

# Water Quality Standards Tools: Site specific criteria, variances, and use attainability analyses.

By  
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# What you'll see in this presentation:

- Basic components of the Water Quality Standards
- Information about three specific WQS tools:
  1. Site Specific Criteria
  2. Variances (main emphasis of this presentation)
    - Cheryl Niemi – Ecology WQP
    - Lindsay Guzzo - USEPA Reg.10
    - EPA HQ staff on the phone
  3. Use Attainability Analyses



# What are Water Quality Standards?

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WQS are the foundation of state and tribal water quality-based pollution control programs under the Clean Water Act.

Purpose: WQS are to protect public health and welfare, enhance the quality of the water, and serve the purposes of the Clean Water Act.

(See 40 CFR 131.2, CWA 101)



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For example, WQS protect fishable and swimmable uses

# WQS are composed of three main parts

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- **Designated uses** – include aquatic life, domestic water supply, recreation, harvest, etc..
- **Water Quality Criteria** – levels of water quality that fully protect the uses  
Numeric and Narrative criteria
- **Antidegradation Requirements** – ensure that existing and designated uses are maintained and protected, and that waters that are of a higher quality than the criteria assigned in the standards are not degraded unless necessary and in the over-riding public interest (WAC 173-201A-300).

Also: Other policies affecting application and implementation (e.g., mixing zones and downstream protection requirements)

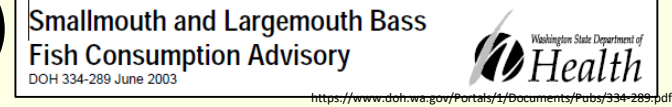
# The WQS tools we'll be talking about today directly address the designated uses and criteria in the WQS

WQS Tool	Designated uses	Criteria
Site Specific Criterion (SSC)	NA	A SSC directly changes a criterion.
Variance	A variance is a new <b>time-limited</b> designated use and criterion.	
Use Attainability Analysis	A UAA is an assessment of factors affecting the attainment of a use, and can support the direct modification of the designated use.	<i>A use change can lead to the development of a new SSC.</i>

All of these must be adopted into rule and receive EPA CWA approval prior to use.

# Why are we talking about these WQS tools now?

Legacy toxic pollutants remain in the environment, are still in discharges to waters, and impact surface waters (e.g., fish advisories)



Other pollutants (e.g. nitrogen) continue to be created and discharged, and impact surface waters.

There are many impaired waters throughout the state.



<https://www.flickr.com/photos/usepagov/sets/72157634706332559/>

We have challenges with use protection and permitting solutions in many waterbodies.

In some cases these WQS tools could help reduce pollution, attain the highest use possible for the waterbody, and provide certainty and compliance in permitting while the pollution controls continue.



# Site Specific Criteria (SSC)

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A Site Specific Criterion is a water quality criterion that is "modified to reflect site-specific conditions."



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# A Site Specific Criterion (SSC)...

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A site-specific criterion is developed to protect the designated use at a particular site.

The SSC accounts for the unique physical, chemical, and/or biological conditions at a site.

Must be based on a sound scientific rationale and protect designated uses and must be adopted into state WQS and reviewed and approved by EPA prior to use.



# Site Specific Criteria (SSC) are allowed under federal and state regulations

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## 40 CFR 131.11(b)(1)(ii)

(b) *Form of criteria:* 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;

## WAC 173-201A-430

(1) **Where the attainable condition of existing and designated uses for the water body would be fully protected using an alternative criterion,** site-specific criteria may be adopted.

# When a discharge or waterbody situation is evaluated – how do you choose the appropriate tool? When is a SSC appropriate?

Use this permitting tool...	When...
Compliance schedule	The effluent limit can't be met now, but can be met after a period of time.
Use this Water Quality Standards tool...	When...
★ Site specific criterion	The attainable condition of existing and designated uses would be fully protected using an alternate criterion.
Variance	We <b>don't know</b> if the designated use can be attained or effluent limit met, but progress toward them can be made.
Use Attainability Analysis	We <b>know</b> that the designated use or effluent limit cannot be attained, and we <b>know</b> what level of use and/or effluent quality can be attained.

# What can drive SSC development?

For aquatic life-based criteria:

Site-specific water chemistry or physical characteristics at the site change the toxicity or bioavailability of the pollutant.

The species composition at the site is different from the species composition in the national dataset that drove the national criterion.

## Washington example

Cyanide acute and chronic SSC for Puget Sound.  
Changed from 1 ppb acute to 9.1 acute and 2.8 ppb chronic.



Illustration from California Dept. Fish and Game

# The SSC development and approval process

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Experience in Washington indicates that SSC development can be resource intensive.

It is also a science-based and complicated procedure.

The decision to approve the site-specific criterion must be based on a demonstration that it will protect the existing and attainable uses of the water body.

If you are interested in investigating a SSC please coordinate with Ecology early on.

# Questions/comments about SSC?



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# Variances

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A WQS variance is a path to improve water quality over time.

Regulations on variances:  
40 CFR 131.14  
WAC 173-201A-420



<https://pixabay.com/en/river-rapids-gulch-water-stream-1209025/>



# What is a Variance?

## Definitions:

### 173-01A-020

"**Variance**" is a **time-limited** designated use and criterion as defined in 40 C.F.R. 131.3, and must be adopted by rule.

**40 CFR 131.3** (o) A water quality standards variance (WQS variance) is 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.

