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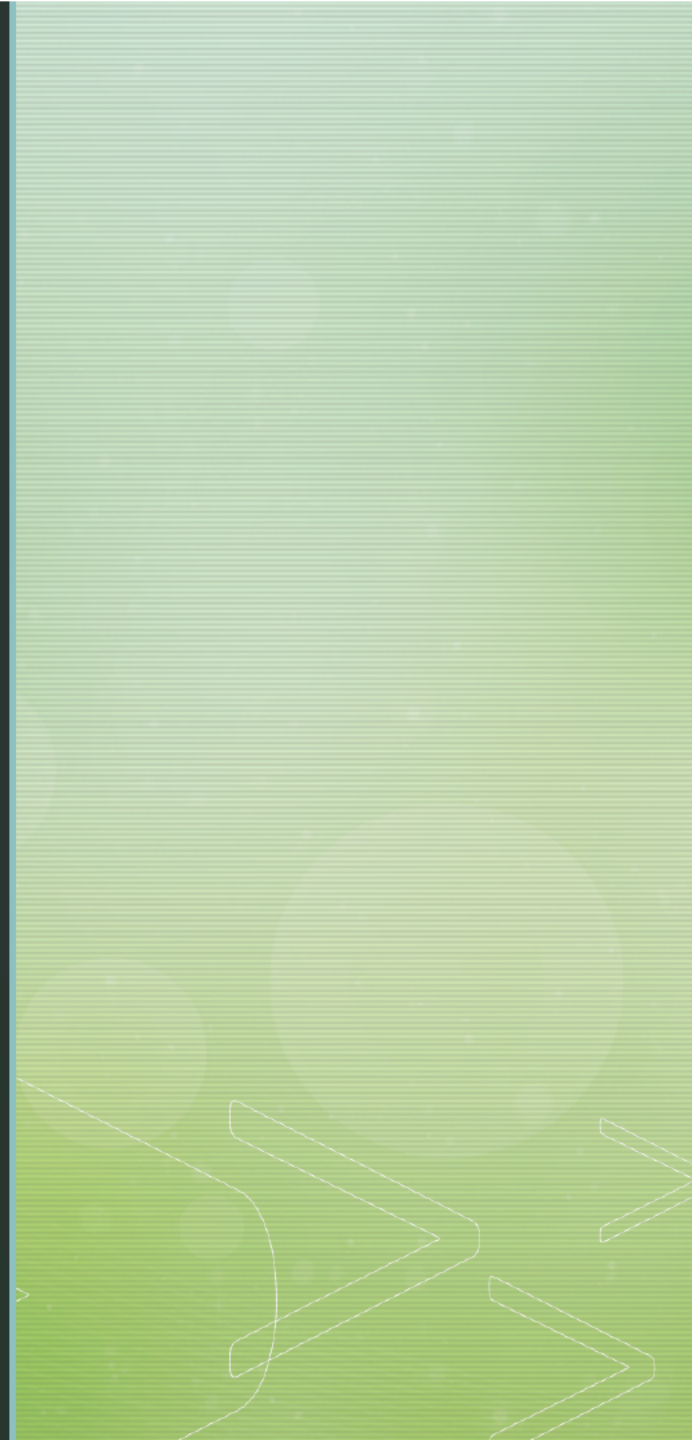

SPOKANE RIVER, VARIANCES, AND PCBS

Variances 101 Presentation, Expert
Panel, and Public Q&A

OCTOBER 8, 2019 | 6:00 TO 8:00 PM
GONZAGA UNIVERSITY SCHOOL OF LAW -
BARBIERI COURTROOM

Public event describing the nature, process, and effects of water quality standard
variances related to PCBs and the Spokane River. Expert panel members include:
Discharge facilities, WA Department of Ecology, and Spokane Riverkeeper.

Contact edenison@lawschool.gonzaga.edu for more information.



Spokane River,
Variances,
& PCBs

Presentation created by Ezekiel Denison, *J.D. Candidate 2020*

The Spokane River & PCBs

- Spokane Valley to Long Lake Dam
- PCBs (Polychlorinated biphenyls)¹
 - Group of 209 man-made compounds that generally occur as complex mixtures
 - Toxic chemicals
 - Persistent, lasting for decades in the environment
 - Move easily between air, water, and land
 - Found throughout Washington
 - Bioaccumulate in people and animals, becoming more concentrated in organisms at the top of the food chain

Spokane Regional Health District **Spokane River Fish Advisory** **Washington State Department of Health**
Updated 2009

Spokane River fish contain chemicals called PCBs and PBDEs (flame retardants). These chemicals can be harmful to your health and the health of your children if eaten in quantities higher than advised.

This advisory is for everyone; men, women, and children. Women who are or might become pregnant, nursing mothers, and young children should pay special attention to this advisory.

