standards for a waterbody can be met by the end of the variance. If that were the case, it would be equally effective to remain under the variance or to terminate the variance and impose a compliance schedule at the next 5-year review or permit reissuance. That decision would be made on a case-by-case basis. We agree that if it is known at the time of permitting (prior to any variance) that a discharger can meet limits then a compliance schedule is the appropriate tool to use. In cases where the variance is for a waterbody, then the requirements for individual dischargers on the waterbody could vary. Please see other responses to your comments regarding monitoring.</i></p>

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<p>Commenter ID: 6</p> <p>Subsection (8)(a)(i) does not explain why any variance would be issued that is not being “implemented in a permit.” Likewise, the contents of the variance, as subsection (6)(c) includes a “description of the permitted and unpermitted dischargers covered by the variance.” Why would Ecology be issuing a variance for an unpermitted discharge? And how is this consistent with the language in subsection (2)(a) and (b), which refer to permitted dischargers? Why does the review process for a waterbody variance include a review of information that would suggest the timeframe for the variance could be shortened but a review of a variance for an individual discharger is not subject to the same evaluation? If there is no review of the timeframe for the variance, what is the point of the review? If in fact the terms of the variance have been made into enforceable permit conditions, those should be directly enforceable and the review of such a variance is rather pointless. Ecology has not articulated a rationale for its curtailed view of the review for an individual discharger variance. Moreover, subsection (8)(c)(ii), which calls for shortening the term of a variance after a review, is not the logical outcome of the process in (8)(a) because that process does not even consider the issue.</p>	<p><i>Variances may be issued for waterbodies. If this is the case, permitted as well as non-permitted entities may find themselves under the variance. All variances longer than 5-years receive a 5-year mandatory review as per WAC 173-201A0-420 (8) (see entire section) and 40CFR131.14(b)(v). Regardless of whether you believe the review of an individual discharger variance where the variance is implemented through enforceable permit conditions seems pointless, it is required by the federal regulations and Ecology considers that it will prove useful in evaluating the progress of the discharger as part of a public process.</i></p>
<p>Commenter ID: 6</p> <p>Subsection (8)(a)(i) states that the review “shall be coordinated” with the public process for issuing an NPDES permit. It does not clearly state that the process will</p>	<p><i>The 5-year review is conducted by Ecology as part of a mandatory public process and the results submitted to EPA. See 40CFR131.14(b)(v).</i></p>

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<p>also be separate so that members of the public not interested in reviewing the permit, realize that the interim review of the variance is contemplated. It does not address how the timing of the review may not coordinate with the issuance of a new NPDES permit, rendering the word “mandatory” with regard to the review and “shall” with regard to the coordination in conflict.</p>	
<p>Commenter ID: 6</p> <p>The phrase “unpermitted dischargers,” namely that a variance is defined to include Ecology’s revision to “BMP requirements for unpermitted dischargers” at subsection (6)(e). However, it is unclear to what Ecology refers. Likewise the submission of a request for a variance requires that the entity provide information on both “[a]ll cost-effective and reasonable best management practices for permitted sources that address the pollutant the variance is based upon,” and “[b]est management practices for nonpermitted sources that meet the requirements of chapter 90.48 RCW,” at proposed subsection (3)(f)(ii) and (iii). If Ecology takes provision (3)(f)(iii) seriously, it will make the variance process significantly more meaningful. However, there is nothing that follows on from subsection (3)(f)(iii) in subsection (6) regarding the actual contents of a variance. There is, instead, merely a “description of ... unpermitted dischargers,” and a reference to Ecology’s authority to “revise BMP requirements for unpermitted dischargers” as a result of the mandatory review. There is no statement that an initial variance will include</p>	<p><i>The new rule language recognizes that both permitted and non-permitted dischargers can be part of the solution for improving water quality under a variance. The specific mechanisms by which a non-permitted discharger participates in this process can vary, from working with Ecology directly on BMPs or by working with other permitted or unpermitted dischargers into the same waterbody. The new language allows for development of different approaches to this during development of the variances. The specific requirements of any variance will be determined during rulemaking. Permits are issued to point source dischargers; therefore, the 5-year interim review for these participants in a variance will be straightforward. When assessing a waterbody variance, the 5-year interim review will also include an assessment of the overall work on the variance that will, by necessity, include an evaluation of both permitted and non-permitted dischargers that are involved in the variance.</i></p>

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<p>BMP requirements for unpermitted dischargers or even a statement of what BMPs Ecology is expecting nonpoint sources to use when it issues the variance and makes assumptions about the impacts of the point sources covered by the variance. There is no clarity that the “nonpermitted sources” described in the application are the same as the “unpermitted dischargers” in the variance itself and, if they are not the same, what an “unpermitted discharge” actually is. In addition, in the mandatory review, the proposed rules state that the review will “be focused” on the discharger’s compliance with the variance and there is no reference whatsoever to any other polluters’ contributions to the pollution problem. This missing piece seems to suggest that the discussions of unpermitted and nonpermitted sources are merely window dressing and that Ecology intends to take no actions to ensure that pollution sources together negate the ongoing need for a variance.</p>	
<p>Commenter ID: 6</p> <p>The proposed Ecology rules do not ensure protection of existing uses, as required. We urge Ecology to note that EPA has written quite a bit about the need to ensure protection of existing uses in the issuance of variances. The requirement to protect existing uses in the issuance of variances derives from several sources. EPA has also held that permits issued pursuant to variances must still comply with antidegradation requirements, including existing use protection. Guidance for Implementation at</p>	<p><i>The determination of attainability is guided by 40CFR131.10. The rule language cites 40CFR131.14, which refers to 40CFR131.10. These federal rules are referred to in WAC 173-201A-420(1)(c). Please see the new 40CFR131.14(b)(vi). Existing uses cannot be removed as per 40CFR131.10. "Existing uses are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards." 40CFR131.3(e). Ecology interprets this to mean that the best use that has occurred in a waterbody on or after</i></p>

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<p>6. A variance applies to the applicable criterion and does not modify the application of the existing use and designated use provisions of the water quality standard. See EPA Memorandum, from Kenneth Mackenthun to Regional WQS Coordinators, Re: Definition of WQS Terms, July 3 1979 at 1.</p>	<p><i>November 28, 1975, is the existing use. This could mean that the existing use occurred in 1975 (if water quality has declined), occurs now (if water quality is improving over time), or might have occurred sometime in between. In most cases, existing uses have not been defined. In a variance situation, if existing uses are known and are currently not being met, then variances could be a tool used to help maintain compliance with limits as efforts to maintain existing use is being accomplished. With regard to designated uses that are not existing uses, in those cases the determination of attainable will be made through a public process with opportunities to examine and discuss this issue. Ecology NPDES permits must meet requirements for antidegradation, and variances would not change that requirement (e.g., Ecology could not grant a variance to the antidegradation requirements). Determining how those requirements are implemented in permits would be part of the public process surrounding the variance and the NPDES permit. Please note, however, that the new federal regulation on variances has a section specifically allowing restoration projects (40 CFR 131.14(b)), and during these projects there could at times be a lowering of water quality in order to carry out the project (e.g., stream restoration via dam removal, which could release sediment and temporarily raise turbidity).</i></p>
<p>Commenter ID: 6 The variance procedure outlined in the proposed rule is extremely thin on both</p>	<p><i>Please see #6 in the “Variance” general response section above. The variance procedures do not provide details on defining</i></p>

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<p>content and process. There are, for example, quite a few key concepts, such as “reasonable progress,” that are completely undefined. After all these years working on this proposed rule, there is nothing in the rule that defines the specific findings that Ecology will make. There is nothing that will help the public or Ecology determine when a variance is more appropriate than a compliance schedule or when a variance should be used to lead up to a compliance schedule. In our opinion, this effort is just slipshod.</p>	<p><i>the specific findings that Ecology will make to determine compliance because it will vary depending on the details of the specific variance request. Reasonable progress, for example, will be defined as part of the specific variance development. Since the variance establishes temporary criteria, it must go through a state rulemaking process and receive EPA approval. Decisions on which path to follow-a compliance schedule or a variance-will be driven by the specific circumstances of the situation in question. Because a variance will require significant effort to develop and then must go through rulemaking and EPA approval, Ecology will want to make sure it is the most appropriate tool before proceeding, as opposed to using a compliance schedule that is part of a permitting process</i></p>
<p>Commenter ID: 6</p> <p>What does “adaptive management” mean in the context of the variance section?</p> <p>Generally, effective adaptive management requires the gathering of information, its analysis, and a decision-making process that is based on the data and analysis. If these steps are not required as part of an NPDES permit that is aimed at meeting a variance, a discharger will not, in fact, be “required to use adaptive management,” as this rule claims. Instead, another section of rules must be written to explain what is required in an NPDES permit written to meet a variance and placed in Ecology’s permitting rules and cited here. The rule provides no guidance to determine how Ecology will establish</p>	<p><i>Adaptive management approaches and other factors brought up in this comment will be determined at the time of rulemaking for any future variance. It is important to remember that variance language does not grant any variance, it only gives the "recipe" for how variances will be developed and approved. The new rule language contains flexibility that will allow different situations to be addressed. The new state rule language, in conjunction with the new federal language (40CFR131.14) will ensure a process that moves to improve water quality and has enforceable requirements in permits.</i></p>

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<p>variances. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	
<p>Commenter ID: 6</p> <p>We urge that Ecology include a requirement that all conditions related to an approved variance be incorporated into the permit of the applicant seeking the variance. Subsection (7) of the proposed rules states that Ecology must include “all conditions necessary to implement and enforce an approved variance” but that is inconsistent with its proposed subsection (3)(e) for the reasons explained in the discussion, namely that it allows for the creation of a pollutant minimization plan and a schedule for its implementation to be postponed to an indefinite time. Rendering expectations into requirements is always a good idea and even more so when a permittee is being allowed to discharge pollution at levels that Ecology has already deemed are not protective. Since the subsections of (7) do not include anything related to implementation of that plan it is quite clear that Ecology is poised to consider the plan as outside the permit requirements. Instead, subsection (7) requires only that effluent limits that represent the status quo are required, without any requirement to do anything else on any schedule. That means that the rules will not support public comments on draft permits that propose to ignore the purported requirements of a variance.</p>	<p><i>It is intended that conditions related to a specific variance would be incorporated into the permit seeking the variance, including pollutant minimization plan conditions. Ecology anticipates that these conditions would go into the initial permit, where they would be subject to timeline requirements and receive Ecology review at the same time in which actions to attain standards are ongoing. However, in many cases pollution minimization is an iterative process: a pollution control technique or approach could be used, and its use could lead to a next-step based on success or lack of success. Permits are developed as part of a public process. If the variance lasts for longer than 5 years, then the 5-year mandatory review will include review of the pollutant minimization plan work, as well as other work being done to meet standards. These items will all be available for public review. Reports submitted to Ecology as part of permit requirements are uploaded to the WQP's PARIS database, which is available to the public.</i></p>

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<p>Commenter ID: 8</p> <p>Standards drive the TMDL cleanup process which encompasses all sources of pollutants to water, point and non-point. Ecology’s statements in this regard border on shocking in their ignorance of the point of setting standards. Ecology is wrong on the law.</p>	<p><i>Ecology agrees that point and non-point source can both be addressed under CWA regulation. Please see #1, 2, 3, and 4 in the “Variance” general response section above.</i></p>
<p>Commenter ID: 8</p> <p>Certain conditions for a variance are more prone to abuse, such as where human conditions supposedly have permanently altered the water body such that it is not possible to meet standards or would be more environmentally damaging to attempt to do so or where it is it is economically prohibitive to return the water to meeting standards, and Ecology must tighten those restrictions and not use them as an excuse to expand here. It is never appropriate to grant a variance where standards can be attained with reductions on point and nonpoint sources, including elimination of discharges. Consistent with the requirements of the Clean Water Act and EPA regulation, Ecology must specify in rule that a variance absolutely cannot be adopted if the water quality criterion can be achieved with either or a combination of technology-based requirements and aggressive permit requirements for best management practices such as low impact development for new development and retrofits for existing sources. Again, Ecology must not promulgate rules that are a disincentive to consistent forward progress on improving water quality and meeting water quality</p>	<p><i>Ecology disagrees with the basic premise of the comment on expanded variances Both the old and the new rule language on variances allow variances, and the new language does not allow "expanded variances", it instead expands and clarifies the requirements for future variance actions. The new language expands and clarifies the requirements for variances, as well as aligns it with EPA's new variance regulation at 40CFR131.14. Given the expanded requirements in the new water quality standards language and the new federal language, Ecology does not think the recommended changes in language are needed.</i></p>

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<p>standards. Ecology’s rule must make clear that a variance does not replace or otherwise alter the underlying designated use, including fish consumption, fish and shellfish breeding, rearing, sheltering, recreational uses (e.g. boating, swimming), or wildlife uses. Finally, the rule must specify that variances can never be an option for new or expanding sources or discharges as such, a concept is completely contrary to the requirements of the Clean Water Act and existing EPA regulation. Moreover, if a new or expanded source or discharge will be discharging to the same waterbody reach (or perhaps waterbody as a whole) where a discharger has or desires a variance, the variance must be denied as it will be impossible to weaken a water quality standard with a variance for one and not run afoul of the law.</p>	
<p>Commenter ID: 8</p> <p>Ecology also claims variances are desirable to provide time to make progress towards attaining standards. This implies, incorrectly, that the Clean Water Act imposes some sort of penalty on a state for failing to achieve water quality standards by a certain date. Regrettably, it does not. A variance does not “create” additional time; whatever time is genuinely needed to meet water quality standards, that time will be taken regardless of whether the state adopts a variance. Rather a variance undoes the water quality standard that has already been determined necessary to protect designated uses of the water by excusing compliance and ultimately removes the incentives to move forward on a</p>	<p><i>Ecology is not eliminating variances as a tool in the water quality standards. Variances have been a tool in the standards for many years, and the new language expands and clarifies the requirements for variances, as well as aligns it with EPA's new variance regulation at 40CFR131.14.</i></p>

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<p>timeline toward compliance. Variances will, in fact, have the opposite effect of making progress by removing the impetus for progress. Waterkeepers Washington urges Ecology to rethink this failed, unnecessary, and counterproductive policy and eliminate it from the proposed rule. At a minimum, Ecology should not be expanding the use of variances, but should be striving to narrow their use to very limited circumstances.</p>	
<p>Commenter ID: 8</p> <p>Ecology is also proposing variances for entire stretches of water. Proposed Rule at 14, 16. Again, Ecology’s large expansion of this suspect concept is at odds with the Clean Water Act and federal regulation. Variances are not appropriate for anything other than portions (generally small) of water bodies and they pertain only to a single discharge or possibly a very small group of geographically-proximate and substantively-similar discharges into that reach. Ecology’s proposal is contrary to the most basic principles underlying the Clean Water Act and its implementing regulations. The scope of the variance must be both discharger- and water body-specific, and it should also be pollutant-specific; it should extend for the shortest distance possible in the water body¹⁵ and must be decided and supported with a full rulemaking record, with public comment, on a case by case basis every three years. Ecology also proposes to introduce, for the first time, multiple discharger variances. Ecology must make explicit in the rule that there are no variances allowed for an</p>	<p><i>Ecology considers large bodies of water (even as large as statewide) to be within the category of "waterbody." Variances are formal rulemakings and must be consistent with both the new water quality standards language and the federal language at 40CFR131.14. Variances can be specifically granted for waterbodies. New water quality standards language is consistent, including language on multi-discharger variances, with 40CFR131.14.</i></p>

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<p>entire water body or an entire region or state for any pollutant.</p>	
<p>Commenter ID: 8</p> <p>Ecology’s justification for expanded variances lacks legal or factual support. Given this Clean Water Act structure, there is no reason to allow “variances” from water quality standards. Ecology argues that expanded variances are needed because updated variables in the water quality standards equation “these new, more protective criteria may be difficult to meet.” As discussed above, however, the standards for numerous chemicals will actually become less stringent under the new rule, and for four of the most important pollutants (arsenic, mercury, dioxins, and PCBs) the changes are at best non-existent or at worse (for arsenic) 555-times worse. Indeed, Ecology has apparently only tallied a total quantifiable cost of \$16,000 for the few more stringent standards, but has acknowledged that compliance costs will go down where standards are weakened. See Preliminary CBA at 39-43, 54. Rather than point to specific pollutants and measures that will now be more difficult to meet and in what ways, Ecology only provided a vague statement about difficulty that is undermined by much of its own analysis. There is no justification (and of course Ecology has provided none), for an expansion of off-ramps like variances for this combination of slightly-improved, unchanged, and weakened toxics standards, much less for all pollutants. And again, Ecology is going even further</p>	<p><i>Ecology disagrees with the basic premise of this comment. Both the old and the new rule language on variances allow variances, and the new language does not allow "expanded variances", it instead expands and clarifies the requirements for future variance actions. Please see #1, 2, 3, and 4 in the "Variance" general response section above. Increases or decreases in the stringency of the human-health criteria may or may not affect actual costs incurred by dischargers. Ecology has revised and clarified the Cost-Benefit Analysis to reflect where less-stringent standards would not necessarily result in reduced costs.</i></p>

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<p>expanding the variance off-ramp for all pollutants, not just those that are part of this particular rulemaking with no rationale at all for doing so.</p>	
<p>Commenter ID: 8</p> <p>Ecology’s variance proposal has unlawfully confused important concepts in the Clean Water Act. Ecology’s proposed rule defines a variance as “a time-limited designated use and criterion as defined in 40 C.F.R. 131.3.” Proposed Rule at 15. The proposed rule goes on to explain that the variance is a change to the designated use itself, “Variances for individual facilities, a group of facilities, or stretches of waters may be issued for the criteria and designated uses. This problem is repeated through the rule for every type of variance Ecology proposes to use (“A variance is a time-limited designated use and criterion.”). This is an unacceptable conflation of Clean Water Act terms and directly contrary to the Act and EPA regulation. The designated use, as explained above, is the use that must be protected under the Clean Water Act. 33 U.S.C. § 1313. A variance cannot be changed for either the long- or short-term. 40 CFR § 131.14(a)(2) (“(2) Where a State adopts a WQS variance, the State must retain, in its standards, the underlying designated use and criterion addressed by the WQS variance, unless the State adopts and EPA approves a revision to the underlying designated use and criterion consistent with §§131.10 and 131.11. All other applicable standards not specifically</p>	<p><i>Ecology has worked closely with EPA to ensure that the new language on variances is lawful and is consistent with the new EPA variance regulation at 40CFR131.14, including language on interim uses. Note that a variance is not a permanent change to a designated use, as your citation to 40CFR131.10 would suggest. Please see 40CFR131.14(b)(ii)(B) for specific federal language on interim uses and criteria for waterbody variances, and see 40CFR131.14(b)(ii)(A) for specific federal language on interim criteria for discharger variances.</i></p>

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addressed by the WQS variance remain applicable.”)	
<p>Commenter ID: 8</p> <p>If used at all, variances must be significantly narrowed and circumscribed, not expanded, to ensure they do not defeat the proper function of the Clean Water Act. Ecology proposes to require a five-year interim review schedule. This is unlawful under the Clean Water Act and EPA regulation. Variances are water quality standards in their own right and as such, must be approved by EPA and must be revisited every three years as part of the required triennial review, with accompanying public process, to justify retention. 33 U.S.C. § 1313(c) and 40 C.F.R. § 131.10(g) and (h). See also EPA WQS Handbook, parts 2.7 and 2.8. Renewal of a variance must be fully-justified at each three-year mark as again, they are highly contrary to Clean Water Act requirements and purposes and should be carefully monitored and generally disfavored. Variances are required to be as short as possible and during the course of the variance, the discharger must regularly demonstrate that reasonable progress is being made to attain water quality standards. This should require, in every permit where a variance is utilized, monthly monitoring and reporting of discharges and progress on reductions; and very specific interim milestones and deadlines for action and progress. (Again, however, it must be noted that this describes a compliance plan, and there does not appear to be any legal or factual support for anything other than a</p>	<p><i>Ecology disagrees with the basic premise of this comment. Both the old and the new rule language on variances allow variances, and the new language does not allow "expanded variances", it instead expands and clarifies the requirements for future variance actions. There are legitimate circumstances where a discharger can eventually meet the permit limit or a waterbody can eventually meet the criteria and designated use, but a longer time frame is needed. For example, new, more protective criteria may be difficult to meet in situations where technology is not yet available or feasible to remove the pollutant, or in cases where either (1) a persistent pollutant resides and is cycling within the aquatic ecosystem of the water body and cannot be removed without degrading the system, or (2) when the main sources of the pollutant are not within the scope of the state's jurisdiction to control through water quality protection. The new language expands and clarifies the requirements for variances, as well as aligns it with EPA's new variance regulation at 40CFR131.14.</i></p>

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<p>compliance plan—there is no need to “write down” the applicable water quality standard in order to give a discharge time to come into compliance with the applicable standard.)</p> <p>Variances should in most instances not extend beyond three years—at most, they might extend for the length of a single permit term with a review as to necessity for continuation at the three-year mark.</p>	
<p>Commenter ID: 8</p> <p>Water quality standards drive many important components of the Clean Water Act and variances disrupt, rather than aid, implementation of the Act. In general, variances are a tool that have outlived their usefulness, if they were ever a legitimate application under the Clean Water Act. Ecology’s justification for the use(s) of variances is inconsistent with the basic structure and requirements of the Clean Water Act, and Waterkeepers Washington strongly question their proposed expanded use. Variances generally, and certainly the ones proposed here, appear to be nothing more than an off-ramp away from meeting standards and from steadily improving water quality. Variances are not an “aid” to meeting water quality standards or a tool that results in “implementation,” but an excuse to avoid them. Their continued and expanded use does not comply with the basic requirements of the Clean Water Act.</p>	<p><i>Please see #1, 2, 3, and 4 in the “Variance” general response section above. The new language is consistent with the new EPA variance regulation at 40CFR131.14.</i></p>

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<p>Commenter ID: 8</p> <p>Where water quality standards are not attained, a state must report this fact to EPA, and the water is added to a § 303(d) or impaired water list. 33 U.S.C. § 1313(d). Once on the list, the water body is in the queue for preparation of a clean-up plan—a Total Maximum Daily Load (“TMDL”) plan. This is the straight-forward way that waters are to be cleaned up under the Clean Water Act structure adopted by Congress. The water quality standards set to protect the designated uses of the water serve as the goal and guiding principle toward which the TMDL and its implementation must always be geared. It serves no purpose and in fact wholly disrupts this structure, to gut the process by rewriting or eliminating the applicable water quality standard. Point sources must have permits to discharge and those permits are to include effluent limitations and other provisions (for example compliance plans) to ensure that the permit is designed to not cause or contribute to violations of water quality standards. In a TMDL situation, a point source will have been assigned a wasteload allocation, a part of the TMDL with which point sources must comply. The point source’s permit must include limits as necessary to comply with the wasteload allocation. Again, compliance plans, within reasonable timeframes, are a method to help point sources reach compliance over the course of a permit.</p>	<p><i>Comment noted.</i></p>

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<p>Commenter ID: 11</p> <p>Provisions for the option of state-wide variances should be added to Section 2, Types of Variances, under WAC 173-201A-420 The approval and effective dates of the Implementation Tools are not linked. Thus, HH WQC could be approved even though all of the Implementation Tools may not yet be available. Alternatively, if the HH WQC are not approved, the proposed Implementation Tools may not be adequate. For example, if EPA promulgates HH WQC for Washington State, there may be an urgent need for state-wide variances for PCBs. State-wide variances should be added to Section 2, Types of Variances, under WAC 173-201A-420 Variance.</p>	<p><i>State-wide variances are considered by Ecology to be a subset of waterbody variances, thus are already included in the rule language on variances. Ecology did not link the approval and effective dates of the human health criteria to the implementation tools in the proposed rule. This was discussed during the rulemaking meetings prior to publishing the first proposed rule and determined not be a viable option for the state.</i></p>
<p>Commenter ID: 13</p> <p>Compliance tools, specifically compliance schedules and variances, which provide dischargers with enhanced flexibility in meeting federal regulations need to incorporate the following elements:</p> <ul style="list-style-type: none"> • Application is limited to an individual discharge or permit as opposed to entire waterbodies or classes of dischargers. • Documentation that the action(s) will not degrade or change an existing designated use; will not contribute to a lowering of water quality; will protect downstream tribal resources; and will not pose an increased risk to human health or the environment. • A specified time frame for achieving water quality standards or compliance as soon as 	<p><i>Please see #1 3, and 5 in the “Variance” general response section above. The new water quality standards variance rule and the federal requirements at 40CFR131.14 contain language that encompasses all but the first bullet point. With regard to that point, both water body and multidischarger variances are allowed in both the new state water quality standards and in the federal regulations. Please also see in the “Variance” general response section above.</i></p>

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<p>possible. Extensions beyond the 5 year NPDES permit cycle must be justified, explicitly time limited, subject to full and appropriate review, and should not be used to avoid meeting criteria.</p> <ul style="list-style-type: none"> • An enforceable sequence of actions or operations that lead to compliance with water quality criteria or effluent limitations. • Clear and enforceable benchmarks and metrics for monitoring progress, including interim numeric limits where possible. • Consultation with and review by tribes whose U&A may be impacted by the action. 	
<p>Commenter ID: 22</p> <p>Weyerhaeuser appreciates the inclusion of broader regulatory languages providing for variances. A variance offers a mechanism for NPDES permittees to maintain Clean Water Act compliance while working toward ultimate achievement of more stringent HHWAC. However, the sheer complexity of the regulatory process raises questions on whether the "on-paper" benefits of a variance could ever actually be realized.</p> <p>Discussion -The proposed regulatory language is an expansion of WAC 173-201A-420 Variances and necessarily references 40 CFR 131.14. As proposed, the pathway to issuance of a variance includes extensive information development on science and technology questions, multiple favorable regulatory determinations by Ecology, targeted amendment of WAC 173-201A, modification of an NPDES permit(s), a formal review procedure with EPA and</p>	<p><i>Ecology expects that variances will be a useful tool in the future, but at this point is uncertain about the frequency of use. To further address your comment, please also see the response to your specific comments in the Cost Benefit Analysis section in this Response to Comments.</i></p>

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interested tribes, perhaps an ESA review, and then approval by EPA. This will be a formidable, resource-intensive, multi-year process.	
<p>Commenter ID: 23, 55, 68</p> <p>Increased availability of variances. Variances are temporary waivers of water quality standards. The proposed rule allows polluters to receive "free passes" to meet water quality standards.</p>	<p><i>Please see #1, 2, 3, 4, and 5 in the "Variance" general response section above.</i></p>
<p>Commenter ID: 30</p> <p>Ecology should include additional variance requirements to ensure that variances do not violate other state and federal regulations or impair treaty rights</p>	<p><i>Please see #1, 2, 3, and 4 in the "Variance" general response section above. Ecology considers that the new water quality standards language on variances combined with the new federal regulation on variances (40CFR131.14) addresses this issue. In addition, the new language on variances contains specific language at WAC173-201A-420(4) that requires Ecology to provide notice and consult with tribes or other states that have jurisdiction over adjacent and downstream waters of the proposed variance.</i></p>
<p>Commenter ID: 30</p> <p>No variance should be authorized prior to the development of a TMDL</p>	<p><i>Ecology considers that there are legitimate circumstances where it would be appropriate to issue a variance outside of a TMDL process.</i></p>
<p>Commenter ID: 30</p> <p>Per federal regulations, variance "renewals" should not be authorized separately from a new variance application and review process. Interim reviews of multidischarger variances should be subject to public process and</p>	<p><i>A renewal request for an expired variance will be considered as long as all conditions in WAC 173-201A-420(1) are met. All variances longer than 5-years receive a 5-year mandatory review as per WAC 173-201A0-420 (8) (see entire section) and 40 CFR 131.14(b)(v). The 5-year review is conducted</i></p>

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evaluated on the entirety of the impacts and cumulative effects of the programmatic proposal. Reevaluations of variances must be subject to EPA review, and a variance should be terminated if reevaluation does not occur.	<i>by Ecology as part of a mandatory public process and the results submitted to EPA.</i>
<p>Commenter ID: 30</p> <p>Proposed variance rules should continue to require that notice of a variance application and all subsequent actions are given to tribes. Such notification should be provided to those affected not just those tribes that Washington State determines to have “jurisdiction.” Tribes should be given notice about all subsequent administrative actions related to variances, not just applications</p>	<i>Comment noted.</i>
<p>Commenter ID: 30</p> <p>The definition of a variance should limit the duration – include requirement for expiration and limit duration between 3 and 10 years.</p>	<i>Ecology has worked with EPA to ensure that the new water quality standards language is consistent and aligned with federal regulation at 40CFR131.14, which does not limit the duration of variances.</i>
<p>Commenter ID: 30</p> <p>Variances should include requirements for dedicated monitoring and funding to implement it</p>	<i>The variance language requires that variance permit conditions must include monitoring and reporting requirements.</i>
<p>Commenter ID: 30</p> <p>Variances should not apply for purposes of implementing section 303(d) of the Clean Water Act.</p>	<i>EPA’s new regulations on variances at 40 CFR 131.14(a)(3) state that the variance applies only to NPDES and 4-1 certifications.</i>

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<p>Commenter ID: 30</p> <p>Variances that address nonpoint sources must include an enforceable mechanism to ensure compliance with water quality standards</p>	<p><i>New language in the variance section, especially for waterbody variances, requires nonpermitted discharges to be included in the variance and identification of best management practices to address nonpermitted discharges, where applicable.</i></p>
<p>Commenter ID: 30</p> <p>Variances that are authorized for excessive periods of time will not be time-limited, because they may have permanent and lasting impacts.</p>	<p><i>Ecology is confident that continual improvements in water quality during implementation of a variance will result in lasting improvements. Without a variance to allow adequate time to work towards compliance, the only other alternative would be a use change, which could have lasting and permanent negative effects to a waterbody because the uses and associate criteria would be removed from applying to the waterbody.</i></p>
<p>Commenter ID: 30</p> <p>Variances, if applicable at all, must only apply to individual dischargers.</p>	<p><i>Ecology considers that there are legitimate circumstances where it would be appropriate to issue a variance for either a single discharge or for multiple discharges, or for specified stretches of waters.</i></p>
<p>Commenter ID: 30</p> <p>Variances, if authorized should only be applied under very limited circumstances.</p>	<p><i>The circumstances in which a variance can be applied are limited, having at their base the factors in 40CFR131.10(g).</i></p>
<p>Commenter ID: 30</p> <p>Variances fundamentally undermine treaty right protection and the purpose of the Clean Water Act. Variances have potential to cause harm to treaty-reserved rights and resources, and therefore should not be authorized in any circumstances where a treaty reserved right and a designated use overlap. Variances may not be legally authorized under the CWA, and</p>	<p><i>Please see #1, 2, 3, 4, and 5 Variances General Comments section of this Response to Comments.</i></p>

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<p>therefore should only be applied under very limited circumstances. Retention of “underlying uses” is a legal fiction, which in practice will have no bearing on water quality protection when a new time-limited water quality standard that is less protective gets adopted as a variance. Therefore, Ecology’s contention that a variance will actively drive water quality improvements in the longer term is not supported by the regulatory structure, since a variance will perpetuate a less protective standard. Variances, although “time-limited,” will have permanent effects on all of the designated uses, including the status of aquatic resources, and the tribes’ ability to harvest and consume fish and shellfish.</p>	
<p>Commenter ID: 34</p> <p>Ecology must carefully consider any additional changes to variance rule language and the rule implementation plan to ensure successful implementation of variances for public and private entities. The variances application process should be a defined path with clear expectations for both the regulated entities and the public. Ecology must develop and disseminate information to assist in applying for a variance with defined steps and timelines to reduce regulatory uncertainty and build trust with the public. Recent federal guidance on variances should be incorporated into Ecology’s rules. Any changes to the proposed variance language should be carefully analyzed to ensure a fair and balanced process with checks and balances. A variance should not be a regulatory roadblock to achieving water quality improvements rather it should be a</p>	<p><i>The new variance language is consistent with and aligned with EPA’s new variance regulations. As variance applications are submitted, Ecology will evaluate the use of emergency rule procedures. Ecology plans to develop guidance for implementing the new variance language. This is specified in the Rule Implementation Plan Water Quality Standards for Surface Waters of the State of Washington Amendments to Chapter 173-201A WAC, as required by the Administrative procedures Act.</i></p> <p><i>Please see #3 in the “Variance” general response section above.</i></p>

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<p>path to compliance. Ecology should assess whether decisions to initially grant a variance can be adopted through RCW 34.05.350 Emergency Rule procedures to allow compliance in specific water permitting situations rather than wait for 12 to 24 months in a typical rule process.</p>	
<p>Commenter ID: 34</p> <p>Variances are necessary and appropriate implementation tools for the rule proposal in WAC 173-201A-420 and allowed by the Clean Water Act. Variances are essential tools for implementing the rule proposal and the proposed language in WAC 173-201A-420 should be adopted along with numeric criteria. A variance is an undesirable but likely necessary implementation tool for the human health rule package. It is a serious tool that modifies a water quality standard and undergoes rigorous evaluation by both the state and EPA and includes public comment. Regulated entities will absolutely require the option of a variance to provide regulatory certainty and a path forward to compliance in certain water permitting situations.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 34</p> <p>Water body and multidischarger variance language is essential and must be retained in WAC 173-201A-420(2). Water body specific and multidischarger variances are essential types of variances for implementing the rule proposal and the proposal in WAC 173-201A-420(2) should be adopted along</p>	<p><i>Comment noted.</i></p>

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<p>with numeric criteria. Ecology must adopt and implement these important types of variances. Ecology should start planning and implementation work for water body and multidischarger variances to mitigate regulatory compliance costs and also provide certainty to regulated entities and the public. A water body variance could establish a framework for improving water quality in a geographical area. It could provide benefits beyond initial compliance with standards as the variance overlay could attract further study, evaluation, and actions by all sectors associated with the waterbody.</p>	
<p>Commenter ID: 38</p> <p>WAC 173-201A-420(3)(f)(iii) says that "If the variance is for a water body, or stretch of water, the following information must also be provided to the department. FF..... "(iii) Best management practices for nonpermitted sources that meet the requirements of chapter 90.48 RCW. FF What does this mean? Is atmospheric transport and deposition included? Is groundwater included? What about bacteria contributions from wildlife? How is an entity initiating a variance request supposed to provide this information? It clearly goes beyond what the entity has operational control over. Perhaps this is where a Chemical Action Plan could be referred to, if the state has prepared one for the parameter of concern.</p>	<p><i>This section is specific to a waterbody variance, and thus will require a more comprehensive approach than an individual variance. When a waterbody variance is considered, the evaluation of the variance will include an assessment of known controls and evaluate whether additional source identification work is needed. This could be done through a Total Maximum Daily Load (TMDL) study or other comprehensive watershed study on the area under consideration. This evaluation could potentially include atmospheric and groundwater-related issues. Specific determinations will occur during development of the specific variance that will go through a rulemaking process.</i></p>

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<p>Commenter ID: 39</p> <p>Ecology proposes to provide variances for individual permittee, groups of permittees and even whole water bodies to avoid compliance with water quality standards. Variances may be applied to toxics or conventional parameters like temperature and dissolved oxygen that impact aquatic life. Variances under the state's rule are "time-limited", but so too was the time of the dinosaurs and they lasted over a million years. This "off-ramp" to the Clean Water Act and the new federal water quality regulations is a blatant disregard of the duty of the state to preserve water and aquatic resources for this and future generations under the Public Trust Doctrine. We have worked in good faith with Ecology long enough on the subject of variances to little avail. Time has run out, the Tribe will put the full force of its governmental authorities and duties to ensure variances do not get effectuated in its Treaty Usual & Accustomed fishing grounds. Ecology's proposed provisions for variances are outrageously over-reaching, ambiguous, arbitrary, capricious, and contrary to law and recent federal regulation.</p>	<p><i>Please see #1, 2, 3, 4, and 5 in the "Variance" general response section above. To address your comments on the proposed provisions being arbitrary and capricious, please also see the section on "Inputs to the Equations" section in this response to comments. The new water quality standards are not contrary to law and federal regulation. Please see 40CFR131.14.</i></p>
<p>Commenter ID: 39</p> <p>Ecology's proposed rule establishes an explicit regulatory framework for the adoption of WQS variances that the state may use to implement adaptive management approaches to improve water quality. This policy, as a general policy, is discretionary under the Clean Water Act. We find it</p>	<p><i>The new water quality standards language is consistent and aligned with federal regulation at 40CFR131.14. As discussed in the Decision Document and elsewhere in the rule record, Ecology considers that the use of a variance is a better approach to attaining water quality standards than downgrading a use, which is the other non-variance</i></p>