In more direct terms:

**A WQS variance is a path to improve water quality over time.**

Regulations on variances:

40 CFR 131.14

WAC 173-201A-420



<https://pixabay.com/en/rowing-rowing-boat-water-river-898008/>

# A Variance also...

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Requires development of an information package that needs to be submitted to Ecology along with the request for the variance.

Has to be adopted into state rule and then submitted to EPA for CWA approval. Depending on the waterbody and the parameter, this might include ESA consultation.

Includes requirements to maintain the highest attainable condition (HAC) of the water.

Includes requirements to minimize pollution, and the variance requirements are incorporated as enforceable conditions in permits.

Includes a 5-year re-evaluation. The re-evaluation can result in additional requirements, and, if the requirements of the variance are not being met then the variance can be removed




A WQS variance is a path to improve water quality over time.



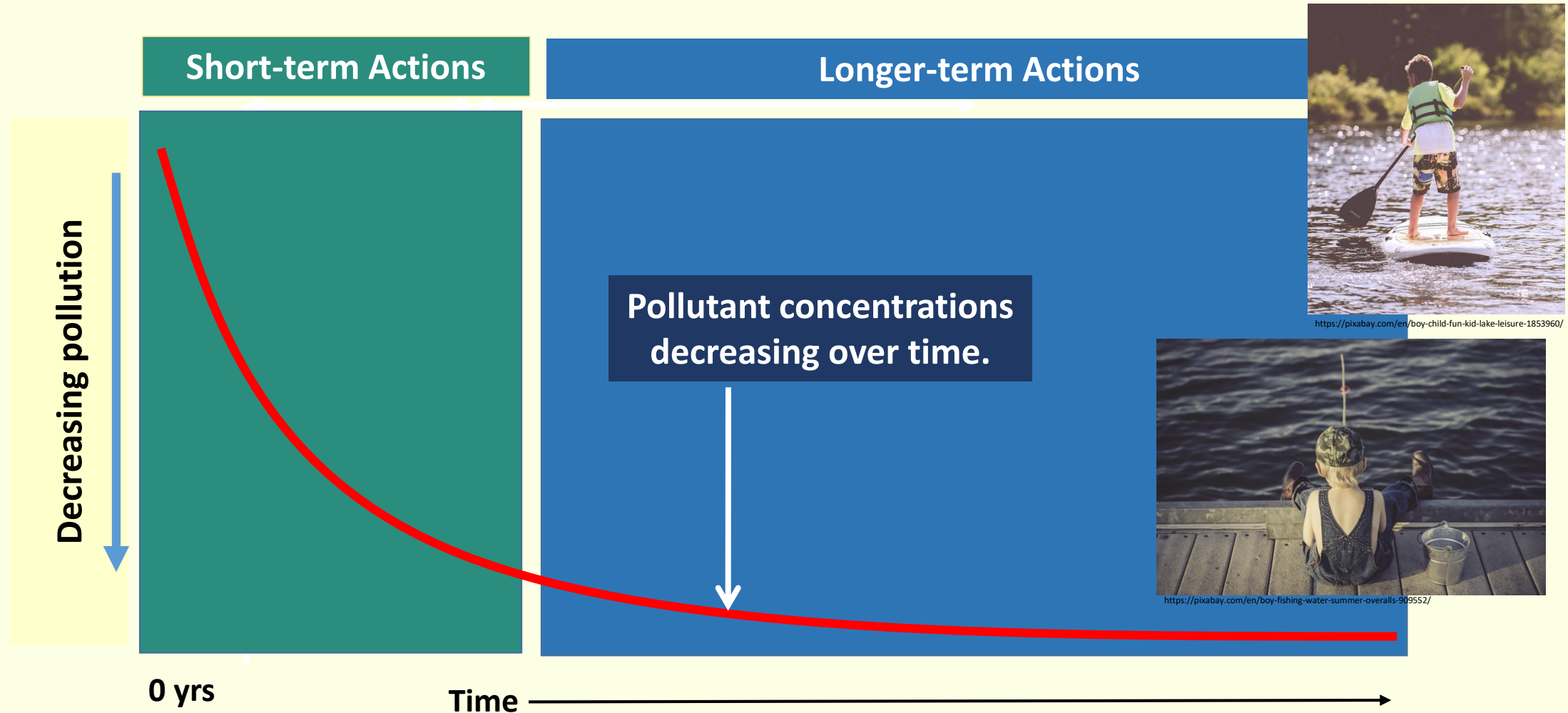
**Variances contain long and short term requirements to reduce pollution, with 5-year re-evaluations to ensure progress is being made.**

**For instance:**



Short-term Actions	Longer-term Actions
<p>Infrastructure in place <b>Offsets evaluated</b> Legal agreements</p> <p><b>Activities put in place, e.g.:</b> New treatment, <b>Erosion controls,</b> Riparian habitat restoration</p>	<p>Continued evaluation of additional sources</p> <p>Continued source control activities</p> <p>Adaptive management to maximize pollution reduction.</p>

Over time, pollutant concentrations decrease and the highest attainable use is met.



# A example of a situation where a variance could be beneficial

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- A legacy pesticide is causing exceedances of human health-based criteria (HHC) and impairing the CWA “fishable” use.
- Source studies shows that pesticide sources are widespread (e.g., coming from POTW discharge, stormdrains, NPS runoff, sediments).
- An integrated strategy requiring comprehensive source investigation and control is needed.
- Work on POTW and stormwater collection systems, erosion control, sediment and upland clean-up and natural attenuation might all be needed to get to meet the standards.
- Implementing this strategy will take decades.

