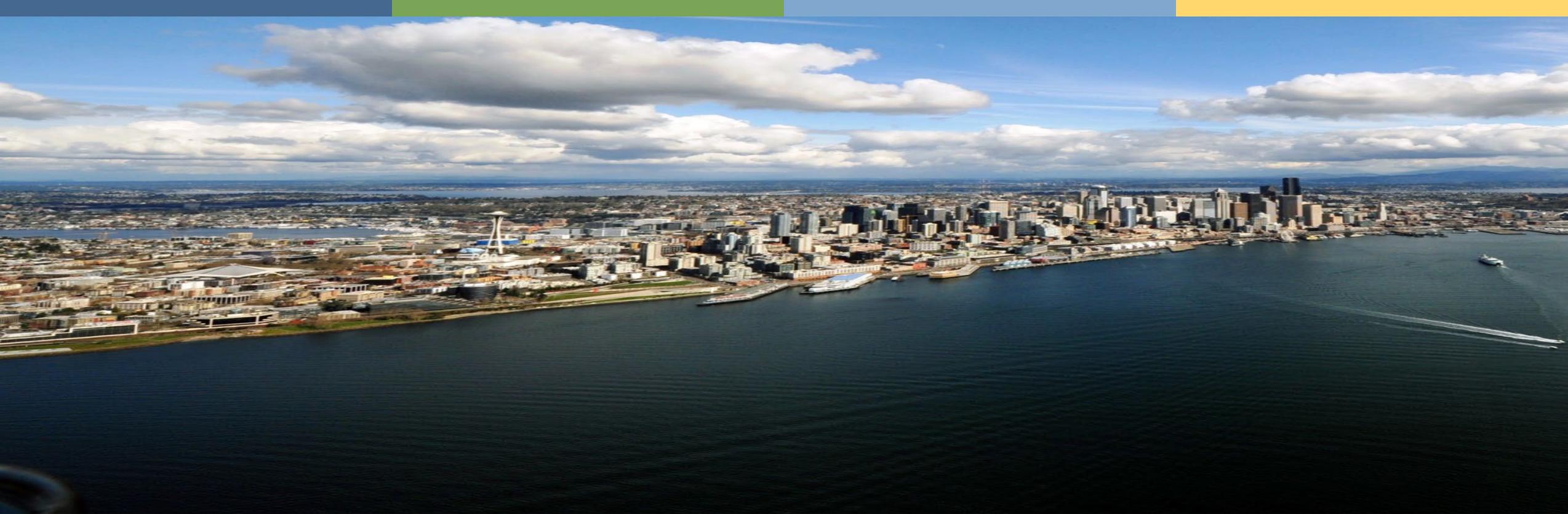


# Water Quality Partnership

## September 21, 2023



<b>Welcome &amp; Program Updates</b>	Colleen Keltz, Leslie Connelly	10:00 – 10:10
<b>Municipal Stormwater – Permits and Manuals</b>	Abbey Stockwell	10:10 – 10:30
<b>6PPD Stormwater updates</b>	Morgan Baker, Katie Rathmell	10:30 – 10:45
<b>General Permit updates</b>	Lucienne Banning	10:45 – 11:00
<b>Grant and Loan updates</b>	Jeff Nejedly, Carson Moscoso	11:00 – 11:20
<b>Watershed Management Updates</b>	Melissa Gildersleeve, Marla Koberstein	11:20 – 11:45
<b>Roundtable</b>	All	11:45 – 11:55
<b>Wrap up</b>	Colleen Keltz	11:55 – 12:00



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# Municipal Stormwater Permits and Manuals