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<p>absolutely unconscionable that the state, using a discretionary policy, proposes to dismantle the protections of standards afforded by the CWA. Though a discretionary policy, the proposed variance provisions are subject to review and approval by EPA for consistency with the new federal water quality regulations published by EPA in August, 2015. 37 The variance provision is intended to effectuate incremental progress in water quality adaptively, while preventing a permanent downgrade in use. While apparently well intended, it will result in the unintended consequence of little to no improvements in water quality, while providing polluters shields from compliance for undetermined and extended periods of time. There is already a process under Section 303(d) of the CWA that provides for a better process for restoring waters of the state, that does not rely on "incremental" progress adaptively, but requires restoration to attain the designated use. And, it's enforceable. The risk, once again, is shifted to the resource and disproportionately on those peoples who consume and rely on the resource for subsistence, ceremonial, and other purposes.</p>	<p><i>alternative where the criteria for use changes in 40CFR131.10(g) can be met.</i></p>
<p>Commenter ID: 39</p> <p>Most importantly, the state's proposed variance policy will prevent the Tribe from fully exercising its treaty rights in its Usual and Accustomed fishing grounds as well as likely result in the non-attainment of downstream water quality standards within the 1873 Survey Area of the Puyallup</p>	<p><i>Comment noted.</i></p>

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<p>Reservation. For these reasons, the Tribe will take the following actions: 1. We will oppose all variance applications applied for within the Tribe's Usual & Accustomed fishing grounds. 2. We will take necessary further actions to 1) make sure the final variance policy is at least consistent with the federal water quality standards regulation, including defining and achieving the "highest attainable use" as required. 3. We will take necessary further actions to ensure our treaty fishery and critical habitat are not harmed or adversely impacted. 4. We will make sure adequate safeguards are contained in the rule "to ensure the attainment and maintenance of downstream waters" within the 1873 Survey Area of the Puyallup Reservation. 5. We will request technical assistance from EPA to restore waters under the Tribe's jurisdiction under Section 303(d) of the CWA by effectuating water cleanup plans (Total Maximum Daily Loads - TMDLs).</p>	
<p>Commenter ID: 39</p> <p>The Clean Water Act provides no express authority for states to issue variances. The Act does allow states to authorize general policies for the implementation of water quality standards. The intent for allowing variances is to prevent a permanent downgrade of a use and provide a mechanism for maintaining standards "where attainable". The underlying presumption is that by preventing a permanent downgrade in a designated use, further improvements in water quality will occur. A variance does not replace a waterbody's designated use, but</p>	<p><i>Please see #1, 2, 3, 4, 5, and 6 in the "Variance" general response section above.</i></p>

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<p>instead merely provides a temporary standard while still preserving the underlying use. It must be based on a use attainability demonstration and targets achievement of the highest attainable use and criteria (or best achievable water quality) during the period of the variance. As such, the variance is a revised water quality standard that must be supported on the basis of the factors specified in 40 CFR § 131.1 O(g), it requires a full public review process, and BP A and approval before it can be used for Clean Water Act purposes. The Proposed Rule broadens the scope of application and provides no timeframe for their expiration. In the public process, variances for durations of 40 years were discussed for some pollutants that would be applicable statewide or to entire watersheds. This timeframe was reportedly based on timeframes for municipal capital budget planning, with no regard for required compliance with the Clean Water Act through achievement of the highest water quality during the interim and preventing the permanent downgrade of the use. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	
<p>Commenter ID: 39</p> <p>The state's variance proposal and anticipated policy is perhaps the most egregious portion of the state's proposed rulemaking in that it provides a steep and swift off-ramp from the goals and requirements of the Clean Water Act and its implementing regulations. By definition variances are not protective of</p>	<p><i>Please see #1 and 2 in the "Variance" general response section above.</i></p>

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<p>human health or, in the case of conventional pollutants, not the fishery, and variances pose a significant possibility for the diminishment of the tribe's treaty rights. Accordingly, in compliance with the Clean Water Act, federal regulations, and to meet the State's obligations to protect tribal treaty rights, the Puyallup Tribe has no recommendations but for making no changes to the existing state policy.</p>	
<p>Commenter ID: 39</p> <p>To prevent the non-attainment of water quality standards and full exercise of treaty reserved rights in our watershed, the Tribe will oppose any and all variances.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 41</p> <p>Add details to the rule on when a variance may be considered, requirements for the applicant requesting the variance, the process for reviewing and deciding on a variance application, and an interim review process to determine if the variance should be terminated or continued. Also include language explicitly stating when a variance may not be considered or pursued.</p>	<p><i>The new rule language does address the requirements indicated in the comment. If those requirements are not met then a variance may not be granted. Ecology cannot regulate when a discharger may pursue a variance, Ecology can only address the discharger's submittal to Ecology.</i></p>
<p>Commenter ID: 32, 12</p> <p>The increased availability and/or potential use of variances in the draft standards are unacceptable. The variances proposed here will result in significant delays in improvement of water quality.</p>	<p><i>The proposed variance language does not increase availability or potential use of a variance. Variances are already allowed under the current standards. The new language clarifies requirements and responsibilities for granting a variance. Variances issued under the new rule language</i></p>

Specific Comments on Variances	
Commenter ID/ Comment	Ecology Response
	<i>should not result in delays in improvements of water quality, and in fact require the identification of key actions to work toward meeting standards.</i>
<p>Commenter ID: 48</p> <p>Consistent with the regulations at 131.14, we recommend specifying that the variance will expire if Ecology does not submit the results of their five-year reevaluation to the EPA within 30 days.</p>	<i>Ecology does not think it is necessary to add this language because the federal regulation at 40CFR131.14 already requires this, and it is referenced in the new variance section.</i>
<p>Commenter ID: 48</p> <p>Ecology also proposed consideration of variances for individual dischargers, multiple dischargers, and waterbodies. The EPA anticipates working closely with the state, especially for multiple discharger variances or waterbody variances, to ensure that each variance meets all applicable federal requirements. The EPA suggests that Ecology review the EPA's FAQs on multiple discharger variances.</p>	<i>We appreciate the support from EPA.</i>
<p>Commenter ID: 48</p> <p>Ecology proposed to remove its current five-year term limit on variances. Instead, Ecology expects the timeframe of a variance not to exceed the term of the permit, except under certain circumstances. If a variance term is issued for more than five years, Ecology proposed that the Department will complete mandatory five-year reviews. In general, the EPA supports this revision to the timeframe for variances as we recognize that there may be reasonable durations other than</p>	<i>Comment noted.</i>

Specific Comments on Variances

Commenter ID/ Comment	Ecology Response
<p>the term of a permit. The EPA will review each individual variance submittal and supporting information from Ecology and consider the justification for the term of the variance when making CWA approval/disapproval decisions.</p>	
<p>Commenter ID: 48</p> <p>In 5(a), the provision appears to indicate that a variance will be adopted for as long as it takes to meet the underlying designated use. To reiterate, a variance should be for the time necessary to meet the highest attainable condition where there is some level of certainty. The reason Ecology would use a variance and not a compliance schedule is because there is uncertainty surrounding meeting the underlying standard. If there is not uncertainty, then a compliance schedule is likely more appropriate.</p>	<p><i>Ecology agrees with this comment in the case of individual discharger variances and multiple discharger variances for meeting permit limits. However, in some cases, effluent limits could be met but uses or criteria would still remain unmet in the waterbody because of factors unrelated to the point-source discharge. In the case of waterbody variances, the use of a NPDES compliance schedule could be more or less applicable to the situation. In cases where it is unclear about the best approach, work on a variance or TMDL-related work will help determine the appropriate direction. Please also see #6 in the "Variance" general response section above.</i></p>
<p>Commenter ID: 48</p> <p>Once Ecology submits its final variance procedures, the EPA will review the specified sections of Ecology's variance procedures as a "general policy" under 40 CFR 131.13 and will base its review on whether the procedure is consistent with the CWA and federal regulations.</p>	<p><i>Comment noted.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 48</p> <p>The EPA is supportive of Ecology's proposed language regarding public process (noting that a variance is a new or revised WQS and, therefore, must meet the 131.20(b) requirements), pollutant minimization plans, and conditions in which variances would be considered for renewal (as long as reasonable progress toward meeting the underlying WQS is being made), shortened, or terminated.</p>	<p><i>Comment noted</i></p>
<p>Commenter ID: 60</p> <p>A variance may be considered when the standards are expected to be attained by the end of the variance period or the attainable use cannot be ... based on 40 C.F.R. 131.14. Standards should be met before giving a variance. An evaluation of treatment or alternative actions that were considered to meet effluent limits based on the underlying water quality criteria, and a description of why these options are not technically, economically, or otherwise feasible. The applicant should have to meet a high standard. The state is trying to clean up Puget Sound and other water bodies. Users that emit effluent, well over one hundred just around the Sound that are municipalities, should be held to the highest standards. Bad behavior, cumulatively among a number of variances, is license to pollute.</p>	<p><i>The requirement for a discharger with a variance is that the highest attainable condition in the waterbody or effluent should be maintained.</i></p>
<p>Commenter ID: 60</p> <p>It is good that surface water standards are being upgraded. However, there is much</p>	<p><i>Ecology can only grant variances if Ecology resources are available to develop the variance and conduct a rulemaking to grant</i></p>

Specific Comments on Variances

Commenter ID/ Comment	Ecology Response
<p>language that gives too much leeway to the applicant for variances. Since Ecology is losing staff and has a hiring freeze, can Ecology staff be on top of each permit and enforce when needed? Individual metals should be weighed and reported as well as a cumulative amount. It is important to know which metals are meeting and not meeting their levels.</p>	<p><i>the variance. Permit reissuance and oversight are also subject to resource constraints. With regard to your comment on metals, in the permit development process one of the first steps is a "reasonable potential determination" of whether pollutants in the effluent will cause an exceedance of water quality standards. If so, then, limits are developed for those pollutants to ensure that standards are met. Permit requirements would also include monitoring to verify compliance with limits. For metals specifically, individual metals are regulated, not the total of all metals. The total of all metals is not regulated because each metal has a unique toxicity and the goal is to stay at levels that do not cause toxicity from each individual metal.</i></p>
<p>Commenter ID: 61</p> <p>We are not convinced that the variance approach contemplated by this rule provide a clear pathway to compliance.</p>	<p><i>The pathway to compliance will be determined in the future when final variances are granted through a rulemaking process. At that time, Ecology intends to follow the requirements in the water quality standards as well as the EPA's new variance regulation (40CFR131.14) to develop variances. Both of the state and federal regulations spell out requirements that, if met, can result in compliance with standards and with permit requirements.</i></p>
<p>Commenter ID: 65</p> <p>The Department should revise subsection WAC 173-20 1A- 420 so that it does not merely indicate when a variance or the renewal of a variance might be considered, but instead spells out when the Department</p>	<p><i>The new language is clear that a variance will be granted through rulemaking when requirements are met. The variance must then be submitted to EPA for Clean Water Act approval.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>will grant variances. Likewise, the rule should identify when the Department will grant state-wide or waterbody-wide variances. Only then will the variance provide a meaningful tool to help dischargers achieve compliance with more stringent permitting requirements.</p>	
<p>Commenter ID: 70</p> <p>While King County recognizes that variances may be an implementation tool when water quality standards improvement is not readily in sight, Ecology's ability to issue variances is constrained by the requirements of 40 CFR 131.10(g). For many wastewater utilities, these EPA criteria are very challenging to meet. As noted in the implementation tools and least burdensome analysis, variances may be needed for ubiquitous widespread contaminants. Because variances are challenging and unlikely to be approved in the timeframe of a normal permit cycle, King County recommends that ubiquitous chemicals receive priority consideration in future chemical action plans, and other upstream toxic reduction actions. Statewide efforts focused on source control rather than costly removal of chemicals after they have entered the waste stream will be more successful in reducing toxics in surface water and sediments. Therefore, we continue to advocate for meaningful toxics reduction legislation and state product stewardship for current-use chemicals and chemical by-products in industrial and consumer products.</p>	<p><i>We agree that toxic reduction efforts to keep toxins out of the waste stream are far more preferable than cleaning up waters polluted by those chemicals and we will continue to advocate for this preventative approach.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 72</p> <p>Variances are given if it is believed that a discharger will take an exceedingly long time to or may never be capable of meeting water quality standards, and because of this a variance excuses them from meeting the standards. Because PCBs and other challenging chemicals have proved difficult to fully remove from Washington’s waters, WDOE is considering allowing waterbody variances in regards to these challenging chemicals. This kind of variance would excuse waterbodies that have pollution problems from becoming cleaner because it doesn’t seem doable in the short term. This is contrary to the direction we need to move. We should be pushing dischargers to lower their output of dangerous chemicals precisely because of the nature and amount of pollution in a waterbody. Giving NPDES holders an off-ramp from the standards moves in the wrong direction.</p>	<p><i>Please see #1, 2, 3, 4, and 5 in the “Variance” general response section above.</i></p>

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Compliance Schedules

Summary of Comments

Many comments focused on whether revisions to the compliance schedule language are appropriate to ensure that permitted discharges are not allowed to avoid compliance with water quality standards without good cause. Some comments questioned why the ten-year limit for compliance schedules has been removed, and why there is a new section related to conditions that allow longer timeframes for compliance schedules during implementation of a TMDL.

Individual comments and responses on compliance schedules are included in the table below this General Comment/Responses section.

General Comment/Responses on Compliance Schedules

1. General Comment: 6, 8, 12, 13, 30, 34, 39, 72

Several comments questioned whether the revised language for compliance schedules appropriately addresses what is needed to grant a compliance schedule.

***Response:** Compliance schedules have existed in Ecology regulations at WAC 173-220-140 for the NPDES permit program since 1974, and were incorporated into the state water quality standards in 1992. Compliance schedules are a broadly used tool for achieving state and federal regulations; compliance schedules under the Clean Water Act are defined federally at Clean Water Act 502(17) and 40 CFR Section 122.2. These regulations require that compliance schedules set forth the shortest, reasonable period of time to achieve the specified requirements, and require that such period to be consistent with federal guidelines and requirements of the Clean Water Act. Compliance schedules become an enforceable part of the permit. If a permittee fails or refuses to comply with interim or final requirements of a compliance schedule in a permit, such noncompliance constitutes a violation of the permit.*

Compliance schedules were incorporated into the state water quality standards in 1992 to ensure continued use in the permitting program, and can be found at WAC 173-210A-510(4). They are built into a permit, order, or directive from Ecology and do not require a rule change. The new Water Quality Standards do not have a maximum numeric time limit, and instead limits must be met as soon as possible. Compliance schedules are used when a permittee cannot meet permit limits when the permit is issued, but can meet limits within a reasonable time period (“as soon as possible”), and are a commonly used tool to make improvements in discharge quality and to keep dischargers in compliance while work is being done. The compliance schedule allows existing dischargers time to come into compliance as new requirements are developed over time and/or as treatment plants need upgrades because of aging equipment, increases in user base, and other reasons. Compliance schedules are not allowed for new discharges. Compliance schedules must include:

- An enforceable sequence of actions and a final limit, and

- Interim actions with milestones if the schedule is longer than one year.

The following revisions to the general allowance for Compliance Schedules in Washington ensure effectiveness at meeting limits as soon as possible without undue delays:

- Compliance Schedules are a part of a permit and do not require a rule change.
- Compliance Schedules are allowed when the facility can achieve water quality standards but needs more time.
- The discharger must meet water quality standards or compliance “as soon as possible.”
- Compliance Schedules must contain an enforceable sequence of actions, interim limits, and a final limit.
- Compliance Schedules must make progress towards the final limit or water quality standards by requiring interim limits/actions with milestones if the schedule is longer than one year.
- Compliance Schedules are not allowed for new dischargers.
- Compliance Schedules cannot be renewed. Compliance schedules are implemented in permits and orders. NPDES permits have public participation requirements that ensure tribes have the opportunity to participate in permit development if desired.

2. General comment: 5, 6, 8, 12, 13, 21, 23, 30, 39, 55, 68, 72

The length of time granted for a compliance schedule should not extend beyond what is already allowed.

***Response:** Compliance schedules must require a permittee to meet the applicable effluent limits “as soon as possible.” The determination of what constitutes “as soon as possible” is made on a permit-by-permit basis considering the specific steps a permittee must take to achieve compliance. A compliance schedule typically is short-term in duration and includes a schedule of actions (investigations such as source identification studies, treatment feasibility studies) to meet the final effluent limitation. Compliance schedules lasting longer than one year must include interim milestones, along with dates for their achievement, with no more than one year between dates. Revised language for compliance schedules emphasizes that compliance schedules must be completed as soon as possible and should generally not exceed the term of the permit. The revisions remove the ten-year limit for compliance schedules to allow flexibility on a permit-by-permit basis. The rule revisions acknowledge that compliance schedules may, in rare circumstances, extend beyond a ten-year timeframe. In 2009, the state legislation recognized there are circumstances where extending a compliance schedule would be appropriate. Compliance schedules must still meet requirements in state NPDES regulations at WAC 173-220-140, which includes specific timeframes within the schedule of compliance and enforceable provisions. The new 2009 law, RCW 90.48.605, focuses on instances when a total maximum daily load (TMDL*) exists on the receiving water, and describes a four-part test that must be established and that is*

part of the proposed new compliance schedule language: 1. The permittee is meeting its requirements under the TMDL as soon as possible. 2. The actions proposed in the compliance schedule are sufficient to achieve water quality standards as soon as possible. 3. A compliance schedule is appropriate. 4. The permittee is not able to meet its waste load allocation solely by controlling and treating its own effluent. Ecology has also added language that takes into consideration circumstances where a TMDL does not exist, but a compliance schedule would be the most appropriate tool to bring the permittee into compliance with the discharge limit in the shortest timeframe possible. In this case, the actions must be identified that will bring the discharger into compliance with the effluent limits, but more time is needed than the term of the permit.

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 5</p> <p>The proposed rule increases time frames for compliance schedules, which is unacceptable. Using the language as soon as possible when referring to must meet water quality standards is too idealistic and vague. Their rule should require concrete time limits for dischargers to meet state standards to ensure accountability that our waters are clean.</p>	<p><i>Please see #2 in the “Compliance Schedule” general response section above.</i></p>
<p>Commenter ID: 6</p> <p>As this section is a mess, we urge Ecology to make explicit reference to the federal regulations on the issuance of compliance schedules for NPDES permits.</p>	<p><i>There is no need to reference the federal regulations in state rule, since they also apply when Ecology develops permit limits.</i></p>
<p>Commenter ID: 6</p> <p>Definition at proposed WAC 173-201A-020. This definition is not consistent with federal regulations and therefore it is not adequate to support the use of compliance schedules for NPDES permits. See 40 C.F.R. § 122.47. We suggest that Ecology not attempt to reinvent the definition of compliance schedules and, instead, follow the federal</p>	<p><i>EPA has reviewed this definition and has indicated that it is consistent with federal requirements. Ecology issues orders through state authority that also serve as 401 certifications that the federal action complies with state water quality standards. Therefore, it is appropriate to define compliance schedules in Washington to include</i></p>

Specific Comments on Compliance Schedules

Commenter ID/ Comment	Ecology Response
<p>regulations. For example, a compliance schedule must be a part of an NPDES permit, § 122.47(a), and cannot be in an unenforceable “order” (or an order enforceable only by Ecology). (The error is repeated in proposed WAC 173-201A-510(4)(a).) Federal regulations contain specific requirements related to the “sequence of interim requirements,” namely that a compliance schedule in excess of one year must include interim requirements and dates for their achievement, § 122.47(a)(3), and that the time between interim dates shall not exceed one year, with exceptions, 12247(a)(3)(i).</p>	<p><i>orders and other legal state directives. We have worked with EPA to ensure that the revised compliance schedule language meets federal requirements and can be approved by EPA. Please also see #1 and 2 in the “Compliance Schedule” general response section above.</i></p>
<p>Commenter ID: 6</p> <p>It is unclear why Ecology uses the phrase “as soon as practicable” in subsection (d) as opposed to “as soon as possible” found in subsection (e) and in 40 C.F.R. § 122.47(a)(1). If the word is intended to suggest something less stringent than federal regulations, it is inconsistent and should be changed. If it has no separate meaning, the language should be consistent so as to not imply there is a difference.</p>	<p><i>Ecology concurs with this comment and has revised the rule language to change the term “as soon as practicable” to “as soon as possible” in subsections (b) and (d) to be consistent with federal regulations.</i></p>
<p>Commenter ID: 6</p> <p>Proposed WAC 173-201A-510(4)(a) introduces unnecessary detail with its addition of (i) and (ii) unless there is something in the universe of aquatic life and everything other than aquatic life that Ecology has in mind to not make subject to compliance schedules.</p>	<p><i>EPA encouraged Ecology to split out aquatic life from other uses with the assumption that the approval of the revised compliance schedule language that apply to criteria to protect aquatic life will be subject to Endangered Species Act (ESA) consultations with the federal USFWS and NOAA fisheries, as opposed to other uses that do not require ESA consultation prior to EPA approval. As noted by EPA, if Ecology adopts this proposed rule language, the state can implement the compliance</i></p>

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Commenter ID/ Comment	Ecology Response
	<p><i>schedule authorizing provision upon the EPA's approval, without ESA consultation, only for uses other than aquatic life.</i></p>
<p>Commenter ID: 6</p> <p>Proposed WAC 173-201A-510(b)(iv), related to completion of “necessary water quality studies related to implementation of permit requirements,” is unclear. If the studies are part of a compliance schedule that leads to compliance with effluent limits it would be consistent with the requirements of WAC 173-201A-510(a) and 40 C.F.R. § 122.47(a). This example, however, does not clearly establish that the compliance schedule for studies will have that result. It appears possible that Ecology might issue a compliance schedule for a study that does not result in compliance with a related effluent limit. In addition, it is unclear how Ecology will identify an effluent limit and a compliance schedule to meet such an effluent limit in the absence of completed studies.</p>	<p><i>The concerns raised are site-specific and will be documented in a permit fact sheet using this provision of the rule. Further, Ecology shared this language with EPA and received support. As stated by EPA, this language clarifies that compliance schedules can be issued for the completion of water quality studies only if such studies are related to implementation of permit requirements to meet effluent limits. Without this clarification, EPA notes that it was unclear if Ecology envisioned such studies to include support for a Use Attainability Analysis (UAA) or a site-specific criteria revision, which would be inconsistent with the EPA's guidance and applicable NPDES regulations.</i></p>
<p>Commenter ID: 6</p> <p>Proposed WAC 173-201A-510(d) implies an extra step in the development of compliance schedules that is not included in federal requirements: “Prior to establishing a schedule of compliance, the department shall require the discharger to evaluate the possibility of achieving water quality standards via nonconstruction changes (e.g., facility operation, pollution prevention).” The rule should be amended to require that Ecology make a finding that is based on that requirement for dischargers and to provide those findings in the required fact</p>	<p><i>This additional step supports state requirement for AKART and is already existing language. Ecology documents the basis for permit limits, including limits in compliance schedules that extent beyond the permit term, in fact sheets currently and will continue to do so.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>sheet for NPDES renewal. Likewise, Ecology’s determination that a period longer than the permit term is needed should be in the required fact sheet.</p>	
<p>Commenter ID: 6</p> <p>The intent of WAC 173-201A-510(e) is unclear. What does it mean by “a longer period of time”? Why are there additional rules that pertain to dischargers discharging to waters subject to a TMDL? What is the purpose of the distinction between WAC 173-201A-510(e)(i) and (e)(iv), the first of which refers to wasteload allocations and the second of which refers to achieving water quality standards. Is the intent of this to address an NPDES permit prior to renewal when the TMDL is approved prior to that point? Is there a distinction between subsection (d)’s requirement that a permittee first demonstrate it cannot meet effluent limits (standards) without construction and subsection (e)(i)’s requirement that a permittee cannot meet its wasteload allocation without construction? And why is the demonstration made by the permittee in subsection (d) but made by Ecology in subsection (e)(i)?</p>	<p><i>In 2009, the state legislation recognized there are circumstances where extending a compliance schedule longer than the 10-year timeframe currently in rule would be appropriate. Compliance schedules must still meet requirements in state NPDES regulations at WAC 173-220-140, which includes specific timeframes within the schedule of compliance and enforceable provisions. The new 2009 law, RCW 90.48.605, focuses on instances when a total maximum daily load (TMDL) exists on the receiving water, and describes a four-part test that must be established and that is part of the proposed new compliance schedule language: 1. The permittee is meeting its requirements under the TMDL as soon as possible. 2. The actions proposed in the compliance schedule are sufficient to achieve water quality standards as soon as possible. 3. A compliance schedule is appropriate. 4. The permittee is not able to meet its waste load allocation solely by controlling and treating its own effluent. Subsection (d) applies to schedules of compliance for all dischargers. Subsection (e) applies when a TMDL is in place and a discharger can meet the four-part test described above to seek a longer compliance schedule.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 6</p> <p>The proposed definition of “compliance schedule” should reference the federal regulations.</p>	<p><i>Please see #1 in the “Compliance Schedule” general response section above.</i></p>
<p>Commenter ID: 6</p> <p>This section is very messy and it is unclear what Ecology is attempting to accomplish with its proposed language. The starting point of compliance schedule rules in state standards should be consistency with the federal regulations yet Ecology’s proposal hints at some federal requirements, adopts some portions of the requirements, and ignores some. This simply leaves everybody in the dark as to how Ecology views the intersection between its own proposed rules and binding federal regulations. It also raises questions about what distinctions Ecology is attempting to draw.</p>	<p><i>Please see #1 in the “Compliance Schedule” general response section above.</i></p>
<p>Commenter ID: 6</p> <p>Why is a permittee only entitled to seek a compliance schedule if it has “made significant progress to reduce pollutant loading during the term of the permit”? If the permit in question has no requirements to reduce pollutant loading and the wasteload allocation was not yet in place, it is unclear why a permittee would be penalized for not making reductions. Likewise, it is unclear what Ecology means by stating that a compliance schedule may be authorized if a permittee is “meeting all of its requirements under the TMDL as soon as possible.” Proposed WAC 173-201A-510(e)(iii). Generally speaking, the requirements of a TMDL as they apply to point sources are wasteload allocations. If this rule language is</p>	<p><i>Subsection (e) applies where a TMDL is in place, and the permittee has done everything within its power to reduce the pollutant of concern, but is still not meeting water quality criteria at the end of pipe because the water cleanup plan has not been fully implemented. As an example, in Idaho, the town of Smelterville wastewater treatment plant draft permit includes a compliance schedule of “twenty years plus five months” for dissolved metals. Smelterville is located within the Bunker Hill Mining and Metallurgical Complex Superfund Site that has a current clean-up schedule of thirty years. This</i></p>

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Commenter ID/ Comment	Ecology Response
<p>intended to ensure that wasteload allocations that are being met pursuant to a compliance schedule are met as soon as possible, it presumably is redundant to the requirement in subsection (d), which requires compliance as soon as practicable. The word “EPA-” should precede the word “approved” to eliminate ambiguity.</p>	<p><i>schedule, along with the need for additional data collection to determine the source of continued elevated metal levels in the new treatment plant effluent, was part of the justification for the twenty-year compliance schedule that was subsequently approved by EPA.</i></p>
<p>Commenter ID: 8</p> <p>Compliance schedules are recognized by EPA as an acceptable tool in permitting under some circumstances. While EPA’s regulations do not set a maximum allowable time for compliance schedules, they must ensure compliance “as soon as possible. Generally, the five-year term of a permit should be more than adequate to bring a facility into compliance—by adding the necessary new technology or entering into pre-treatment agreements or implementing process changes. While Ecology rules currently provide for two permit terms or a full decade—this length of time is unlikely to be necessary and as noted above, is contrary to existing law and policy. Ecology now seeks even further expansion and that proposal is simply unwarranted by the facts or the law. Anything more than a permit term is an attempt to avoid compliance as opposed to working diligently on addressing a pollutant discharge problem. Given that Ecology’s only two justifications for an extreme expansion of compliance plans (basically “noncompliance plans”) fail on the facts and the law, Ecology should withdraw the proposal for expanded compliance plans and move to narrow the availability of variances altogether. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Please see #1 and 2 in the “Compliance Schedule” general response section above.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 10</p> <p>Polluters should have stricter schedules of compliance and not give more variances.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 12</p> <p>Loopholes in the implementation process of the proposed legislation could lead to delays in water quality improvements. Instead of relying on dischargers to simply meet the new water quality standards “as soon as possible”, additional framework should be included to create a strict timeframe in which standards are met. Language instead should read “as soon as possible or within ten years ” or otherwise provide encouragement for compliance sooner than ten years, but set a deadline to ensure our public is not unnecessarily exposed to contaminants longer than they have to be. Protection of our waterways are simply too important to be delayed any further.</p>	<p><i>Please see #1 and 2 in the “Compliance Schedule” general response section above. Ecology does not agree that the rule will result in unnecessary delays in water quality improvements. Compliance schedules include a sequence of interim requirements such as actions, operations, or milestone events to achieve the stated goals. These regulations require that compliance schedules set forth the shortest, reasonable period of time to achieve the specified requirements, and require that such period to be consistent with federal guidelines and requirements of the Clean Water Act. Compliance schedules become an enforceable part of the permit. If a permittee fails or refuses to comply with interim or final requirements of a compliance schedule in a permit, such noncompliance constitutes a violation of the permit.</i></p>
<p>Commenter ID: 13</p> <p>Compliance tools, specifically compliance schedules and variances, which provide dischargers with enhanced flexibility in meeting federal regulations need to incorporate the following elements:</p>	<p><i>Ecology believes the elements mentioned are more appropriately included in the permit or order in question, consistent with federal rule and guidance, to allow for site-specific factors to be included.</i></p>

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Commenter ID/ Comment	Ecology Response
<ul style="list-style-type: none"> • Application is limited to an individual discharge or permit as opposed to entire waterbodies or classes of dischargers. • Documentation that the action(s) will not degrade or change an existing designated use; will not contribute to a lowering of water quality; will protect downstream tribal resources; and will not pose an increased risk to human health or the environment. • A specified time frame for achieving water quality standards or compliance as soon as possible. Extensions beyond the 5 year NPDES permit cycle must be justified, explicitly time limited, subject to full and appropriate review, and should not be used to avoid meeting criteria. • An enforceable sequence of actions or operations that lead to compliance with water quality criteria or effluent limitations. • Clear and enforceable benchmarks and metrics for monitoring progress, including interim numeric limits where possible. • Consultation with and review by tribes whose U&A may be impacted by the action. 	
<p>Commenter ID: 13</p> <p>Compliance tools, specifically compliance schedules and variances, which provide dischargers with enhanced flexibility in meeting federal regulations need to incorporate the following elements:</p> <ul style="list-style-type: none"> • Application is limited to an individual discharge or permit as opposed to entire waterbodies or classes of dischargers. • Documentation that the action(s) will not degrade or change an existing designated use; will not contribute to a lowering of 	<p><i>Please see #1 and 2 in the “Compliance Schedule” general response section above.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>water quality; will protect downstream tribal resources; and will not pose an increased risk to human health or the environment.</p> <ul style="list-style-type: none"> • A specified time frame for achieving water quality standards or compliance as soon as possible. Extensions beyond the 5 year NPDES permit cycle must be justified, explicitly time limited, subject to full and appropriate review, and should not be used to avoid meeting criteria. • An enforceable sequence of actions or operations that lead to compliance with water quality criteria or effluent limitations. • Clear and enforceable benchmarks and metrics for monitoring progress, including interim numeric limits where possible. • Consultation with and review by tribes whose U&A may be impacted by the action. 	
<p>Commenter ID: 17</p> <p>Schedules of compliance also apply to general permits. Ecology's proposed rule states that schedules of compliance shall meet requirements in WAC 173-220-140, a rule which only applies to individual NPDES permits. For general permits, the proposed compliance schedule rule must refer to WAC 173-226-180. At WAC 173-201A-510(4)(d), after "WAC 173-220-140" please add", or in WAC 173-226-180 for general permits," or language to the same effect. Reference: Pollution Control Hearing Board municipal stormwater Phase I and Phase II general permit ruling at http://www.eluho.wa.gov/Global/RenderPDF?source=casedocument&id=327 (Findings of Fact, Conclusions of Law and Order- Condition S4, at CL 12, August 07, 2008, in PSA, et al. v. Ecology,</p>	<p><i>As the commenter notes, the compliance schedule language in the proposed rule cross references the compliance schedule requirements in the individual NPDES permit regulation (chapter 173-220 WAC), but does not cross reference the compliance schedule requirements in the general NPDES permit regulation (chapter 173-226 WAC). Ecology will delete the cross reference to WAC 173-220-140 because the cross reference is unnecessary. A compliance schedule in an individual NPDES permit must comply with the requirements in WAC 173-201A-510 as well as the requirements in WAC 173-220-140. Likewise, a compliance schedule in a general permit must comply with the</i></p>

Specific Comments on Compliance Schedules

Commenter ID/ Comment	Ecology Response
<p>PCHB Nos. 07-021, 07-026, 07-027, 07-028, 07-029, 0-030, 07-037 (Phase I), and PCHB Nos. 07-022, 07-023 (Phase II). See also WAC 173-226-040. WAC 173-201A-510 Means of implementation. (4) General allowance for compliance schedules. ((ft;t)) .(d). Prior to establishing a schedule of compliance, the department shall require the discharger to evaluate the possibility of achieving water quality ((criteria)) standards via nonconstruction changes (e.g., facility operation, pollution prevention). Schedules of compliance ((may in no case exceed ten years, and)) shall meet requirements in WAC 173-220-140. Or in WAC 173-226-180 for general permits, and shall require compliance with the specified requirements as soon as practicable. Compliance schedules shall generally not exceed the term of any permit unless the department determines that a longer time period is needed to come into compliance with the applicable water quality standards.</p>	<p><i>requirements in WAC 173-201A-510 as well as the requirements in WAC 173-226-180.</i></p>
<p>Commenter ID: 23, 68,55 Compliance schedules are too long.</p>	<p><i>Please see #2 in the “Compliance Schedule” general response section above.</i></p>
<p>Commenter ID: 30 Compliance schedules should not be authorized for purposes of “conducting studies.”</p>	<p><i>Please see #1 in the “Compliance Schedule” general response section above.</i></p>
<p>Commenter ID: 30 Compliance schedules should require interim numeric effluent limits in conjunction with narrative limits, when such limits are applicable.</p>	<p><i>Ecology agrees that interim limits are required in compliance schedules, and this is clearly stated in WAC 173-201A-510(c).</i></p>

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<p>Commenter ID: 30</p> <p>Ecology should require a transparent demonstration on the record that compliance schedules will achieve attainment with standards in the time allotted.</p>	<p><i>Please see #1 and 2 in the “Compliance Schedule” general response section above. All compliance schedules will be developed and implemented in a permit or order, with appropriate documentation in the record.</i></p>
<p>Commenter ID: 30</p> <p>Ecology’s proposed regulations should further define the limited circumstances when a compliance schedule applies.</p>	<p><i>Please see #1 and 2 in the “Compliance Schedule” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>Proposed compliance schedule rules are overbroad, and afford ecology too much discretion in delaying permit compliance with water quality standards. Rule Language should be further refined to limit the duration and application. Proposed regulations need to provide guidance on time limits.</p>	<p><i>Please see #1 and 2 in the “Compliance Schedule” general response section above. Ecology agrees that additional guidance is needed and will be developed. Ecology plans to develop guidance for implementing the new compliance schedule language. This is specified in the Rule Implementation Plan Water Quality</i></p> <p><i>Standards for Surface Waters of the State of Washington Amendments to Chapter 173-201A WAC, as required by the Administrative procedures Act.</i></p>
<p>Commenter ID: 30</p> <p>Proposed rules create a disincentive to complete approvable TMDLs</p>	<p><i>Compliance schedules have existed in Ecology regulations at WAC 173-220-140 for the NPDES permit program since 1974. We have never found them to be a disincentive for completing approvable TMDLs. Please also see in the “Compliance Schedule” general response section above.</i></p>