**In the interim, a variance can provide a structured set of enforceable actions to continually keep the water at the highest attainable condition.**

# Key concepts when thinking about variances:

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Focus is on meeting CWA requirements – meet criteria and protect uses as soon as possible.

Focus is on extended timelines, only where needed, that are tied to activities to meet CWA requirements.

Focus is on providing a predictable regulatory environment through clear and relevant timeframes for pollution control activities to occur.

Focus is on accomplishing short-term work and ensuring that long-term work occurs.



A WQS variance is a path to improve water quality over time.



# When a discharge or waterbody situation is evaluated – how do you choose the appropriate tool? When is a variance appropriate?

Use this permitting tool...	When...
Compliance schedule	The effluent limit can't be met now, but can be met after a period of time.
Use this Water Quality Standards tool...	When...
Site specific criterion	The attainable condition of existing and designated uses would be fully protected using an alternate criterion.
★ Variance	We <b>don't know</b> if the designated use can be attained or effluent limit met, but progress toward them can be made.
Use Attainability Analysis	We <b>know</b> that the designated use or effluent limit cannot be attained, and we <b>know</b> what level of use and/or effluent quality can be attained.



# Key requirement in variance development: The Highest Attainable Condition (HAC) must be determined

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The core concept of a variance is that, whether we are addressing effluent quality or a waterbody, the highest attainable condition must be maintained throughout the term of the variance.

**The Highest Attainable Condition is called the HAC.**

The EPA structure for variances is built on the concept of the HAC, which determines the type of variance that is most appropriate for the situation.

- There are 5 types of HACs (3 for dischargers and 2 for waterbodies).
- To support a variance the development and determination of the HAC is critical (we just can't get there without it).

# Variances can apply to dischargers or to waterbodies

## Discharger variances (individual or multiple)

A time-limited designated use and parameter-specific change to the standard(s) of the receiving water body for a specific discharger. **The temporary standard(s) only apply at the point(s) of compliance for the individual facility.**

## Water body variances

A time-limited designated use and parameter-specific change to the standard(s) for **a stretch of waters**. **Any discharger of the specific parameter that is defined within the geographic scope of the water body variance may be covered under the variance** that is granted by the department, provided all requirements of the variance for that discharger are met.

**How to choose?? Discharger or Waterbody variance?**

## Discharger or waterbody variance? Some important differences.

### Discharger variances

The HAC for these variances can be based on:

- the **HA interim criterion (best ambient water quality)**
- the **HA interim effluent condition (best effluent quality)**

There are **3** different paths to a HAC in the CFR based on these factors.

### Waterbody variances

The HAC for these variances is based on:

- the **HA interim criterion (best ambient water quality) and the HA interim use (best use quality)**

Although effluent quality cannot define the HAC for a waterbody variance, maintaining the best quality effluent would be part of a waterbody variance and subsequent permit conditions.

There are **2** different paths in the CFR based on the HA interim criterion and HA interim use

**Also:** **NPS BMPs** are required with a waterbody variance.

Note that the HAC for a discharger variance can be based largely on effluent quality, while the HAC for a waterbody variance will always be defined by the highest attainable water quality *and* use.

The bolded red, blue, and green text on this slide corresponds to the bolded red, blue, and green text on the next more complex slide

## Choosing a variance pathway – evaluate what you need to define the HAC (cont.)

Discharger variances – 3 HACs	HAC Requirements
<p><u>Path 1:</u> The highest attainable <b>interim criterion</b> = HAC.</p>	<p>Requires estimation of the highest attainable ambient water quality</p>
<p><u>Path 2:</u> The <b>interim effluent condition</b> that reflects the <u>greatest pollutant reduction achievable</u> = HAC.</p>	<p>Requires knowledge of the best quality effluent that is achievable. When that quality is achieved the variance ends.</p>
<p><u>Path 3:</u> If no additional feasible pollutant control technology can be identified, <b>the interim criterion or interim effluent condition</b> that reflects the <u>greatest pollutant reduction achievable with the pollutant control technologies installed at the time</u> the State adopts the WQS variance, and the adoption and implementation of a Pollutant Minimization Program.</p>	<p>Requires installation of feasible control technologies.</p> <p>The HAC is expressed as the best ambient water quality condition, or the best effluent condition, once the feasible control technology is installed.</p> <p>Technology must be installed or guaranteed at the time the variance is granted.</p> <p>A PMP is required, and it is the continued implementation of the PMP that allows the duration of the variance to extend beyond the time of installation of the technology.</p>



Waterbody variances – 2 HACs	HAC Requirements
<p><u>Path 1</u></p> <p>HAC = highest attainable <b>interim criterion and interim use</b>.</p>	<p>Requires estimation of the highest attainable ambient water quality and use.</p> <p>The more complex the source situation, the more complex the data needs and modeling would need to be to define the HAC.</p> <p>Once the HAC is attained the variance would end.</p>
<p><u>Path 2</u></p> <p>HAC = If no additional feasible pollutant control technology can be identified, <b>interim criterion and interim use</b> that reflect the <u>greatest pollutant reduction achievable with the pollutant control technologies installed at the time</u> the state adopts the WQS variance, and the adoption and implementation of a Pollutant Minimization Program.</p>	<p>Requires installation of feasible control technologies.</p> <p>The HAC is expressed as the best ambient water quality condition and use once the feasible control technology is installed.</p> <p>Technology must be installed or guaranteed at the time the variance is granted.</p> <p>The more complex the source situation, the more complex the data needs and modeling would need to be to define the HAC.</p> <p>A PMP is required, and it is the continued implementation of the PMP that allows the duration of the variance to extend beyond the time of installation of the technology.</p>
<p><b>NPS BMPs:</b> Identification and documentation of any cost-effective and reasonable best management practices that could be implemented to make progress towards attaining the underlying designated use and criterion are required.</p>	

## **Waterbody Path 1. HAC = highest attainable interim criterion and interim use.**

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**“Less complex”** example:

- A river with zinc levels that exceed criteria.
- One point source (PS) discharger.
- The PS and NPS contributions have already been estimated via source studies.
- The improvements from technology installation at the PS can be estimated fairly well, and reductions via BMPs can be estimated for the next 10 years.
- Predicting the zinc levels for 10 years in the future (when the feasible technology and BMPs are installed) can be done with high certainty via modeling. Estimates beyond that are highly uncertain.