Abbey Stockwell



# 2024 Municipal Stormwater Permit Reissuance - Western Washington focus

Formal drafts for public comment

# Permit History

**Phase I**  
(Issued 1995,  
reissued 2007, 2012, 2019)

- King, Snohomish, Pierce, & Clark Counties; Cities of Seattle & Tacoma

**Western WA Phase II**  
(Issued 2007,  
reissued 2012, 2019)

- 83 cities and parts of 5 counties

**Eastern WA Phase II**  
(Issued 2007,  
reissued 2012, 2019)

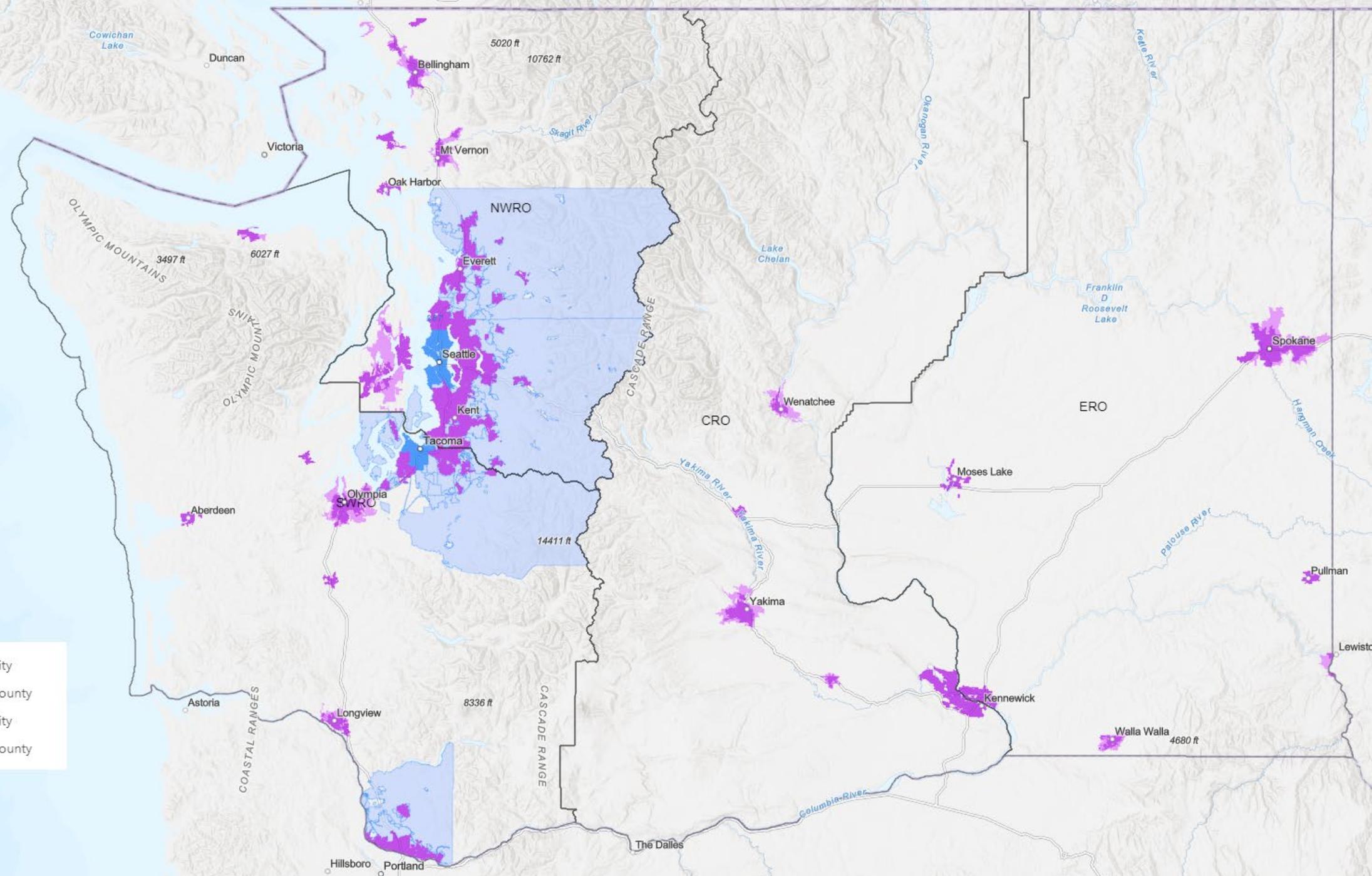
- 19 cities and parts of 6 counties

Phase I&II permits  
include **Secondary**  
**Permittees**

- 47 Ports, Schools, Irrigation Districts, etc.