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<p>Commenter ID: 30</p> <p>The rule amendment extends the time limit for compliance schedules beyond ten years without consideration of the circumstances prescribed by RCW 90.48.605, and is therefore not authorized by state law.</p>	<p><i>An extension in compliance schedule length beyond 10 years is not prohibited by any law. RCW 90.48.605 applies only to a suite of specific TMDL-associated circumstances. Ecology followed the specific language as directed by the legislature in developing new rule language for RCW 90.48.605.</i></p>
<p>Commenter ID: 32</p> <p>The draft standards allow a significant increase in timeframes for compliance schedules, which is unacceptable. Ecology already provide for the use of compliance plans in permitting. While EPA does not set a maximum allowable time for compliance schedules, they must ensure compliance “as soon as possible.” The draft standards uses vague language “as soon as possible” when refereeing to must meeting water quality standards, which is contrary to the law and threatens to result in a perpetual delay in compliance. The draft standards must require specific timeframes to meet standards to ensure accountability that our waters are clean.</p>	<p><i>The proposed revisions to the variance section follow federal regulations that dictate that a variance must be “as soon as possible”. The required timeframe for final compliance is unchanged. The rule revisions acknowledge that this may in rare circumstances extend beyond the term of a permit or a ten-year timeframe.</i></p>
<p>Commenter ID: 34</p> <p>Compliance schedule language is essential and must be retained in WAC 173-201A-510(4). Compliance schedule language is essential for implementing the rule proposal and the proposal in WAC 173-201A-510(4) and should be adopted along with numeric criteria. The continued availability and usefulness of compliance schedules is a key part of implementing the rule proposal. Specifically, the proposal acknowledges and allows for additional time to come into compliance with</p>	<p><i>Comment noted.</i></p>

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<p>applicable standards in certain circumstances in WAC 173-201A-510(4) (d) and (e). Ecology must adopt these concepts as they provide regulatory certainty for dischargers while working towards improved water quality.</p>	
<p>Commenter ID: 39</p> <p>The rule language should include enforceable interim numeric limits and narrative limits when the narrative provisions are enforceable, as in the case of facility construction deadlines. This is consistent with the Hanlon Memo. Hanlon Memo at 2. Therefore, based on the law and policy above, the Puyallup Tribe recommends that for non-TMDL Waters, Ecology require the shortest timeframe possible on a case-by-case basis. Ecology must mandate that schedules of compliance may not exceed ten years, and shall generally not exceed the term of any permit. When appropriate and as soon as possible, Ecology should require that the compliance schedule shall lead to compliance with the state water quality standards and the Clean Water Act and implementing regulations. For TMDL waters, Ecology must mandate that compliance schedules may not exceed the 10 year timeline, unless permittees meet the requirements of the four part test established in RCW 90.48.605, as discussed above. If the permittee meets the four part test requirements, compliance schedules must be the shortest timeframe possible, so long as it is not later than the applicable statutory deadline under the Clean Water Act 40 CFR §122.47(a)(1). When appropriate, and as soon as possible, the compliance schedule shall lead to compliance with the state water quality standards, Clean Water Act and implementing regulations.</p>	<p><i>Please see #1 and 2 in the “Compliance Schedule” general response section above.</i></p>

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<p>Commenter ID: 39</p> <p>Not providing a time certain timeframe for compliance schedules is a significant and unacceptable deviation from existing rule language that provides a time certain deadline for complying with water quality standards. In fact, the draft rule language as written provides an open-ended off ramp from meeting water quality standards in a timely way and delays measurable progress in water quality in the interim. This is contrary to the Clean Water Act. The draft rule language as written misconstrues the intent of compliance schedules in the CW A. Notably, compliance schedules that are longer than one year in duration must set forth interim requirements and dates for their achievement. 40 C.F.R. §122.47(a)(3). Instead of a "schedule for compliance", the Proposed Rule grants polluters a wide berth to pollute and not meet effluent limits necessary to achieve water quality standards. Although, EPA does not expressly state the limitations of the "timeframe allowed," everything in the CW A points to the fact that such schedules should be, at a minimum or "as soon as possible". Furthermore, the rule language should include enforceable interim numeric limits and narrative limits when the narrative provisions are enforceable, as in the case of facility construction deadlines. This is consistent with the Hanlon Memo. Hanlon Memo at 2.</p>	<p><i>Please see # 2 in the "Compliance Schedule" general response section above.</i></p>
<p>Commenter ID: 39</p> <p>The proposed draft rule language mandates compliance with "water quality standards in the shortest practicable time". See Proposed Rule. Instead, Ecology should revise its rule to utilize the federal language in 40 C.F.R. §122.47(a)(1) - "as</p>	<p><i>Ecology concurs with this comment and has revised the rule language to change the term "as soon as practicable" to "as soon as possible" in subsections (b) and (d) of the variance section to be consistent with federal regulations.</i></p>

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<p>soon as possible". There is a significant difference between "practicable" and "possible" as the impermissible subjective factors creep in with the use of "practicable" with regard to the regulated community. The Federal Regulations avoided this difficult issue in complying with the Clean Water Act's mandate and using "possible."</p>	
<p>Commenter ID: 39</p> <p>The rule language for compliance schedules in both non-1MDL and TMDL waters alike should incorporate as much of the Hanlon Memorandum language or intent as possible. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue). Ecology's Proposed Rule fails to sufficiently limit compliance schedules. Based upon the items discussed above regarding compliance schedules, the Proposed Rule is arbitrary, capricious, contrary to law, and violates Treaty Rights.</p>	<p><i>The Hanlon Memorandum is implementation guidance for federal rule. Ecology has taken a consistent approach and will develop implementation guidance for this state rule language as well. To further respond to your comment, please see the Inputs to the Equations section in this Response to Comments.</i></p>
<p>Commenter ID: 41</p> <p>Understanding when compliance schedules do not apply would help in understanding how this tool should be used. WAC language should provide direction on the scope of these tools to avoid permittees of Ecology from taking advantage of the rule by interpreting it too broadly to meet the foundational water quality objectives in the CWA.</p>	<p><i>Compliance schedules are considered by Ecology on a case specific basis, and the decision to issue a compliance schedule is determined by Ecology, not by the permittee. Therefore, we do not believe additional language is needed to ensure that the tool is interpreted too broadly by permittees. Ecology will clarify schedules of compliance in a specific permit or order.</i></p>
<p>Commenter ID: 48</p> <p>Based on direction from the Washington Legislature, Ecology proposed language regarding how compliance schedules interact with TMDLs at</p>	<p><i>Comment noted.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>WAC 173-201A-510(4)(e). This new language explains situations in which Ecology can determine a longer time period is needed to come into compliance with WQBELs based on applicable WQS beyond the term of a NPDES permit. In any of these situations, the actions specified in the compliance schedule must be sufficient to achieve WQBELs based on WQS as soon as possible according to WAC 173-201A-510(4)(e)(iv). This is consistent with the EPA's guidance and applicable NPDES regulations.</p>	
<p>Commenter ID: 48</p> <p>Lastly, the EPA acknowledges that Ecology constructed the compliance schedule provision to apply to aquatic life uses (WAC 173-201A-510(4)(a)(i)) and uses other than aquatic life (WAC 173-201A-510(4)(a)(ii)). If Ecology adopts this proposed rule language, the state can implement the compliance schedule authorizing provision upon the EPA's approval, without ESA consultation, only for uses other than aquatic life.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 48</p> <p>The EPA acknowledges that Ecology proposed to replace its existing maximum compliance schedule duration of ten years with language specifying that compliance schedules shall generally not exceed the term of the permit at WAC 173-201A-510(4)(d). This is consistent with applicable EPA guidance and applicable NPDES regulations so long as compliance schedules are authorized to meet a NPDES permit's WQBELs as soon as possible.</p>	<p><i>Comment noted.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 48</p> <p>The EPA compared the proposed provision to the language in federal regulations at 40 CFR 122.47(a)(1), which requires "compliance as soon as possible ..." Ecology's proposed provision retains language in its current provision, which requires compliance "in the shortest practicable time." Without a definition of "practicable," it is not clear whether "practicable" means the same thing as "possible." The EPA's concern is that it could be implemented in a manner less stringent than "possible." Ecology uses these terms interchangeably throughout the compliance schedule authorizing provision and supporting documentation. The EPA recommends that Ecology use "possible" throughout to ensure the provision is as stringent as federal regulations.</p>	<p><i>Ecology concurs with this comment and has revised the rule language to change the term "as soon as practicable" to "as soon as possible" in subsections (b) and (d) of the variance section to be consistent with federal regulations.</i></p>
<p>Commenter ID: 48</p> <p>The EPA requests that Ecology clarify that compliance schedules cannot be established for WQS themselves. Instead, compliance schedules can be authorized for WQBELs that are based on certain WQS.</p>	<p><i>Ecology concurs that compliance schedules are for limits, not for standards.</i></p>
<p>Commenter ID: 48</p> <p>The EPA supports Ecology's decision to delete WAC 173-201A-510(4)(a)(v) from its existing compliance schedule provision. This language regarding "resolution of pending water quality standards issues" is inconsistent with the EPA's guidance and applicable law. In addition, the EPA supports the language Ecology proposed to add to WAC 173- 201A-510 (4)(b)(iv). This language clarifies that compliance schedules can be issued for the completion of water quality studies only if</p>	<p><i>Comment noted.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>such studies are related to implementation of permit requirements to meet WQBELs. Without this clarification, it was unclear if Ecology envisioned such studies to include support for a Use Attainability Analysis (UAA) or a site-specific criteria revision, which would be inconsistent with the EPA's guidance and applicable NPDES regulations.</p>	
<p>Commenter ID: 48</p> <p>The EPA supports Ecology's new definition for compliance schedules.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 61</p> <p>We are concerned that compliance schedules will not serve to address the most difficult challenges because they must ultimately end at compliance – which may be impossible in some instances.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 65</p> <p>The Clean Water Act and its implementing regulations have always authorized the use of compliance schedules to provide time for dischargers to come into compliance with permit requirements. See 33 U.S.C. § 1362(17); 40 C.F.R. §§ 122.2, 122.47. Washington regulations also authorize the issuance of compliance schedules. See WAC 173-220-140, 173-201A-510(4). The proposed rule does not grant any compliance schedules and does nothing to clarify when the Department will grant compliance schedules.</p>	<p><i>Compliance schedules are issued on a case specific basis. The compliance schedule section in the rule provides information on what is needed to qualify for a compliance schedule. Ecology will determine schedules of compliance in a permit or order.</i></p>
<p>Commenter ID: 66</p> <p>WSDOT believes Ecology intends to use compliance schedules as an implementation tool to</p>	<p><i>All compliance schedules will be developed and implemented in a permit or order. Permittees and interested parties will retain all the current</i></p>

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Commenter ID/ Comment	Ecology Response
<p>provide reasonable time for technological advances in stormwater treatment to lead to technology-based BMPs that are widely available and cost-effective. If so, suggest clarifying how Ecology plans to develop compliance schedules and how permittees can obtain those schedules. WSDOT remains concerned that existing stormwater best management practices are likely unable to remove carcinogenic pollutants, such as C-PAH, to a level that meets the proposed criteria.</p>	<p><i>opportunities for involvement in permit and order development.</i></p>
<p>Commenter ID: 72</p> <p>The proposed WDOE rule opens Compliance Schedules to be far too open ended. It says dischargers must meet water quality standards “as soon as possible”. This vague language allows the discharger control of the time-frame in which they will comply. Spokane Riverkeeper maintains that it’s far too idealistic to assume that dischargers will do everything in their power to stop polluting. The rule should have concrete time-limits, inside of the 5 year permit schedule, that dischargers need to meet in order to ensure accountability.</p>	<p><i>Please see #1 and 2 in the “Compliance Schedule” general response section above.</i></p>

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Intake Credits

Summary of Comments

Several comments questioned whether intake credits should be allowed and some suggested this new section should be removed from the rule. Some comments suggested that intake credits should be allowed but must meet strict requirements to ensure that this tool is not misused and does not allow pollution to occur from individual dischargers. Some comments support the use of intake credits as a way to ensure that a discharger is not required to deal with pollutants that already exist in the receiving water and that is not present in their discharge.

Individual comments and responses on intake credits are included in the table below this General Comment/Responses section.

General Comment/Responses on Intake Credits

1. General Comment: 5, 8, 12, 13, 30, 32, 39, 41, 72

Intake credits should not be allowed and this new section should be removed from the rule. The use of intake credits will weaken the ability to remove toxics and discourage efforts to remove pollutants.

Response: Ecology does not agree that intake credits will weaken the ability to eliminate toxics or discourage efforts to remove pollutants. Evaluation of the use of intake credits is independent of the requirement to apply all known, available, and reasonable methods of treatment (AKART) prior to discharge. AKART requires pollutant treatment and removal if the technologies to do so are available and reasonable. Intake credit analysis occurs separately under the conditions and minimum requirements in the rule. The analysis resulting in the most stringent effluent limits must be applied in developing an NPDES permit.

2. General Comment: 5, 8, 13, 21, 30, 34, 39, 41, 72

To avoid potential violations of water quality standards, intake credits should be limited to very specific circumstances to ensure that this tool is not misused.

Response: Ecology believes the proposed rule requirements are protective of water quality standards. In addition to physical, chemical, and spatial analysis required to demonstrate applicability, there must be no net addition of the pollutant to the discharge compared to the intake water. If any mass is added by the discharger, an equal or greater mass must be removed and an effluent limit is required. The rule contains very specific requirements to prevent misuse and ensure protection of water quality. Ecology is developing guidance for permit writers to ensure consistent implementation of intake credits and protection of all downstream waters.

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 4 NWFPA supports inclusion of intake credits to provide regulatory relief to dischargers who are subject to background pollutants.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 5 Ecology should not be providing offerings from meeting existing standards or providing the designated tenable uses. Also, do not provide intake credit. Incentives should be developed to capture all pollutants coming through the system that end up in our waters. Please construct policies that create net decreases in pollutants leaving the end of pipes in order to encourage dischargers to work towards cleaning up Washington's waters.</p>	<p><i>Please see #1 and 2 in the "Intake Credits" general response section above.</i></p>
<p>Commenter ID: 8 Ecology proposes to allow intake credits. Proposed Rule at 16-18. The intake credits system "address situations where facilities bring in and discharge levels of background pollutants contained in the intake water, referred to as intake credits." In other words, intake credits allow dischargers to discharge water that violates ordinarily-applicable limits if the discharger has not added pollutants to the water. Intake credits are a particularly problematic concept for toxics such as those at issue in this rulemaking. Many chemicals for which such exceptions will be sought are for chemicals that accumulate in fish tissue and water over time such that even small additions are ultimately harmful and harmful in the very way the water quality criteria is supposed to avoid. Allowing intake credits could weaken the ability to rid Washington's waters of these dangerous pollutants and would contribute to and/or perpetuate the death by a thousand cuts problem of bioaccumulation that Washington is currently experiencing with these pollutants. If intake credits will be included in the rules, and Waterkeepers objects to their inclusion, Ecology</p>	<p><i>Please see #1 and 2 in the "Intake Credits" general response section above.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>must strengthen the rules to protect against abuse and the bioaccumulation problem.</p>	
<p>Commenter ID: 8 Ecology should impose strict laboratory and testing requirements on any discharger seeking an intake credit and ensure that monitoring occurs frequently with full public disclosure. Further, permits should be written with no-detect limits such that as laboratory methods improve at detection, the amounts of these toxic pollutants is steadily pushed downward—the plain intent and requirement of the Clean Water Act. Any permit allowing an intake credit must strictly enforce specific testing at the point of intake to determine the background level of the subject pollutant and testing again at the point of discharge (in the pipe or facility, not once it hits the water) and any increase in the pollutant must be considered a permit violation. Finally, Ecology’s intake credit must be pollutant, waterbody, and discharger specific—anything more broad and loosely-regulated will simply be subject to abuse and will be nothing more than a permit to perpetuate pollution.</p>	<p><i>Please see #1 and 2 in the “Intake Credits” general response section above. Ecology requires sufficiently sensitive test methods in all permits, as required by federal rule at 40 CFR 122 and 136. All intake credits are evaluated on a pollutant, waterbody, and discharger specific basis when developing the permit. Ecology expects significant additional monitoring will be required in the permit when intake credits are used to ensure that the conditions for use of the credit remain applicable. We are developing additional guidance for permit writers to ensure adequate permit conditions are applied in a consistent manner.</i></p>
<p>Commenter ID: 12 Do not allow the implementation of intake credits and instead provided incentives for net decreases in pollutants.</p>	<p><i>Please see #1 in the “Intake Credits” general response section above.</i></p>
<p>Commenter ID: 13 Regarding intake credits, the State has expanded the definition and use of intake credits in a manner that is overly broad and has the potential to be misused. Intake credits should apply only to intake water that comes from the same surface body of water in the immediate vicinity of the discharge. Intake credits should be limited to facilities that do not add the intake pollutant of concern and do not alter the intake pollutant chemically or physically. Intake credits should not be used when intake water is taken from groundwater and discharged to surface water,</p>	<p><i>Please see #1 and 2 in the “Intake Credits” general response section above. The rule contains very specific requirements to prevent misuse and ensure protection of water quality. The potential scenarios you describe will require significant additional study and documentation to allow use of intake credit over more straightforward scenarios. Ecology is also developing guidance for permit writers to ensure consistent implementation of intake credits.</i></p>

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Commenter ID/ Comment	Ecology Response
when intake water is mixed with waters other than those from the same body of water, or when intake water supplied by a municipality is treated to remove an intake water pollutant prior to distribution.	
<p>Commenter ID: 22 The proposed regulatory language is much improved over the January 2015 version. Although this administrative mechanism will not likely be relied on in many NPDES permitting transactions, it is nevertheless an important and reasonable regulatory concept. Weyerhaeuser appreciates Ecology's efforts to develop and include the Intake Credit concept in the water quality standards regulation.</p>	<i>Comment noted.</i>
<p>Commenter ID: 30 Documenting, reporting, and transparency requirements should be included when intake credits are applied.</p>	<i>Ecology agrees and is developing guidance to ensure transparency in the use of intake credits in permits. Because the documentation and reporting is associated with issuance of the NPDES permit, which has its own public process requirements, no additional language is incorporated in the rule. Ecology fact sheets are intended to fully document the basis for permit development, including reasonable potential analysis that doesn't result in a limit. This is retained for intake credits and Ecology expects full and clear documentation of use to be available for interested parties during the draft permit comment period.</i>
<p>Commenter ID: 30 Further refinement of the definition and criteria applicable to intake credits is needed. The proposed definition for intake credits is overbroad in that it allows the application of intake credits to the development of both technology based effluent limits (TBEL), water quality based effluent limits (WQBEL) and Reasonable Potential Analysis (RPA). It also does not adequately define what bodies of water</p>	<i>Please see #1 and 2 in the "Intake Credits" general response section above. Ecology considers that the proposed rule requirements are protective of water quality standards. In addition to physical, chemical, and spatial analysis required to demonstrate applicability, there must be no net addition of the pollutant to the discharge compared to the intake water. If any mass is added by the discharger, an</i>

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<p>intake and subsequent discharge can come from. Therefore, further refinement of the definition and subsequent criteria are recommended as follows: Definitions and subsequent regulations should prohibit use of intake credits in the RPA. Prohibition of credits for intake pollutants partially or entirely due to human activity should be maintained. Deletions and clarifications are recommended to further refine application of intake credits and prevent violation of the Clean Water Act. 1) Clarify 460(1)(d). This section proposes the following: (d) Where intake water for a facility is provided by a municipal water supply system and the supplier provides treatment of the raw water that removes an intake water pollutant, the concentration of the intake water pollutant will be determined at the point where the water enters the water supplier's distribution system. It is not clear from the language whether a credit is allowed before or after treatment from a drinking water facility. The language should clarify that credits will not be provided for pollutants present in the water prior to treatment. If this provision were to be construed to the contrary, it could provide a pollution allowance for a pollutant that is not actually present in the "intake" of the discharger, because it was removed in the prior drinking water treatment. Intake credits must only be allowed for pollutants that merely pass through a facility without either an addition or alternation of the physical and chemical proprieties of the pollutant. Delete section 460(1)(e) Delete mixing zone allowance in 460(2)(a)(iv) Delete allowance to increase pollutant concentration in discharge unless it violates applicable water quality standard in 460(2)(a)(iv) – this is a direct violation of anti-degradation requirements.</p>	<p><i>equal or greater mass must be removed and an effluent limit is required. Use of intake credits for a reasonable potential analysis is more limited than water quality-based effluent limit use. Technology-based effluent limit use is not addressed in the proposed rule language. Technology-based effluent limit use is already allowed separately under federal rule. The definition of "intake pollutant", combined with the requirements in 460(1)(d), prevent the use of intake credits for pollutants removed prior to the permitted facility. Ecology anticipates limited use of 460(1)(e) due to the additional analysis required with multiple sources. While adding complexity to the analysis, it does not limit water quality protections. Mixing zone analysis is retained and consistent with allowable use of mixing zones within the water quality standards. Under the proposed language, no net addition of the pollutant (i.e. no increase in loading) is allowed, including within a mixing zone. Ecology agrees with maintenance of the restrictions on use of intake credits for ground water where the intake pollutant is present due to human activity.</i></p>
<p>Commenter ID: 30 The use and application of intake credits should be further refined and Narrowed to ensure that credits are only applied to circumstances that</p>	<p><i>The rule contains very specific requirements to prevent misuse and ensure protection of water quality. Ecology is developing guidance for permit writers to</i></p>

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<p>Will not cause or contribute to violations of water quality standards Or in any way increase the pollutant level of downstream tribal waters Or downstream water resources of affected tribes.</p>	<p><i>ensure consistent implementation of intake credits and protection of all downstream waters.</i></p>
<p>Commenter ID: 30 TMDLs development must be required prior to allowing intake credits for discharges into 303(d) listed waters.</p>	<p><i>Ecology did not incorporate this suggestion. The additional data required from a facility to demonstrate no net addition of a pollutant in the discharge as compared to the intake water may be valuable information in TMDL development and establishing wasteload allocations.</i></p>
<p>Commenter ID: 30 To avoid potential violations of water quality standards, intake credits should be limited to the following circumstances: a. The facility does not add the intake pollutant of concern if it is a toxic parameter b. The facility does not alter the intake pollutant chemically or physically c. When intake of the pollutant of concern comes from the same surface body of water from the immediate vicinity of the discharge. d. When the intake credit is used to demonstrate compliance with effluent limitations, as opposed to avoiding the setting of effluent limitations through the Reasonable Potential Analysis review. e. Prohibits the use of mixing zones for demonstrating compliance with requirements and water quality standards. f. Prohibit any increase in pollutant concentration to avoid anti-degradation violations.</p>	<p><i>Ecology believes the proposed rule requirements are protective of water quality standards. In addition to physical, chemical, and spatial analysis required to demonstrate applicability, there must be no net addition of the pollutant to the discharge compared to the intake water. If any mass is added by the discharger, an equal or greater mass must be removed and an effluent limit is required. Antidegradation requirements are independent of intake credits. Any increase in concentration as compared to the intake pollutant concentration must also be analyzed for compliance with antidegradation.</i></p>
<p>Commenter ID: 32 The draft standards should eliminate the proposal for intake credits. Intake credits allow a polluter to discharge water that violates water quality limits if the discharger has not added pollutants to the water. Allowing intake credits could weaken the ability to eliminate toxics and would contribute to and/or perpetuate the death by a thousand cuts problem of bioaccumulation</p>	<p><i>Please see #1 in the “Intake Credits” general response section above.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>that Washington is currently experiencing with these pollutants. If intake credits will be included in the final standards, Ecology must address potential impacts from bioaccumulation and develop incentives to capture all pollutants coming through the systems that end up in our waters.</p>	
<p>Commenter ID: 34 Intake credits are necessary and appropriate implementation tools for the rule proposal in WAC 173-201A-460 and allowed by the Clean Water Act. Intake credits are essential tools for implementing the rule proposal in water permits for point source dischargers and the proposal in WAC 173-201A-460 should be adopted along with numeric criteria. The revised 2016 intake credit rule language is an improvement over the 2015 proposed language as it expands on the 2015 concept and provides additional details on the 41 intent and functions of intake credits. While an intake credit will not be available in all situations to a discharger, nevertheless it can be a useful tool for permitting when a facility is found not to have the reasonable potential to cause or contribute to an exceedance of the applicable water quality standard but the pollutant is found in intake water.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 39 It is essential that the state's water quality standards rule provide a sufficient definition, and specify how and when these tools will be used. The use and application of intake credits should be narrowly construed to and only applied in circumstances that will not cause or contribute to violations of water quality standards or degrade tribal waters. To avoid potential violations of water quality standards, intake credits should be limited to the following circumstances:</p> <ul style="list-style-type: none"> • The facility does not add the intake pollutant of concern 	<p><i>Many of your suggested restrictions are already included in the proposed rule. Ecology believes the proposed rule requirements are protective of water quality standards as written. In addition to physical, chemical, and spatial analysis required to demonstrate applicability, there must be no net addition of the pollutant to the discharge compared to the intake water. If any mass is added by the discharger, an equal or greater mass must be removed and an effluent limit is required. Use of intake credits for reasonable potential analysis is much more limited than when calculating effluent</i></p>

Specific Comments on Intake Credits

Commenter ID/ Comment	Ecology Response
<ul style="list-style-type: none"> • The facility does not alter the intake pollutant chemically or physically • When intake of the pollutant of concern comes from the same surface body of water from the immediate vicinity of the discharge • When the intake credit is used to demonstrate compliance with effluent limitations, as opposed to avoiding the setting of effluent limitations through the Reasonable Potential Analysis review. 	<p><i>limits. Ecology is also developing guidance to assure consistent use of intake credits in permit development.</i></p>
<p>Commenter ID: 39 The Puyallup Tribe fundamentally has a problem with a facility "bringing in" pollutants via their process and delivering these pollutants into the Tribe's treaty and jurisdictional waters, namely toxics like arsenic. The facility then gets a "credit" under their permit that in effect allows the facility to violate usually-applicable water quality based limits if it has not added or modified the pollutant. These toxics are carcinogenic, or in the case of other toxics, persistent and often bioaccumulate. These pollutants would not have been otherwise discharged to receiving waters but for the facility's operations and it is blatantly unconscionable to us to receive a "credit" to discharge these pollutants under a water quality based effluent limit.</p>	<p><i>Ecology does not agree that the rule allows a facility to "bring in" pollutants that would not otherwise reach the vicinity of the outfall point in the receiving water within a reasonable period had it not be removed by the permittee. This is the primary limiting condition on the use of intake credits, along with several other limitations required to protect water quality.</i></p>
<p>Commenter ID: 39 Without narrowly construing the definition, scope, and applicability of the proposed Intake Credit language in the Proposed Rule so that an intake pollutant will not "cause or contribute to an excursion of a water quality standard", we find Ecology's Proposed Rule to be arbitrary, capricious, contrary to law, and violates the Tribe's treaty rights.</p>	<p><i>Please see #1 and 2 in the "Intake Credits" general response section above. The rule contains very specific requirements to prevent misuse and ensure protection of water quality. Ecology is developing guidance for permit writers to ensure consistent implementation of intake credits and protection of all downstream waters.</i></p>
<p>Commenter ID: 41 WEC is concerned about how intake credits will be applied and what safeguards exist for disproportionately impacted communities. It is</p>	<p><i>Please see #1 and 2 in the "Intake Credits" general response section above. Ecology believes the rule language provides sufficient safeguards to avoid the</i></p>

Specific Comments on Intake Credits

Commenter ID/ Comment	Ecology Response
<p>important to push dischargers to reduce pollution, especially in areas with toxic "hot spots" affecting people who live near and use the waters. We are concerned that the proposed provision will be used to allow areas of high pollution to be maintained and compliance obligations to be unfairly weakened based on the "no net addition" part of the rule. We recommend this provision be removed with a process for discussing it if necessary given the other implementation tools available.</p>	<p><i>outcomes mentioned. We are developing additional guidance to support consistent use of intake credits statewide.</i></p>
<p>Commenter ID: 48 As explained in further detail below, the EPA does not consider the intake credit rule (Section B) and provision regarding CSOs (Section D) to be WQS under CWA Section 303(c); rather they are NPDES permitting implementation provisions. Consistent with 40 Part 123.62 and Section VII.B. of the NPDES MOA between the EPA and Ecology, Ecology must notify the Regional Administrator and shall transmit to the EPA regulatory revisions that affect the NPDES permitting program. The EPA will determine whether the proposed change(s) triggers a revision to the state's approved program.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 48 The EPA does not consider this new implementation tool to be a WQS under CWA Section 303(c); rather it is an NPDES permitting implementation provision. The EPA provided comments on the 2015 proposed provision, and it appears Ecology has addressed our previous comments. 1. Ecology's proposed language at WAC 173-201A-460(2)(a) parallels, in part, the GLI language. Specifically, the rule provides that water quality-based effluent limits (WQBELs) may be established "so there is no net addition of the pollutant in the discharge compared to the intake water" if certain specified conditions are met. This provision is similar to the GLI's "No Net Addition" (NNA), and the conditions are essentially parallel to</p>	<p><i>Comment noted.</i></p>

Specific Comments on Intake Credits

Commenter ID/ Comment	Ecology Response
<p>those included in the GLI provision. This revision from the previous version is consistent with the EPA's earlier comments. 2. In general, the restrictions on the use of the intake credit provision seem to be as protective as the GLI. Ecology appears to have addressed the EPA's primary comments from the previous draft version of this provision proposed in 2015 when it comes to separating out the two types of intake credit provisions in the GLI (Reasonable Potential and NNA provisions).</p>	
<p>Commenter ID: 49 Intake credits are a necessary and appropriate implementation tool for the rule proposal and allowed by the Clean Water Act. KapStone recognizes the improved language in this section over the January 2015 proposal. The proposed language provides additional details on the use of intake credits and it states that an intake pollutant must be from the "same body of water" as the discharge in order to be eligible for an intake credit. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue)</p>	<p><i>The proposed rule describes the conditions a discharger must demonstrate to establish a "same body of water" determination. If the intake pollutant would have reached the vicinity of the outfall point in the receiving water within a reasonable time had it not been removed by the permittee, and other applicable rule conditions are met, the intake credit may be used.</i></p>
<p>Commenter ID: 72 The rule proposes Intake Credits that excuse a discharger from being responsible for removing pollutants entering their facilities. This is problematic as dischargers need to ensure that there is no net increase in the amount of pollutants leaving their facility. Intake Credits will have the effect of encouraging dischargers to do the bare minimum with regards to cleaning up pollutants like PCBs. If intake credits were to be given, there should be some sort of incentive to having a net decrease in pollutants to encourage dischargers to work towards cleaning up Washington's waters.</p>	<p><i>Please see #1 and 2 in the "Intake Credits" general response section above.</i></p>

Specific Comments on Intake Credits

Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 75</p> <p>I would like to suggest site specific options for treatment facilities that can demonstrate that the source water that makes up the influent to the treatment facilities, if that's part, the remaining part of that source water ends up in the receiving waters, that they be allowed to take the intake credits for the source water that comes into their facility. In other words, if there's an aquifer, and the water purveyors take the water out of the aquifer, and it's used by the residents and then flows to the treatment plant and then goes into the receiving waters or the stream, and that aquifer, the water that was left in that aquifer also ends up into that streaming water, receiving water, that that be considered as a site specific case for applying intake credits.</p>	<p><i>The scenario you describe may be eligible for an intake credit provided the conditions in the rule are met and appropriate data and documentation are provided to verify use of the credit. All evaluations are site specific and case-by-case.</i></p>

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Combined Sewer Overflow Treatment Plants

Summary of Comments

Several comments support adding this approach for combined sewer overflow treatment plants to the draft rule, while other comments question why this new section is necessary. Some comments do not agree with the proposed use of narrative effluent limits as the primary means for compliance for combined sewer overflows as opposed to numeric limits.

Individual comments and responses on combined sewer overflow treatment plants are included in the table below.

Specific Comments on Combined Sewer Overflow Treatment Plants	
Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 13</p> <p>The State has proposed allowing CSO treatment facilities to primarily use narrative effluent limits as opposed to having to meet numeric hhc. The Tribe does not believe that this approach complies with either state or federal CSO policies and regulations. Although CSO dischargers such as King County have made significant improvements in treating CSO discharges and in reducing the frequency and magnitude of CSO events, there is ample evidence that even intermittent discharges of contaminants may result in environmental degradation. The Tribe believes that, like any other discharger, CSO treatment facilities must ultimately comply with water quality standards, including numeric hhc, that protect designated uses. The Tribe requests that this section of the proposed rule be revised to include measures for monitoring and demonstrating compliance with all applicable criteria.</p>	<p><i>Ecology agrees that all discharges must comply with numeric and non-numeric water quality standards. The proposed rule language for CSOs recognizes the intermittent nature of the discharge and describes the primary means of requiring compliance with water quality standards as though the use of narrative limitations or best management practices. This is consistent with federal rule at 40 CFR 122.44(k) where numeric effluent limitations are infeasible to calculate. Compliance with all water quality standards, including numeric human health criteria, is still required. Monitoring and reporting requirements will be specified in the NPDES permit issued to a CSO facility.</i></p>
<p>Commenter ID: 30</p> <p>Federal legal requirements provide that water quality based effluent limits are required to</p>	<p><i>Ecology agrees that water quality based effluent limits are required for CSO discharges where reasonable potential to</i></p>

Specific Comments on Combined Sewer Overflow Treatment Plants

Commenter ID/ Comment	Ecology Response
show compliance with state standards (including HHC) in the second phase of CSO plan implementation unless permittees can otherwise demonstrate compliance with applicable standards.	<i>exceed water quality standards exists. The new provision only clarifies the appropriate method for expressing those water quality based effluent limits (e.g. as best management practices).</i>
Commenter ID: 30 Narrative limits are less protective of water quality, and are likely to generate less water quality data to evaluate progress and compliance with federal and state requirements	<i>Ecology does not agree that narrative limits are less protective of water quality. The new provision provides clarity on how to appropriately assure protection of water quality standards for intermittent and highly variable CSO discharges.</i>
Commenter ID: 30 Proposed use of narrative effluent limits as the primary means for compliance for CSO should be eliminated, because it does not provide assurance of effective treatment, and may contravene both state and federal regulations.	<i>Federal and state regulations support the use of a narrative, best management practices, approach when it is infeasible to calculate a numeric effluent limit. Ecology believes this is the appropriate approach to assure effective treatment for CSO discharges that is protective of water quality standards.</i>
Commenter ID: 30 Requiring narrative limits merely because of the variability of discharge sets bad precedent for NPDES permits, and is an approach unsupported by federal law.	<i>Ecology relies on federal regulations at 40 CFR 122.44(k) which allow the use of best management practices (BMP) in NPDES permits if it is not feasible to calculate numeric limits. Due to episodic and short-term CSO discharges, it is not feasible to calculate numeric effluent limits that are based on criteria with durations of exposure up to 70 years.</i>
Commenter ID: 30 State law requirements for CSO dischargers, including those from CSO treatment plants,	<i>Ecology agrees and has proposed implementation rules protective of human health water quality standards, including designated uses.</i>

Specific Comments on Combined Sewer Overflow Treatment Plants

Commenter ID/ Comment	Ecology Response
also require compliance with WQS and protection of designated uses	
<p>Commenter ID: 35</p> <p>We support the State approach as it will ensure intermittently treated discharges are protective of human health and that the County's long-term CSO control plan will be successful.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 45</p> <p>I believe that, limiting the narrative capability to CSOs rather than to stormwater in general is inappropriate. Stormwater is also periodic. And while we may have a lot of water in Western Washington, it's particularly periodic in Eastern Washington. And during the summer it can be very periodic with storm events such as thunderstorms and that sort of thing. So I want Ecology to re-look at that criteria and apply it more broadly so that narrative criteria is available to all types of stormwater discharges, not just CSOs.</p>	<p><i>The new provision is specific to CSOs but is not limited to CSO discharges. Ecology already uses a narrative best management practice approach in many stormwater permits where it is infeasible to calculate numeric effluent limits.</i></p>
<p>Commenter ID: 48</p> <p>The EPA does not consider the new provision at WAC 173-201A-510(6) to be a new or revised WQS under CWA Section 303(c); rather it is an NPDES permitting implementation provision. These provisions provide clarity for the implementation of the human health criteria in NPDES permits, but do not change the underlying human health criteria. From a permitting perspective, the EPA does not believe this new provision is necessary given the existing flexibilities in</p>	<p><i>Ecology agrees the new provision is related to NPDES permitting implementation. Providing this clarification in rule rather than relying on existing guidance will provide greater consistency in implementation, a more transparent approach to permitting, and greater regulatory certainty.</i></p>

Specific Comments on Combined Sewer Overflow Treatment Plants

Commenter ID/ Comment	Ecology Response
<p>guidance. Where effluent pollutant concentration data and numeric criteria exist, Ecology must evaluate for RP. There are flexibilities already identified in EPA and Ecology guidance²⁶ to use appropriate averaging periods, dilution design conditions, and point of application of the criteria as ways to address the long duration associated with human health criteria. CSO BMPs (nine minimum controls) are already required to be in CSO permits as technology-based effluent limits (TBELs). In addition, the EPA's CSO policy²⁷ (codified under CWA 402(q)) requires that controlled CSO discharges not cause or contribute to exceedances of the WQS.</p>	
<p>Commenter ID: 48</p> <p>The EPA supports Ecology's new definition for CSO treatment plants. Ecology relies on federal regulations at 40 CFR 122.44(k) which allow the use of best management practices (BMP) in NPDES permits if it is not feasible to calculate numeric limits. Due to episodic and short-term CSO discharges, Ecology states it is not feasible to calculate numeric effluent limits that are based on criteria with durations of exposure up to 70 years.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 60</p> <p>All treatment plant effluent is highly toxic. EPA regulates and tested few. EPA plans to review nearly 200 emerging contaminants, but there are thousands. Effluent has acidified water bodies, impacted the health of</p>	<p><i>Ecology agrees and has proposed implementation rules protective of human health.</i></p>

Specific Comments on Combined Sewer Overflow Treatment Plants

Commenter ID/ Comment	Ecology Response
<p>marine life, contaminated marine life on human & wildlife diets has pass the contamination to humans and wildlife. WA State needs to write strong rules that will protect our natural resources.</p>	
<p>Commenter ID: 69 Supports approach in draft rule.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 70 King County supports Ecology's incorporation of language within the rule defining how human health water quality standards will be applied to treatment plants that operate on an intermittent basis. We support this approach as it will ensure intermittently treated discharges are protective of human health while providing certainty to King County's long-term combined sewer overflow control plans.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 73 Generally, the State has been helpful in supplying high water quality to the citizens, we don't have the issues here of Flint, Michigan. But trying to put all water treatment into the same category isn't reasonable, and way too costly. Because King County's regional service area includes some parts with combined sewer systems, I am particularly interested in the language of the proposed rule as it relates to combined sewer overflow (CSO) treatment plants. The State is proposing to use narrative water quality standards and require a set of best practices specifically for these intermittent</p>	<p><i>Comment noted.</i></p>

Specific Comments on Combined Sewer Overflow Treatment Plants

Commenter ID/ Comment	Ecology Response
<p>CSO treatment plants. These plants are critical investments that move us towards improved water quality. We support the State approach as it will ensure the intermittent need for treating and reducing the total number of these discharges will be protective of human health. The County's long-term CSO control plan will be successful considering the very high cost of the occasional need for treatment.</p>	

Other Comments on Rule Revisions

Downstream Waters Protection

Summary of Comments

Most comments on downstream protection were similar, expressing concern that the proposed new standards would not be protective of downstream waters. One comment indicated that the proposed fish consumption rate and risk level would help ensure protection of downstream waters. Because of the similarity of the comments, a general response is given below.