Result: the criterion portion of the HAC is the estimate of WQ at 10 years. The interim use can be described. The duration would be 10 years because that is how far we can reliably estimate the HAC. Variance would be re-evaluated at 5 years.

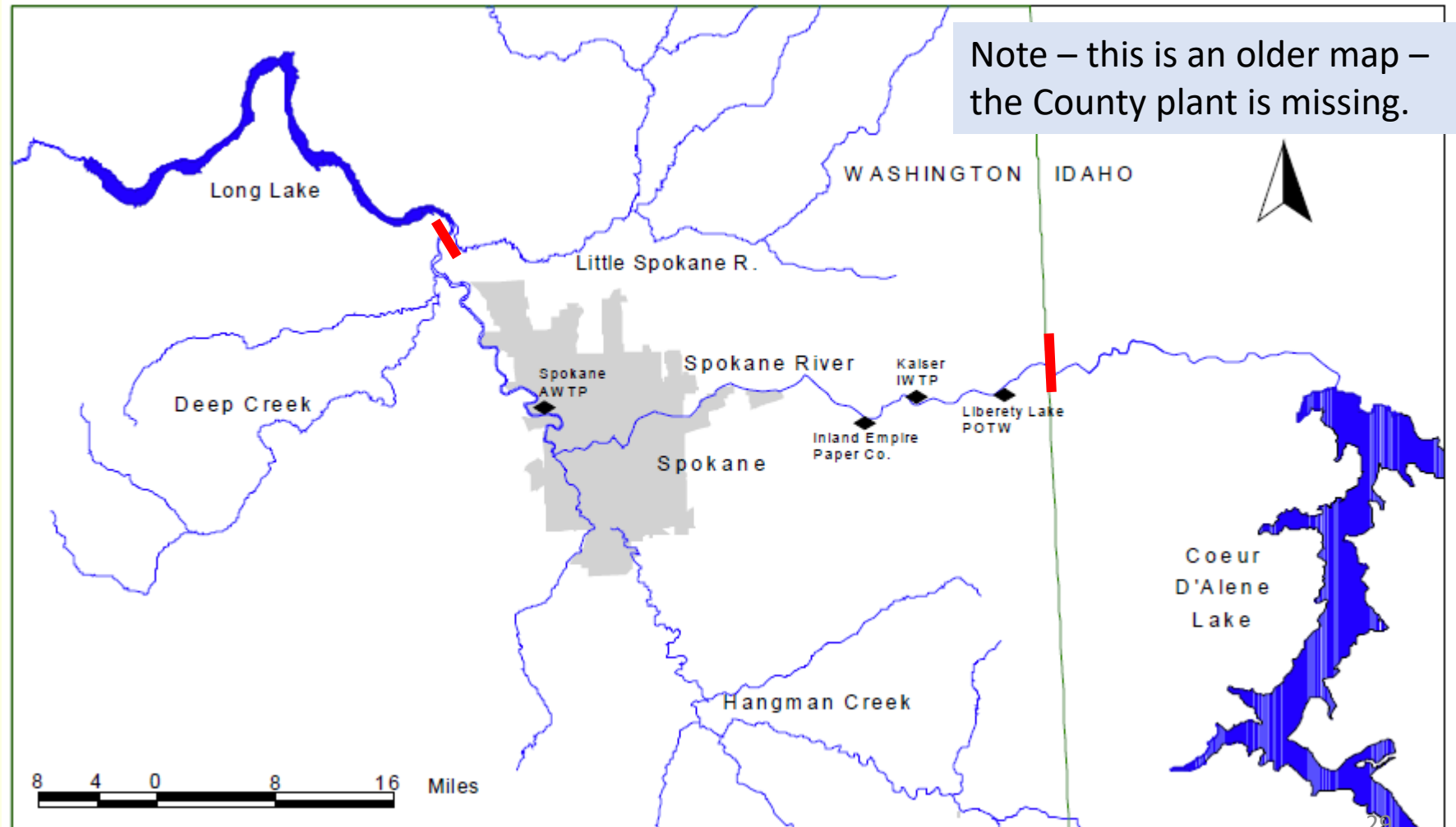
## A more complex scenario for a waterbody variance: the Spokane River and PCBs.

- Let's focus on the Idaho border to the Nine Mile Dam – 38.4 miles – marked by red bars.
- Long stretches are listed for PCBs.

Lake Spokane (Long Lake) is the first major impoundment (a 24 mile reservoir) downstream of the stretch of the SpR that we are looking at.

The lake is also 303(d) listed for PCBs.