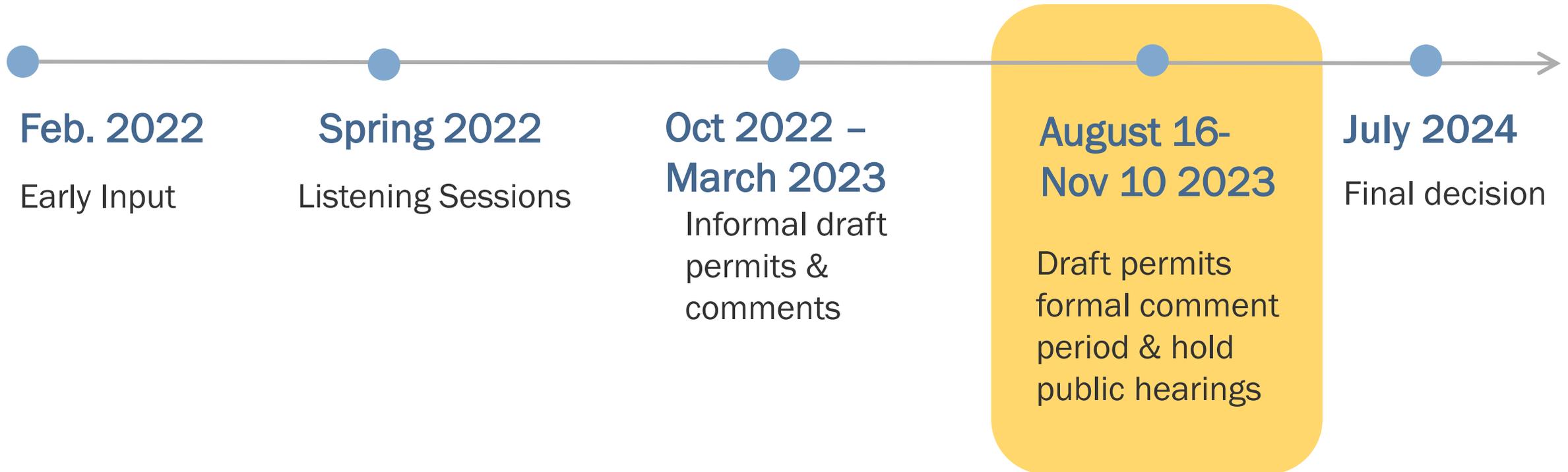


-  phase1, city
-  phase1, county
-  phase2, city
-  phase2, county



# Reissuance Timeline

Where we're headed next





Phase I

Western  
Phase II

Eastern Phase  
II

# Municipal Stormwater Permits

# Stormwater Management Program



Stormwater Planning

Mapping

Public Education & Outreach

Public Involvement

Illicit Discharges Detection & Elimination (IDDE)

Controlling Runoff from New Development

Operations & Maintenance (O&M)

Source Control for existing development

Structural Stormwater Controls (PH I only)

Monitoring & Assessment

Total Maximum Daily Loads (TMDLs)

# Stormwater Management Manuals



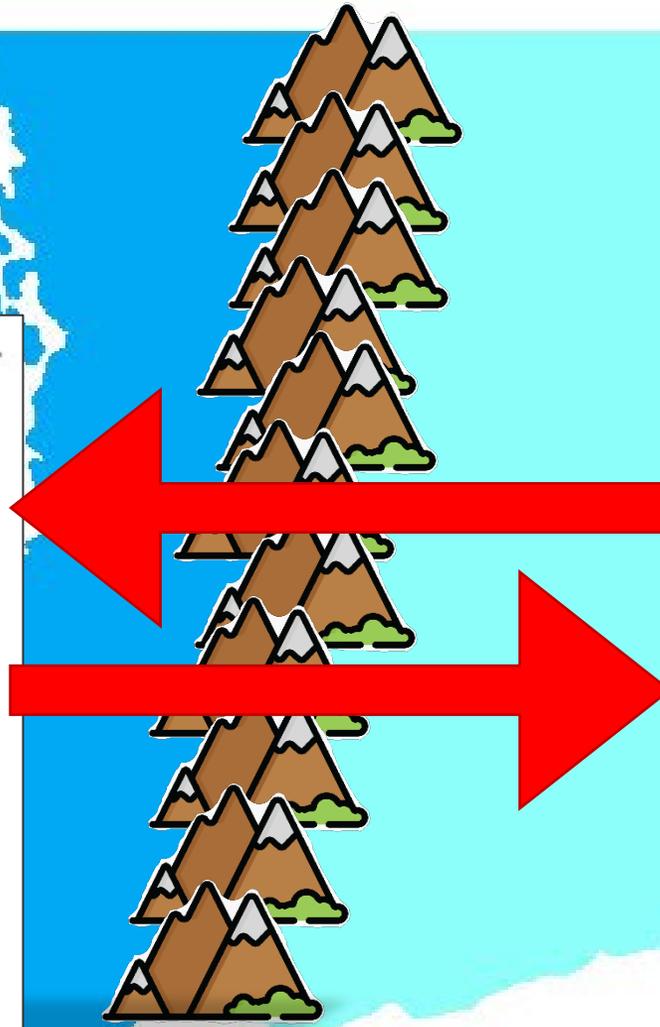
Stormwater Management Manual for Western Washington



July 2019



Publication Number 19-10-021



Stormwater Management Manual for Eastern Washington



August 2019



Publication Number 19-10-041

Printed on recycled paper

# Announcements and Next Steps

## Workshops and hearings on Permit and SWMM

### **Virtual hearings**

Sept. 18, 2023, 9 a.m. & 1:30 p.m.