Individual comments on downstream waters protection are included in the table below this General Comment/Responses section.

General Comment/Responses on Downstream Waters Protection

1. General comment: 26, 30, 31, 39, 48, 53

Concerns are expressed that the proposed new water quality standards will not be protective of downstream waters.

General response: The federal regulations specify how states are to address downstream waters in development of state water quality standards. These two requirements are found in 40 CFR 131.10 and specify that the State: 1) shall take into consideration the water quality standards of downstream waters, and 2) shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.

Ecology already has existing narrative rule language in WAC 173-201A-260(3)(a) and (3)(b) that allows for case-by-case establishment of additional requirements to fully support designated and existing uses, and requires that upstream actions must be conducted in manners that meet downstream water body criteria. To further fulfill the first requirement to take into consideration the water quality standards of downstream waters, Ecology placed language requiring protection of downstream waters in the draft rule at WAC 173-201A-240(b) and considered all public comments that were received during the public comment period regarding downstream waters protection, as the final rule was developed. Ecology considers “downstream waters” to include both intra- and interstate waters, as well as waters that form a boundary between adjacent jurisdictions.

The second part of the federal requirement is that the state shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters. New language in WAC 173-201A-240(b) explicitly requires upstream water quality to provide for attainment and maintenance of downstream water quality standards. This language was taken from EPA’s *Templates for Narrative Downstream Protection Criteria in State Water Quality Standards* (EPA 2014, 820-F-14-002). Further, existing narrative rule language in WAC 173-201A-260(3)(a) and (3)(b) allows for case-by-case establishment of additional requirements to fully support designated and existing uses, and requires that upstream actions must be conducted in

manners that meet downstream water body criteria. These narrative standards will collectively be used to ensure that downstream waters are adequately considered and protected.

Specific Comments on Downstream Waters Protection	
Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 26</p> <p>The Spokane Tribal Natural Resources Department with these comments does not support, and the comments should not be construed as supporting any NPDES permits that do not meet the downstream water quality standard requirements of 40 C.F.R. Section 122.4(d).</p>	<p><i>Please see #1 in the “Downstream Waters Protection” general response section above.</i></p>
<p>Commenter ID: 30</p> <p>Washington’s proposed water quality standards fail to demonstrate protection of downstream standards, including the tribes’ and Oregon’s, as required by federal regulations. Pursuant to the CWA and its implementing federal regulation, states are required to demonstrate that new or revised water quality standards do not cause or contribute to violations of downstream standards. EPA explains that the preferred path for states to comply with 40 CFR 131.10(b) is to develop water quality standards that are consistent with those downstream.</p> <p>Unfortunately, not all of Washington’s proposed HHC meet these requirements, because they establish standards for shared intra-state/tribal waters (e.g. Oregon, Spokane Tribe) whose current water quality standards for many parameters are more protective than Washington’s proposal. This has the effect, as EPA notes in the quote above, of shifting the burden unto the tribes to regulate the inadequacies of upstream standards. This issue is exacerbated by the fact that many tribes’ jurisdictional boundaries lie at the mouths of streams, and therefore are downstream of most dischargers. Ecology must adopt more</p>	<p><i>Please see #1 in the “Downstream Waters Protection” general response section above.</i></p>

Specific Comments on Downstream Waters Protection

Commenter ID/ Comment	Ecology Response
protective numeric criteria to ensure consistency with federal regulations	
<p>Commenter ID: 31</p> <p>Washington’s final rule should quantitatively specify requirements for how Washington will “maintain a level of water quality when entering downstream waters” and who will be responsible for the inadequacies of upstream standards. Washington shares waters with Oregon and with tribes that currently have or are working to have water quality standards that are more protective than Washington’s proposed rule. The narrative in the proposed rule is not sufficient to assure the attainment of downstream standards either with Oregon’s or those of the tribes.</p>	<p><i>Please see #1 in the “Downstream Waters Protection” general response section above.</i></p>
<p>Commenter ID: 39</p> <p>Absent any clear evidence as to how Washington intends to meet the Clean Water Act's obligations regarding downstream waters, the Proposed Rule is arbitrary, capricious, contrary to law, and a violation of the Tribe's Treaty Right.</p>	<p><i>Please see #1 in the “Downstream Waters Protection” general response section above. Also, please see responses to comments in the Inputs to the Equations and Tribal Treaty Rights sections of this Response to Comments.</i></p>
<p>Commenter ID: 39</p> <p>Although states have flexibility and discretion as to how this requirement is accomplished, the Tribe prefers this approach. Consistent upstream and downstream uses and criteria provide consistency across jurisdictional waters for the successful management of resources and reduce the likelihood of interjurisdictional disputes. Based on the Proposed Rule, the State of Washington's rules continue to become more and more disparate from Washington Tribe's water quality standards. and neighboring states like Oregon. The state's proposed</p>	<p><i>Please see #1 in the “Downstream Waters Protection” general response section above.</i></p>

Specific Comments on Downstream Waters Protection

Commenter ID/ Comment	Ecology Response
<p>changes to implementing the proposed standards through the use of variances and compliance schedules broaden the chasm between neighboring states and Washington's Tribes. The requirement to protect downstream uses mandates adopting either narrative or numeric criteria to ensure the attainment and maintenance of downstream and preferably, an antidegradation policy and implementation plan that expressly prevents degradation of downstream waters and a plan for assurances.</p>	
<p>Commenter ID: 39</p> <p>Specifically, when designating or revising upstream uses specified in Clean Water Act section 101(a)(2), or subcategories of such upstream uses, provisions should include how the state's revised upstream uses (and associated criteria) will continue to demonstrate protection of existing or designated uses of downstream waters. The state has not provided the rationale as to how they will ensure downstream tribal and inter-state uses with neighboring states of Oregon and Idaho will be protected, particularly in light of the broadening of the off-ramps from the Clean Water Act provided by authorizing extensive undefined compliance schedules, variances and, intake credits.</p>	<p><i>Please see #1 in the “Downstream Waters Protection” general response section above.</i></p>
<p>Commenter ID: 39</p> <p>The Puyallup Tribe would like to obtain assurances from the State of Washington that the integrity of our downstream waters will be maintained and human health and our resources will be protected. Accordingly, we have requested assistance from EPA and cooperation from the State to restore downstream waters of the Tribe under the 303(d) process.</p>	<p><i>Please see #1 in the “Downstream Waters Protection” general response section above.</i></p>

Specific Comments on Downstream Waters Protection

Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 42</p> <p>EPA also appropriately recognizes the need, under the CWA, to protect downstream states' and tribes' WQS.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 48</p> <p>Finally, many of Washington's rivers are in the Columbia River basin, upstream of Oregon's portion of the Columbia River. Oregon's criteria are based on a FCR of 175 g/day and a cancer risk level of 1 o-6 • Ecology's proposal to derive human health criteria for Washington using a cancer risk level of 10⁻⁶ along with a FCR of 175 g/day helps ensure that Washington's criteria will provide for the attainment and maintenance of Oregon's downstream WQS consistent with 40 CFR 131.10(b)</p>	<p><i>Please see #1 in the “Downstream Waters Protection” general response section above.</i></p>
<p>Commenter ID: 48</p> <p>The EPA has specific comments on WAC 173-201A-240(5)(b). In general, the EPA supports Ecology's revisions to this provision, which explain the purpose of the criteria, criteria derivation, and the format of Table 240. However, the EPA would like to address the proposed language regarding protection of downstream waters in further detail. Ecology proposed to add the following language: "All waters shall maintain a level of water quality when entering downstream waters that provides for the attainment and maintenance of the water quality standards of those downstream waters, including the waters of another state." This is consistent with the EPA's regulation at 40 CFR 131.1(b). In addition, the EPA's 2014 guidance on Protection of Downstream Waters states that: "Adoption of narrative criteria or numeric criteria (or both) that are protective of downstream waters are viable options under</p>	<p><i>Please see #1 in the “Downstream Waters Protection” general response section above.</i></p>

Specific Comments on Downstream Waters Protection

Commenter ID/ Comment	Ecology Response
<p>40CFR131.1(b). States/tribes have discretion in choosing their preferred approach. The EPA expects that many states/tribes will consider using a combination of narrative and numeric criteria depending on their circumstances. “The EPA’s guidance also suggests that states and tribes can consider a more tailored and specific narrative criterion and/or a numeric criterion in certain situations, such as when more stringent numeric criteria are in place downstream and/or environmental justice issues are relevant. Most of Washington’s rivers are in the Columbia River basin and are, therefore, upstream of Oregon’s portion of the Columbia River. In addition, the Columbia River constitutes most of the Washington-Oregon border. The EPA recommends that Ecology adopt numeric human health criteria (either in addition to or instead of narrative criteria), consistent with our comments in this letter, that ensure the attainment and maintenance of Oregon’s downstream WQS, or to provide additional rationale detailing how the use of a narrative downstream protection criterion alone will protect Oregon’s more stringent WQS. For waters flowing into Oregon, criteria that are equally stringent as or more stringent than Oregon’s human health criteria would better ensure the attainment and maintenance of Oregon’s downstream WQS consistent with 40 CFR 131.1(b). This aligns with the EPA’s previous statements regarding a desire for regional consistency in human health criteria among Region 10 states.</p>	
<p>Commenter ID: 53</p> <p>CTUIR members fish in Washington waters and those “downstream.”</p>	<p><i>Please see #1 in the “Downstream Waters Protection” general response section above.</i></p>

Tribal Treaty Rights

Comment Summary

Many comments were received dealing with the effect of the new rule on tribal treaty rights and the designated uses that apply to the standards and criteria to protect tribal rights. Many of the comments describe the importance of fishery resources to the health and well-being of tribes, and express concern that the new human health criteria will result in contamination of fish and shellfish to such an extent that tribal treaty rights will not be upheld.

Individual comments and responses on Tribal Treaty Rights are included in the table below this General Comment/Responses section.

General Comment/Responses on Tribal Treaty Rights

1. General Comment: 1, 21, 24, 76, 30, 31, 33, 36, 37, 39, 53, 64, 77

Many comments expressed concerns that the new rule does not protect tribal treaty rights, and that the new criteria will result in contamination of fish and shellfish to such an extent that tribal treaty rights will not be upheld.

General Response: The new human health criteria were developed to protect fish, shellfish, and surface water drinking water uses in Washington. The designated uses to which the human health criteria apply are discussed in #2 general comment below. As discussed in the section on Fish Consumption Rates in this Response to Comments, Ecology's based the human health criteria on a fish consumption rate of 175g/day. Ecology based this decision on survey information from the three Puget Sound tribal surveys with the highest high fish consumption rates, with added safety factors such as inclusion of marine species and the addition of all fish and shellfish consumed regardless of source. Consequently, Ecology is treating tribal fish consumption as a focus population of the criteria equation. As several commenters have noted, factors other than fear of toxics have lowered fish consumption rates from historic or unsuppressed rates, and these factors cannot be addressed by the human health criteria (i.e. decreased abundance of fish and shellfish, consumer choice to replace fish and shellfish with other food options, etc.). While the human health criteria for toxics cannot increase the abundance of fish and shellfish, the human health criteria will likely result in reduced fish advisories. If consumption rates increase to the extent that 175 g/day is no longer representative of average consumption rates of high-consuming tribes or other populations in Washington, the criteria can be updated with consideration of new information. Please see the Fish Consumption Rates section of this Response to Comments

2. General Comment: 1, 21, 24, 76, 30, 31, 33, 36, 39, 53, 64, 77

Ecology must adopt criteria that fully protect the designated uses, including fishing or harvesting that are critical to maintain tribal treaty rights. Several commenters also cited the Decision that EPA made in designating a sustenance use for Maine based on tribal fish consumption, and noted that the State of Washington, like in Maine, has a

duty to protect the sustenance use in these waters so that tribal members can safely consume fish.

General Response: Ecology agrees that the state is required under the CWA to adopt criteria that fully protect the designated uses, including the fishing or harvest use. Ecology disagrees that the EPA evaluation for Maine is applicable to Washington and that the tribal populations should be termed the “general population” for purposes of the human health criteria in Washington.

In its proposed regulation for Washington EPA found that, within the harvesting use, there is a more sensitive sub-use called “tribal treaty rights,” and then EPA treated this as a new use category. This is analogous to making categories based on sensitivity (such as described below for aquatic life uses). The EPA approach is flawed because it results in accounting for the sensitive or “highly exposed” populations twice. In human health criteria development “highly exposed” populations are considered and accounted for when the input values (for the human health criteria equations) are determined for criteria calculation (for example, choice of a FCR or other inputs to the equation). The EPA human health criteria 2000 guidance clearly describes the approach to addressing sensitive populations in the context of criteria that protect an “entire” designated use, not multiple categories of the same use type (e.g., sustenance as one part of the harvest use). For instance, EPA provides a risk range that can be applied to the general population (10^{-7} to 10^{-5}) in order to ensure that highly exposed or more sensitive groups do not exceed an acceptable upper risk level of 10^{-4} . See, for example, EPA 2000 (page 2-6): “EPA believes that both 10^{-6} and 10^{-5} may be acceptable for the general population and that highly exposed populations should not exceed a 10^{-4} risk level” and “In cases where fish consumption among highly exposed population groups is of a magnitude that a 10^{-4} risk level would be exceeded, a more protective risk level should be chosen.” Protection of highly exposed groups is addressed by input values, not by re-defining the designated use and to what it applies. EPA’s 2000 guidance on FCRs demonstrates this with the following specific recommendation for protection of highly exposed populations:

“EPA recommends default fish intake rates for recreational and subsistence fishers of 17.5 grams/day and 142.4 grams/day, respectively. These rates are also based on uncooked weights for fresh/estuarine finfish and shellfish only. However, because the level of fish intake in highly exposed populations varies by geographical location, EPA suggests a four preference hierarchy for States and authorized Tribes to follow when deriving consumption rates that encourages use of the best local, State, or regional data available. ... EPA strongly emphasizes that States and authorized Tribes should consider developing criteria to protect highly exposed population groups and use local or regional data over the default values as more representative of their target population group(s). The four preference hierarchy is: (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 rates.” (EPA, 2000, pages 4-24 to 4-25, emphasis added)

In its action for Washington EPA applied an approach that is commonly used in designating aquatic life uses. This aquatic life use approach, based on categories of uses, is demonstrated in Washington’s freshwater designated uses for aquatic life. Instead of simply designating a general use of “aquatic life,” the Washington water quality standards contain designated aquatic life use

categories from higher to lower sensitivity, and have criteria developed to address each use category. An example is WAC 173-201A-200 Table 200(1)(c).

The criteria applied to each designated use category are developed to provide full protection for that specific use. This approach is not unusual in aquatic life standards adopted by states, but is unusual for human health criteria harvest uses because the risk-based criteria guidance produced by EPA (2000 guidance) already accounts for different categories of use (e.g. sensitivity or high exposure) in the development of the input values to the criteria calculation.

EPA does not suggest in its guidance that states should redefine the designated use to reflect a highly exposed or a sensitive group, but instead recommends that states should develop criteria that protect these groups. This approach results in a one-time accounting-for of the highly exposed group during criteria calculation, instead of accounting for highly exposed populations twice, as occurs when both the designated use and the input values are both modified to focus on highly exposed populations.

The designated use at issue in this comment is the use of "harvest." The designated use of harvest in Washington's water quality standards is a general use, and the population it applies to encompasses all people harvesting from Washington surface waters (not just a category represented by highly exposed groups or sustenance users as the commenter asserts). This population includes those who don't eat fish and shellfish (but might have incidental intake via sauces, dressings, etc.), those who might eat as little as one fish or shellfish meal once in a lifetime, and ranges to those who eat fish and shellfish on a daily basis. The human health criteria apply to all waters where harvest and/or drinking water uses are designated (this includes all surface waters of the state). The current rule takes onto account protection of fish and shellfish resources from toxics for all waters of the state, including the Usual and Accustomed waters. The human health criteria also include the practice of drinking untreated Washington surface waters. "Untreated" in regard to the human health criteria refers to specific treatment to remove toxics from water prior to drinking it, and not to other water treatments such as filtration to remove solids or chlorination to kill pathogens. The level of specificity of the harvest use, as described above, is consistent with EPA's Water Quality Standards Handbook: "The State selects the level of specificity it desires for identifying designated uses and subcategories of uses (such as whether to treat recreation as a single use or to define a subcategory for secondary recreation," at <https://www.epa.gov/sites/production/files/2014-10/documents/handbook-chapter2.pdf>).

Because the harvest levels in, and the FCRs potentially associated with, some of Washington's surface waters could represent subsistence (including Usual and Accustomed waters that cover much of the state) the FCR (and body weight in part) included in the criteria calculations were based on tribal fish consumption survey information, as consistent with EPA guidance.

With regard to suppression, please see comments and responses in the Fish Consumption Rate section of this Response to Comments.

Note: Apart from the general use of the word "harvest, the specifically named designated uses in WAC 173-201A that the new human health criteria in Washington apply to are:

- The water-plus-organism human health criteria apply to any waters that include the Domestic Water (domestic water supply) use defined in WAC 173–201A–600.
- The organism-only human health criteria apply to waters that do not include the Domestic Water (domestic water supply) use and that are defined at WAC 173–201A–600 and 173–201A610 as the following: Fresh waters— Harvesting (fish harvesting), and Recreational Uses; Marine waters— Shellfish Harvesting (shellfish—clam, oyster, and mussel— harvesting), Harvesting (salmonid and other fish harvesting, and crustacean and other shellfish—crabs, shrimp, scallops, etc.— harvesting), and Recreational Uses.

Specific Comments on Tribal Treaty Rights	
Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 1</p> <p>The state must not impair the tribe's treaty-reserved rights to take and consume fish at all their usual and accustomed fishing grounds and stations. The proposed rules by the state of Washington do not meet these requirements.</p>	<p><i>Please see #1 and 2 in the “Tribal Treaty Rights” general response section above.</i></p>
<p>Commenter ID: 1</p> <p>Washington State is required to meet the provisions of the Clean Water Act to preserve the beneficial uses of water, including fishing. The public health issues that are determined by these standards affect everyone in Washington who eats fish. On top of this concern, the state must not impair the tribe's treaty-reserved rights to take and consume fish at all their usual and accustomed fishing grounds and stations. The proposed rules by the state of Washington do not meet these requirements.</p>	<p><i>Please see #1 and 2 in the “Tribal Treaty Rights” general response section above.</i></p>
<p>Commenter ID: 21</p> <p>The Lummi people have a treaty right to harvest finfish and shellfish - this right is diminished if the harvested fish cannot be consumed due to contamination or the fish cannot be harvested at all. Contamination of finfish and shellfish habitat, just like reduced instream flows due to out-of-stream diversions, fish passage</p>	<p><i>Please see #1 and 2 in the “Tribal Treaty Rights” general response section above.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>barriers, elimination of functioning riparian areas, and other factors have put our treaty rights and our Schelangen ("way of life") at risk.</p>	
<p>Commenter ID: 24, 76</p> <p>The state must not impair the tribe's treaty-reserved rights to take and consume fish at all their usual and accustomed fishing grounds and stations. The proposed rules by the state of Washington do not meet these requirements.</p>	<p><i>Please see #1 and 2 in the "Tribal Treaty Rights" general response section above.</i></p>
<p>Commenter ID: 30</p> <p>Environmental Justice and Tribal Exposure to Toxic Chemicals. The elevated health risk to tribal members from exposure to pollutants is considered to be an unacceptable impairment of treaty reserved rights by tribes. The state of Washington must utilize exposure parameters in the calculation of human health criteria that fully protect tribal members' health, continued cultural, spiritual, and economic practices, and the treaty-reserved rights to exercise them safely. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Please see #1 and 2 in the "Tribal Treaty Rights" general response section above.</i></p>
<p>Commenter ID: 30</p> <p>The Department of Ecology's proposed draft rule for variances, compliance schedules, intake credits, and narrative effluent limits creates a package of regulatory measures that authorizes non-compliance with water quality standards, and as a result fails to protect the treaty reserved rights of tribes to harvest fish and shellfish under the protection of the federal Clean Water Act. Tribes recognize that EPA regulations authorize states and authorized tribes to adopt water quality standards variances, compliance schedules, and</p>	<p><i>Responses are addressed in the sections on Variances, Compliance Schedules, Intake Credits, and Implementation Tools General Comments in this Response to Comments.</i></p>

Specific Comments on Tribal Treaty Rights

Commenter ID/ Comment	Ecology Response
<p>site-specific criteria to provide time to achieve the applicable water quality standards.²²³ However, EPA has also stated that, in order harmonize treaty-reserved rights with the CWA, such rights must be considered when determining whether proposed water quality standards amendments adequately protect Washington’s fish and shellfish harvesting designated uses.²²⁴ Consideration of treaty-reserved rights must be incorporated into any proposed implementation requirements that enable dischargers to delay or avoid compliance with required standards. Ecology has proposed “implementation tools” that could suspend protection of any of Washington’s designated uses without providing sufficient requirements to assure future attainability. They also remove important requirements to attain standards within reasonable timeframes. The state’s proposed implementation tools would give the state broad discretion to permit discharges that are out of compliance with water quality standards for unspecified numbers of years or decades, thereby creating permanent damage to treaty-reserved resources. Clearly, the emphasis of the proposed rule is on achieving more predictability for dischargers to continue to pollute, rather than certainty for clean water. Although many participants in the rulemaking process have noted that toxic contaminants in both point-source and non-point sources must be addressed to achieve water quality, the proposed implementation tools continue to segment such linkage, by removing requirements to prepare TMDLs prior to issuing variances, compliance schedules, and other implementation “tools.” Finally, tribes note that the proposed implementation tools apply to all water quality standards, thereby creating “off-ramps” for compliance that could impact the exercise of treaty rights, recreation, commercial fishing and shellfish</p>	

Specific Comments on Tribal Treaty Rights

Commenter ID/ Comment	Ecology Response
cultivation, threatened aquatic resources under the federal Endangered Species Act, and human health.	
<p>Commenter ID: 30</p> <p>The proposed fish consumption rate is not representative of a heritage rate or rates reflective of treaty-reserved fishing rights. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Please see #1 and 2 in the “Tribal Treaty Rights” general response section above.</i></p>
<p>Commenter ID: 31</p> <p>CRITFC’s member tribes hold treaty-secured and federally recognized tribal fishing rights that must be protected by the water quality regulations in Washington and all states in the watershed.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 31</p> <p>EPA’s proposed rule for Washington “Revision of Certain Water Quality Criteria Applicable to the State of Washington” that was issued in September 2015 specifically includes the safe harvest of treaty-reserved resources as a designated use in regulating water quality in Washington.</p>	<p><i>Please see #2 in the “Tribal Treaty Rights” general response section above.</i></p>
<p>Commenter ID: 31</p> <p>Substantial portions of the Columbia River are currently under fish consumption advisories because of this contaminant and clearly the state’s current water quality standards are not sufficient to protect the uses of these waters for fishing.</p>	<p><i>Please see #1 and 2 in the “Tribal Treaty Rights” general response section above.</i></p>
<p>Commenter ID: 33</p> <p>The Tribe has requested for many years that Washington State or the U.S. Environmental Protection Agency develop and adopt water quality standards that</p>	<p><i>Please see #1 and 2 in the “Tribal Treaty Rights” general response section above.</i></p>

Specific Comments on Tribal Treaty Rights

Commenter ID/ Comment	Ecology Response
<p>will be protective of the health of our tribal people and respect our treaty-reserved rights to the harvest of fish and shellfish. The Department of Ecology has now proposed a second draft rule for human health criteria and implementation tools that we believe fail to be protective of fish and shellfish consumption rates healthy for our tribal community.</p>	
<p>Commenter ID: 36 The harvest and consumption of fish and shellfish remains at the heart of tribal communities, and is a cultural, nutritional, and economic necessity as well as a treaty right.</p>	<p><i>Please see #1 and 2 in the “Tribal Treaty Rights” general response section above.</i></p>
<p>Commenter ID: 36 The State cannot impair the tribes' treaty-reserved rights to harvest and consume fish at their usual and accustomed grounds and protecting the water and marine sources is critical for the tribal exercise of treaty rights. The Tribes should not be faced with weighing the exercise of their treaty rights against the risk of cancer because the State has prioritized industry over human health. The proposed rule by the State of Washington do not meet these requirements</p>	<p><i>Please see #1 and 2 in the “Tribal Treaty Rights” general response section above.</i></p>
<p>Commenter ID: 37 This proposed rulemaking fails respect the state's obligation to honor the treaty rights of Pacific Northwest tribes.</p>	<p><i>Please see #1 in the “Tribal Treaty Rights” general response section above.</i></p>
<p>Commenter ID: 39 Based upon the extensive discussion and reasons stated herein, the Proposed Rule is arbitrary, capricious and a violation of law. In addition, the Proposed Rule violates the Tribe's Treaty rights. Absent significant</p>	<p><i>Please see in the “Tribal Treaty Rights” general response section above. To further address your comment, please also see responses in the Inputs to the Equations</i></p>

Specific Comments on Tribal Treaty Rights

Commenter ID/ Comment	Ecology Response
<p>changes to address the issues stated herein, Ecology risks significant ongoing litigation, EPA disapproval and subsequent delay in implementing the water quality standards that will protect all citizens of the State of Washington, including tribal people.</p>	<p><i>section of this Response to Comments.</i></p>
<p>Commenter ID: 39</p> <p>EPA determined it was their duty to include the concept of sustenance fishing as provided for in the tribal settlement acts, as to do otherwise "would run the risk that state WQS could be based on assumptions about fish consumption rates that could lead to criteria that fail to protect the Tribe's ability to safely consume fish for their sustenance". Accordingly, EPA concluded that the State of Maine had a duty to protect the sustenance use. "To adequately protect the sustenance fishing use, EPA reasoned, the State of Maine was required to revisit two aspects of its technical analysis supporting the human health criteria that determine how clean waters must be to allow the Tribes to safely consume fish for their sustenance." EPA continued that the State of Maine's analysis must treat the tribal population exercising the sustenance: fishing use as the target general population, not as a high consuming subpopulation of the State. EPA guidance calls for WQS that provide a high level of protection for the general population, while recognizing that small subpopulations may face greater levels of risk. However, the Tribes are not a subpopulation using the waters on their own lands; they are the population for which that land base was established and set aside. Second, the data used to determine the fish consumption rate for tribal sustenance consumers must reasonably represent tribal consumers taking fish from tribal waters and fishing practices unsuppressed by concerns about the safety of</p>	<p><i>Please see #1 and 2 in the "Tribal Treaty Rights" general response section above.</i></p>

Specific Comments on Tribal Treaty Rights

Commenter ID/ Comment	Ecology Response
<p>the fish available to them to consume. The data on which the State relied to develop the fish consumption rates for the Maine water quality standards did not include information about the sustenance practices of tribal members fishing in their own water, nor did they represent consumption levels that were unsuppressed by concerns about pollution. EPA concluded that the best available data that represent the unsuppressed fishing practices of tribal members fishing in tribal waters are contained in the Wabanaki Lifeways study, which looked at the historic sustenance practices of the Tribes in Maine.” Based on the Maine decision, Tribes in the State of Washington should be viewed by the State as the target population for making risk management decision, not a highly exposed subpopulation as most the waters for which this rule applies throughout the state are Usual and Accustomed fishing grounds. The State of Washington, like in Maine, has a duty to protect the sustenance use in these waters so that tribal members can safely consume fish.</p>	
<p>Commenter ID: 39</p> <p>For time immemorial, the Puyallup Tribe has fished the waters both within and outside its current reservation boundaries as a subsistence fishery, with the salmon being a traditional food source and cultural staple. The Tribe has a Treaty Right to fish and consume fish that are safe for consumption. The resulting Proposed Rule fails to reach any reasonable protection that demonstrates the States acknowledgment of, much less protection of, the Tribe's Treaty Rights. Finalizing the Proposed Rule without significant revisions will result in a violation of the Tribe's Treaty Rights.</p>	<p><i>Please see #1 and 2 in the “Tribal Treaty Rights” general response section above.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 39</p> <p>The proposed water quality standards at issue in these comments are required under the Clean Water Act to protect the most sensitive applicable uses in Washington's waters, which include the tribes' reserved rights to take fish for subsistence, ceremonial, religious and commercial purposes in Usual and Accustomed fishing places.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 39</p> <p>The Puyallup Tribe is a signatory of the Medicine Creek Treaty. 10 Stat. 1132 (1855). The state is party to the treaty and has an obligation to not foreclose the ability of the Tribe to fully exercise the full extent of the treaty right. The exercise of this right is to take fish and safely consume fish throughout the Tribes Usual and Accustomed fishing areas for subsistence, ceremonial, and commercial purposes. The courts have defined the extent of these rights to include a 50% allocation of the fishery as necessary to prevent the Tribes a moderate standard of living U.S. v. Washington, 384 F.Supp. 312, (W.D. Wash., 1974). Because treaties are binding and the supreme law of the land, the state in the rulemaking process and EPA who will review and approve or disapprove these rules must not interfere with the full exercise of this right by both protecting the beneficiaries of the right (the consumers to safely consume fish) as well as the safety of the food source (the fishery) to ensure continued reliance to feed their families and secure a moderate living. See Maine Decision.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 39</p> <p>The Tribes' usual and accustomed fishing grounds throughout Washington State compromise a majority of the waters of the state and it is the duty of the state</p>	<p><i>Please see #1 and 2 in the "Tribal Treaty Rights" general response section above.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>under the Clean Water Act to protect designated uses of these waters which include the fishing use. EPA determined in the recent Maine disapproval action that " it was their duty to include the concept of sustenance fishing as provided for in the tribal settlement acts, as to do otherwise "would run the risk that state WQS could be based on assumptions about fish consumption rates that could lead to criteria that fail to protect the Tribe's ability to safely consume fish for their sustenance". EPA guidance calls for WQS that provide a high level of protection for the general population, while recognizing that small subpopulations may face greater levels of risk. However, the Tribes are not a subpopulation using the waters on their own lands; they are the population for which that land base was established and set aside. Second, the data used to determine the fish consumption rate for tribal sustenance consumers must reasonably represent tribal consumers taking fish from tribal waters and fishing practices unsuppressed by concerns about the safety of the fish available to them to consume. The data on which the State relied to develop the fish consumption rates for the Maine water quality standards did not include information about the sustenance practices of tribal members fishing in their own water, nor did they represent consumption levels that were unsuppressed by concerns about pollution. Based on the Maine decision, Tribes in the State of Washington should be viewed by the State as the target population for making risk management decisions, not a highly exposed subpopulation as most the waters for which this rule applies throughout the state are Usual and Accustomed fishing grounds. The State of Washington, like in Maine, has a duty to protect the sustenance use in these waters so that tribal members can safely consume fish. Thus, under the Clean Water Act, protecting the designated uses of Washington's waters includes protecting the sustenance use. (Please</p>	

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Commenter ID/ Comment	Ecology Response
<p>see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	
<p>Commenter ID: 42</p> <p>Extensive comments on the tribes’ unique political and legal status and rights to fish. WQS for Washington must be evaluated in view of these legal constraints. EPA Has Recognized that WQS for Washington must comport with the above legal constraints. EPA correctly understands tribes exercising their fishing rights to be the relevant target general population; other highly-exposed groups would also be protected (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 53</p> <p>Fish advisories do not address the problem. It is unacceptable to suggest that tribal members could simply avoid higher risk by simply eating less fish—that eating more fish is “voluntary,” and the higher risk is assumed voluntarily (which is the presumption behind advisories). The ability to freely and fully exercise Treaty Rights—protected under the United States Constitution—should not come at the cost of excessive danger to health and well-being. Cancer should not be the penalty for adhering to time-honored rights and traditions.</p>	<p><i>Please see #1 and 2 in the “Tribal Treaty Rights” general response section above.</i></p>
<p>Commenter ID: 53</p> <p>The “right of taking fish” at all usual and accustomed places was guaranteed by the Treaty of 1855 with the United States. Inherent in the right of taking fish is that there are fish to take, and that those fish are safe to eat. Tribal representatives 161 years ago did not sign</p>	<p><i>Comment noted.</i></p>

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Commenter ID/ Comment	Ecology Response
treaties securing the right to harvest and consume contaminated fish.	
<p>Commenter ID: 64</p> <p>The Tulalip Tribes, as the successors in interest to the Snohomish, Snoqualmie, and Skykomish tribes and other tribes and band signatory to the Treaty of Point Elliott, urge Washington State not to issue regulations that will again fall short of the stated goal of protecting people who consume fish and shellfish. These regulations would result in impairment of the Tribe's treaty-reserved rights to take and consume fish at all our usual and accustomed fishing grounds and stations. For Tulalip, as with many other tribes across the country, rates of diabetes, obesity and other chronic diseases have become epidemic among our people. In an effort to combat these alarming health trends, we have established several tribal programs aimed at encouraging individual tribal members to return to a healthier diet, including a diet richer in traditional foods. For Tulalip people, that means eating a lot of fish and shellfish. We want to be able to eat fish at levels that are more consistent with our traditional diet and what public health experts recommend. As you know, fish have been an integral part of our traditional diet since time immemorial. Tulalip along with other Tribal nations expressed concern many years ago that the existing fish consumption rate of 6.5 grams per day grossly under-represents tribal fish consumption. The harvest and consumption of fish and shellfish remains at the heart of our tribal community, and is a cultural, nutritional, and economic necessity. Most importantly, the Tulalip Tribes has constitutionally protected, treaty-reserved rights to harvest, consume, and manage fish and shellfish in our usual and accustomed areas. Fishing is central to Tulalip culture and the rights reserved to continue our lifeways of fishing in all usual</p>	<p><i>Please see #1 and 2 in the “Tribal Treaty Rights” general response section above.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>and accustomed waters is a central component of our treaty with the United States government. These rights are as important today as when the treaty was signed, as is reflected in the landmark case of U.S. V. Washington (Boldt decision). These comments are submitted to ensure protection of those reserved rights and the health of tribal members.</p>	
<p>Commenter ID: 64</p> <p>Washington State is required to meet the provisions of the Clean Water Act to preserve the beneficial uses of water, including fishing. As a sovereign nation, the Tulalip Tribes believe that Ecology's draft rule for human health criteria and implementation tools will impair these treaty-reserved rights to take and consume fish at all our usual and accustomed fishing grounds and stations.</p>	<p><i>Please see #1 and 2 in the “Tribal Treaty Rights” general response section above.</i></p>
<p>Commenter ID: 77</p> <p>The Stillaguamish Tribe has a treaty reserved right to take fish at our usual and accustomed fishing grounds, and the State has a duty to ensure that these fish are safe to eat so that the Tribe can exercise this right. Furthermore, the Tribe has reserved hunting and gathering rights, and uptake of toxins wildlife and plants also has a serious negative impact on these reserved treaty rights. At an even deeper level, these treaty rights reflect spiritual and cultural lifeways of the Stillaguamish people that have existed from time immemorial I T. o be able to fish, hunt, gather and use these animals and plants in their diet, ceremonies, art and so many other ways are crucial to the Stillaguamish people, and we need clean water for all of this.</p>	<p><i>Please see #1 and 2 in the “Tribal Treaty Rights” general response section above.</i></p>

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Support for Rule

Summary of Comments

Many comments expressed strong opinions on either support of the revisions to the state water quality standards or not supporting the state revisions. Many commenters that do not support the state rule revisions expressed support for EPA draft regulations.