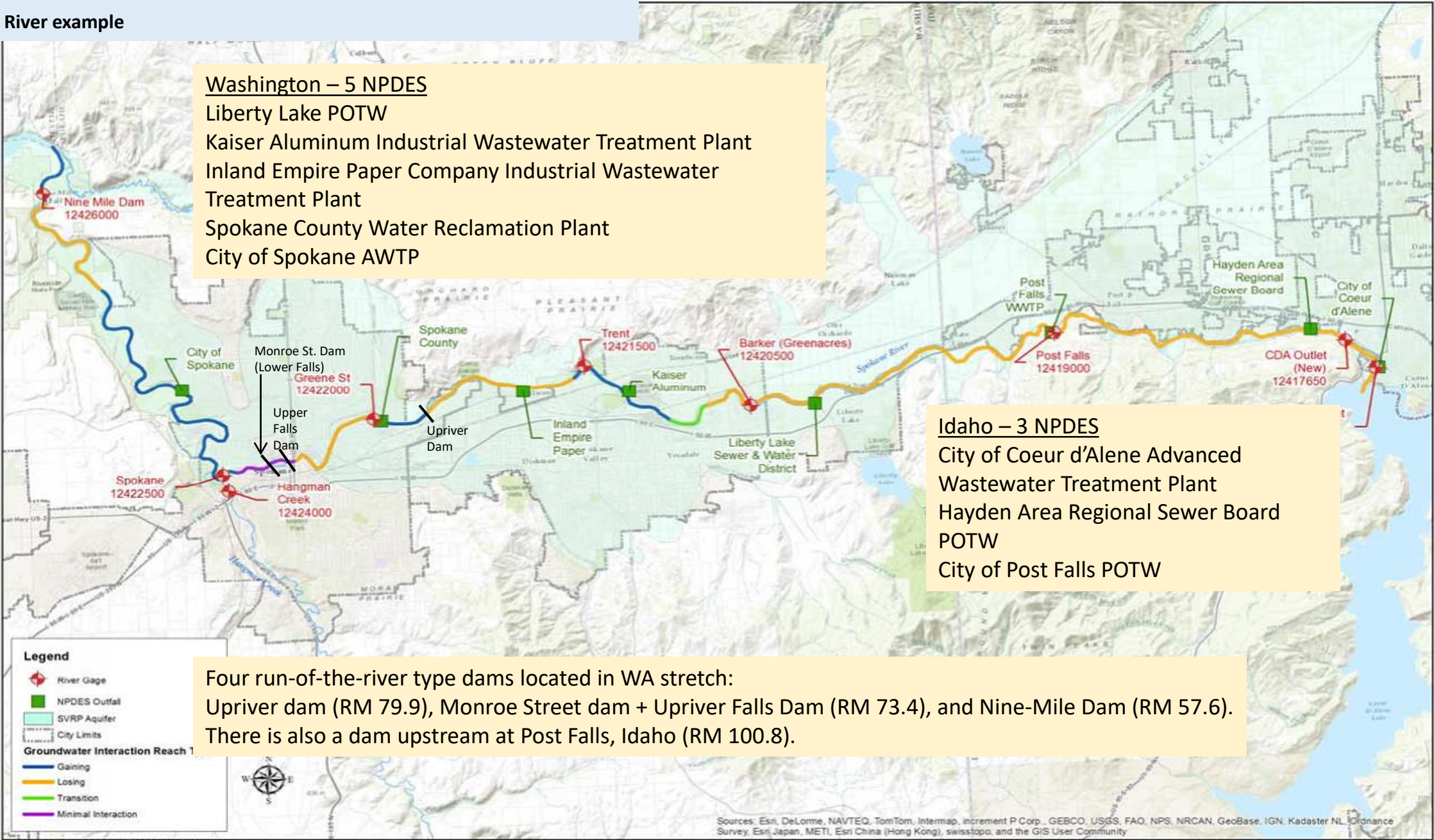
The SpR upstream of Lake Spokane drains over 6,000 square miles of land in Washington and Idaho.





Waterbody Path 1. HAC = highest attainable interim criterion and interim use.

Spokane River example



Washington – 5 NPDES  
Liberty Lake POTW  
Kaiser Aluminum Industrial Wastewater Treatment Plant  
Inland Empire Paper Company Industrial Wastewater Treatment Plant  
Spokane County Water Reclamation Plant  
City of Spokane AWTP

Idaho – 3 NPDES  
City of Coeur d'Alene Advanced Wastewater Treatment Plant  
Hayden Area Regional Sewer Board POTW  
City of Post Falls POTW