From Upriver Dam to the Idaho Border
Do Not Eat Fish
Catch & Release Only

From Nine Mile Dam to Upriver Dam
Do Not Eat:
Largescale Sucker

Lake Spokane (Long Lake)
Two meals per week:
Rainbow Trout, Yellow Perch
One meal per week:
Mountain Whitefish
One meal per month:
Brown Trout & Largescale Sucker

You can reduce your exposure to PCBs if you prepare your fish this way:

- When cleaning fish, remove the skin, fat, and internal organs before cooking
- Cook fish on a rack so the juices and fat will drip off
- Do not eat the head, juices, bones, organs/guts, fat, and skin
- Consume younger, smaller fish

Questions?
Spokane River Fish Advisory:
Spokane Regional Health District
Mike LaSeuola 509-324-1574
www.srhhd.org

Fish Advisories in Washington State:
WA Department of Health
Toll-Free 1-877-485-7316
www.doh.wa.gov/fish

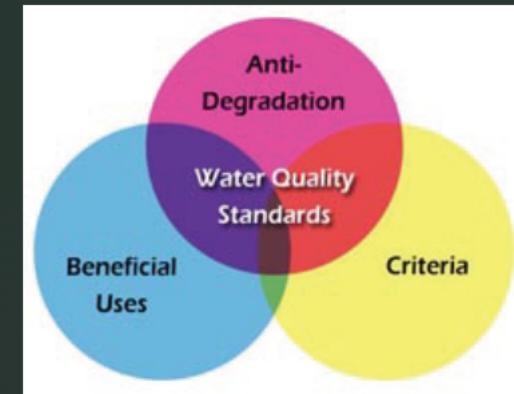
DOH PUB NO: 334-164

Washington State Mercury Advisory: Women who are or might become pregnant, nursing mothers, and young children should follow this advice due to high mercury levels in these fish statewide:
Northern Pikeminnow – Do Not Eat **Largemouth and Smallmouth Bass – Two meals per month**

Photo taken from:
<https://www.spokanepublicradio.org/post/forum-will-address-chemicals-spokane-river>

Water Quality Standards

- Water Quality Standard (WQS)
 - “Defines the water quality goals of a water body, or portion thereof, by **designating the use or uses** to be made of the water and by setting **criteria** that protect the designated uses.”²
 - States must review, establish, and revise WQS
- Designated Use(s)
 - Fishing, swimming, wildlife, etc.³
- Criteria
 - Based on sound scientific rationale
 - Must contain sufficient parameters or constituents to protect the designated use⁴
- Purposes of WQS
 - Establish water quality goals for a specific water body; AND
 - Serve as the regulatory basis⁵



Toxic Pollutants Criteria

- *“Toxic substances shall not be introduced above natural background levels in waters of the state which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic toxicity to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department.”⁶*
- Following criteria shall be applied to all surface waters of the State of Washington:
 - Aquatic life protection
 - Human health protection
- Human Health Protection
 - Calculated using Fish Consumption Rate of 175g/day
 - Cancer risk level equal to one-in-one-million

Uses & PCB Criteria for Spokane River

- Designated Uses
 - Salmonid (trout) spawning/rearing
 - Recreational uses
 - Water supply uses
 - Domestic, Industrial, agricultural, etc.
 - Misc. Uses
 - Harvesting, boating, aesthetics, wildlife, and commerce/navigation
- PCB Criteria
 - Human health criteria for consumption of water & organisms
 - = 7 picograms/liter (pg/L)**



WQS Variance

- “A time-limited designated use and criterion for a specific pollutant(s) or water quality parameter(s) that reflect the highest attainable condition during the term of the WQS variance.”⁷
 - Spokane River variances = Time-limited designated use and criteria for PCBs
 - First toxic pollutant variance in the USA
- When to consider a WQS Variance⁸:
 - The standards are expected to be attained by the end of the variance period OR
 - The attainable use cannot be reliably determined
- Impermissible adoption of a WQS Variance⁹:
 - “A State may not adopt WQS variances if the designated use and criterion addressed by the WQS variance can be achieved by implementing technology-based effluent limits required under sections 301(b) and 306 of the CWA.”