Individual comments and responses on Support of State Rule Revisions are included in the table below this General Comment/Responses section.

General Comment/Responses on Support on Rule

1. General Comment: 2, 5, 11, 12, 19, 22, 34, 35, 40, 46, 50, 58, 61

Several commenters expressed overall support for the development of human health criteria by Washington State rather than EPA, and support the need for implementation tools. Some commenters also expressed appreciation for the public involvement opportunities that the state took to involve and educate stakeholders.

Response: Ecology's public process for this rule development was extensive, and Ecology considered the public input from this extensive process when making decisions regarding development of the human health criteria and implementation tools, as well as other policy decisions made during the development of this rule. Ecology will adopt this state rule within the 180 days allowed by the Washington Administrative Procedures Act. While Ecology appreciates support for timely adoption and approval of the state water quality standards, we note that the state has no control over the timelines or actions of the USEPA after the state rule is adopted and submitted to EPA for approval.

2. General Comment: 1, 3, 7, 8, 10, 13, 14, 15, 20, 21, 24, 27, 30, 32, 36, 37, 39, 40, 43, 57, 59, 64, 67, 68, 76

Several commenters expressed an overall lack of support for the proposed state rule revisions for human health criteria unless they are the same as or more stringent than the EPA's proposed criteria. Many noted support for EPA's adoption of its proposed rule for Washington, rather than the state rule. Many commenters expressed concerns that the state proposal falls short of protecting people who consume fish from Washington's waters.

Response: Ecology has provided an extensive record that meets requirements in the state's Administrative Procedures Act to ensure that the new rule is protective of water quality and the associated designated uses of waters in the state. Ecology's public process for this rule development was extensive, and Ecology considered the public input when making decisions regarding the human health criteria, as well as other policy decisions made during the development of this rule. While different parties may disagree with the decisions Ecology made, those decisions were informed by Ecology's public process and were not the result of arbitrary or

capricious decision-making. The public record for this rule covered more than 4 years with multiple opportunities for public input and discussion. A detailed information index related to the human health criteria and implementation tools rulemaking process can be found on Ecology's website at: <http://www.ecy.wa.gov/programs/wq/swqs/HHCinfoindex.html>. Ecology hosted a series of Water Quality Policy Forums on the rulemaking work between October 2012 and September 2013 to address the complex science and public policy issues and to enable all interested stakeholders to participate in the rule development process (see website at: <http://www.ecy.wa.gov/programs/wq/swqs/hhcpolicyforum.html>). For more detailed information and explanations on the development of human health criteria, please see other sections in this Response to Comments on Fish Consumption Rates, Risk Levels, PCBs, Arsenic, and Inputs to the Equations. For more detailed information on implementation tools, please see sections on Variances, Compliance Schedules, and Intake Credits.

Individual comments on Support of State Rule Revisions to the State Water Quality Standards are included in the table below.

Specific Comments on Support for the Proposed State Rule	
Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 1</p> <p>The proposed state rule once again falls short of the stated goal of protecting people who consume fish and shellfish. The Department of Ecology's draft rule proposes other human health criteria that do not incorporate best available science and fails to account for other sources of toxic chemicals.</p>	<p><i>Please see #2 in the "Support for the Rule" general response section above.</i></p>
<p>Commenter ID: 3, 32, 36, 57, 76, 24, 64, 27</p> <p>The state should adopt standards modeled after, the same as, or more stringent than the EPA's proposed criteria.</p>	<p><i>Please see #2 in the "Support for the Rule" general response section above.</i></p>
<p>Commenter ID: 5, 12</p> <p>These comments are made with the idea that we should be working towards the ultimate elimination of discharge to the nation's waters. Ecology's proposed rulemaking should help us get there. Please do not provide provisions that</p>	<p><i>The new human health criteria and Implementation Tools should, over time, result in actions to reduce toxics entering surface waters.</i></p>

Specific Comments on Support for the Proposed State Rule

Commenter ID/ Comment	Ecology Response
<p>stall our progress, or avoid the tough work of getting our public waters fishable and swimmable.</p>	
<p>Commenter ID: 7 We must do better with regard to these water supplies.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 8 Ecology’s proposed rule cannot be demonstrated to be adequately protective of designated uses and it certainly does not result in more stringent human health criteria—in many instances criteria get weaker or simply stay as they were under the old, obviously non-protective rate.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 8 It is disheartening, to say the least, that so many pollutants would actually be allowed in greater quantities in our water, especially since two of those (arsenic and PCBs) are among the most dangerous regulated and the most prevalent. For four of the most hazardous and persistent chemicals in our waters—PCBs, arsenic, and mercury—the proposed rule does nothing or actually increases the amount of chemical allowed in Washington waters. The entire point of this exercise is to correct the current situation where Washington’s human health water quality standards for toxics are too weak and not adequately protective. Ecology’s current proposed rule is not in accord with the science or with the law and must be withdrawn as well as disapproved by EPA.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>

Specific Comments on Support for the Proposed State Rule

Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 8</p> <p>When, in 2015, Ecology proposed to increase the cancer risk rate to 10^{-5}, it tried to soften the effect of weakening cancer protections by combining that change with a program it called “anti-backsliding” so that no criteria for chemicals (other than arsenic) would become less protective. The result was a muddled hodgepodge of sometimes more protective criteria and sometimes the same concentrations as are allowed under the currently-inadequate and non-protective NTR. Yet, ironically, that anti-backsliding rule meant that—at the very least—health protections would not decrease (other than for arsenic). But the same cannot be said for Ecology’s latest attempt: for freshwater alone, there are 23 chemicals⁹ for which health protections would decrease under the new rule even before the off-ramps and loopholes are considered. EPA’s 2015 proposal is based on sound and complete science and is compliant with EPA’s own direction and recommendations for calculating protective human health water quality criteria. Plainly, in falling so far short of that, Ecology’s current proposed standards cannot be approved by EPA and Ecology must reconsider its arbitrary and inadequately protective approach. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 8</p> <p>The effect of Ecology’s proposed rulemaking is to reduce health protections for many chemicals—including one of the most dangerous, arsenic—leave others nearly unchanged and to expand and create loopholes</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above. Ecology disagrees that there is any reason to produce and publish another draft rule.</i></p>

Specific Comments on Support for the Proposed State Rule

Commenter ID/ Comment	Ecology Response
<p>for all pollutants from all pollutant sources. While rightly proposing an increased fish consumption rate and maintaining a one in one million cancer risk rate, Ecology otherwise manipulates the water quality standards equation and methodology such that it avoids increasing protections for the designated use of fishing and eating fish and shellfish for residents of the state, the basic requirement for setting standards under the Act. At the same time, Ecology expands the avenues for non-compliance with those inadequate standards for polluters—and for all water quality standards—by proposing to allow variances from water quality standards for an indefinite period of time, potentially decades. On top of dumbing down the standards with lengthy variances, Ecology will write compliance plans for polluters, again of indefinite length and ultimately proposes to allow polluters to give up at some point in the future. With these proposed rules, Ecology has written away many of the basic water quality protections of the Clean Water Act. Ecology should not settle for this outcome. Ecology must again return to the drawing board and propose a fish consumption rate that is in-line with tribal survey data and that will ensure strong protections for the highest fish consuming populations in the state. The current proposal includes unacceptable and arbitrary games (PCBs, for example) with math that will not result in on the ground protections. Lastly, Ecology should abandon plans to expand existing loopholes and off-ramps, especially where Ecology has acknowledged that its new rules are unlikely to change anything in practice for polluters.</p>	

Specific Comments on Support for the Proposed State Rule

Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 8</p> <p>Waterkeepers Washington objects to finalization of these rules as proposed and requests Ecology (or the U.S. Environmental Protection Agency) to finalize more protective rules that utilize an accurate fish consumption rate, that retains a protective 10⁻⁶ cancer risk rate for all human health criteria, protectively regulates all chemicals, and that eliminates unlawful and inappropriate compliance off-ramps.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 10</p> <p>It is our strong belief that the proposed rule does NOT do enough to protect those water systems</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 10</p> <p>This only allows for or makes legal polluting easier than it does not under the current EPA standards.</p>	<p><i>Please see other sections in this Response to Comments on Risk Level, Fish Consumption Rates, PCBs, Arsenic, Other Chemical Specific Comments, Variances, and Compliance Schedules.</i></p>
<p>Commenter ID: 11</p> <p>EPA states that Washington State may try to provide final criteria prior to EPA’s finalization of its HH WQC for Washington State (EPA 2015). However, this is an unrealistic goal given the state requirements for public review, which is a critical part of the process. EPA’s Federal Register notice also stated that if EPA finalizes its rule and Washington State subsequently submits HH WQC that are approved by EPA, the previously approved, EPA-developed HH WQC for Washington State would no longer apply (in favor of the Washington State-developed HH WQC). This eventuality would be extremely inefficient for all parties involved, and would</p>	<p><i>Please see #1 in the “Support for the Rule” general response section above. Ecology will adopt this rule within the 180 days allowed by the state Administrative Procedures Act (post release of the draft rule). Ecology has no control over the timelines or actions of the USEPA.</i></p>

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<p>create a tremendous amount of regulatory uncertainty. The uncertainty would likely lead to inaction for both compliance and enforcement activities—and therefore no improvement in water quality during that period—as well as significant economic impacts. Washington State should work aggressively to avoid this possibility.</p>	
<p>Commenter ID: 11</p> <p>We appreciate the time and effort that Washington State Department of Ecology (Ecology) staff have invested in engaging stakeholders and the public on these complex issues, and in the development of this second proposal. We strongly support development of HH WQC by Washington State rather than the US Environmental Protection Agency (EPA). We also support the need for implementation tools.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 12</p> <p>Our Washington Water Quality Standards need to move us forward towards greater protections, not to maintain a level comfortably close to the status quo. Our state standards need to be as protective, if not more protective, than the current EPA standards.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 13</p> <p>As a co-manager of natural resources with the State of Washington, the Suquamish Tribe urges the State to revise the proposed human health water quality criteria and implementation tools to meet the intent of the CWA for all designated uses, to respect and uphold treaty-reserved rights</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>

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and resources, and to protect the health of tribal members and all Washington citizens who eat fish.	
<p>Commenter ID: 13</p> <p>Washington's environmental laws are meant to protect human health and the environment for all citizens, tribal and non-tribal. These laws, however, are not purely state issues and have a direct nexus to tribal and federal interests. Washington State is required to meet the provisions of the Federal Clean Water Act and to adopt water quality standards that preserve the beneficial uses of surface waters, including aquatic life habitat and fishing. The public health issues that are determined by these standards affect everyone in Washington who eats fish. However, because tribal health and well-being rely on traditional lifeways that include the harvest and consumption of large quantities of local fish and shellfish across a lifetime, the failure to adopt protective criteria disproportionately and involuntarily harms tribal communities.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 14</p> <p>Please tighten rules for no exceptions to pollute, tighter limits on mercury and arsenic, and monitoring compliance to current restrictions. Please save our rivers. And our people.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 15</p> <p>Polluters do not need any more incentive to forego applying necessary environmental standards. I have grown up next to and live blocks away from our wonderful river and have</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>

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<p>seen the effects of pollution on this natural resource. We should be taking all measures to keep it clean not only because it is the most right and kind thing to do but also from the standpoint that this water helps keep our city beautiful and attracts tourists and implants for revenue.</p>	
<p>Commenter ID: 16</p> <p>Washington state is home to a wide variety of marine environments. We urge you to pursue water quality rules that can be adapted to local conditions.</p>	<p><i>The new human health criteria are statewide in application, but can be modified on a site-specific basis by future rulemaking. Variances, also a part of this rule, can be discharger-specific, can apply to multiple dischargers, or can apply to stretches of waters of different sizes, for instance individual lakes or sections of rivers, or much larger expanses of waters. Variances can only be granted through a rulemaking process. Both site-specific criteria and variances must have EPA CWA approval prior to use.</i></p>
<p>Commenter ID: 16</p> <p>We urge Ecology and the Environmental Protection Agency to take the time necessary to develop a similar, more collaborative approach (as used in the Lower Duwamish) to water quality rules and fish consumption. In our view, the present DOE and EPA proposals will result in a top-down, one-size fits-all effort that is highly likely to result in the type of prolonged disputes that hamstring the Portland Harbor superfund in Oregon. In contrast, the Duwamish model is literally producing cleaner fish sooner.</p>	<p><i>The Duwamish model is working, and is a combined approach under EPA's Superfund Program that also uses state standards.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 20</p> <p>State water quality standards should be more protective than federal standards, not less. Let's move this forward.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 21</p> <p>Hopefully, Washington State can prioritize the protection of public health and the environment over the interests of private companies and conclude this prolonged adoption process in the near future.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 21</p> <p>It is morally and legally wrong for the state to allow large private companies to profit at the expense of the environment and the citizens of the state.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 24, 76</p> <p>First, the proposed state rule once again falls short of the stated goal of protecting people who consume fish and shellfish.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 24, 76</p> <p>Washington State is required to meet the provisions of the Clean Water Act to preserve the beneficial uses of water, including fish able rivers. Implicit in that is safe fish consumption. The public health issues that are determined by these standards affect everyone in Washington who eats fish. On top of this concern, the state must not impair the tribe's treaty-reserved rights to take and consume fish at all their usual and accustomed fishing grounds and stations. The proposed rules by the state of Washington do not meet these requirements.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 21</p> <p>The Lummi Nation has been working on a triennial review of our water quality standards and anticipates that revised water quality standards will be issued for public comment during 2017. We are relying on the best available science in the revisions to our water quality standards and if the state does the same, it will be easier to both ensure consistency among the two sets of water quality standards and ensure the Washington standards will be protective of our downstream designated uses.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 22</p> <p>At the outset, the Water Quality Program should again be complimented for a sustained, highly professional and transparent public involvement process on this regulation development activity. The quality of the agency work and commitment to engage willing stakeholders over these last five years has been exceptional.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 22</p> <p>The state of Washington should be committed to a legal defense of an adopted state water quality standards revision should the EPA chose to disapprove any aspect of the state rule per 40 CFR 131.21. Washington will certainly characterize its submittal of water quality standards to EPA as fully achieving the regulatory criteria in 40 CFR 131.5, 40 CFR 131.6 and 40 CFR 131.11(a), and assert per 40 CFR 131.5(b) that EPA must therefore approve the standards.³ That said, a side-by-side comparison of EPA's September 2015 Revision of Certain Water Quality Standards Applicable</p>	<p><i>Please see #1 in the "Support for the Rule" general response section above.</i></p>

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<p>to Washington⁴, and the Department of Ecology's current HHWQC proposal, reveals many differences. It is not premature for Washington's Governor and the Department of Ecology to acknowledge the possibility of a partial EPA disapproval of state adopted standards (per 40 CFR 131.21). Should disapproval occur the Governor should be resolved to provide a vigorous legal (and political and public relations defense) of state adopted HHWQC revisions. Further, the state of Washington should make clear to EPA that any series of events that leaves the EPA Sept ember 2015 water quality standards proposal being promulgated and serving as Washington water quality standards is simply unacceptable.</p>	
<p>Commenter ID: 30</p> <p>The attached comments and all materials referenced demonstrate that the state of Washington's proposed rule fails to protect designated uses of water in several important ways. We call your attention to three of the major deficiencies. First, the state has selectively adopted the revised national 304(a) criteria, excluding relative source contribution and bioaccumulation criteria. The state fails to account for all sources of pollution, and does not use updated scientific information to analyze how pollutants accumulate in the food chain. Second, the state sets aside several highly toxic chemicals for special treatment to exempt them from tighter standards, leaving these chemicals at status quo, or even allowing discharge levels to increase. These exemptions are clearly directed toward alleviating the impact of tighter chemical criteria on specific industries, yet the</p>	<p><i>Please see #2 in the "Support for the Rule" general response section above.</i></p>

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<p>Clean Water Act mandates that public health must be the overriding consideration in the establishment of standards. Third, variances, compliance schedules, and other implementation provisions will allow permittees to violate water quality standards for potentially long and unspecified amounts of time.</p>	
<p>Commenter ID: 30</p> <p>Tribes strongly agree with the US Environmental Protection Agency's formal determination that the "existing criteria are not protective of the designated uses," and therefore "new or revised WQS [water quality standards] for the protection of human health are necessary to meet the requirements of the CWA [Clean Water Act] for Washington." 2 The EPA published this determination as part of the proposed rule to amend the National Toxics Rule for water quality criteria applicable to Washington in September 2015.</p>	<p><i>Ecology also agrees that the older EPA rule (the 1992 National Toxics Rule) is outdated.</i></p>
<p>Commenter ID: 31</p> <p>As stewards of the Columbia River fishery, CRITFC can only support the implementation of regulations and programs that improve water quality to a level that is sufficient to protect our watershed from the harmful impacts of waterborne pollutants. Ecology's proposed rule once again falls short of the stated goal of protecting people who consume fish from Washington's waters and should be revised.</p>	<p><i>Please see #2 in the "Support for the Rule" general response section above.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 32, 74, 77, 51, 1, 21, 36,30, 76, 24, 64, 33</p> <p>Support EPA's adoption of its proposed rule for Washington.</p>	<p><i>Comment noted</i></p>
<p>Commenter ID: 34</p> <p>Our greatest concerns remain with the incremental excess cancer risk level and the significantly increased fish consumption rate, which combined with other conservative factors will result in unnecessarily stringent water quality criteria. Water quality criteria serve as the foundation for implementing most Clean Water Act programs. Many of the proposed criteria are unattainable with current wastewater treatment technologies. NPDES permittees—including cities, counties, ports and the private sector—will be challenged with a demand for expensive wastewater treatment system upgrades, an inability to comply with permit terms, and litigation threats. We cite the lack of any meaningful basis in the administrative record for the risk management decision made for the cancer risk factor. The Department of Ecology was unable in supporting materials to demonstrate meaningful health protection gains from these more stringent water quality standards.</p>	<p><i>Please see the Overview section of the Decision-Document for this rulemaking, and see the “Risk Level” and “Cost Benefit Analysis” sections in this Response to Comments.</i></p>
<p>Commenter ID: 34</p> <p>Submitting the rule package for EPA approval containing both numeric criteria and implementation tools is appropriate under the law and consistent with Ecology’s prior commitments. Ecology has reiterated its intent to submit a rule package containing both</p>	<p><i>Ecology did not add language that tied the use of the human health criteria to the approval of the Implementation Tools, although this was discussed as part of the public process. In the past EPA has approved and disapproved specific sections of new rules. Please see the EPA</i></p>

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<p>numeric and narrative criteria and implementation tools for water permits on numerous occasions in the 2015 and 2016 public processes. It is extremely helpful for all parties to see a path toward implementation as the rule proposal moves through the state and federal approval processes. Under no circumstances should the rule proposal components be divided up and moved separately through the federal approval process. Appropriate rule language should be included to ensure all components remain together similar to “the numeric criteria in Table 240 for human health protection become effective when the water quality standards implementation policies in revised WAC 173-201A-420 Variances, -460 Intake Credits, and -510(4) General Allowance for Compliance Schedule, are approved by EPA.” If Ecology’s 2016 proposal is not approved by EPA, then Ecology should still immediately adopt these state implementation policies.</p>	<p><i>comment letter (Commenter 48). Ecology considers that EPA will approve the implementation tools as indicated in its letter.</i></p>
<p>Commenter ID: 34</p> <p>The signatories to this comment letter appreciate the public involvement opportunities provided by the Department of Ecology to develop revisions to human health-based water quality criteria and implementation tools. We appreciate that over the last four years, it has been a difficult task to fairly balance revising standards that appropriately protect human health uses with reasonably available and foreseeable wastewater treatment technology.</p>	<p><i>Comment noted.</i></p>

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<p>Commenter ID: 35</p> <p>Generally, the Valley View Sewer District is supportive of the State retaining control of the water quality standards updates and its approach toward setting human health criteria. Along with King County, we remain committed to improving public health and water quality in the region and want to see the best approach to help us achieve our water quality and human health outcomes.</p>	<p><i>Please see #1 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 36</p> <p>The proposed rule is not protective of our Nisqually tribal people by failing to protect people who consume fish and shellfish.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 36</p> <p>Washington State is required to meet the provisions of the Clean Water Act to preserve the beneficial uses of water, including fishing. The public health issues that are determined by these standards affect everyone in Washington who eats fish. The proposed rule by the State of Washington do not meet these requirements. The health of all its citizens should be the highest priority of the State of Washington.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 37</p> <p>This proposed rulemaking fails to protect beneficial uses of water under the Clean Water Act.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 39</p> <p>The proposed State's rule does not protect designated uses as required by the CW A, is not</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>

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<p>scientifically sound, is contrary to EPA guidance and is far less protective than the EPA proposed rule.</p>	
<p>Commenter ID: 39</p> <p>The State has failed, by letting political pressures by those who stand to reap purely economic benefit from weaker pollution protections, to offer human health criteria and, therefore, enforceable water quality standards, that meet today's best available science based requirements to ensure the state's citizens are protected from pollution in our waters. The State has attempted to offer a more reasonable, albeit still inadequate, fish consumption rate as an indicator that it is strengthening protections for people and fish. It also has reconsidered, after discussions with EPA and others, to change the cancer risk rate in the existing standards to a less protective level. However, at the same time, most of the gains achieved in protection have been nullified by adjusting other inputs that go into the derivation of the standard (i.e. relative source contribution). The State's arbitrary and capricious actions have not gone unnoticed by Tribes, citizens, or the U.S. Environmental Protection Agency.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 39</p> <p>Tribal scientists have worked tirelessly with the State Department of Ecology to analyze the best available science to arrive at criteria that would protect the health of people as required under the Clean Water Act. Yet that work has largely been displaced and disregarded because in the end Washington has allowed politics to override</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>sound science and interfere with its obligations to base this rule upon the best available science and obligations set forth in the Clean Water Act.</p>	
<p>Commenter ID: 40 This rule seems designed to benefit those who pollute the river, certainly not to benefit the river or those of us who love it. You can do a lot better</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 43 Sure relax the time frames for compliance, let Inland paper ride, ignore Kaiser PCB’s, arsenic isn’t an issue. Flint officials are getting jail time for mismanagement, that should apply to all public servants who deny the public clean viable water resources, and place them at risk. It has been 100 years of pollution get a grip and end this madness.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 44 Because the consequences of the proposed rule are so uncertain, WPPA expects a proposal of this far-reaching nature to provide a concrete, realistic framework for how they will be addressed. We are deeply concerned that the proposed rule does not clearly establish such a framework. For these reasons ask you to revert to previously proposed rule language for water quality standards.</p>	<p><i>Please see the Overview section of the Decision Document for rationale for changes from the first draft rule.</i></p>
<p>Commenter ID: 46 WASWD supports the State taking the lead in development of these updates of WQS and values the greater local knowledge that Ecology</p>	<p><i>Please see #1 in the “Support for the Rule” general response section above.</i></p>

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<p>staff can bring to bear in making the many decisions this process requires. Our members expect to continue to work in partnership with Ecology staff going forward, to protect human health and water quality, using the most reasonable approaches available.</p>	
<p>Commenter ID: 57 Ecology has buckled under to industry and public utilities.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 58 The City understands the need to update the Water Quality Standards for Protecting Human Health. We seek a reasonable approach to meeting such standards; one that considers ability to pay, available technology, achievable timelines, and environmental tradeoffs. New tools for implementation listed in DOE's proposal, such as variances, should help communities meet the new standards if the tools are in fact applied when needed.</p>	<p><i>Please see #1 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 59 Please rethink your idea on allowances for pollution into our waterways. This is UN-ACCEPTABLE.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 61 We appreciate the robust process you have undertaken, and while we do not agree with every element of this proposal we appreciate the thoughtful and transparent effort you made to get here.</p>	<p><i>Comment noted.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 64</p> <p>Ecology's proposed state rule once again falls short of the stated goal of protecting people who consume fish and shellfish.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 67</p> <p>We absolutely must do better. People joke about how nasty the river is. This needs to be taken more seriously. We need to hold polluters accountable. We should be allowed to benefit from the river. By continuing to poison and neglect we're only hurting ourselves and those who follow.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 68</p> <p>The proposed measures are way too slack. Please tighten restrictions such that polluters will keep our wonderful water in good shape. This is no time to backslide on water quality.</p>	<p><i>Ecology disagrees that the proposed measures are too slack. Please see other sections in this Response to Comments on Risk Level, Fish Consumption Rates, PCBs, Arsenic, Other Chemical Specific Comments, Variances, and Compliance Schedules.</i></p>
<p>Commenter ID: 72</p> <p>Unfortunately, the Washington Dept of Ecology (WDOE) proposed water quality standards and fish consumption rule would fall short of protecting these uses (Spokane River system fisheries) and the public that depends on them.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 77</p> <p>The proposed rules are geared to help dischargers avoid compliance instead of holding them accountable.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 77</p> <p>The State should reconsider the provisions in the draft rule and restore critical elements that will protect fish consumers and all tribal members in Washington.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>
<p>Commenter ID: 77</p> <p>Washington State has the opportunity to develop water quality standards that are not only protective of the health of its current citizens, but also to those citizens for generations to come from exposure to toxic chemicals in water and fish. The first proposed draft rule did not do this, nor does this second attempt.</p>	<p><i>Please see #2 in the “Support for the Rule” general response section above.</i></p>

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Miscellaneous Comments

Summary of Comments

The comments in the following table did not fall into any other category. Each comment has its own response, and comments are sorted according to commenter ID.

Specific Comments on Miscellaneous Subjects	
Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 8</p> <p>Waterkeepers Washington expects Ecology to include in the record for this rulemaking, NWIFC and EPA’s comments submitted in March of 2015 on the prior rulemaking effort as many of those comments and criticisms remain relevant and applicable to the current proposed rule.</p>	<p><i>Ecology believes this comprehensive response to comments fulfills this comment.</i></p>
<p>Commenter ID: 21</p> <p>Although I appreciate the efforts of your agency and the associated difficulties in adopting water quality standards that are protective of public health of all citizens in the state, the Washington state water quality standards update process has gone on far too long. I urge you to be guided by the best available science, ensure that the adopted water quality standards are protective of the designated uses of each water body under your jurisdiction, and move rapidly toward adopting updated standards.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 21</p> <p>We agree with the Washington state position that adopting a more protective fish consumption rate for water quality standards is not a panacea and that Ecology needs to do much more to address the discharges of non-point pollutant sources in Washington State.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 22</p>	<p><i>Comment noted.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>Adopting this rule revision package would represent a mediocre public policy outcome for the state of Washington. Five years of regulation development activity now has the state of Washington proposing unnecessarily conservative human health based water quality criteria (HHWQC). The Department of Ecology's own evaluation of these numeric criteria strains to show any benefit to human health protection. Comments submitted by the Northwest Pulp and Paper Association offer details on the state of Washington's leap to unnecessarily stringent HHWQC. With a few important exceptions, Ecology's proposed criteria give only secondary consideration to accepted risk management principles, cost/benefit assessments, and relevant court decisions. While the headline at time of rule adoption this autumn will make claims about cleaner water and improved public health, the near certain effect of this rule package in coming years will be incrementally higher cost to NPDES permittees (and thus the public), incrementally higher management and program delivery costs for the Department of Ecology, adverse secondary effects on state economic growth, stigmatization of Washington waters, more litigation; all of this for no practical benefit to the health of state residents (including high fish consuming population groups).</p>	
<p>Commenter ID: 25</p> <p>It seems that the water gets tested but not the many varieties of clams? We get frustrated when it is closed and then reopened without the shellfish</p>	<p><i>The Washington Department of Health tests clams and issues shellfish advisories, largely based on bacteria or biologically-produces toxins. Please see the WDOH website at</i></p>

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Commenter ID/ Comment	Ecology Response
<p>being tested. Please test the shellfish. We live on this and it is very important to so many.</p>	<p>http://www.doh.wa.gov/CommunityandEnvironment/Shellfish.</p>
<p>Commenter ID: 26</p> <p>Overall, Ecology should redraft its revisions to work towards one of the overarching purposes of the Clean Water Act, which is “that the discharge of pollutants into the navigable waters be eliminated.”</p>	<p><i>The new human health criteria and Implementation Tools should, over time, result in actions to reduce toxics entering surface waters.</i></p>
<p>Commenter ID: 29</p> <p>In October 2015, the World Health Organization's IARC came out with a report evaluating the cancer risks associated with consumption of red meat and processed meat. The studies address only the cancer risks, not the cardiovascular risks that also result from a high red meat diet. The information is relevant to Ecology's proposed revisions of human health surface water quality criteria, which for most parameters are intended to produce cancer risks of less than 1 in a million (10^{-6}) for people consuming 175 grams/day of fish for a 70 year life time. The program has the potential to scare people away from fish consumption without giving them good information on the risks of other food and protein sources. As such, it may do more harm than good. I recognize that Ecology has been under a lot of pressure from EPA Region X and from the Tribes to go with 10^{-6} risk level, and a high fish consumption rate, and I also recognize that the Water Quality Program with its standards program, is constrained as to what it can address. However, from a public health perspective, the narrow focus on fish consumption really puts blinders on us as to where the really significant risks lie, and can even drive us away from fish</p>	<p><i>Ecology agrees that substantial, and sometimes startling, risks are associated with other non-fish sources of food. The information you point out is important information for consumers to be aware of.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>consumption and towards riskier dietary choices. The public needs to become better informed in order to make better choices.</p>	
<p>Commenter ID: 30</p> <p>Tribes concur that water quality discharge standards are only a part of the toxic chemical problem in the state of Washington, and that more efforts toward source control and toxic cleanup are needed. However, the standards are an essential anchor for determining where and how to deploy toxic reduction efforts, and monitor improvement.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 31, 56, 51, 53, 1, 36, 30, 39, 76, 24, 26, 77, 13, 64, 33, 8, 42</p> <p>Commenter supports, endorses, and incorporates by reference the comments of the Northwest Indian Fisheries Commission (NWIFC) and the Columbia River Inter-Tribal Fish Commission (CRITFC) submitted to Ecology in April 2016 or at other times in relation to the rule.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 34</p> <p>Ecology should ensure that implementation of the criteria will be based on approved test methods in effect at the time of rule adoption. The state water quality standards currently limit test methods for numeric criteria to EPA approved methods. Under Washington law Ecology is further constrained to use only those test methods that are approved at the time the water quality standards are adopted. In a parallel provision of the state water quality standards Ecology has concluded that it can only use EPA guidance on deriving numeric limits that was in effect at the time of rule adoption. That</p>	<p><i>Ecology is required by federal regulation to use "sufficiently sensitive test methods" as per 40 CFR 122.21(e)(3), 122.44(i)(1)(iv), and 40 CFR 136.1(c). If Ecology were to specify test methods in the water quality standards then each time a new method was placed into 40CFR136 the state would have to change the water quality standards in order to comply with the regulations cited above. This would be extremely cumbersome and resource intensive. Ecology specifies testing methods used in</i></p>

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Commenter ID/ Comment	Ecology Response
<p>provision, WAC 173-201A-240(4), states that “USEPA Quality Criteria for Water, 1986, as revised shall be used in the interpretation of values listed in subsection (3) of this section.” Ecology has specifically interpreted this provision to mean, in the case of copper criteria, that it cannot use the biotic ligand model (BLM) to derive permit limits since the BLM was not part of the EPA guidance document at the time Ecology adopt its copper criteria. This interpretation was affirmed by the PCHB in Copper Development Association v. Ecology, PCHB 10-142, Order of Summary Judgment (December 12, 2011). The same rationale should apply to approved test methods. This is a critical issue to ensure that no test method will be applicable to the new and significantly more stringent human health criteria without a full understanding of how the criteria will be implemented relying on the new test methods, including the costs and benefits of the proposed changes. (Please see original comment letter in Appendix A for more extensive discussion/description on the issue).</p>	<p><i>Washington NPDES permits as part of its permitting guidance. With regard to copper, Ecology cannot use the BLM because there is already an equation for copper criteria in the water quality standards. It is not that the BLM was not part of EPA guidance at the time of adoption of the current copper equation.</i></p>
<p>Commenter ID: 38</p> <p>We agree that for some toxics, CWA tools are not able to address significant sources, and that alternative tools, such as Chemical Action Plans (CAPs) are more appropriate. Such plans can, and have in the past, lead to some bans, and also to some push for alternative assessments, and that is appropriate. In the past, the bans have been imposed by the legislature. The Governor linked the earlier proposed rule- making to a legislative proposal to address toxics. We disagreed with any requirement that the two activities must be linked. The legislative proposal did not pass, and the</p>	<p><i>Comment noted.</i></p>

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<p>earlier rule was pulled and this new proposed rule is now available for review and comment. This proposed rule, like the earlier proposed rule, is well thought out. The combined process (earlier proposed rule and this proposed rule) was extensive and open, and the decisions made are well explained.</p>	
<p>Commenter ID: 39</p> <p>The Puyallup Tribe commented extensively on the proposed federal rule in December, 2015. Our comments are mostly incorporated herein by reference.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 42</p> <p>I urge Ecology to work with the affected tribes on a government-to-government basis in order to ensure that the final rule advances protection of tribes’ rights, resources, and health and well-being.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 44</p> <p>As detection methods are inevitably improved, how will permittees be expected to achieve compliance under the proposal? What “reasonably available” technology will result in compliance?</p>	<p><i>Ecology expects that as detection limits improve slowly over time, work on source controls and removal will also increase. Because there is uncertainty with this, the new rule language contains clarified and modified tools (variance and compliance schedule language), as well as new intake credit language. It appears the second question may be confusing terms applied to technology based limits with water quality based limits.</i></p>
<p>Commenter ID: 44</p>	<p><i>Ecology cannot predict with certainty the need for additional administrative action</i></p>