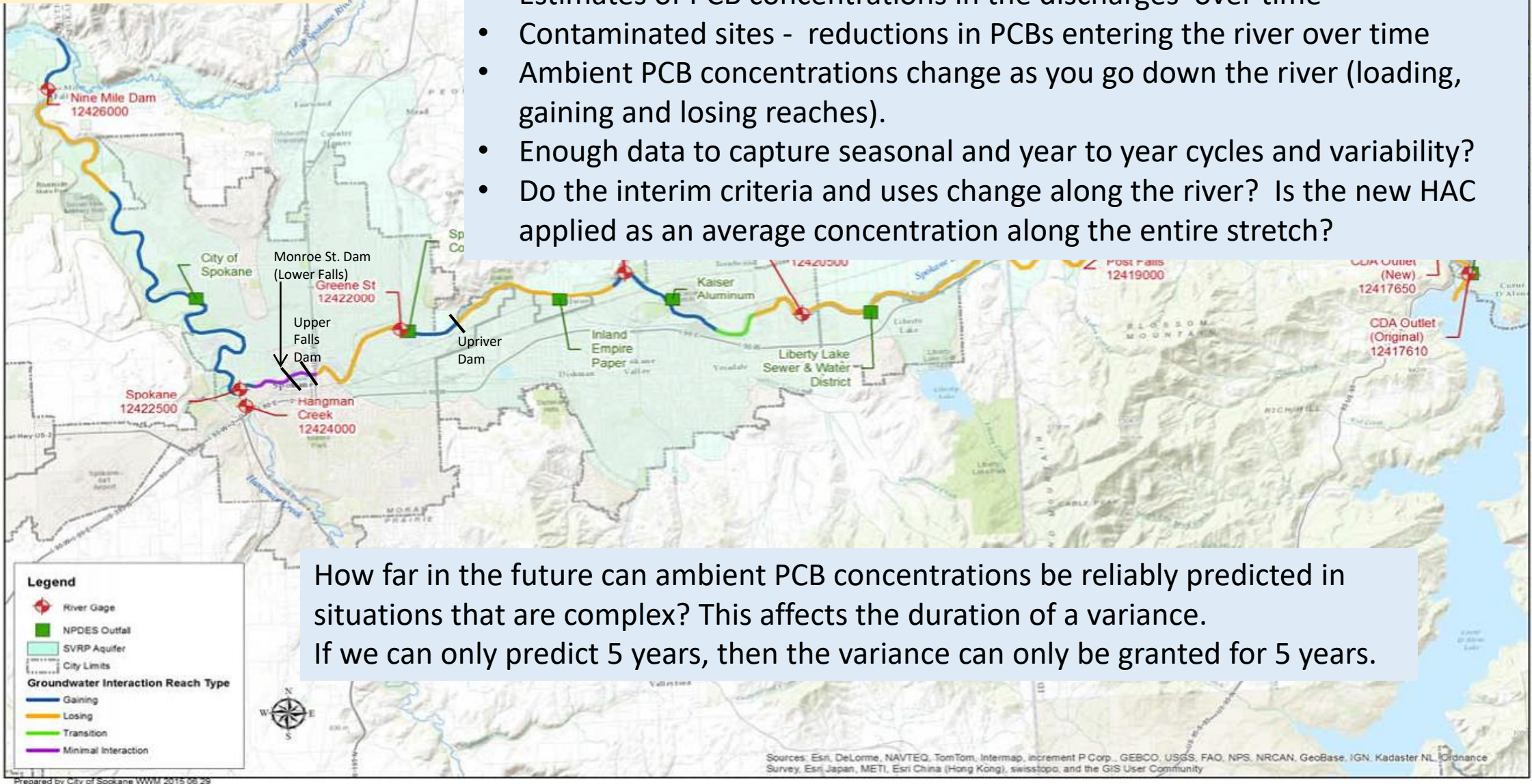
Four run-of-the-river type dams located in WA stretch:  
Upriver dam (RM 79.9), Monroe Street dam + Upriver Falls Dam (RM 73.4), and Nine-Mile Dam (RM 57.6).  
There is also a dam upstream at Post Falls, Idaho (RM 100.8).




**Waterbody Path 1. HAC = highest attainable interim criterion and interim use.**

Some of the modeling considerations for developing the HAC would include:

- Schedule of technology installation at 8 NPDES discharges (ID & WA)
- Estimates of PCB concentrations in the discharges over time
- Contaminated sites - reductions in PCBs entering the river over time
- Ambient PCB concentrations change as you go down the river (loading, gaining and losing reaches).
- Enough data to capture seasonal and year to year cycles and variability?
- Do the interim criteria and uses change along the river? Is the new HAC applied as an average concentration along the entire stretch?



## Back to Discharger variances...

Discharger variances HAC	HAC Requirements
<p><u>Path 1:</u> The highest attainable <b>interim criterion</b> = HAC.</p>	<p>Requires estimation of the highest attainable ambient water quality</p>
<p><u>Path 2:</u> The <b>interim effluent condition</b> that reflects the <u>greatest pollutant reduction achievable</u> = HAC.</p>	<p>Requires knowledge of the best quality effluent that is achievable. When that quality is achieved the variance ends.</p>
<p> <u>Path 3:</u> If no additional feasible pollutant control technology can be identified, <b>the interim criterion</b> <u>or</u> <b>interim effluent condition</b> that reflects the <u>greatest pollutant reduction achievable with the pollutant control technologies installed at the time</u> the State adopts the WQS variance, and the adoption and implementation of a Pollutant Minimization Program.</p>	<p>Requires installation of feasible control technologies.</p> <p>The HAC is expressed as the best ambient water quality condition, or the best effluent condition, once the feasible control technology is installed.</p> <p>Technology must be installed or guaranteed at the time the variance is granted.</p> <p>A PMP is required, and it is the continued implementation of the PMP that allows the duration of the variance to extend beyond the time of installation of the technology.</p>

# How to obtain a variance?

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Assemble the required information package and submit it to Ecology, along with a request for a variance.

Before beginning, Ecology strongly recommends:

- Contact Ecology WQS to discuss the situation. We will coordinate with your permit manager and EPA to help ensure that you get the information that can help you build a successful submittal.



A WQS variance is a path to improve water quality over time.



**What information is required when requesting a variance in Washington?** (see WAC 173-201A-420)

Required for all variances	The criteria and designated use(s) proposed to be modified by the variance, and the proposed duration of the variance.
	A demonstration that attaining the water quality standard is not feasible for the requested duration of the variance based on 40 C.F.R. 131.14. ( <b>Lindsay Guzzo EPA Reg. 10 will discuss this requirement</b> )
	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.
	Sufficient water quality data and analyses to characterize receiving and discharge water pollutant concentrations.
	A description and schedule of actions that the discharger(s) proposes to ensure the HAC is attained within the variance period.
	Dischargers are also required to submit a schedule for development and implementation of a pollutant minimization plan for the subject pollutant(s).

