



# Spokane River Variances for PCBs

# What we see in the river

Elevated PCB concentrations in water

Elevated PCB concentrations in fish tissue - high enough to prompt fish advisories



The Spokane River is CWA 303(d) listed as impaired by PCBs.



# What does the Spokane River 303(d) listing mean for permits?

No more assimilative capacity for PCBs in the river – concentrations are already too high.

NPDES permit limits based on the 7 ppq criterion would be 7 ppq.

Ecology is considering **variances** – a new *interim WQS* – as a tool to reduce PCBs entering the river.

- Ecology received 5 variance applications in April 2019.
- Ecology filed a notice of intent to start a variance rulemaking on June 12 2019.

With a variance the permit limit would be based on the Highest Attainable Condition and would require continued reductions in PCBs over time.

# There are 3 paths to a discharger variance

HAC	HAC Requirements	Applicant
<p><u>Path 1:</u> The highest attainable <b>interim criterion</b> = HAC.</p>	Requires estimation of the highest attainable ambient water quality	None
<p><b>Path 2:</b> The <b>interim effluent condition</b> that reflects the <b>greatest pollutant reduction achievable</b> = HAC.</p>	Requires knowledge of the best quality effluent that is achievable. When that quality is achieved the variance ends.	Kaiser (requested duration: 13 years, 2 mo.)
<p><b>Path 3:</b> If no additional feasible pollutant control technology can be identified, the interim criterion or <b>interim effluent condition</b> that reflects the <b>greatest pollutant reduction achievable with the pollutant control technologies installed at the time</b> the State adopts the WQS variance, and the adoption and implementation of a Pollutant Minimization Program.</p>	<p>Requires installation of <b>feasible control technologies</b>.</p> <p>The HAC is expressed as the best ambient water quality condition, or the <b>best effluent condition, once the feasible control technology is installed</b>.</p> <p>Technology must be installed or guaranteed at the time the variance is granted.</p> <p>A <b>PMP</b> is required, and it is the continued implementation of the PMP that allows the <b>duration</b> of the variance to extend beyond the time of installation of the technology.</p>	City of Spokane Spokane County Inland Empire Paper Liberty Lake (requested durations: 20 years)



# PCB Criteria: Spokane River

Regulatory levels for total PCBs	Total PCBs (ppb)	Basis
Human health criterion (HHC)	0.000007 (or 7 parts per quadrillion)	Fish ingestion by people
Aquatic life criterion	Acute	Fish health
	Chronic	

- Downstream Spokane Tribe HHC is 1.3 ppq

# Measuring PCBs

Two methods are available to measure PCBs

Measures	Method 608	Method 1668
EPA Approved for Compliance	Yes	No
Sensitivity	Moderate	High
Quantitation level	50,000 ppq	7-30 ppq
Blank Interference	Limited	High
Purpose	Compliance	Source tracking

# Challenges Measuring PCBs

- PCBs are **everywhere**, including filtered laboratory water
- Separating background PCBs in water from other sources

## How do we account for background PCB levels?

- **Blank censoring:**
  - Measure PCB levels in control blanks
  - Apply a multiplier to PCB levels measured in blanks (e.g. 1x, 3x, 5x, 10x)
  - Confidence in reported PCB level depends on the multiplier selected
    - 10x blank = high confidence (used in permitting)
    - 3-5x blank = moderate confidence (used in source tracking)



# 2018 Outreach



March

August

November

Spokane Permitting Workshop  
March 14, 2018

Water Quality Permitting Tools Workshop  
August 8, 2018

Water Quality Permitting Tools Workshop #2:  
Decoding the Variance Process  
November 5, 2018



# 2019 - 2020 Outreach



October

November

March  
2020

Inadvertent PCBs in Inks and Pigments:  
Partners for Innovative Solutions

October 8, 2019

Workshop on PCB Variances for Spokane  
River Dischargers

November 14, 2019

Variances open house

March 24 & 26, 2020



# Questions?