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Commenter ID/ Comment	Ecology Response
<p>How will increased demand for administrative action on the Water Quality Program be addressed without damaging its ability function?</p>	<p><i>based on the new rule language. Additional effort would be absorbed into existing workload, and traded off for ongoing and extended workload.</i></p>
<p>Commenter ID: 58</p> <p>The City supports the ongoing efforts of the Spokane River Regional Toxics Task Force and the direct-to-implementation approach to reducing toxics in the watershed. Measurable progress has been made toward identifying and reducing pollution sources throughout the Spokane region. We believe this approach results in a "cleaner river faster." The City also supports related efforts to provide state funding and policies directed toward source control of toxics, as well as dollars to invest in projects that help achieve water quality goals. Particularly, the state should consider ways to invest in multi-year, holistic approaches that have greater positive impacts on the environment, rather than a piece meal approach which simply funds one project at a time without considering the larger picture.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 62</p> <p>We are a member of the Federal Water Quality Coalition and was actively involved in developing those comments as well.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 62, 49, 4, 22</p> <p>Commenter endorses the comment package submitted by Northwest Pulp and Paper Association and other co-signers.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 65</p>	<p><i>Comment noted.</i></p>

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<p>Approaches in combination, such as restoring ecological function, green infrastructure, and integrated watershed methods target sources in an environmentally and economically sustainable way and have already demonstrated meaningful water quality improvement as well as greater social good and economic benefit than the Ecology proposal. We urge Ecology to work with us (Boeing) and other stakeholders to address this.</p>	
<p>Commenter ID: 65</p> <p>Boeing is concerned that establishing overly protective Human Health Criteria based on faulty assumptions regarding the fish consumption patterns of Washington residents and extreme risk management decisions will result in expending resources that could otherwise be used for real and meaningful environmental improvements. Boeing believes it will be more effective and meaningful to focus on a combination of measures, such as restoring ecological functions, utilizing green infrastructure, and applying an integrated watershed approach that targets both point and non-point sources in an environmentally and economically sustainable way. These approaches have already been demonstrated to improve water quality as well as provide notable social and economic benefits.</p>	<p><i>Ecology agrees that the measures pointed out in this comment are important. The new criteria and implementation tools should complement these other approaches.</i></p>
<p>Commenter ID: 65</p> <p>Many of our concerns with the proposed rule remain. Boeing requests that the Department reconsider several important aspects of the proposal. In addition, the law requires that the Department revise and republish the Cost-Benefit Analysis and DEIS so that the public and</p>	<p><i>Ecology disagrees that the law requires that the Department revise and republish the Cost-Benefit Analysis and DEIS. To further address your comment, please also see the responses to your comments in the Cost Benefit Analysis and DEIS sections in this Response to Comments.</i></p>

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<p>regulated community can understand the rationale for the proposed rule. The Department should extend the public comment period on the proposed rule until those revised documents are published.</p>	
<p>Commenter ID: 65</p> <p>To avoid the risk of adverse consequences as a result of rulemaking, Washington should consider an incremental approach that would allow development of a meaningful and effective solution based on appropriate scientific data and analysis.</p>	<p><i>Ecology considers that that approach has already been taken. Please also see responses in the Inputs to the Equations section of this Response to Comments.</i></p>
<p>Commenter ID: 70</p> <p>Finally, Ecology has recently indicated that the Listing Policy 1-11 will be revisited. King County urges Ecology to move quickly on improvements so that the next Waterbody Assessment process will be conducted using the most robust, up to date and scientifically based criteria. As noted in the supporting documentation for this rulemaking, many new waterbodies are likely to be designated as impaired under the revised human health criteria. Given the significance of this effort, such designations should be made with proper data and process.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 71</p> <p>Recent tests on the salmon populations in Puget Sound are revealing residual concentrations of numerous pharmaceuticals in their flesh. This is most likely from people not properly disposing of outdated medicines or when a family member passes they are too often flushed down the toilet. In Whatcom County there are too few pharmacies</p>	<p><i>Comment noted.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>that routinely take these unneeded meds. To be disposed of properly. I propose legislation that would make it mandatory for all pharmacies that dispense meds. To take the old/unused ones back. Another 5 or 10 cents could be added onto the price to cover the expense. Keep up the great work.</p>	
<p>Commenter ID: 71</p> <p>Water quality sustains ecological processes that support native fish populations, vegetation, wetlands and birdlife. Water is essential to humans and the health of our environment.</p>	<p><i>Comment noted.</i></p>
<p>Commenter ID: 73</p> <p>Please, making rules without actual need for them makes it that much harder for my district to connect those still on septic systems. We have almost 900 customers with sewer available who won't pay to connect.</p>	<p><i>This rule should not result in discouraging hook-ups to sewage treatment plants. Please see the Cost Benefit Analysis section in this Response to Comments.</i></p>
<p>Commenter ID: 73</p> <p>The dedicated pollution control people of the MWPAAC committee have been informed of your efforts to change the rule to support certain special interest groups. My concern is not that there is a source of pollution that needs to be regulated, but to put the cost of unnecessary regulation onto the ratepayers connected to the cleanest treatment in the state, the country even, will put the cost out of reach for some people still connected to septic systems. Failing septic systems in the suburbs are a definite hazard to humans.</p>	<p><i>Ecology disagrees that changes were based on support of special-interest groups. This rule should not result in discouraging hook-ups to sewage treatment plants. Please see the Inputs to the Equations and Cost Benefit Analysis sections in this Response to Comments.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 73</p> <p>The water quality standards for protecting human health, Chapter 173-201A WAC recommended changes need to be linked to actual studies of injury to humans that indicate a need for remediation. Has this provision in the WAC changed? Are we to create a new rule that benefits meter companies that have made test equipment that is more sensitive than the human body? Wouldn't it be better if they dedicated their R&D efforts to make smaller, cheaper equipment so more agencies can afford it and water gets tested more often in places that have ignored water quality conditions for lack of affordable equipment?</p>	<p><i>Please see the Testing Methods section in this Response to Comments.</i></p>

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Preliminary Cost Benefit Analysis (including Least Burdensome Alternative Analysis)

Comment Summary

Comments received on the Preliminary Cost Benefit Analysis were all individual, and are listed below with responses.

Specific Comments on Preliminary Cost Benefit Analysis	
Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 8</p> <p>Despite having proposed only modest changes to some human health water quality standards, Ecology’s Proposed Rule contains new and expanded off-ramps and loopholes that would allow polluters many avenues of delaying and avoiding compliance with clean water standards. This is particularly true because Ecology has only been able to tally a meager \$10,600 in total quantifiable costs from the new rule and has acknowledged that there will be cost-savings to industry in complying with weaker standards. See Ecology, Preliminary Cost-Benefit and Least-Burdensome Alternative Analyses at 39-43, 54 (Feb. 2016) (“Preliminary CBA”). Plainly there is no pressing need to relieve polluters from a burdensome requirement (and, as set forth below, even if the requirement were more stringent, that is in fact the way the Clean Water Act works.)</p>	<p><i>Ecology does not view implementation tools as a way to avoid compliance or to provide off-ramps to the Clean Water Act. There are legitimate circumstances where a discharger can eventually meet the permit limit or a waterbody can eventually meet the criteria and designated use, but a longer time frame may be needed, or a different approach is needed to ensure that water quality is protected and the discharger remains in compliance while efforts are taken to control or abate pollution. The various implementation tools are consistent with EPA requirements and the revisions are supported by EPA. Note, also, that the nearly \$11 thousand you reference is only the quantifiable portion of the cost, which also includes development and implementation of a source control plan. That cost is highly variable in its contents, requirements, timing, and achievability, and so was not quantified in dollar terms in the analysis.</i></p>
<p>Commenter ID: 8</p> <p>Note that Ecology has entirely failed to analyze costs to health, lost wages, and other impacts</p>	<p><i>Less-stringent (higher allowable concentration) standards for chemicals only arise in cases of updated scientific knowledge about the chemical. This might include better understanding of how</i></p>

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Commenter ID/ Comment	Ecology Response
<p>from weakening standards for over twenty chemicals, including arsenic.</p>	<p><i>chemicals are absorbed, how strongly they contribute to the risk of developing a cancer, or how strongly they contribute to the risk of developing associated noncancer illnesses. Even though the allowable concentrations for these chemicals increase (become less stringent), their protectiveness improves or (at worst) remains the same, at maximum excess cancer risk of one-in-one-million.</i></p>
<p>Commenter ID: 11</p> <p>Chapters 5 and 7 of the CBA (Ecology 2016b) understate the cost of the proposed HH WQC. In Chapter 5, Ecology notes all new 303(d) listings are expected on waterbodies with no dischargers. This is curious, as the 2015 CBA (Ecology 2016a) identifies 55 expected new listings for waterbody segments, 5 of which have dischargers. The 2016 CBA identifies 306 expected new listings for waterbody segments with no dischargers on any of them. Is there no overlap between these lists, or have the discharging entities all ceased to operate? The possibility of waterbody listings will discourage potential development on many Washington State waterways, a fact that should be recognized in Chapter 5.</p>	<p><i>Note that the dischargers on newly listed waterbodies (in the previous analysis) did not discharge the chemicals for which the listing was being added. As this required additional investigation in the previous dataset, it was mentioned in the analysis. In the updated dataset, we reported that there are no dischargers on newly listed waterbodies that discharge the chemicals for which the listing is likely. Therefore, in either case (the 55 listings or the 306 listings) there are no dischargers likely to be impacted by the new listings. Note also: The changes to the rule language (resulting in different water quality standards) and updated waterbody data are the primary part of the change in identified added or removed 303(d) listings, though a change in how Ecology defines the locations/areas of waterbodies also contributed, but the structure of the change was not likely to affect the numbers significantly, and if anything would result in an overestimation of listings. The Final Cost-Benefit Analysis has been updated with additional information about how the</i></p>

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Commenter ID/ Comment	Ecology Response
	<i>listing policy and definitions have changed.</i>
<p>Commenter ID: 11</p> <p>In the CBA, several “no cost” scenarios are identified wherein the discharger is unlikely to need to take further action; for example, “it is unlikely further treatment is necessary” even though the facilities are out of compliance with HH WQC (see page 37)(Ecology 2016b). In addition, facilities for which a limited amount of data indicate a potential lack of compliance (with proposed HH WQC) are assumed to bear no additional costs. As discussed previously, reducing chemicals in discharge to comply with HH WQC that are 20 times lower (for some chemicals) will be more expensive than compliance under baseline.</p>	<p><i>Of the 7 facilities that had detections above the proposed limit but did not need further treatment, five discharged stormwater; that is, the detections of chemicals in exceedance of the proposed limit was found in stormwater. As explained, it is not appropriate to apply human health criteria limits to stormwater, as human health criteria limits are based on lifetime exposures to a chemical, not on intermittent discharges that have significant variation in pollutant concentration during and between storms. Rather than using human health criteria to regulate stormwater dischargers, Ecology instead requires these facilities to implement Best Management Practices (BMPs). In this analysis, Ecology found that all of these facilities were already implementing sufficient BMPs and would not increase the BMPs based on this rule.</i></p> <p><i>One facility is not meeting the current standard and as a result, is changing their discharge method to instead have wastewater hauled offsite. With their new discharge method, they will meet the proposed standard at no additional cost.</i></p> <p><i>The remaining facility that would potentially discharge chemicals in exceedance of the proposed standard discharges arsenic and is regulated under a TMDL-based limit. Ecology is not</i></p>

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	<p><i>amending TMDL limits in this rulemaking and therefore, this facility will not have to change practices. Moreover, the proposed standard for arsenic is becoming less stringent than the existing limit; thus, were it not for the TMDL, this facility would now have to reduce its discharge by less.</i></p> <p><i>Your comment also references facilities for which a limited amount of data may indicate a possible lack of compliance. As stated in the analysis, in these cases Ecology does not immediately make facilities change their treatment. Rather, Ecology continues to monitor these facilities and track whether they have consistent detections of the chemical in levels that exceed the proposed standard; this monitoring happens within existing Priority Pollutant Scans. In all of the cases mentioned, the facility had a consistent history of discharging pollutants within allowed limits; Ecology permit managers interpreted the single detection of the chemical as an anomaly. Therefore, the permit manager for each facility expected that further monitoring would reveal subsequent non-detections of the chemical, thereby not necessitating that the facility take any further action.</i></p>
<p>Commenter ID: 11</p> <p>The CBA assumes that dischargers out of compliance under baseline conditions will face the same compliance costs (regardless of reduced HH WQC), understates the influence of improved analytical methods and increased</p>	<p><i>We address your concern about costs for improved analytical and testing methods in Chapter 7. On page 56, we state that with improved testing methods, dischargers may incur additional costs. However, we also explain, “There is too much uncertainty in the locations, facilities, chemicals,</i></p>

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Commenter ID/ Comment	Ecology Response
<p>listings, and states that no action will be needed in several cases without rationale.</p>	<p><i>concentrations, and timing of impacts associated with future improvements to sampling and testing to assess the impacts of these future actions quantitatively.” It is important to note that should improved testing methods drive additional costs for dischargers, they would also drive public benefits from reduced exposure to these chemicals.</i></p>
<p>Commenter ID: 11</p> <p>The CBA assumes that the only dischargers with “yes” results from the reasonable potential analysis (RPA) that previously received “no” results will bear additional costs. This is a misrepresentation, as coming into compliance with HH WQC that are 20 times lower (for some chemicals) will cost more. Costs will become greater as analytical methods improve. This is supported by the discussion in Section 6.6, wherein “reduced costs of complying with less stringent criteria” are identified as a (cost saving) benefit.</p>	<p><i>We address your concern that costs will rise as analytical methods improve in Chapter 7. On page 56, we state that with improved testing methods, dischargers may incur additional costs. However, we also explain, “There is too much uncertainty in the locations, facilities, chemicals, concentrations, and timing of impacts associated with future improvements to sampling and testing to assess the impacts of these future actions quantitatively.” It is important to note that should improved testing methods drive additional costs for dischargers, they would also drive public benefits from reduced exposure to these chemicals.</i></p>
<p>Commenter ID: 11</p> <p>The CBA understates the costs and challenges of the proposed rule and the adoption of new, more sensitive analytical methods. The EIS should better represent the importance of analytical sensitivity relative to HH WQC as well.</p>	<p><i>We address your concern about costs for improved analytical and testing methods in Chapter 7. On page 56, we state that with improved testing methods, dischargers may incur additional costs. However, we also explain, “There is too much uncertainty in the locations, facilities, chemicals, concentrations, and timing of impacts associated with future improvements to sampling and testing to assess the impacts</i></p>

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	<p><i>of these future actions quantitatively.” It is important to note that should improved testing methods drive additional costs for dischargers, they would also drive public benefits from reduced exposure to these chemicals.</i></p>
<p>Commenter ID: 11</p> <p>The process of total maximum daily load (TMDL) development is slow, and there will likely be many more 303(d)-listed waterbodies than waterbodies with TMDLs for several decades. However, Ecology’s discussion of costs in Chapter 7 focuses on the cost of more sensitive analytical methods (driven in part by lower criteria) associated with TMDLs. More sensitive analytical methods will mean more listings (and more TMDLs with more stringent requirements). Again, Chapter 7 does not discuss the loss of development (i.e., new or expanding dischargers) on listed waterbodies or water bodies with TMDLs. New development may be forced to locate elsewhere, and dischargers needing to expand their facilities may choose to relocate. These costs should be discussed in Chapters 5 and 7, and in the summary and conclusions in Chapter 8.</p>	<p><i>The Cost-Benefit Analysis has been updated with additional discussion of TMDLs in the context of lower detection limits. Waterbody quality and regulatory context may play a part in new discharger decisions of where to locate, on the same waterbody, within the state, or interstate. Expansion of current dischargers that would potentially be limited by future 303(d) listings and TMDLs may be managed using the proposed compliance tools. We note, however, that none of the likely new 303(d) listing have dischargers who discharge the listing chemicals in question. Consequently, lower detection limits would not necessarily result in impacts to dischargers, unless those dischargers discharge the chemicals for which a lower detection limit would result in a 303(d) listing on a waterbody assessment area to which they discharge. Ecology's policy addressing detection limits and listing of impaired waterbodies as follows. Regarding current non-detect samples: "It is appropriate to use non-detect values for assessment purposes when the detection limit is less than the criteria (e.g. bacteria). In these situations, we can be assured that the non-detect samples are meeting the water quality</i></p>

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	<p><i>standard. However, if the detection limit is greater than the criteria, it is not appropriate to use non-detect samples (e.g. some toxics). In these situations, a non-detect sample may, or may not show compliance with water quality standards. For calculating a geometric mean using non-detect samples, where zero cannot be used, a value should be chosen so as not to bias the geometric mean high or low.”</i></p> <p><i>Regarding non-detects: "For water column and tissue data, non-detects are not used to determine exceedances. When the criterion or criterion tissue equivalent concentration is less than the detection value these data will not be used for Assessment purposes because the detection level is not sensitive enough to ensure compliance with the criterion. A more sensitive analytical method should be used to determine into which category the parameter/segment combination belongs."</i></p>
<p>Commenter ID: 11</p> <p>There are no Implementation Tools available to new or expanding dischargers; this should be identified in the CBA. As has been clear for some time, compliance schedules and variances will not be available to new or expanding dischargers. Because this is not a change from the baseline, it is not discussed in the CBA other than to state that new dischargers are expected to behave similarly to existing dischargers (Ecology 2016b). The CBA should recognize that a discharger facing criteria that may be 20 times lower and with no access to compliance schedules and variances may face additional</p>	<p><i>Information on how implementation tools can be applied to new and expanding dischargers is part of the rule record, and in particular was discussed with reference to the Pinto Creek Decision.</i></p>

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<p>costs and obstacles to operation, and therefore behave differently than an existing discharger (e.g. they may choose not to expand or not to operate in Washington State). This is mentioned briefly at the end of the section on Compliances in the Key Decisions Overview, but not at all in the section on Variances (Ecology 2016c). This is an important issue that needs to be clearly identified for all readers, even if no solution is currently endorsed by Ecology. Thus, a new section that calls out the issue of new and expanding dischargers being unable to use variances or compliance schedules should be added to the Key Decisions Overview.</p>	
<p>Commenter ID: 16</p> <p>We are concerned that the proposed rule will impose unattainable goals for water quality permits and in-water cleanup projects that will result in a significant loss of family wage jobs in an area that routinely ranks among the top five export production centers in the nation.</p>	<p><i>We found that no industries in Washington are likely to incur significant costs. Therefore, we find it unlikely that any businesses in the area will incur costs that would result in job loss.</i></p>
<p>Commenter ID: 22</p> <ul style="list-style-type: none"> • Chapter 9 - The Least Burdensome Alternative Analysis lacks rigor. The agency asserts the "elements of the proposed rule" result in the least burdensome regulation that meets the goals and objectives of the statute. This analysis is too narrow and a number of credible and CWA compliant HHWQC alternatives could be developed. As a single example, Ecology presented a compelling HHWQC rule package in January 2015 that included a choice of 10^{-5} as a fully protective incremental excess cancer risk level. How is it then in the current rule proposal 	<p><i>Please see the section on Risk Level in this Response to Comments. The Least-Burdensome Alternative Analysis has been updated with this discussion.</i></p>

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<p>that an excess cancer risk level of 10^{-6}, resulting in more stringent HHWQC, is the better choice? In what sense would it lead to a less burdensome result for those obligated to comply with it?</p>	
<p>Commenter ID: 22</p> <ul style="list-style-type: none"> • Paragraphs 2.2.3 and 2.2.4 - It is appropriate that Ecology recognizes the Permit Writers Manual and Water Quality Program Policy 1-11 as elements of the "Baseline" for Clean Water Act program delivery. As mentioned in General Comment #5, agency discretion and policy choices presented in those guidance documents will have significant influence on program success. Ecology should always be open to meritorious and pragmatic changes in those documents. 	<p><i>Ecology continuously updates its guidance to accommodate new laws and regulations, as well as to provide preferred directions and approaches for different permitting situations as they arise. Ecology does not consider its guidance to be a rule.</i></p>
<p>Commenter ID: 22</p> <p>Chapter 5 - Likely Costs of the Proposed Rule - Here are a few costs areas that Ecology probably could estimate and mention. The document identifies there will be 307 new Category 5 CWA 303(d) listings. These will each require development of a TMDL and then Ecology efforts to impose the Wasteload and Load Allocations, and more. Ecology's range of costs to produce and implement a TMDL should be known. Category 5 listings for toxics will surely increase in time as monitoring effort and more refined analytical methodologies combine to reveal impaired waterbodies. Ecology's adoption of revised HHWQC will almost certainly generate legal appeals. The state will incur costs to defend the adopted HHWQC. NPDES permittees unable to immediately</p>	<p><i>Ecology cannot predict with certainty the need for additional TMDLs or variances based on the new rule language. Please see other responses to your comments in this section. This additional effort would be absorbed into existing workload, traded off for ongoing and extended workload required to address ongoing noncompliance issues at dischargers, and ongoing contamination issue at impaired waterbodies. Ecology is as likely to incur legal costs in cases brought by parties wishing less-stringent regulation as parties wishing for more stringent regulation. The Cost-Benefit Analysis has been updated to better reflect this information. The Spokane River efforts have resulted in innovative and community-based efforts to decrease PCBs entering surface waters.</i></p>

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<p>comply with WQBELs driven by more stringent criteria will likely seek an extended compliance schedule or a variance. These will require resource intensive responses by Ecology. Some costs could be estimated. The Spokane River Watershed effort to reduce PCBs represents a case-study that should not be overlooked. Could Ecology imagine another watershed, citizen concern with another HHWQC, the use of litigation and legal precedent, etc., in an effort to affect CWA program implementation?</p>	<p><i>The information from this effort will inform other PCB control efforts around the state and likely in other states. This type of situation could arise in other areas of the state and possibly with other chemicals, but cannot be predicted with certainty.</i></p>
<p>Commenter ID: 22</p> <p>Chapter 6 - Likely Benefits of the Proposed Rule Amendments - Here are a few observations on benefits that Ecology could be more forthcoming about. This Chapter alludes to qualitative human health benefits arising from adoption/implementation of the proposed HHWQS. But given the earlier acknowledgement that no toxic pollutant reductions from NPDES permittees will result from implementation of the proposed rule, and that TMDL work for the additional 307 impaired waterbodies "is not likely in the 20-year timeframe of this analysis" (paragraph 5.6.2), what is the mechanism to accomplish improved health benefits (qualitative or quantitative)? The reduced incremental cancer rate attributable to the proposed HHWQC can be computed for any defined population group and for the general population. These population level analyses should be developed and presented so that state residents can understand the human health benefit expected from this rule proposal¹³. To provide a proper context, any claim of cost savings due to reduced cancer rates (mortality or</p>	<p><i>Ecology has expanded and clarified the discussion of health and other benefits likely and possibly arising from the proposed rule, in the Cost-Benefit Analysis, as well as clarified the role of potentially affected entities and those to whom improved water quality would be of value without using the water.</i></p>

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<p>pecuniary or non-pecuniary cost of illness) being assigned to the adoption of more stringent HHWQC can and should be based on Washington population demographics and survey fish/shellfish consumption information. Finally, given Ecology's own conclusion that water quality benefits arising from this proposed rule are not quantifiable, the discussion in sections 6.2 Potentially affected entities and benefits and 7.5 Non-use benefits under future improvements in sampling and testing simply lacks relevance and credibility.</p>	
<p>Commenter ID: 22</p> <p>Ecology has never issued a WQS variance and the "Rule Implementation Plan: Water Quality Standards for Surface Waters of the State of Washington offers minimal commentary on the success elements for issuing a variance or sense of commitment on how the agency would ever turn the concept into reality¹⁰. The Preliminary Cost-Benefit and Least Burdensome Alternative Analyses seems not to recognize the certain Ecology and permittee resource demands associated with a variance issuance process, nor the implications to an NPDES permittee should the decision-making on a variance application stretch out for years or ultimately be unsuccessful. Given the CWA realities mentioned in Comment #2 above (Note to reader: these comments address inclusion of the specific fish consumption rate, exposure duration, and incremental excess cancer risk level) there is an under-appreciation of the likely reliance on variances as the practical implementation tool to accommodate more</p>	<p><i>Ecology expects that variances will be needed in some situations, and has developed language that should accommodate those situations meeting the requirements in the new rule language as well as 40 CFR 131.14. Ecology cannot predict with certainty the need for variances or the workload associated with variances. It is likely that some variances will require smaller amounts of work (e.g., a variance for an individual discharger based on 40 CFR 131.10(g)(6)) while others will require more resources (e.g., a waterbody variance where multiple point and non-point sources are present). Costs to the discharger in situations where the need for a variance can be demonstrated but where Ecology cannot amend the water quality standards and submit the variance to EPA for CWA approval cannot be predicted with certainty, nor can the length of delays or the specific types of discharger that would be affected by this situation. It is likely that permits would be extended in</i></p>

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stringent HHWQC in NPDES permitting transactions.	<i>this situation to accommodate additional time needed. Additional effort by Ecology would be absorbed into existing workload, traded off for ongoing and extended workload required to address ongoing noncompliance issues at dischargers, and ongoing contamination issue at impaired waterbodies.</i>
<p>Commenter ID: 22</p> <p>Ecology's static 2016 analysis on the implications of these proposed numeric criteria in the delivery of Clean Water Act programs is woefully and intentionally short-sighted. It is an admittedly difficult challenge to perform the RCW 34.05.328 cost/benefit assessment on the effects of the proposed regulation. While the format and topic areas addressed in the analysis seem comprehensive, the C/ B conclusions in Chapter 8 are simply not credible. The reason stems from Ecology's insistence on a static analysis based on 2016 information. Surely the agency does not believe a look-back in 2036 {reflecting the presumed 20-year life of this regulation) will come close to matching the meager summary of costs and benefits presented in this immediate evaluation. The draft presentation opens the agency to justifiable criticism along the lines of "The State of Washington's revised toxic pollutant water quality standards are not expected to result in any higher level of wastewater treatment on NPDES permittees; no reduction of toxic pollutants into state waters; no ambient water quality improvement; no incremental cost for private or public entities; no meaningful human</p>	<p><i>Ecology cannot predict with certainty actions that will occur in the next 20 years with regard to many factors that could affect costs and benefits. These factors include EPA actions, such as CWA-approval and interpretations of regulations, PCHB decisions, and development of new treatment and/or analytical methods. Please see other responses to your comments in this section.</i></p>

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<p>health benefits; etc.” We would encourage the agency to supplement Chapter 8 with a C/B assessment based on Ecology experience with CWA program implementation and the likely/probable/possible outcomes linked to more stringent HHWQC.</p>	
<p>Commenter ID: 22</p> <p>Ecology’s static 2016 analysis on the implications of these proposed numeric criteria in the delivery of Clean Water Act programs is woefully and intentionally short-sighted. Water quality numeric criteria serve as the regulatory foundation on which most Clean Water Act programs are based. With the pending adoption of criteria that are generally more stringent, Ecology can certainly anticipate the effect they will have on CWA program delivery. The "Preliminary Cost-Benefit and Least Burdensome Alternative Analysis2," makes only a token effort at a "best information" 20-year look-forward on the implementation realities of the proposed HHWQC. The impact of more stringent HHWQC, coupled with enhanced analytical methodologies, and a growing body of ambient water quality and NPDES permittee discharge data, will ripple across CWA program implementation. In a 5-10 year timeframe Ecology can expect:</p> <ul style="list-style-type: none"> • Many thousands of new waterbody/pollutant Category 5 listings, • A parallel demand for TMDLs. Each TMDL must necessarily spawn NPDES repermitting transactions, non-point source reductions, or "other pollution control" program development to reduce trace toxic pollutant discharges. 	<p><i>Ecology cannot quantify unknown variables, nor can we forecast them with sufficient confidence based on the broad set of unknowns surrounding detection of chemicals at levels below current detection limits, in unspecified locations. We cannot determine reasonable estimates for these variables in a technological improvement scenario, in which technology pricing may also change in unknown direction.</i></p> <p><i>Ecology agrees that there is potential for both costs and benefits if the ability to detect chemicals improves over time. We discuss these in Chapter 7 of the Cost-Benefit Analysis, and have expanded and clarified those discussions of both costs and benefits in the Final Cost-Benefit Analysis, in response to comments. With regard to increased listings over time, it is likely under the new human health criteria that become more stringent there will be additional listings based on the new criteria. Other increases in listings will occur but will be caused by the creation of larger data sets (more areas samples over time) and because of enhanced analytical methods. Listings for PCBs should not increase based on the new human health criteria because the PCB criteria did not change from prior National Toxics Rule</i></p>

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<p>Experience indicates the combination of extraordinarily low HHWQC and societal/legacy/nonpoint/ undefined pollutant sources will lead to TMDL "black holes" attainment of water quality standards is not likely.</p> <ul style="list-style-type: none"> • NPDES permittees will fail "reasonable potential analyses" with the need for customized WQBELs and ultimately a demand for tertiary wastewater treatment, • Requests for variances of all types (individual, multi-discharger, waterbody). Requests for intake credit consideration. Both will represent enormous resource drains on the Water Quality Program, • Litigation challenges seem probable when a Clean Water Act transaction fails to satisfy somebody. It is easy to imagine credible scenarios in which aspects of the Water Quality Program service delivery becomes grid-locked and to the detriment of the state. The state of Washington's lack of inquisitiveness in examining the likely broader effect of the proposed HHWQC over the next 20 years represents a major deficiency of this rule package. 	<p><i>values. The approach for mercury is being deferred to a rulemaking that will begin after the current new rule has received EPA approval, and thus the impact of new human health criteria for mercury/methylmercury on future listings is unknown. In addition, Ecology's Water Quality Policy 1-11 "Assessment of Water Quality for the Clean Water Act Section 303(d) and 305(b) Integrated Report" is frequently updated to accommodate new science and policy information, thus the decisions that lead to listings are not static over time and cannot be predicted with certainty. Policy 1-11 is currently undergoing an update, and scoping on this process began on January 20, 2016. Ecology agrees that TMDLs will continue to be required, with likely additional TMDL requirements (e.g., studies, permitting) spurred by additional listings over time. Variances and compliance schedules are tools that can be used to help attain water quality standards. In cases where water quality standards cannot be attained and where the use at issue is not an existing use, it is possible to change the designated use for a waterbody if one of the 6 factors in 40 CFR 131(g) can be demonstrated.</i></p>
<p>Commenter ID: 22</p> <p>Paragraph 3.2.2 - A fish consumption rate of 175 gr/dis not representative of "average" fish and shellfish consumption of highly-exposed Puget Sound population groups. It is much closer to goth percentile and, as pointed out in agency</p>	<p><i>Cost-Benefit Analysis language has been revised to clarify what the 175 g/day represents.</i></p>

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<p>documents, includes all fish and shellfish, irrespective of source. This is a highly conservative policy (really a political) choice.</p>	
<p>Commenter ID: 22</p> <p>Paragraph 4.2 and Chapter 5 - The analysis overlooks the costs the "public" will bear in the form of increased sewer rates if/when POTWs are required to install tertiary treatment to achieve a water quality-based effluent limit. A presentation by Bellingham Mayor Kelli Linville to Governor Inslee {December 2013} articulates this reality (attached). The residents in the Spokane River watershed are certainly experiencing higher sewer bills as the wastewater treatment jurisdictions and other local governments chase PCBs entering the environment. The residents of the City of Vader will soon be paying for expensive wastewater treatment system upgrades driven by a 303(d) Category 5 impairment listing based on Fish Tissue results {newspaper article and Ecology letter enclosed). While these three examples are not directly connected to the proposed HHWQC revisions, they do offer advance notice on the progression of CWA program implementation leading to sewer rate increases. Ecology would be hard pressed to deny that adoption of more stringent HHWQC would not ultimately lead to this result.</p>	<p><i>While it is true that additional costs incurred by dischargers may be passed on to their consumers (their ability to do so depends on the relative responsiveness of their supply and demand to prices), Ecology's analyses only count these costs once when they are incurred as direct costs. If they are passed through to consumers, this is not counted as an additional cost. We note that, as the analysis discusses (see CBA page 42), 13 WWTPs are likely to incur costs of testing and Source Control Plans, but are unlikely to incur additional costs such as tertiary treatment.</i></p>
<p>Commenter ID: 34</p> <p>Preliminary Cost-Benefit and Least-Burdensome Alternative Analyses are incomplete in key areas and fail to adequately quantify the true costs of the proposed rule. Ecology's Preliminary Cost-</p>	<p><i>The Cost-Benefit Analysis addresses potential improvements in detection limits, but does not forecast specific federal decisions regarding analytical test methodologies. There is not information or data based on which Ecology could</i></p>

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<p>Benefit Analysis inadequately addresses the complex and evolving nature of regulatory costs of the more stringent 2016 proposal which will be phased in over time. The Analysis fails to quantify all regulatory costs across sectors for “prospectively impacted entities.” While the February 2016 Analysis is an improvement over the 2015 Analysis—it still fails to identify and quantify all regulatory cost drivers for the private and public sectors and provide information to the public. The analysis should address future federal actions on analytical test methodologies; future PCHB decisions; an increased number of impaired water listings under Section 303(d) of the CWA; Ecology staff costs for preparation and implementation of additional complex TMDLs; incrementally higher remediation costs as the complete program is implemented; and, lost economic opportunities for the public due to increased compliance costs and regulatory uncertainty.</p>	<p><i>reasonably make such a forecast. The same is true for future decisions made by the Pollution Control Hearings Board. Ecology assessed and discusses increased 303(d) listings, finding a net increase in the number of listings (including assessment areas that are currently listed but would be removed from the list), and discussing the limited nature of the prioritization and development of TMDLs in these areas over time given the lack of dischargers on the newly listed assessment areas that discharge the listing chemicals in question. For this reason, Ecology does not estimate associated development costs for such TMDLs as a result of the rule revision. Ecology cannot predict remediation costs over the next 20 years with certainty, but it is possible that both costs and benefits will occur based on the new criteria. We note also that technological advances may also decrease the costs of compliance or theoretical treatment methods in the future as well. Ecology's economic analysis addresses direct costs, and do not address the degree to which those costs are passed through to other entities. Counting these as an additional cost would be double counting. We note also that the degree to which compliance costs can be passed through depends on the relative elasticity of the product being supplied (how relatively responsive supply is to costs) as well as the demand for it (how relatively responsive demand is to price changes). Ecology disagrees that the revised rule creates regulatory uncertainty that does not exist</i></p>

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	<p><i>under the baseline, where in either case detection limits may theoretically decrease in the future, various federal decisions may be made, new PCHB decisions may be issued, dischargers may come into existence that behave unlike existing facilities in their industry, and technological improvements may reduce the cost of treatment methods.</i></p>
<p>Commenter ID: 45</p> <p>I'd like to bring up the application of the Clean Water Act in this particular situation. I have been looking at some of the cost data that is available from prior activities, , going back to the original rule and I see that, even under best criteria this rule will eventually, if not immediately, create a significant cost impact on businesses, municipalities, wastewater treatment districts, farmers, and a variety of other individuals. These costs, while not directly accessible in developing a criteria do need to be looked at in the broader context of the goal of the Clean Water Act which is, as noted in slide 11, t, protect public health. If we take a very close look at that we'll realize they're limited resources by nature of all enterprises, including government, we're going to start seeing that this rule will actually degrade public health, not improve it. The current standard that's being proposed, of one in a million additional cancer risk, not death, risk, is laudable except for if you look at a study done by the National Institute of Health. They've identified that, for a two percent – correction, six percent – reduction in funding of national health institutes, you can have up to forty three additional deaths per year</p>	<p><i>The new rule is expected to result in both costs and benefits over time. Ecology cannot predict all future costs and benefits, but in the case that future costs become prohibitive for some dischargers, both Ecology and the EPA (at its new 40 CFR 131.14) now have language on variances that should provide a pathway for continued compliance while pollution controls are pursued. If Ecology were to modify the new rule to increase the risk level, prior analyses on the first draft rule also indicates that costs and benefits with a higher risk level are minimal. If the costs were calculated to be large with the second draft rule, decreasing those costs by raising the risk level would not guarantee that those cost savings would go to the National Institute of Health and result in reduced mortality from that pathway.</i></p>