Nov. 6, 2023, 9 a.m. (WWA) & 1:30 p.m (EWA)

### **In-Person hearings**

Oct 3, 2023 9:30 a.m. Moses Lake

Oct. 17, 2023, 9:30 a.m. Lacey Community Center

Comment period closes on **November 10, 2023, 11:59 pm**

# Early and often input – Thank you!

- Early call for input
  - Ad-hoc group letters
- SSC TAC and PAC
- Preliminary draft informal comments



# Significant Updates Proposed

- Address tire wear research findings
- Update Stormwater Planning & “Retrofit” programs
- Enhance Source Control requirements
  - street sweeping program
  - PCBs in building materials
  - PFAS in firefighting foams
- Updates to Appendix 1
  - Project review thresholds



# Submitting Written Comments

## Online:

**Draft Permit or SWMMs:**

<https://wq.ecology.commentinput.com/?id=C57pYMegb>

**Comments due by Nov. 10,  
2023**

## Mail To:

Abbey Stockwell

WA State Department of Ecology

P.O. Box 47696

Olympia, WA 98504-7696



# Questions on permit or manual?

## **Abbey Stockwell**

Phase II Municipal Stormwater General Permit Writer

[Abbey.Stockwell@ecy.wa.gov](mailto:Abbey.Stockwell@ecy.wa.gov)

## **Amy Waterman**

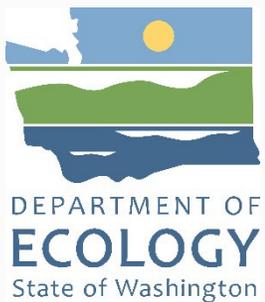
Phase I Municipal Stormwater General Permit Writer

[Amy.waterman@ecy.wa.gov](mailto:Amy.waterman@ecy.wa.gov)

## **Amanda Heye**

Stormwater Management Manual Technical Writer

[Amanda.hey@ecy.wa.gov](mailto:Amanda.hey@ecy.wa.gov)



# 6PPD and Stormwater Best Management Practices

Morgan Baker, 6PPD Management Analyst  
Water Quality Partnership – September 2023

# Agenda

- Funding for **Best Management Practices (BMP) Effectiveness studies**
- **Completed research**
- **Ongoing research** supported by Proviso funds and the Stormwater Action Monitoring Program
- **Regulatory response:** permit and manual updates
- Identified **data gaps** to fill with new studies



## BMP Effectiveness Studies

- \$1.5 million/year from the legislature (2022, 2023 – 2025)
- Completed 1 contract, supporting 6 ongoing projects
- Fall 2023: Soliciting for competitive bids and Interagency Agreements (IAAs)

Washington State Department of Ecology

## STORMWATER TREATMENT OF TIRE CONTAMINANTS BEST MANAGEMENT PRACTICES EFFECTIVENESS

Final Report | June 2022



## Completed: Osborn & Evergreen StormH2O Consulting

- Researched and conducted a literature review on how effective current BMPs are at addressing tire contaminants
- Published a report describing the potential effectiveness of:
  - Source Control BMPs
  - Flow Control BMPs
  - Runoff Treatment BMPs

# Source Control BMPs

Prevent stormwater contaminants from entering storm drain systems

**High Potential:** Street sweeping, cleaning roadside ditches, catch basins, and storm drains

**Medium Potential:** Education and outreach



# Flow Control BMPs

Slow and reduce runoff volume through on-site management of water

**High Potential:** Bioretention, infiltration basins

**Medium Potential:** Detention ponds, permeable pavement



# Runoff Treatment BMPs

Reduce concentrations of targeted pollutants through means of physical filtration and chemical sorption