## Additional requirement for water-body variances

The results from a pollutant source assessment that quantifies the contribution of pollution from permitted sources and non-permitted sources;

All cost-effective and reasonable BMPs for permitted sources that address the pollutant the variance is based upon;

BMPs for non-permitted sources that meet the requirements of chapter 90.48 RCW.

- Municipalities will need to articulate what they will do to address nonpoint pollution that is within their jurisdictional authorities

# What happens after the variance request and information package is submitted to Ecology?

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- Ecology reviews the submittal and decides whether it can support rule development.
- If so, formal rule-making can start. This is a formal public process subject to Administrative Procedures Act requirements.
- Once adopted, the variance is submitted to the USEPA for CWA review, including ESA consultation if needed.
- If approved by the USEPA, the requirements of the variance can be implemented.



A WQS variance is a path to improve water quality over time.





# What does a variance contain?

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Any variance will contain **at least** the following contents:

- The duration of the variance
- Geographic area or specific waters
- A description of the permitted and unpermitted dischargers covered by the variance.
- Identification of required actions and a schedule, including measurable milestones, for all pollution sources (permitted and unpermitted) subject to the variance.

**Dischargers are required to use adaptive management to achieve the goals of the variance.**

- A provision allowing the department to (1) reopen and modify permits and (2) revise BMP requirements for unpermitted dischargers as a result of the mandatory interim review of the variance

# Variances can result in permit conditions

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NPDES permits will contain all the conditions necessary to implement and enforce an approved variance.

These permit conditions include:

- Effluent limits
- Monitoring and reporting requirements
- A provision allowing the department to reopen and modify the permits based on the mandatory interim review of the variance.



A WQS variance is a path to improve water quality over time.



# Variances also contain mandatory interim reviews

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The department will conduct an interim review of each variance at least once every five years.

**For a variance that applies to a permit**, the variance will be shortened or terminated if the review determines that:

- The conditions and requirements have not been complied with (unless reasons outside the control of the discharger prevented meeting any condition or requirement)
- Water quality standards could be met in a shorter time frame.
- **For a variance that applies to a waterbody**, the variance could be shortened or lengthened based on new information.



A WQS variance is a path to improve water quality over time.



# Take home messages:

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It takes a process to be granted a variance:

- Coordination with Ecology
- Information collection and submittal
- Rule-making and EPA review

Permits will contain enforceable conditions that are required by the variance.

The focus is always on meeting WQS by working toward the highest attainable condition.

The variance can be terminated if conditions are not met.



A WQS variance is a path to improve water quality over time.



## Additional Information:

### Resources on variances:

- Water Quality Standards for Surface Waters of the State of Washington, Chapter 173-201A WAC (2016) - <https://fortress.wa.gov/ecy/publications/documents/0610091.pdf> (see part IV, section 420)
- EPA's Water Quality Standards regulation: 40 CFR 131.14
- EPA's Water Quality Standards Variance Building Tool - <https://www.epa.gov/wqs-tech/water-quality-standards-variance-building-tool>
- EPA's Water Quality Standards Variance Building Tool Flow Chart - <https://www.epa.gov/sites/production/files/2017-07/documents/variance-building-tool-chart.pdf>
- EPA's Interim Economic Guidance for Water Quality Standards (1995) – <https://www.epa.gov/wqs-tech/economic-guidance-water-quality-standards> This document provides guidance to understand the economic factors that may be considered, and the types of tests that can be used, to determine if a designated use cannot be attained, if a variance can be granted, or if degradation of high-quality water is warranted.

### Ecology contact information:

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[swqs@ecy.wa.gov](mailto:swqs@ecy.wa.gov)



A WQS variance is a path to improve water quality over time.



# Questions/comments about Variances?



<https://pixabay.com/en/question-question-mark-survey-2736480/>





# Use Attainability Analysis (UAA)

*“ . . a structured scientific assessment of the factors affecting the attainment of a use which may include physical, chemical, biological, and economic factors as described in section 131.10(g).”*

40 CFR 131.3



<https://pixnio.com/fauna-animals/fishes/salmon-fish-pictures/sockeye-salmon-spawn-wenatchee-river>

A UAA study can be the basis of modifying a designated use.

## Review: Designated Uses and the Water Quality Standards

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The water quality standards **establish water quality based goals** for waterbodies (streams, lakes, marine embayments).

They do this by **designating beneficial uses** (fishing, swimming, aquatic life habitat) to the waters and **assigning numeric and narrative criteria** to protect those uses.