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<p>for every hundred thousand people. So, if we're looking at the kind of reductions that could be expected by these extremely expensive treatment systems that would be necessary to meet these ridiculously, pardon me, these very low limits, I would expect that we would find that there is a much greater risk to public health by having these rules imposed, instead of a more reasonable set of criteria which would look at a better risk factor, such as ten to the minus fourth or ten to the minus fifth.</p>	
<p>Commenter ID: 46</p> <p>Unfortunately, Ecology's economic analysis assumes the impact on permit holders will be quite small, perhaps based on the expectation that we already know about the occurrence of the contaminants with revised standards, at the levels of concern. In many cases this is not true, such that the cost just to determine if a new limit will potentially need to be addressed is almost certain to be much greater than the average cost of compliance developed by the economic analysis. This rule will affect communities on a site-specific basis and therefore have the potential for wide variation in the economic impact.</p>	<p><i>As we interpret it, your comment suggests that compliance costs for facilities should be higher as facilities have to test chemical concentrations in their effluent. While it is accurate that facilities will have to test for chemical concentrations, this is not a cost of the proposed rulemaking. Under the current rule (what we call the baseline in the Economic Analysis), facilities are already required to test and monitor their effluent-- this does not change or increase with the proposed standard. Therefore, no additional costs of testing or monitoring accrue to facilities in response to the proposed rulemaking.</i></p>
<p>Commenter ID: 61</p> <p>Finally, we must note that we are disappointed with the economic impact analysis incorporated into this proposal. We believe it significantly undersells the potential costs particularly for future scenarios where testing methodologies improve and for costs associated with source</p>	<p><i>We address your concern about costs for improved testing methods in Chapter 7. On page 56, we state that with improved testing methods, dischargers may incur additional costs. However, we also explain, "There is too much uncertainty in the locations, facilities, chemicals, concentrations, and timing of impacts associated with future improvements to</i></p>

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<p>control implementation for types of sources outside of the jurisdiction of utilities to control.</p>	<p><i>sampling and testing to assess the impacts of these future actions quantitatively.” Lastly, it is important to note that, should improved testing methods drive additional costs for dischargers, they would also drive public benefits from reduced exposure to these chemicals.</i></p> <p><i>Regarding your comment on the costs associated with source control implementation—We based this cost estimate on the best available information at the time, and were unable to quantify source control implementation costs due to the broad spectrum of source control options. We have also revised how this information is communicated in the Final Cost-Benefit Analysis.</i></p>
<p>Commenter ID: 61, 38</p> <p>We are concerned with parameters with criteria so low that existing analytical methods can’t tell us if the receiving waters meet the criteria or even if the parameters are present in treated wastewater. The current analytical limitations coupled with very low criteria make it impossible to determine possible future impacts to permitted dischargers for many parameters.</p>	<p><i>Ecology agrees that criteria below detection levels limit the ability to quantitatively address the degree to which waters are contaminated or what specific future actions would be required of dischargers if the ability to detect these chemicals improves. These criteria, however, do reflect the appropriate maximum concentration of certain chemicals that is adequately protective of high-consuming populations, consistent with the treatment of other chemicals under the rule.</i></p>
<p>Commenter ID: 62</p> <p>Ecology also chose an excess cancer risk level of 1×10^{-6}. When coupled with the FCR and the other default values in the equation to derive</p>	<p><i>Please see the section on Risk Level in this Response to Comments. Ecology has expanded and clarified the discussion of health and other benefits likely and possibly arising from the proposed rule, in</i></p>

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<p>HHWQC, this results in extremely conservative criteria that provide little, if and, human health protection when compared to more reasonable alternatives but imposes potentially exorbitant costs on all Washington residents. Ecology should revise the Proposal.</p>	<p><i>the Cost-Benefit Analysis. We have also included specific discussion of the 10⁻⁵ versus 10⁻⁶ risk level in the Least-Burdensome Alternative Analysis.</i></p>
<p>Commenter ID: 65</p> <p>Ecology has failed to demonstrate that the probable benefits of the rule are greater than its probable costs, as required by RCW 34.05.328(1)(d). RCW 34.05.328(1)(d) requires an agency adopting a significant legislative rule to “[d]etermine the probable benefits of the rule are greater than its probable costs.” Washington Laws 1995 ch. 403, § 201. The Washington Legislature adopted this requirement as part of the Regulatory Reform Act of 14 1995. In doing so, the Legislature found that “Washington’s regulatory system must not impose excessive, unreasonable or unnecessary obligations; to do so serves only to discredit government, makes enforcement of essential regulations more difficult, and detrimentally affects the economy of the state and the well-being of our citizens.” The proposed rule, if enacted, would violate RCW 34.05.328(1)(d) because Ecology has concluded that, except for the change in the criteria for phthalate, the proposed Human Health Criteria will have neither costs nor benefits. In an attempt to comply with this statutory requirement, the Department published the Cost- Benefit Analysis as part of the rule proposal package. This document is remarkable in that it claims that the proposal to revise the Human Health Criteria for 94 toxic substances will have absolutely no effect. It will require no</p>	<p><i>The Cost-Benefit Analysis discusses additional benefits of increased protectiveness in the case that (contrary to existing behavior) a discharger should come into existence that discharges these chemicals in concentrations exceeding the proposed human health criteria. This benefit of theoretical protectiveness corresponds to the theoretical costs of compliance such a discharger would incur, and these are discussed in the analysis. Ecology does not agree that dischargers are likely to now need to assess whether they will discharge chemicals they do not currently discharge. Ecology previously proposed human health criteria based, in part, on a one-in-one-hundred-thousand excess cancer risk, and this was as part of an overall policy package addressing human health and risk from contaminated fish and water.</i></p> <p><i>As has been in explained in the preliminary cost benefit analysis we would use the following tiered approach. This would be implemented sequentially through each permit cycle:</i></p> <p><i>1-Require the facility to employee clean monitoring/testing methods. Phthalates are used as a plasticizer and may be found in sample collection and analytical</i></p>

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<p>changes in behavior, and therefore, will have no costs and no benefits. On its face, the document demonstrates that the proposed rule violates RCW 34.05.328(1)(d). In the Cost-Benefit Analysis, the Department claims to have analyzed every waterbody, every NPDES permit, and every TMDL, and concluded that the proposed Human Health Criteria would not require any changes in behavior, other than the possibility of additional treatment for bis(2-ethylhexyl) phthalate. The Cost-Benefit Analysis concludes that the proposed criteria has the potential to impose more stringent discharge limitations on 15 facilities in Washington. 13 of those facilities could be subject to more stringent phthalate limits. Two other facilities could become subject to other limits, but the analysis concludes that one of those facilities is already curtailing operations and the other will not need to change its technology to comply with the new limits. If the rule will require no changes in behavior, it cannot affect water quality or benefit the environment or public health. This means that the proposed new criteria for 94 substances, other than phthalates, will have no benefit. The Cost-Benefit Analysis also considers what it describes as the “hypothetical” scenario that future testing methodologies may lower detection levels. Future improvements in test methods combined with the revised Human Health Criteria could result in much more stringent limitations on dischargers that would require changes in behavior. The Department found that “[t]here is too much uncertainty” associated with this scenario to “assess the impacts of these future actions quantitatively.” Inexplicably, the Cost-Benefit Analysis concludes by stating that “Ecology believes the</p>	<p><i>equipment causing elevated sample results. This step is to verify the concentration of phthalate in effluent.</i></p> <p><i>2-If the facility continues to show phthalates in their discharge after a comprehensive implementation of using clean monitoring techniques then they would be required to develop a Source Control Plan. This plan would have the facility look at all other sources of potential phthalate contamination.</i></p> <p><i>3-The plan would then be implemented to determine the phthalate source and then implement necessary action to eliminate or reduce the source of phthalates.</i></p> <p><i>4-If the source control plan is implemented and there continue to be phthalates in the effluent at levels above effluent limits then the facility would look at process enhancements that could be put into place at the facility to address the phthalates.</i></p> <p><i>5- Implement process enhancements that will help with phthalate removal.</i></p> <p><i>If process improvements are unable to meet phthalate effluent limits a facility may decide to seek a variance to the criteria for phthalates or a use change to the beneficial use. This decision is highly dependent on the work above. In addition, any decision for a variance or use change would have to meet federal criteria and go through a subsequent rule change and approval by the Environmental Protection Agency.</i></p>

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<p>likely benefits of the rule exceed its likely costs.” No explanation accompanies this conclusion. The analysis indicates that 13 facilities may face more stringent phthalate limits. The cost of compliance is estimated at \$10,000 per facility. The more stringent limits might or might not result in changes to ambient water quality, and therefore might or might not have some very small, but admittedly unquantifiable, health benefit. That theoretical health benefit depends upon the possibility that more stringent limits cause an improvement of water quality, the possibility that any water quality improvement causes a change in the tissue concentrations of fish that someone consistently eats over the course of his or her lifetime, and the possibility of a change in that person’s health. The benefit is not only unquantifiable, but highly improbable. It is clear that the proposed revisions to Human Health Criteria would violate RCW 34.05.328(1)(d) because even the rule’s proponent, Ecology, is unable to explain why its benefits would exceed its costs.</p>	<p><i>We are not making changes to the CBA analysis because these costs are too speculative in nature and may exceed the twenty-year time horizon.</i></p> <p><i>In addition, we also recognize the potential costs associated with having the federal government promulgate human health criteria for Washington State. Currently the Environmental Protection Agency is being challenged in federal court to adopt human health criteria for Washington State. Based on the rule that EPA has put out for public review we know that a considerable number of the criteria will be lower (more stringent) and will therefore have a potential to incur more costs. Maintaining state control over the development of water quality standards for the State of Washington is a significant, qualitative benefit. In fact, the legislature has directed Ecology to preserve and vigorously exercise “state powers to insure that present and future standards of water quality within the state shall be determined by the citizenry, through and by the efforts of state government, of the state of Washington.” RCW 90.48.010. The state Administrative Procedures Act, RCW 34.05.328(1)(d), directs Ecology to consider qualitative and quantitative benefits and costs, as well as “the specific directives of the statute being implemented.” Given the legislature’s directive to vigorously exercise state power to insure that water quality standards are determined by the State, Ecology believes the probable benefits of the human health</i></p>

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	<p><i>criteria proposed by Ecology are greater than the probable costs.</i></p> <p><i>Specific to Bis(2) ethyl hexyl phthalate, EPA's proposed criteria is one fifth of the criteria being adopted by Ecology.</i></p>
<p>Commenter ID: 65</p> <p>Ecology has failed to demonstrate that the rule is the least burdensome alternative, as required by RCW 34.05.328(1)(e). Ecology's proposed revisions to the Human Health Criteria fail to comply with this requirement. Ecology states its objective in proposing the new Human Health Criteria is to protect public health. The Department has articulated this goal:</p> <ul style="list-style-type: none"> • "To retain and secure high quality for all waters of the state." Cost-Benefit Analysis at 70. • "To protect the public health or welfare, enhance the quality of the water, taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial and other purposes." The Department boldly concludes, again without explanation, "the proposed rule represents the least burdensome alternative possible to meet the goals and objectives of the rule." In a series of conclusory sentences, the Department dismissed the current Human Health Criteria, and other Human Health Criteria based on a lower fish consumption rate as alternatives that would not be sufficiently protective of human health. These conclusions are overly broad and unjustified in light of 	<p><i>Please see the section on Risk Level in this Response to Comments. The Least-Burdensome Alternative Analysis has been updated with this discussion.</i></p> <p><i>As has been explained in the preliminary cost benefit analysis we would use the following tiered approach. This would be implemented sequentially through each permit cycle:</i></p> <ol style="list-style-type: none"> <i>1. Require the facility to employ clean monitoring/testing methods. Phthalates are used as a plasticizer and may be found in sample collection and analytical equipment causing elevated sample results. This step is to verify the concentration of phthalate in effluent.</i> <i>2. If the facility continues to show phthalates in their discharge after a comprehensive implementation of using clean monitoring techniques then they would be required to develop a Source Control Plan. This plan would have the facility look at all other sources of potential phthalate contamination.</i>

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<p>admissions the Department has made elsewhere in the same document. As explained above, the Department concedes that the only one of the new Human Health Criteria that may have any practical effect is the new phthalate criterion. The other 94 criteria will not result in changes in effluent limitations for any permit holder in Washington. Therefore, one less burdensome alternative would be to make no change to the criteria for those 94 substances. According to the Department’s own analysis, the new criteria for those 94 substances will be no more effective at protecting public health than the existing Human Health Criteria. The criteria are more stringent than existing criteria, and therefore, more burdensome in theory. Even if Ecology were correct that they will not require any changes of behavior by existing or future dischargers, the analysis required to verify that existing and future dischargers do not have the potential to exceed the more stringent standards will make the proposed criteria more burdensome for regulators and dischargers than the existing criteria. The proposed rule, therefore, violates RCW 34.05.328(1)(e). The Department’s analysis is also flawed because it fails to consider the alternative of adopting criteria based on a fish consumption rate of 175 g/day and a cancer risk factor of 10⁻⁵. The Department’s failure to consider this alternative is particularly shocking given that the Department proposed this alternative in January 2015, and at that time, the Department concluded that it was the least burdensome alternative that would meet its objectives. Without mentioning this alternative, the Department now concludes that another even more burdensome option is the least burdensome</p>	<ol style="list-style-type: none"> 3. <i>The plan would then be implemented to determine the phthalate source and then implement necessary action to eliminate or reduce the source of phthalates.</i> 4. <i>If the source control plan is implemented and there continue to be phthalates in the effluent at levels above effluent limits then the facility would look at process enhancements that could be put into place at the facility to address the phthalates.</i> 5. <i>Implement process enhancements that will help with phthalate removal.</i> <p><i>If process improvements are unable to meet phthalate effluent limits a facility may decide to seek a variance to the criteria for phthalates or a use change to the beneficial use. This decision is highly dependent on the work above. In addition, any decision for a variance or use change would have to meet federal criteria and go through a subsequent rule change and approval by the Environmental Protection Agency.</i></p> <p><i>We are not making changes to the CBA analysis because these costs are too speculative in nature and may exceed the twenty-year time horizon.</i></p> <p><i>In addition, we also recognize the potential costs associated with having the federal government promulgate human health criteria for Washington State. Currently</i></p>

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<p>alternative. This conclusion is arbitrary and capricious.</p>	<p><i>the Environmental Protection Agency is being challenged in federal court to adopt human health criteria for Washington State. Based on the rule that EPA has put out for public review we know that a considerable number of the criteria will be lower (more stringent) and will therefore have a potential to incur more costs. Maintaining state control over the development of water quality standards for the State of Washington is a significant, qualitative benefit. In fact, the legislature has directed Ecology to preserve and vigorously exercise “state powers to insure that present and future standards of water quality within the state shall be determined by the citizenry, through and by the efforts of state government, of the state of Washington.” RCW 90.48.010. The state Administrative Procedures Act, RCW 34.05.328(1)(d), directs Ecology to consider qualitative and quantitative benefits and costs, as well as “the specific directives of the statute being implemented.” Given the legislature’s directive to vigorously exercise state power to insure that water quality standards are determined by the State, Ecology believes the probable benefits of the human health criteria proposed by Ecology are greater than the probable costs.</i></p> <p><i>Specific to Bis 2 ethyl hexyl phthalate, EPA’s proposed criteria is one fifth of the criteria being adopted by Ecology.</i></p>

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<p>Commenter ID: 65</p> <p>Ecology has failed to provide an adequate justification for the proposed rule, in violation of RCW 34.05.328. In Ecology’s rule proposal packet, the Department repeatedly states that its purpose in proposing revised Human Health Criteria for toxic substances is to protect people who drink surface water and consume fish from Washington waters. Yet, the Department also claims that the new Human Health Criteria will have virtually no effect on water quality, and will provide no more protection for Washington citizens than existing standards. After spending a significant amount of time developing revised Human Health Criteria for 98 different toxic substances, the Department did not consider the potentially significant costs likely to be incurred by regulated entities and identified only the possibility of some unquantifiable, and at most small, benefits that might result from more stringent discharge limits on bis(2-ethylhexyl) phthalate. The Department concludes, without explanation, that the uncertain and unquantifiable benefits are greater than the identified cost of more stringent limits. Remarkably, Ecology nonetheless proposes to adopt more stringent Human Health Criteria for 94 other substances. The Department claims that these criteria will not have any practical effect on or cost to the regulated community, will not require any change in behavior and likewise, will then have no effect on water quality in the state. The Department has failed to justify the proposed rule, and as a result, its adoption would violate RCW 34.05.328, which requires Ecology to develop a rule that has greater benefits than costs and is the least</p>	<p><i>The Cost-Benefit Analysis discusses additional benefits of increased protectiveness in the case that (contrary to existing behavior) a discharger should come into existence that discharges these chemicals in concentrations exceeding the proposed human health criteria. This benefit of theoretical protectiveness corresponds to the theoretical costs of compliance such a discharger would incur, and these are discussed in the analysis. Ecology previously proposed human health criteria based, in part, on a one-in-one-hundred-thousand excess cancer risk, and this was as part of an overall policy package addressing human health and risk from contaminated fish and water. Please see the section on Risk Level in this Response to Comments. The Least-Burdensome Alternative Analysis has been updated with discussion of this alternative.</i></p>

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Commenter ID/ Comment	Ecology Response
<p>burdensome alternative option for regulated entities in the state of Washington.</p>	
<p>Commenter ID: 65</p> <p>Ecology’s proposed rule is based upon a faulty cost-benefit analysis because the Department fails to present the underlying analysis necessary to support its conclusions. The Department’s Cost-Benefit Analysis concludes that the proposed Human Health Criteria will not require any changes in behavior, other than with respect to the phthalate criterion, and therefore, will have no other benefits or costs. As discussed above, if this is the case, the vast majority of the proposed rule is entirely unjustified and the Department should not (and cannot legally) go forward with its promulgation. In order to serve its purpose under RCW 34.05.328, a cost-benefit analysis must provide a credible assessment of a proposed rule’s costs and benefits, and the assessment must be explained clearly and with sufficient detail to allow the public to understand it and provide meaningful comment. As the Washington Legislature has found, “[m]embers of the public affected by administrative rules must have the opportunity for a meaningful role in their development; the bases for agency action must be legitimate and clearly articulated.” Washington Laws ch. 403, §1 (1995). In this case, the Cost-Benefit Analysis fails to clearly articulate the bases for its assessment, or relies upon assumptions that are unsupported in the document. The Department has published a cursory and conclusory document that falls far short of the type of analysis of costs and benefits that the Washington Legislature requires an agency to publish in connection with such a</p>	<p><i>The Cost-Benefit Analysis discusses additional benefits of increased protectiveness in the case that (contrary to existing behavior) a discharger should come into existence that discharges these chemicals in concentrations exceeding the proposed human health criteria. This benefit of theoretical protectiveness corresponds to the theoretical costs of compliance such a hypothetical discharger would incur, and these are discussed in the analysis. Ecology does not agree that dischargers are likely to now need to assess whether they will discharge chemicals they do not currently discharge. Ecology previously proposed human health criteria based, in part, on a one-in-one-hundred-thousand excess cancer risk, and this was as part of an overall policy package addressing human health and risk from contaminated fish and water. Please see the section on Risk Level in this Response to Comments. The Least-Burdensome Alternative Analysis has been updated with the alternative of a higher risk level.</i></p>

Specific Comments on Preliminary Cost Benefit Analysis

Commenter ID/ Comment	Ecology Response
<p>significant legislative rule. In this portion of the report, the Department claims to have performed several types of detailed analyses, but does not present them in a way that allows the public to understand and comment upon them. In order to comply with the letter and intent of RCW 34.05.328, the Department must “show its work.” The Department’s Cost-Benefit Analysis is severely flawed. It fails to present or explain the underlying analysis. It bases its conclusions on assumptions that are neither supported by the language of the proposed rule or the facts presented. The Cost-Benefit Analysis is both an important part of the agency’s decision-making process, and a document that is essential to allowing meaningful public comment on a proposed rule. The Department should revise the Cost- Benefit Analysis to address its shortcomings, and extend the public comment period on the proposed rule until it is reissued.</p>	
<p>Commenter ID: 65</p> <p>The current proposal is unjustified. The Department itself acknowledges that the new Human Health Criteria will have little practical effect. The Department claims that proposal might result in “unquantifiable positive but likely small reduced cancer risk” and “unquantifiable positive but likely small reduced non-cancer illness risk.” WDOE, Preliminary Cost-Benefit and Least-Burdensome Alternative Analysis vii (Feb. 2016) (hereinafter “Cost-Benefit Analysis”). Significantly, these highly uncertain and unquantifiable benefits are all associated with the proposed new criterion for bis(2- ethylhexyl) phthalate. The Department has proposed to change the Human Health</p>	<p><i>The Cost-Benefit Analysis discusses additional benefits of increased protectiveness in the case that (contrary to existing behavior) a discharger should come into existence that discharges these chemicals in concentrations exceeding the proposed human health criteria. This benefit of theoretical protectiveness corresponds to the theoretical costs of compliance such a discharger would incur, and these are discussed in the analysis. Ecology previously proposed human health criteria based, in part, on a one-in-one-hundred-thousand excess cancer risk, and this was as part of an overall policy package addressing human health and risk</i></p>

Specific Comments on Preliminary Cost Benefit Analysis

Commenter ID/ Comment	Ecology Response
<p>Criteria for 94 other substances, but has been unable to identify any benefit from doing so. According to the Department’s own analysis, there is no justification for the vast majority of its current proposal, and therefore, is contrary to law.</p>	<p><i>from contaminated fish and water. Please see the section on Risk Level in this Response to Comments. The Least-Burdensome Alternative Analysis has been updated with the alternative of a higher risk level.</i></p>
<p>Commenter ID: 70</p> <p>Looking at the draft criteria as a whole, we believe that there are several aspects of the rulemaking and supporting documentation that could be improved. The economic analysis document supporting this draft rule is one such component which seems significantly out of line based on our experience and that of other control agencies. For example, King County and other jurisdictions, such as Spokane and Seattle, have a long history of source control actions. Based on this experience, Ecology's estimated cost of \$1,000 one-time per utility to conduct source control implementation is not reasonable. Ecology's analysis further states that source control costs statewide would be \$11,000 to attempt to control Bis(2-ethylhexyl) phthalate (DEHP) sources. Many legal in-use products contribute DEHP and other toxic contaminants to wastewater systems, and thus these types of sources are outside the jurisdiction of utilities to remedy or control. Source control efforts are potentially required for many pervasive urban pollutants beyond arsenic and DEHP as cited in the cost-benefit analysis. Similarly the costs of monitoring efforts are not accurately addressed. The criteria will result in additional monitoring of effluent and surface water quality. This will be further impacted by the inevitable change to more sensitive analytical methods and</p>	<p><i>Our \$11,000 in costs is in reference to facilities developing a Source Control Plan, not actually implementing one. We were unable to quantify source control implementation costs due to the broad spectrum of source control options. We have revised how this information is communicated in the Final Cost-Benefit Analysis. Our estimates of the cost for utilities to develop a source control plan is based on the judgement of our permit writers and the best available information at the time; if you have more accurate information, we would welcome that information. The \$11,000 cost to address Bis(2) comes from facilities having to investigate the source of the chemical; for municipal utilities, this would involve looking for phthalates in industrial facilities that discharge to their area and possibly having industries conduct additional sampling (see CBA p. 42). We acknowledge that many of these facilities are unlikely to find obvious sources of phthalates or have the ability/jurisdiction to control it. This is why we do not attribute additional costs for removing the phthalates, but instead, limit the costs to the \$11,000 for developing the Plan itself. See further discussion on page 42 of the</i></p>

Specific Comments on Preliminary Cost Benefit Analysis

Commenter ID/ Comment	Ecology Response
<p>increasingly strict effluent limits. Ecology should publish a rule that makes it clear that significant changes to the regulatory will lead to much higher costs for implementation. We urge the state to revise the economic analysis to assess the true complexities and costs.</p>	<p><i>CBA for more explanation. On the matter of monitoring costs; the proposed rule does not change the monitoring requirements for facilities and therefore, costs for monitoring fall under the baseline. We do, however, address the issue improved analytical methods in Chapter 7. On page 56, we state that with improved testing methods, dischargers may incur additional costs. However, we also explain, “There is too much uncertainty in the locations, facilities, chemicals, concentrations, and timing of impacts associated with future improvements to sampling and testing to assess the impacts of these future actions quantitatively.” It is important to note that should improve testing methods drive additional costs for dischargers, they would also drive public benefits from reduced exposure to these chemicals.</i></p>

Draft Implementation Plan

Comment Summary

Comments received on the Draft implementation Plan were all individual and are listed below with responses.

Specific Comments on Draft Implementation Plan	
Commenter ID/ Comment	Ecology Response
<p>Commenter ID: 6</p> <p>Clean Water Section 303(d) and NPDES Permits It its narrative, Rule Implementation Plan Water Quality Standards for Surface Waters of the State of Washington; Amendments to Chapter 173-201A WAC (Draft Jan. 2015), Ecology sets out some internal rules for when it will use its new criteria. Some of these observations are simply unlawful. For example, once EPA has formally approved a TMDL to achieve an outdated and less stringent standard, Ecology cannot retain the waterbody in category 4a for completed TMDLs. Instead, those waters must be relisted. In addition, while the chart is silent on the relationship between completed TMDLs’ wasteload allocations and new or revised permits, permit writers may not continue to rely on wasteload allocations without reference to the new criteria, once EPA has approved them. In addition, NPDES permits cannot be put out for public comment using no-longer-applicable criteria.</p>	<p><i>Comments noted. Ecology is revising the implementation Plan to address this comment. TMDL success is evaluated through the Effectiveness Monitoring Program. Each TMDL contains an effectiveness monitoring plan. As monitoring results are reviewed Ecology will determine whether the TMDL is likely to result in meeting the new human health criteria. At that time, the TMDL will be revisited to determine whether it should remain or be removed from Category 4(a).</i></p>
<p>Commenter ID: 34</p> <p>The rule implementation plan must take into account evolution of the regulatory framework over time. Ecology’s support documents should be designed to implement the proposal considering the evolution over time of regulations and laws and science. Nothing will remain static as this rule proposal is implemented across Washington. We provide a list of factors that will change over time and no one issue is more important than others. First, analytical test</p>	<p><i>Ecology agrees that many events will occur in the future that will require development of new guidance and approaches. This situation is not new. Over the years, Ecology has continually developed and maintained permitting guidance and approaches to address new laws and regulations, and that process is ongoing. Ecology cannot predict the pace of new</i></p>

Specific Comments on Draft Implementation Plan

Commenter ID/ Comment	Ecology Response
<p>methodologies will likely advance and have lower quantification levels leading to more stringent water quality based effluent limits as allowed for by WAC 173-201A-260(3)(h). Second, water permit holders will likely change as populations shift and manufacturing changes. Third, Section 303(d) lists of waters impaired by pollutants under the Clean Water Act will likely change. Fourth, additional large and complex TMDLs will need to be developed in populous areas of Washington. Fifth, applications and drafting water quality permits will become more complex and require additional Ecology staff-time and scientific support activities. Sixth, large-scale treatment technology is likely to advance beyond 2016 technology limitations. Seventh, case law and also legal precedents from the Pollution Control Hearings Board (PCHB) will change, for example, the practical implications of PCHB No. 11-184 for future water permits. Finally, when all is said and done, the situation will likely be chaotic and factors surrounding water permitting will not evolve at the same pace. As a result the questions for Ecology are at what pace will the evolution in each sector occur; and, how will Ecology respond to the challenge of developing appropriate implementation policies? We encourage Ecology to build a plan based on realistic assessments of available data, implementation tools and science while building in flexibility to meet these evolving challenges.</p>	<p><i>technology or other developments that drive new or different requirements, but Ecology will continue to develop approaches and guidance to new requirements as they occur, taking into account data, science, and permitting and standards tools. New guidance and approaches are developed to comply with state and federal laws and regulations.</i></p>
<p>Commenter ID: 46</p> <p>The Implementation Plan is also lacking in detail about how the new standards will be rolled-out in new permits, given the lack of data and the difficulty of obtaining data at some of these new very low levels. While all of the key parts of the plan are</p>	<p><i>Ecology agrees that implementation of the new human health criteria needs to be clear. The Implementation Plan describes the tasks associated with the adoption of the new human health criteria, and includes references to Permits Writer's Guidance and</i></p>

Specific Comments on Draft Implementation Plan

Commenter ID/ Comment	Ecology Response
<p>included, some additional detail in this critical area is needed.</p>	<p><i>training. Actual development of the implementation approaches will occur through guidance development.</i></p>
<p>Commenter ID: 66</p> <p>The cost- benefit analysis states, "Because most human health criteria (HHC) are based on lifetime exposures, direct comparisons of receiving water criteria with pollutant concentrations in intermittent stormwater discharges are not appropriate. This, and the high variation in stormwater pollutant concentrations and discharge volumes between storms and during a single storm, make the application of HHC to stormwater particularly problematic. Based on the authority of 40 CFR 122.44(k)(3), Ecology instead requires the implementation of Best Management Practices (BMPs) to control or abate pollutants in stormwater discharges, as it is not feasible to derive appropriate numeric effluent limits for the HHC." WSDOT suggests adding this wording to the Rule Implementation Plan for consistency and additional clarity.</p>	<p><i>Ecology agrees that implementation of the new human health criteria needs to be clear. The Implementation Plan describes the tasks associated with the adoption of the new human health criteria, and includes references to Permits Writer's Guidance and training. Actual development of the implementation approaches will occur through guidance development. Current guidance includes language that specifies that human health criteria water quality-based limits for episodic discharges are in some cases (such as many stormwater discharges) infeasible to calculate, thus will be BMP-based, as allowed in 40CFR122.44(k).</i></p>
<p>Commenter ID: 66</p> <p>WSDOT remains concerned about the effect of the proposed criteria on the construction stormwater general permit process. It is important that the permitting process for contaminated sites be clear and consistent statewide to minimize confusion and permitting delays. Clarification should be added to the Rule Implementation Plan to describe how and when the new human health criteria will be useful to set trigger levels for contaminants. If the new criteria are going to apply to construction discharges, the Rule Implementation Plan must include</p>	<p><i>Ecology agrees that implementation of the new human health criteria needs to be clear. The Implementation Plan describes the tasks associated with the adoption of the new human health criteria, and includes references to Permits Writer's Guidance and training. Actual development of the implementation approaches will occur through guidance development. Current guidance includes language that specifies that human health criteria water quality-based limits for</i></p>

Specific Comments on Draft Implementation Plan

Commenter ID/ Comment	Ecology Response
reasonable lead time for technological advances in stormwater treatment to allow for technology-based approaches to compliance that are widely available and cost-effective.	<i>episodic discharges, such as many stormwater discharges, will be BMP-based, as per 40CFR122.44(k).</i>

Draft Environmental Impact Statement

Summary of Comments

A variety of comments were received on the Draft Environmental Impact Statement (DEIS).

Individual comments and responses on Tribal Treaty Rights are included in the table below this General Comment/Responses section.

General Comment/Responses on Draft Environmental Impact Statement

1. General Comment: 8, 65

Ecology did not consider a reasonable range of alternatives.

Response: Ecology disagrees that a reasonable range of alternatives were not considered. For this rulemaking, many different alternatives could have been considered. Ecology chose to present alternatives that were based on the substantial public process that was conducted to support development of this rule. The public process, including lengthy discussion of approaches and alternatives, included consideration of different FCRs (both higher and lower than 175 g/day) based on different statistics, focus populations, and resources. Body weight was also considered and discussed. Although considered and discussed, increasing the life expectancy has no effect on the calculated criteria because with water quality criteria the exposure duration is assumed to be the same as the lifetime value. Changing this value would only be relevant if the duration of exposure was assumed to be less than a lifetime, such as used in the MTCA risk equations. Please see the Inputs to the Equations section of this Response to Comments for a description of the lengthy and comprehensive process that was part of this rulemaking. Ecology does not consider the analyses in the DEIS to be "limited." Given the multiple inputs to the draft rule and multiple values that could be used for any of the inputs, there were literally hundreds of different possible combinations (alternatives) of input values that could have been used to calculate criteria. SEPA requires an analysis of "reasonable alternatives," not "every" alternative, and Ecology used the extensive public process supporting this rule to focus on a reasonable suite of alternatives for the DEIS. The DEIS is not required to recommend one alternative over another, nor to explain the rationale behind the preferred alternative. (See Decision Document for rationale). The DEIS is required to present alternatives and explain the differences. In the case of Alternative 2 vs. Alternative 3, both alternatives use a HQ = 1 and a risk level of 10⁻⁶, so given that neither alternative as a whole has all criteria "higher than" or "lower than" the other, they are considered approximately equal in protection.

Specific Comments on Draft Environmental Impact Statement

Comment	Ecology Response
<p>Commenter ID: 8</p> <p>The DEIS is inadequate in its failure to consider reasonable alternatives. Ecology failed to consider and evaluate numerous important alternatives, rendering the DEIS inadequate. For example, Ecology entirely failed to consider any fish consumption rate higher than 175 g/day, even though numerous studies show fish consumption rates well in excess of that rate. Ecology also failed to consider maintaining a 70 kg body weight or increasing the life expectancy used in its calculation and how those changes would affect the chosen proposal. Instead, Ecology only considered a no-action alternative, EPA’s proposed rule, and the Ecology proposed rule. Lastly, Ecology unacceptably limited its comparison of the alternatives it did present, providing only one paragraph on “usability” and one on “environmental protection.” That discussion does not differentiate between, for example, the environmental protection differences in EPA’s much stronger proposed rule. In the tables presented, the qualitative ratings of alternatives 2 and 3 are the same, but there is essentially no explanation as to why one was selected over other.</p>	<p><i>Please see #1 DEIS General Response section above.</i></p>
<p>Commenter ID: 11</p> <p>The tables including HH WQC and analytical sensitivities in Appendix B of the EIS (Ecology 2016a) are helpful. They would be much more useful, however, if criteria below approved analytical method sensitivity were listed in bold type. This would help readers more easily understand how current and proposed HH WQC compare to analytical methods, and help frame many of the discussions in the CBA (Ecology 2016b).</p>	<p><i>Comment noted.</i></p>

Specific Comments on Draft Environmental Impact Statement

Comment	Ecology Response
<p>Commenter ID: 65</p> <p>Ecology’s proposed rule is based on an inadequate Environmental Impact Statement. Under the State Environmental Policy Act, an Environmental Impact Statement (“EIS”) should present a reasonably thorough discussion of the significant environmental impacts associated with the agency’s proposed action. In doing so, it should compare the proposed action to a reasonable range of alternatives, so that the decision makers and the public can understand and assess the likely effects of the proposed action. The Department first issued a draft EIS in January 2015. See WDOE, Draft Environmental Impact Statement (Jan. 2015). Along with its revised rule, the Department published a revised DEIS in January 2016. See Draft Environmental Impact Statement – Revised (Jan. 2016) (hereinafter “DEIS”). The DEIS has several fundamental inadequacies. Its analysis of the proposed Human Health Criteria is contradicted by and fundamentally inconsistent with the analysis presented in the Cost-Benefit Analysis, and it fails to consider a reasonable range of alternatives to the proposed Human Health Criteria. The DEIS is inconsistent with Ecology’s Cost-Benefit Analysis. In its summary, the DEIS explains that “[t]he objective of the draft rule is to adopt Human Health Criteria for the state of Washington that protect people who consume fish and shellfish in waters regulated by Ecology.” The document then goes on to compare four alternatives for Human Health Criteria with respect to the level of environmental protection provided and usability. The analysis and conclusions of this critical part of the DEIS are inconsistent with the analysis Ecology presented in its Cost-Benefit Analysis. Specifically, the DEIS concludes that the existing Human Health Criteria provide a “Moderate-Low” level of environmental</p>	<p><i>Please see #1 DEIS General Response section above. The alternatives in the DEIS were evaluated based on environmental protection and usability. These two factors are defined in the DEIS and the analysis presented is consistent with those factors as defined. The DEIS is consistent with the CBA.</i></p>

Specific Comments on Draft Environmental Impact Statement

Comment	Ecology Response
<p>protection, but that the proposed Human Health Criteria will provide a “High” level of environmental protection. The DEIS appears to reason that, in theory, more stringent criteria are more protective. However, the DEIS never considers the practical effect of the new criteria. It does not compare the environmental conditions expected after adoption of the proposed criteria to current environmental conditions. The Department attempted to do so in the Cost-Benefit Analysis. As discussed above, the Department concluded that the only potential positive improvement would be the possibility of a reduction in phthalate discharges to the environment. The new proposed criteria for the other 94 substances would have absolutely no effect. It is, therefore, inaccurate and incredibly misleading to the public to issue a DEIS that claims that the proposed rule will increase the level of environmental protection from Moderate-Low to High.</p>	
<p>Commenter ID: 65</p> <p>The DEIS fails to consider a meaningful range of alternatives. An EIS must consider a reasonable range of alternatives. With respect to most of the Human Health Criteria proposed, the Department’s DEIS considers only three: 1. Human Health Criteria based on fish consumption rate of 6.5 g/day and risk level of 10^{-6}. (No Action Alternative) 2. EPA’s proposed Human Health Criteria, which are based on fish consumption rate of 175 g/day and risk level of 10^{-6}. 3. Human Health Criteria for most substances based on fish consumption rate of 175 g/day and risk level of 10^{-6}, but criteria for copper and asbestos based on SDWA levels. Although the DEIS identifies these as three alternatives, for 94 of the covered substances there are only two alternatives: the first and second listed above. The third</p>	<p><i>Please see #1 DEIS General Response section above.</i></p>

Specific Comments on Draft Environmental Impact Statement

Comment	Ecology Response
<p>alternative is identical to the second, except for copper and asbestos. The DEIS ignores at least two obvious additional alternatives. The first is the proposed Human Health Criteria the Department published in January 2015, which was based on 175 g/day fish consumption and a risk level of 10^{-5}. The second is an alternative set of criteria based on a fish consumption rate in the range of 30 to 60 g/day, which would much more closely approximate the average consumption of Washington-reared fish by high consuming populations, and a risk level of 10^{-5}. These alternatives in addition to those identified in the DEIS would reflect a reasonable range of alternatives. By failing to evaluate such a range, the Department has set up a false choice—either stick with the status quo, or support the Department’s current proposal. Ecology should revise the document to include a meaningful analysis and range of alternatives, and reissue the DEIS for further public comment</p>	

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Appendices

Ecology prepared the following Appendices for the Concise Explanatory Statement:

Appendix A: Commenter Index

Appendix B: Transcripts from Public Hearings

Appendix C: Citation List

Appendix D: Copy of Written Comments

Due to the size of this document, Ecology published copies of the written comments in a single associated document called Concise Explanatory Statement: Appendix D (Publication no. 16-10-027), available at www.ecy.wa.gov/programs/wq/ruledev/wac173201A/1203docs.html.