Types of Variances

- Types:
 - Discharger Specific
 - Individual
 - Multiple dischargers
 - Waterbody or Waterbody Segment
- Adopted for:
 - Permittee(s)
 - Waterbody/Waterbody Segment
- Spokane River & PCBs
 - All 5 applications = Individual, discharger specific

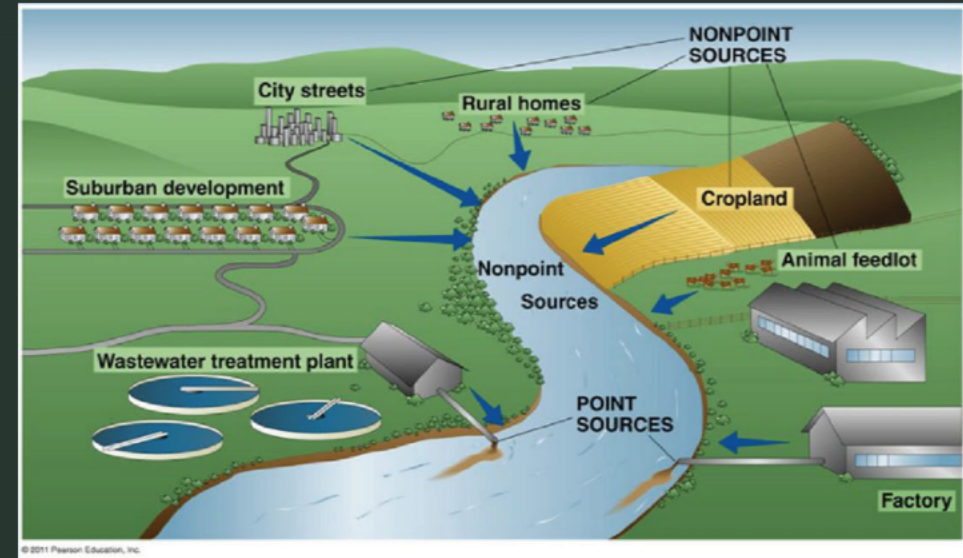
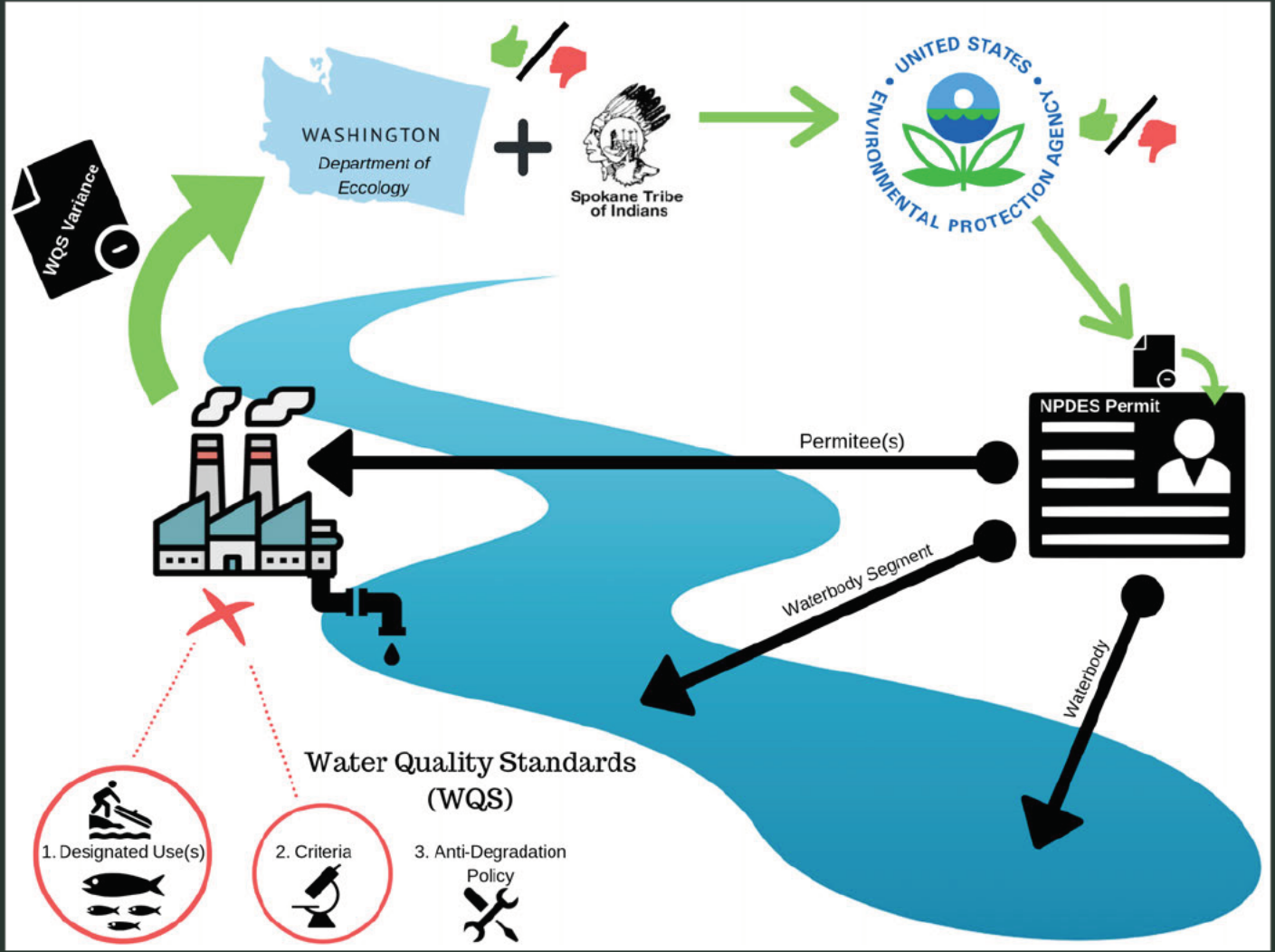