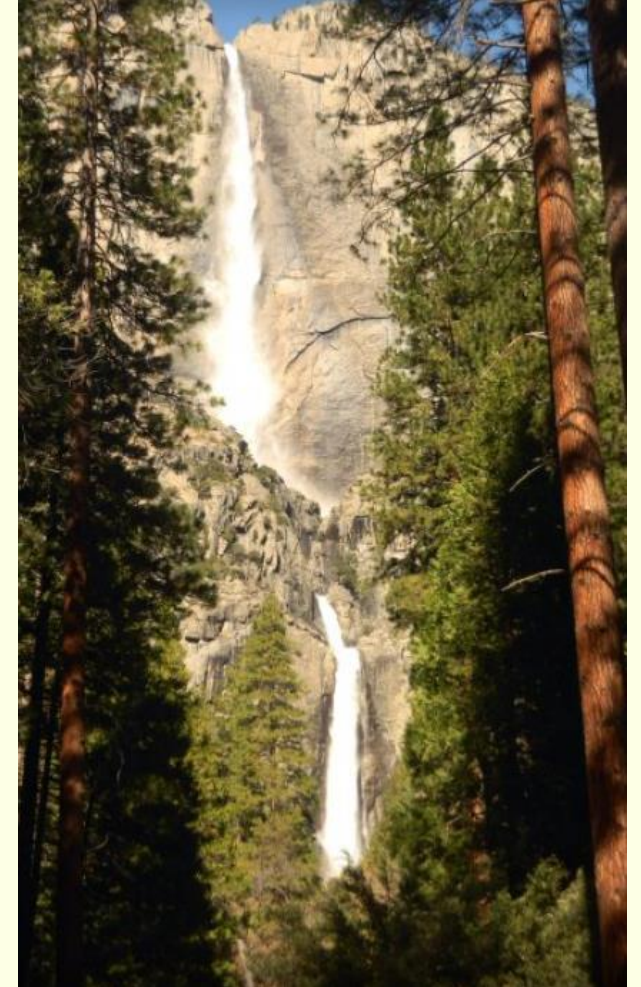
The most stringent criteria are assigned to protect those designated uses that are the most sensitive to pollution.

A UAA can be used to modify a designated use.

## Why a process to ensure that the designated uses represent uses that exist or are attainable in the waterbody:

- 1) Improves credibility for the water quality standards (which encourages cooperation).
- 2) Minimizes unwarranted costs for water quality protection (meeting criteria to protect sensitive uses that do not exist and will never exist).

**UAAs are the federally authorized mechanism for adjusting the use-protection goals established in state water quality standards.**



<https://pixnio.com/nature-landscapes/waterfalls/trees-waterfall-forest-mountain>

# Setting a Basic Foundation for Understanding UAAs

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## What is a UAA?

A structured scientific assessment of the factors affecting the attainment of a use which may include physical, chemical, biologic, and economic factors.

## What is the regulatory basis for conducting UAAs?

Federal regulations governing state water quality standards establish the requirements for a Use Attainability Analysis.





## What is a designated use?

Designated uses are those uses specifically assigned to a waterbody for protection in a state's water quality standards.

Once a use is designated in the state standards, it receives special regulatory protection under the federal UAA regulations; even if it has never actually existed.

## What is an existing use?

Existing uses are “those uses actually attained in the water body on or after November 28th, 1975, whether or not they are included in the water quality standards.”



<https://pixnio.com/transportation-vehicles/ships-boats/boat-water-river-fishing-man>

*Note: The date of 1975 is when the first federal water quality standards regulation was adopted under Clean Water Act.*

## Who is in charge of reviewing UAAs?

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Ecology has authority over the state water quality standards.

*Ecology must find the UAA meets state and federal water quality laws and regulations, before adopting the changes.*

EPA would then review the revised state standards to ensure they meet all federal requirements under the Clean Water Act and the Endangered Species Act.

*Where endangered species occur, then the federal fish agencies must concur with EPA's determination.*

## What is a UAA used for?

To remove uses **designated** to a waterbody in the state water quality standards that are neither **existing** nor **attainable**.

- Existing uses must be fully protected.
- No mechanism exists under federal laws and regulations to remove existing in-stream uses (*fishing, aquatic life and wildlife habitat, recreation in and on the water, etc.*).
- Where a designated use does not exist, the UAA process is designed to identify and protect the highest attainable use.



# When is a UAA the appropriate tool to consider?

Use this permitting tool...	When...
Compliance schedule	The effluent limit can't be met now, but can be met after a period of time.
Use this Water Quality Standards tool...	When...
Site specific criterion	The attainable condition of existing and designated uses would be fully protected using an alternate criterion.
Variance	We <b>don't know</b> if the designated use can be attained or effluent limit met, but progress toward them can be made.
★ Use Attainability Analysis	We <b>know</b> that the designated use or effluent limit cannot be attained, and we <b>know</b> what level of attainable use and/or effluent quality can be attained.

# How do you know and demonstrate that a designated use cannot be attained?

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The following six conditions are used to evaluate whether a designated use is also an attainable use:

- (1) Naturally occurring pollution concentrations prevent the attainment of the use; or
- (2) Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or
- (3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or

(continued next slide)

(4) Dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or

(5) Physical conditions related to the natural features of the water body, such as lack of proper substrate, cover, flow; depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or

(6) Controls more stringent than those required by § 301 (b) and 306 of the Act would result in substantial and widespread economic and social hardship.

These 6 factors are found in 40 CFR 131.10(g).

# Components of a UAA Study

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**All UAAs must be designed to answer the following:**

1. What are the existing uses of the waterbody?
2. What are any causes of impairment to the ability of the water to support existing and designated uses?
3. What are the highest (most stringent) attainable uses?
4. Will the proposed change in a designated uses fully protect both the existing uses in the waterbody and the downstream uses and criteria?

# Summary of Ecology Review Process

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- UAAs will be reviewed for completeness and adequacy in demonstrating attainable uses.
- During the initial review, as appropriate Ecology will confer with other state resources agencies, EPA, the tribes, and other interested and knowledgeable groups.
- Ecology will make a decision on rule-making.
- If so, formal rule-making can start. This is a formal public process subject to Administrative Procedures Act requirements.
- Once adopted, the variance is submitted to the USEPA for CWA review, including ESA consultation if needed.
- If approved by the USEPA, the requirements of the variance can be implemented.

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# Questions/comments about UAAs?



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