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Appendix B: Transcripts from Public Hearings.

Seattle, Washington – April 5, 2016
South Sound Community College

VERBATIM REPORT OF PROCEEDINGS

WASHINGTON DEPARTMENT OF ECOLOGY WATER QUALITY STANDARDS PUBLIC HEARING

6:30 p.m.
April 5, 2016
South Sound Community College
Georgetown Campus
Seattle, Washington

Reported By:
Mary Jo Fratella, RPR, CCR #2083

HEARING OFFICER LEUBA: I want to thank you for coming this evening and we're going to begin tonight's hearing. I do have some information that I need to provide before we start the hearing. The purpose of this hearing is to gather public comment on the proposed amendments to the Water Quality Standards for Surface Waters in the State of Washington, Chapter 173-201 Washington Administrative Code, and also the draft environmental impact statement for that proposed rule. This hearing is part of the public comment period that ends at 5:00 p.m. on Friday, April 22, 2016.

There are four general steps that -- Is that better? Tonight's hearing consists of four steps I have to read into the record first, then I'll call people to testify in the order that you signed in, and, once everyone has testified, I'll provide an opportunity for folks who have changed their minds during the process of this to come forward, and when all the testimony is completed I'll need to read a few more things into the record, including next steps, and then I'll close the hearing.

So, my hearing officer job tonight is to conduct the hearing and gather your comments for the public record. I want to make sure that Ecology obtains a clear record of the hearing, which is why I will be recording the hearing, and Mary Jo Fratella, who is a court reporter, will be -- recorder, court recorder, will be producing a transcript of your testimony as you give it. I want to make sure that everyone has an opportunity to testify, if they want to.

I will need your cooperation on some ground rules. I don't think we have any problems with cell phones. They all seem to be off and I don't see anybody even playing solitary. If you need to take a call, please step out of the room. One person will come to the table at a time and speak. You will be giving your testimony to me, as the hearings officer, and to Kelly, as the special assistant to the director. Audience members please allow the person commenting to have the floor so there's no noise or side conversations. If you want to have a side conversation, please take it into

the hall. Again, I'm going to reiterate that we respect everyone's opinion, and the right to speak and be heard, regardless of any differences you may have. This includes being respectful towards other people and opinions while giving your testimony. I will call people up to comment in the order in which you signed in. People who want to testify will come to the front and speak into that microphone; so, speak clearly and not too fast so the court reporter and I can maintain an accurate and understandable recording. Please keep your comments concise. Ecology gives written comments the same consideration as oral comments, so please summarize lengthy statements. You may also submit written comments.

During the hearing questions can be asked, questions can be asked for the record, but cannot be answered by Ecology staff at that time. Questions posed during formal testimony will be answered in a Concise Explanatory Statement which will be available after the hearings are concluded online and after the rule is adopted. Are there any questions about these ground rules?

If you wish to receive notification personally when the Concise Explanatory Statement is available, please be sure you have provided Becca Conklin or Susan Braley with an e-mail or mailing address. I want to make sure that you and your neighbors get to comment. We know you took the time and trouble to come tonight and may want to leave at a reasonable hour, as well. We have three people who wish to comment tonight and I believe we'll limit that time to 10 minutes per person. Is there a problem with that? Has anyone changed their mind and want to sign in to testify tonight currently? I'll ask again after everyone has testified. I will open the floor again for anyone who changes their mind. Please summarize your lengthy comments or repetitive ones. If you prefer, you can provide comments in writing. Written comments receive the same consideration.

I'll start the formal hearing now. I will be recording this part of the hearing to make sure Ecology accurately receives your comments. I'll begin by recording some required information into the record.

(THE AUDIO RECORDING STARTED.)

HEARING OFFICER LEUBA: I'm Victoria Leuba, the hearings officer for this hearing on the proposed amendments to the Water Quality Standards for Surface Waters of the State of Washington, Chapter 173-201A, Washington Administrative Code. Let the record show that it is 7:36 p.m. on April 5, 2016, and this hearing is being held in room C-122 within Building C of South Seattle Community College's Georgetown campus located at 6737 Corson Avenue South, Seattle, Washington.

Legal notice of the rule and this hearing was published in the Washington State Register, Number 1604092, on February 17, 2016. Ecology issued a state-wide news release on the rule making and hearings on February 3, 2016. In addition, Ecology placed information about the comment period and hearings on their website for the rule and in the online public calendar. Ecology sent rule announcements via e-mail to the following Listservs or e-mail distribution lists on February 3, 2016: Water Quality Listserv with 1,138 subscribers; Water Quality Partnership with 58 members; and Ecology News Listserv with 1,471 subscribers. Ecology issued a reminder about the public hearing dates and times to these Listservs on March 30, 2016.

It is now formal comment time for anyone who would like to comment. I'll be calling you to testify in the order in which you signed in. When I call your name, please come up to the microphone, state your name and the company or organization you represent, if any. I apologize in advance if I mispronounce your name. Feel free to correct me. Remember, our time limit is about ten minutes and no extra noise. When you've gotten to nine minutes, Susan will hold up a card that says one minute, and, when your time is up, I will call the next person to testify.

We will begin with Sophia Reeser (sic). She'll be followed by Chris Wilke.

MS. RESSLER: You were close. For the record, my name is Sophia Ressler and I'm speaking as a private citizen tonight, but I'm also an employee of Puget SoundKeeper. I grew up on Vashon Island where I, every Saturday morning, would go out on my dad's fishing boat. We also would collect mussels out in front of my childhood home and go clam digging. I think that the most important thing that this rule -- the purpose of it is the human health criteria, which I think Ecology really needs to pay attention to those three little words.

Ecology has an obligation to protect the human health of the people of the Puget Sound, and the Clean Water Act requires that the data that they use be based on the local data about how much fish is being consumed. Unfortunately, this is not what has happened. This data is now 40 years old and we're trying to bring up new standards, but I don't believe that Ecology is doing the proper thing, especially in regards to mercury and PCBs, which are the most glaring issue, as I see it here.

The national toxics rule that was being referred to earlier that PCBs and mercury are still going to be governed by is woefully outdated. It was established in 1992 and has not been updated since then. Currently, there are 17 of the 18 water bodies in the State of Washington with fish advisory consumptions. 17 of these are listed because they are either listed for PCBs, or mercury, or both. So, the point of making this -- improving this rule is that we're trying to make these fish safer -- safer for public --

(THE AUDIO RECORDING BEGAN PLAYING)

HEARING OFFICER LEUBA: It's giving me troubles. It should be good.

MS. RESSLER: Okay. We're trying to make fish public -- healthier for public consumption, but we're improving -- we're attempting to improve a rule and not even touching on the actual problem. Furthermore, this is an extremely large environmental justice concern. I eat this fish because I want to and I likely do it at levels that are dangerous for me, but at least I make the choice to eat this fish. There's a lot of people in this state that don't have the choice and whose livelihood is based off of eating this fish. Based on Ecology's own research, these groups are tribal members, Asian Pacific Islanders, and commercial and recreational fishermen, and this rule should be calibrated to protect these sensitive communities.

Completely ignoring PCBs and mercury, and keeping them at inadequate levels, is unacceptable and it doesn't help protect the communities that are living off of this fish; so, I would like to just urge Ecology to not punt PCBs and mercury, which is what they're doing in their current rule,

and instead apply the 175 grams a day fish consumption rate to PCBs and mercury like the EPA rule is suggesting that we do.

HEARING OFFICER LEUBA: Chris Wilke.

MR. WILKE: Hi. For the record, my name is Chris Wilke, Executive Director at Puget Soundkeeper in Seattle, Washington, and thank you for hearing my testimony today. Puget Soundkeeper represents 3,000 members, supporters, and volunteers who care deeply about the health of Puget Sound and its surrounding waters. In particular, many of our supporters are motivated by a desire to keep their access to safe and abundant local seafood, as well as to preserve this legacy for future generations. Puget Soundkeeper will be submitting written comments to supplement the testimony I'm giving today.

In section 101 of the Clean Water Act it states that it is the national goal that discharges of pollutants be eliminated to the nation's waters by 1985. While we have made progress, we clearly have a long ways to go before reaching this goal. Setting strong standards is the first step to improve our efforts over time. It is time to revise the water quality criteria for human health for the State of Washington.

As the Department of Ecology knows very well, this is an issue that has stalled in the State of Washington for many years. Ecology is also aware of the strong influence that polluting industries have on policy making at the state level around this issue as much as any another. Ecology is also aware of the social justice implications of this issue for many in Washington, especially treaty tribes, Asian Pacific Islanders, and recreational fishers. Access to safe local seafood is of paramount concern for their well-being.

In light of these considerations, we applaud Ecology for taking action to draft a new revised rule that recognizes the higher consumption rate of 175 grams a day while maintaining cancer risk rates of ten to the minus six, and for scrapping the earlier draft rule that called for raising the cancer risk rate by a factor of ten; however, this will be empty progress if this rule proceeds as written in exempting certain chemicals like PCBs and mercury, which are precisely the two chemicals that are responsible for the vast majority of fish consumption advisories issued by the Department of Health. Even though there are many sources of these pollutants, including ones that would not necessarily be regulated by this rule, the existing fish consumption advisories are evidence that our waterways have lost any assimilative capacity for these chemicals and that it is time to act.

Beyond failure to make progress, this new rule will actually be a step backwards in terms of protecting human health if we keep the same standards for mercury and PCBs while simultaneously adding implementation loop holes such as intake credits and unlimited timelines for variances and compliance schedules. I also understand that this would weaken the other water quality rules by applying the same unlimited timelines and variances to other water quality rules.

EPA has proposed a rule that doesn't take these dangerous paths and this is a strong indication that they would likely reject this rule. This would only result in a further delay in finalizing the rule, which would exacerbate the pollution problems and benefit only one set of parties, the polluters. Every day of delay is potentially a five to ten year delay because Ecology issues

pollution discharge permits on five year cycles. They also write compliance schedules to give industries more time. This issue has long-term consequences as PCBs, and mercury, and other chemicals take a very, very long time, in some cases generations, to get out of the environment.

A quick review of the Department of Health's website reveals that consumption advisories have been issued for 18 major waterways in our state. Of these 18, all but one waterway have a fish consumption advisory for either PCBs or mercury, and many have advisories for both. 84% of the waterways, of the listed waterways, are listed for PCBs, and 44% are listed for mercury. In addition, every waterway in the state that supports bass, a popular sport fish, has a mercury advisory.

Under the Clean Water Act, every man, woman, and child has a right to go down to a local waterway, catch a fish, and bring it home for dinner, feed it to their family, and expect it to be free of toxic pollution. There's no exempt status allowed. Our waterways are either clean or they must be cleaned up. How can Ecology, in good conscience, exempt the very chemicals that are poisoning us the most? We ask that Ecology let the EPA move forward to finalize their draft rule to strength the protections needed to protect Washington's fish consumers. Setting the strong standard now is the step to controlling pollution and reducing the risk that is already present for fish consumers in Washington State. Thank you.

HEARING OFFICER LEUBA: Thank you. Karen Gogins.

MS. GOGINS: Hi. For the record, my name is Karen Gogins and I'm the policy manager for Citizens For a Healthy Bay, an environmental non-profit organization that represents and engages citizens in the clean-up, restoration, and protection of Commencement Bay, its surrounding waters, and natural habitat. I'm commenting on behalf of CHB on the new draft water rule proposed by Ecology that updates surface water quality standards in the State of Washington. CHB will submit more extensive comments in writing. It is well-known that Washington's current standards have been woefully outdated and inadequate for over 20 years. This timely -- The timely implementation of strong water quality standards for our state is of paramount importance. While the proposed rule is more protective of water quality than Ecology's first draft in 2015, CHB still has several significant concerns about its content. CHB supports standards that effectively protect human health, particularly people who regularly consume locally sourced fish and shell fish. Throughout Tacoma and Pierce County many people regularly eat local fish and shell fish. It is an integral part of our region's identity.

The proposed fish consumption rate of 175 grams per day is a significant improvement over the current rate of just six and a half; however, setting a strong and realistic fish consumption rate for all people in Washington, including Native American tribes and Pacific -- Asian Pacific Islander communities, is imperative to the equitable protection of human health. The best available data indicates rates well above the proposed 175 grams among some tribal members with treaty protected fishing rights and CHB encourages Ecology to fully account for accurate fish consumption rates.

CHB is also concerned about the draft criteria for certain toxic pollutants which critically threatens the health of our waters and community. CHB supports the EPA's more stringent limits

for PCBs, arsenic, and methylmercury, and urges Ecology to implement those strong criteria values into their rule. These toxins have long threatened and damaged the health of Commencement Bay, its surrounding waters, and the people who live, work, and recreate there. Thank you for your time tonight and for taking public comment. Please consider our concerns. Doing so will help us keep the bay healthy for citizens of Tacoma and our state, and to ensure that our communities can thrive today and for generations to come. Thank you.

HEARING OFFICER LEUBA: Is there anyone else that would like to provide testimony? If you would like to send in comments, they must be received by 5:00 p.m. on Friday, April 22, 2016. You may submit comments by mail to Becca Conklin, Washington State Department of Ecology, Water Quality Program, post office box 47600, Olympia, Washington 98504-7600. Comments can also be e-mailed to swqs@ecy.wa.gov or faxed to (360) 407-6426. Those addresses are also available on the handout on the tables over here.

Additional public hearings will be held Wednesday, April 6, 2016, at 6:30 p.m. in Spokane Valley at the Center Place Events Center, 2426 North Discovery Place, Spokane Valley, Washington, and Thursday, April 7, 2016, at 1:30 p.m. to 4:30 p.m., and again at 6:30 p.m., in Olympia. The April 7th hearings are online only hearings via webinar. Ecology will accept comments through the webinar via phone during the April 7th hearing. You can go to the website to register or see the focus sheet on the side table here for more information. All testimony received at this hearing, as well as e-mails and hard copy comments received by 5:00 p.m. on Friday, April 22, 2016, will be part of the official record for the proposed standards.

Ecology staff will respond to comments in a document called the Concise Explanatory Statement or CES. The CES will be available after the rule is adopted on Ecology's website, which is listed here, several other publications over there, and on the slide that's still available. Ecology will send a notice about the availability of the CES in a news release and to the Listservs. The next step is to review the comments and make a determination whether to adopt the rule. Ecology Director Maia Bellon will consider the documentation and staff recommendations and will make a decision about adopting the rule. Ecology expects to adopt the rule no earlier than August 1, 2016. If we can be of further help to you, please do not hesitate to ask.

On behalf of the Department of Ecology, thank you for coming tonight. Let the record show that this hearing was adjourned at 7:53 p.m.

(HEARING ADJOURNED)

DEPARTMENT OF ECOLOGY
WASHINGTON WATER QUALITY STANDARDS
RULE PROPOSAL PUBLIC HEARING

April 6, 2016
CenterPlace Regional Events Center
Spokane, Washington 99216
6:30 p.m.

MS. BRONSON: I'm Erika Bronson, the hearings officer for this hearing on the proposed amendments to the water quality standards for the surface waters of the state of Washington, Chapter 173201A, Washington Administrative Code. Let the record show that it is 8:04 p.m. on April 5th, 2016,

25 and this hearing -- is it April 5th? I think it's April 6th.

UNIDENTIFIED SPEAKERS: 6th.

MS. BRONSON: That's great. Okay. April 5th (sic) of 2016. And this hearing is being held in the auditorium within the CenterPlace Event Center located at 2426 North Discovery Place, Spokane Valley, Washington, 99216. Legal notice of the rule in this hearing was published in the Washington State Register No. 16-04-092 on February 17th, 2016. Ecology issued a statewide news release on the rule making and hearings on February 3rd, 2016.

In addition, Ecology placed information about the public comment period and hearings on their website for the rule and in the online public calendar. Ecology sent rule announcements via email to the following Listserves or email distribution lists on February 3rd, 2016; the water quality Listserve with 1,138 subscribers, the Water Quality Partnership with 58 members, the Ecology News Listserve with 1,471 subscribers. Ecology issued a reminder about the public hearing dates and times to these Listserves on March 30th, 2016.

It is now the formal comment time for anyone who would like to comment. I'll be calling you to testify in the order in which you signed in. When I call your name, please come up to the microphone and state your name and the company or organization you represent, if any. I apologize in advance if I mispronounce your name. But I don't think I will, because I've checked with the two of you prior to this.

Remember to limit your comments to about 10 minutes. And, obviously, no extra noise. When you have 30 seconds left to complete your testimony, Susan will hold up a card. She's located right over there. And when your time is up, I will call the next person to testify.

So we will begin with Alli Beard followed by Ken Windrem.

MS. BEARD: The following comments -- oh, okay. Well, these comments were prepared by Spokane Riverkeeper, and I am about to read them. My name's Alli Beard on behalf of Spokane Riverkeeper.

The Spokane Riverkeeper is a project with the Center of Justice. And we are an affiliated member of the Water Keeper Alliance. We work to protect and restore the world's waters so they are healthy and usable by communities that interact with them. As such, the Spokane Riverkeeper's stated mission is keeping the Spokane River fishable and swimmable.

The rule change that the Washington Department of Ecology has proposed takes several steps in the right direction but fall short in helping us keep our Spokane River fishable for the public. Ecology's proposed rule has improved the fish consumption formula over the existing rule. The formula seems a more realistic consumption rate of 175 grams of fish per day while keeping the acceptable human health risk at one case of cancer in a million fish eating residents. These standards would make Washington's waters cleaner and its fish safer to eat.

We commend Ecology for listening to the public and changing their proposed rules to be more realistic and more protective of human health. However, we encourage Ecology to review and revise their rule with regards to mercury, PCBs and arsenic. The proposed rule is not strong enough with regards to these toxins. All these toxins bio-accumulate and bio-magnify in the food chain in such a way that makes Spokane River fish problematic to consume.

In some cases fish in the Spokane River are edible under the specific amounts and frequencies recommended in Department of Fish - Department of Health Fish Advisories. But depending on the age, species and river reach, many other types of fish are too toxic to eat. The standards for PCBs are still exceeded, still exceeded in some fish. And a statewide mercury advisory remains in place making their consumption extremely problematic for pregnant women, children and folks who for cultural and economic reasons consume far more than the recommended allowance.

Currently the EPA has put forward PCB standards that are more protective and more up-to-date. We feel strongly that the EPA guidelines should be followed. Additionally, we feel the EPA standards for both arsenic and methylmercury should be adopted. We understand that these toxins are tough to capture but feel strongly that inaction is not a solution. Using the older National Toxics Rule criteria is not adequate and leaves the public vulnerable to higher levels of these toxins over time.

The proposed rule increases time frames for compliance schedules, which is unacceptable. Using the language as soon as possible when referring to must meet water quality standards is too idealistic and vague. Their rule should require concrete time limits for dischargers to meet state standards to ensure accountability that our waters are clean.

The increased availability and/or potential use of variances in the proposed rule is unacceptable. Ecology policy should be pushing dischargers to lower the output of dangerous chemicals at the end of pipe. Precisely because the nature and the amount of the pollution in the water body can be excessive and challenging.

Ecology should not be providing offerings from meeting existing standards or providing the designated tenable uses. Also, do not provide intake credit. Incentives should be developed to capture all pollutants coming through the system that end up in our waters. Please construct policies that create net decreases in pollutants leaving the end of pipes in order to encourage dischargers to work towards cleaning up Washington's waters.

These comments are made with the idea that we should be working towards the ultimate elimination of discharge to our nation's rivers. Ecology's proposed rule making should help us get there. Please do not provide provisions that stall our progress or avoid the tough work of getting our public water fishable and swimmable.

Thank you for the opportunity to comment.

MS. BRONSON: Thank you, Alli. Next we'll have Ken Windrem.

MR. WINDREM: Hi, I'm Ken Windrem, citizen. 4039 Pasadena Lane, Spokane, Washington. The total PCBs is based upon all 209 congeners as proposed, and then taking a relationship factor of what may be toxin and isn't toxin. The World Health Organization and the European Union simply picks 12 of the toxic chemicals that are in the 209 to establish standards for PCBs. I recommend that the DOE also take that type of approach to determine the toxins that are needed and remove those from our system.

The other thing is the intake credits. I would like to suggest site specific options for treatment facilities that can demonstrate that the source water that makes up the influent to the treatment facilities, if that's part, the remaining part of that source water ends up in the receiving waters, that they be allowed to take the intake credits for the source water that comes into their facility.

In other words, if there's an aquifer, and the water purveyors take the water out of the aquifer, and it's used by the residents and then flows to the treatment plant and then goes into the receiving waters or the stream, and that aquifer, the water that was left in that aquifer also ends up into that streaming water, receiving water, that that be considered as a site specific case for applying intake credits.

Thank you for letting me speak.

MS. BRONSON: Thank you, Ken. Okay, is there anyone else who would like to provide testimony?

Okay. It looks like there's not. So if you would like to send in comments, they must be received by 5:00 p.m. on Friday, April 22nd, 2016. You may submit your comments by mail to Becca Conklin, Washington State Department of Ecology, Water Quality Program, P.O. Box 47600, Olympia, Washington, 98504-7600. Comments can also be mailed, can also be emailed to swqs@ecy.wa.gov. They can also be faxed to (360) 407-6426. These addresses are also available on the handouts that are out in the hallway. We will be having additional public hearings tomorrow, Thursday, April 7th, 2016, at 1:30 p.m. to 4:30 p.m., and again at 6:30 p.m. via Webinar.

All testimony received at this hearing, as well as emails and hard copy comments received by 5:00 p.m. on Friday, April 22nd, 2016, will be part of the official record for the proposed standards.

Ecology staff will respond to comments in a document called the Concise Explanatory Statement or CES. The CES will be available after the rule is adopted on Ecology's website at the URL that is spelled out on the wall there. Probably want to get closer if you actually want to write it down. Ecology will send a notice about the availability of the CES in a news release and to the Listserves that I previously mentioned.

The next step is to review the comments and make a determination whether to adopt the rule. Ecology Director Maia Bellon will consider the documentation and staff recommendations and will make a decision about adopting the rule. Ecology expects to adopt the rule no earlier than August 1st, 2016.

If we can be of further help to you, please do not hesitate to ask. On behalf of the Department of Ecology, I thank you for coming tonight. Let the record show this hearing was adjourned at 8:15 p.m.

(HEARING ADJOURNED)

DEPARTMENT OF ECOLOGY
WASHINGTON WATER QUALITY STANDARDS
RULE PROPOSAL PUBLIC HEARING
Transcribed from an audio recording of the webinar by Becca Conklin

April 7, 2016
Webinar
1:30 p.m.

HEARING OFFICER BRONSON: I'm Erika Bronson, the Hearings Officer for this hearing on the proposed amendments to the Water Quality Standards for Surface Waters of the State of Washington - Chapter 173-201A Washington Administrative Code.

Let the record show it is 2:04 p.m. on April 7, 2016 and this hearing is being held as a webinar, using WebEx.

Legal notice of the rule and this hearing was published in the Washington State Register, number 16-04-092, on February 17, 2016. Ecology issued a state-wide news release on the rulemaking and hearings on February 3, 2016. In addition, Ecology placed information about the comment period and hearings on their website for the rule and in the online public calendar.

Ecology sent rule announcements via email to the following ListServes or email distribution lists on February 3, 2016: the Water Quality ListServ with 1,138 subscribers, the Water Quality Partnership with 58 members, the Ecology News ListServ with 1,471 subscribers. And Ecology issued a reminder about the public hearing dates and times to these ListServes on March 30, 2016.

It is now the formal comment time for anyone who would like to comment. Do we have anyone at this time? Okay, well, maybe we'll give it just a few minutes here to let people raise their hands electronically if they would like to testify.

(PHONE MUTED)

HEARING OFFICER BRONSON: Alright, well, this is Erika again, and we currently do not have anyone who is indicating that they would... oh, oh, maybe I spoke to soon. Do we have someone? Okay. Uh, we have Mel Oleson, who is asking to testify. So Mel, we'll turn the line over to you, we'll unmute you. And please, uh, state your name and any organization or company that you represent.

(PAUSE)

HEARING OFFICER BRONSON: Mel, we think you might be experiencing some technical difficulties. And we're working on trying to connect with you here... We heard you for a second.

MR. OLESON: Can you hear me now?

HEARING OFFICER BRONSON: Yes, we can. Go, go ahead. Please state your name and any company or organization that you represent.

MR. OLESON: Okay. Melvin Oleson. I'm a certified professional in stormwater quality with, uh, twenty seven years of experience in the field. And I'm retired and I don't represent anybody except for myself.

Uh, I wish to comment on two particular items. One is a comment dealing with the use of narrative criteria for periodic, uh, discharges as is identified in the CSO section of this permit. Uh, proposed rule, I should say. Uh, I believe that, um, limiting the the [sic] narrative capability to CSOs rather than to stormwater in general is, um, inappropriate. Stormwater is also periodic. Uh, and while we may have a lot of water in Western Washington, it's particularly periodic in Eastern Washington. And during the summer it can be very periodic with storm events such as thunderstorms and that sort of thing. So I want to ask Ecology to re-look at that criteria and apply it more broadly so that narrative criteria is available to all types of stormwater discharges, not just CSOs.

Uh, the second issue I'd like to bring up has to do with the, um application of the Clean Water Act in this particular situation. Um, I have been looking at some of the cost data that is available from prior activities, uh, going back to the original rule and I see that, uh, even under best criteria that this rule will eventually, if not immediately, create a significant cost impact on businesses, municipalities, wastewater treatment districts, uh, farmers, and a variety of other individuals.

These costs, while not directly accessible in developing a criteria do need to be looked at in the broader context of the goal of the Clean Water Act which is, as noted in slide 11, to, uh, protect public health. Um, if we take a very close look at that we'll realize they're limited resources by nature of all, uh, enterprises, including government, we're going to start seeing that, uh, this rule will actually degrade public health, not improve it. The current standard that's being proposed, of one in a million additional cancer risk, not death, risk, is, um, laudable except for if you look at a study done by the National Institute of Health. They've identified that, for a two percent –

correction, six percent – reduction in funding of national of health institutes, you can have up to forty three additional deaths per year from, uh, for every hundred thousand people.

So, if we're looking at the kind of reductions that could be expected by these extremely expensive, uh, treatment systems that would be necessary to meet these ridiculously, pardon me, these very low limits, uh, I would expect that we would find that there is a much greater risk to public health by having, uh, these rules imposed, um, instead of a more reasonable set of criteria which would look at a, uh, better risk factor, such as ten to the minus fourth or ten to the minus fifth.

Um, those are my comments. Thank you.

HEARING OFFICER BRONSON: Alright. Thank you, Mel. Do we have anyone else at this time?

(PAUSE)

HEARING OFFICER BRONSON: I just want to let participants know that we have announced this hearing as running until 4:30, so we are going to remain on the line until 4:30. Um, and we will just be checking periodically to see if anyone has decided to testify.

(PHONE MUTED. LONG PAUSE)

HEARING OFFICER BRONSON: Hello everyone. This is Erika, the hearing officer, just checking in. Uh, it looks like we still have about eleven people on the line, so we just to let you know we are still here, and we are still accepting testimony if anyone would like to give it. Please just, um, indicate by raising your hand on WebEx.

(PHONE MUTED. LONG PAUSE)

HEARING OFFICER BRONSON: Alright, everyone. It looks like we've still have three people on the line. Uh, so this is Erika, the hearing officer, just checking in again to ensure that we don't have anyone who wants to testify. If you do, please raise hand on WebEx. And again, we will be here until 4:30.

(PHONE MUTED. LONG PAUSE)

HEARING OFFICER BRONSON: Hello, This is Erika, the hearings officer again. I'm just checking in because I see that we have a new participant who recently joined. So, we just want to welcome you and let you know that we are open to formal testimony right now, and if you would like to testify, please just use the raise hand function on WebEx.

(PHONE MUTED. LONG PAUSE)

HEARING OFFICER BRONSON: Alright, this is Erika, the hearings officer, we're just checking in again. We have about seven minutes left until 4:30, so we're just wanting to make one last call for anyone who wants to give public testimony. If you would like to, please use the raise hand function on WebEx. We'll give people some time here and then, at 4:30, I will read some things into the record and close the hearing.

(PHONE MUTED. LONG PAUSE)

HEARING OFFICER BRONSON: Alright. This is Erika Bronson, the hearings officer, and we have not had anyone else indicate that they would like to testify and it is now 4:30, so um, I am going to close the hearing.

If you would like to send in comments, they must be received by 5 p.m. on Friday, April 22, 2016. You may submit comments by mail to Becca Conklin, Washington State Department of Ecology, Water Quality Program, PO Box 47600, Olympia, WA 98504-7600. Comments can also be emailed to swqs@ecy.wa.gov. They can also be faxed to (360) 407-6426. These addresses are also available on, um, the the materials posted on Ecology's website.

All testimony received at this hearing, as well as e-mails and hard copy comments received by 5 pm on Friday, April 22, 2016, will be part of the official record for the proposed standards.

Ecology staff will respond to comments in a document called a Concise Explanatory Statement or CES. The CES will be available after the rule is adopted on Ecology's website. Ecology will send a notice about the availability of the CES in a news release and to the ListServes.

The next step is to review the comments and make a determination whether to adopt the rule. Ecology Director, Maia Bellon, will consider the documentation and staff recommendations and will make a decision about adopting the rule. Ecology expects to adopt the rule no earlier than August 1st, 2016.

If we can be of further help to you, please do not hesitate to contact us.

On behalf of the Department of Ecology, thank you for joining us on this webinar. Let the record show this hearing was adjourned at 4:32 p.m.

(HEARING ADJOURNED)

DEPARTMENT OF ECOLOGY
WASHINGTON WATER QUALITY STANDARDS
RULE PROPOSAL PUBLIC HEARING
Transcribed from an audio recording of the webinar
By Becca Conklin

April 7, 2016
Webinar
6:30 p.m.

HEARING OFFICER BRONSON: I'm Erika Bronson, the Hearings Officer for this hearing on the proposed amendments to the Water Quality Standards for Surface Waters of the State of Washington - Chapter 173-201A Washington Administrative Code.

Let the record show it is 7:07 p.m. on April 7, 2016 and this hearing is being held as a webinar, using WebEx.

Legal notice of the rule and this hearing was published in the Washington State Register, number 16-04-092, on February 17, 2016. Ecology issued a state-wide news release on the rulemaking and hearings on February 3, 2016. In addition, Ecology placed information about the comment period and hearings on their website for the rule and in the online public calendar.

Ecology sent rule announcements via email to the following ListSerts or email distribution lists on February 3, 2016: the Water Quality ListServ with 1,138 subscribers, the Water Quality Partnership with 58 members, and the Ecology News ListServ with 1,471 subscribers. Ecology also issued a reminder about the public hearing dates and times to these ListSerts on March 30, 2016.

It is now the formal comment time for anyone who would like to comment. Do we have anyone? We are hearing a little bit of static, um, but the person we have on the line here is, uh, you are unmuted so if you do want to testify please feel free. You are our one and only on the phone.

(PAUSE)

HEARING OFFICER BRONSON: Okay, well, so since we are not hearing anything I am going to go ahead and read the closing remarks here.

Um, if you would like to send in comments, if you were maybe having some difficulty connecting with us here, they must be received by 5 p.m. on Friday, April 22, 2016. You may submit comments by mail to Becca Conklin, at the Washington State Department of Ecology, Water Quality Program, PO Box 47600, Olympia, WA 98504-7600. Written comments can also be emailed to swqs@ecy.wa.gov. They can be faxed to (360) 407-6426. These addresses are also available on the handout on Ecology's web page.

All testimony received at this hearing, as well as e-mails and hard copy comments received by 5 pm on Friday, April 22, 2016, will be part of the official record for the proposed standards.

Ecology staff will respond to comments in a document called a Concise Explanatory Statement, or CES. The CES will be available after the rule is adopted on, and it will be on Ecology's website. Ecology will send a notice about the availability of the CES in a news release and to the ListSerts.

The next step is to review the comments and make a determination whether to adopt the rule. Ecology Director, Maia Bellon, will consider the documentation and staff recommendations and will make a decision about adopting the rule. Ecology expects to adopt the rule no earlier than August 1st, 2016.

If we can be of further help to you, please do not hesitate to contact us.

On behalf of the Department of Ecology, we thank you for joining us tonight. Let us, let the record show this hearing was adjourned at 7:11 p.m.

(HEARING ADJOURNED)

Appendix C: Citation List

This citation list contains references for data, factual information, studies, or reports on which the agency relied in the adoption for this rule making. (RCW 34.05.370(f))

At the end of each citation is a number in brackets identifying which of the citation categories below the sources of information belongs. (RCW 34.05.272)

Citation Categories	
1	Peer review is overseen by an independent third party.
2	Review is by staff internal to Department of Ecology.
3	Review is by persons that are external to and selected by the Department of Ecology.
4	Documented open public review process that is not limited to invited organizations or individuals.
5	Federal and state statutes.
6	Court and hearings board decisions.
7	Federal and state administrative rules and regulations.
8	Policy and regulatory documents adopted by local governments.
9	Data from primary research, monitoring activities, or other sources, but that has not been incorporated as part of documents reviewed under other processes.
10	Records of best professional judgment of Department of Ecology employees or other individuals.
11	Sources of information that do not fit into one of the other categories listed.

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