Photo taken from:
<https://blog.nus.edu.sg/klarissayow/2016/08/22/an-introduction-to-water-pollution/>

Period of Effect & Underlying Standards

- Each variance will be granted for the minimum time estimated to meet the underlying standard(s).
 - Terms proposed in Spokane River Applications:
 - 4 Applications = 20 years (
 - 1 Application = 158 months (13.2 years) (Kaiser)
- If during the period of the variance it is determined that a designated use cannot be attained, then a use attainability analysis is initiated¹⁰
- Mandatory interim review = Every 5 years¹¹
 - The ability to apply a variance in permits or other actions may be terminated by the department as a result of a mandatory interim review
- The State must retain the underlying WQS (7pg/L) during the period of the variance¹²
 - All other applicable standards not specifically addressed by the WQS variance remain applicable

Variance Application Flow Chart



WA Requirements (WAC 173-201A-420(3))

- Pollutant-specific uses and criteria
- Proposed duration
- Demonstration of non-feasibility
- Evaluation of treatment alternatives
- Sufficient water quality data and analyses
- A description and schedule of actions
- Pollutant Minimization Plan

EPA Requirements (40 C.F.R. § 131.14(b))

- Similar to WA Department of Ecology
- Highest Attainable Condition
 - Represents the highest attainable quality of the waterbody applicable throughout the term of the WQS variance
 - Shall not result in the lowering of the currently attainable ambient water quality
 - Must be specified as quantifiable expression in one the following ways (for discharger-specific variance):
 - “Highest attainable interim criterion; OR
 - Interim effluent condition that reflects greatest pollution reduction achievable; OR
 - If no additional feasible pollutant control technology can be identified, the interim criterion or interim effluent condition that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the State adopts the WQS variance, and the adoption and implementation of a Pollutant Minimization Program”

National Pollutant Discharge Elimination System (NPDES) Permit Effects

- A WQS variance, once adopted by the State and approved by EPA, shall be the applicable standard for ***purposes of the CWA***¹³
 - Purposes of the CWA = minimum standards which must be used when the CWA and regulations implementing the CWA refer to water quality standards¹⁴
- Examples¹⁵:
 - Identifying impaired waters and calculating TMDLs
 - Developing NPDES permit limitations under CWA
 - Issuing certifications

Public Participation

- Variance Application Process
 - The decision to grant a variance is a **formal rule making** subject to a public and intergovernmental involvement process.
 - The department will provide notice of the proposed variance and consult with Indian tribes or other states that have jurisdiction over adjacent and downstream waters of the proposed variance.
 - The department shall maintain and make publicly available a list of dischargers that are covered under the variances that are in effect.¹⁶
- Comment Periods
- SEPA analysis
 - What is SEPA

Footnote Citations

1. PCBs info:

- Polychlorinated biphenyls, or PCBs, are a group of 209 man-made compounds that generally occur as complex mixtures.
- PCBs are very persistent, lasting for decades in the environment.
- Like other persistent, bioaccumulative, and toxic chemicals, PCBs move easily between air, water, and land.
- They are found throughout Washington. PCBs also accumulate in people and animals, becoming more concentrated in organisms at the top of the food chain, like orcas.
- Citation:
 - <https://ecology.wa.gov/Waste-Toxics/Reducing-toxic-chemicals/Addressing-priority-toxic-chemicals/PCBs>

2. 40 C.F.R. § 131.2

3. 40 C.F.R. § 131.10

4. 40 C.F.R. § 131.11

5. 40 C.F.R. § 131.2

6. WAC 173-201A-240(5)

7. 40 CFR §131.3(o)

8. WAC 173-201A-420(1)(a) & (c)-(e)

9. 40 CFR § 131.14(a)(4)

Footnote Citations Cont.

10. WAC 173-201A-420(5)
11. WAC 173-201A-420(8)
12. 40 C.F.R. §131.14(a)
13. 40 CFR § 131.14(a)(3)
14. 40 CFR § 131.21(d)
15. 40 CFR § 131.21(d)
16. WAC 173-201A-420(4)(a)&(b)

For list of dischargers and the current process see <https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-quality-standards/Updates-to-the-standards>