**High Potential:** Sorbent media, bioretention soil mix, media filters

**Medium Potential:** Sand filters



## Completed: Osborn & Evergreen StormH2O Consulting

- Particle size distribution (PSD) literature review
- PSD highest for clay and silt range
- BMPs that can remove this particle size likely more effective at removing pollutants (metals and nutrients; more data needed to assess 6PPD-quinone)
- > 50% removal of this PSD with: bioinfiltration swales and ponds, bioretention, wet vaults



# Ongoing Projects

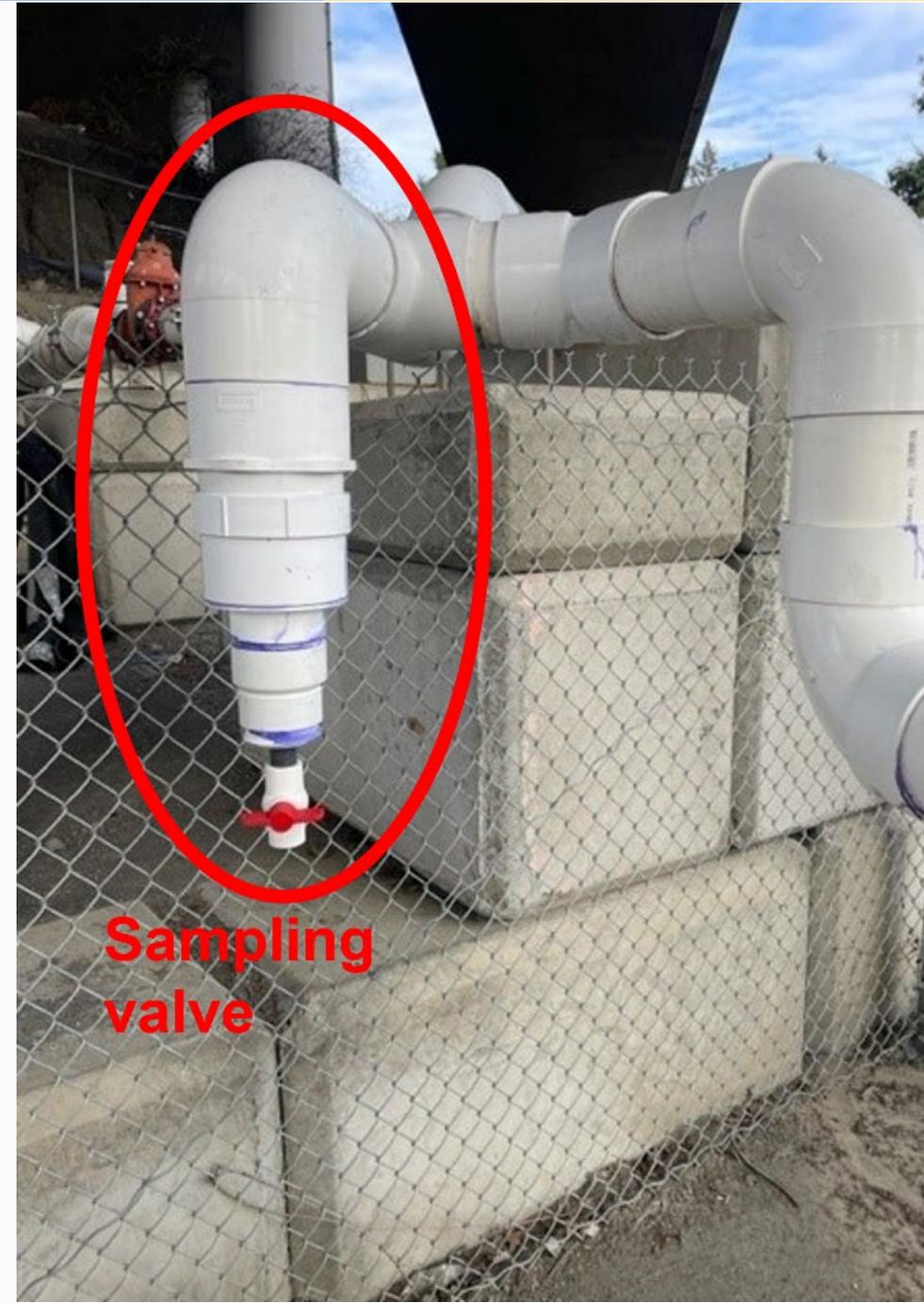
- **King County** – Testing 4 High Performance Bioretention Soil Mixes (HPBSM) testing
- **UW-Tacoma** – Comparing the contaminant capture of engineered medias, commercial sorbent components, and simplified soils

Photo: Madison Rose Bristol



# Ongoing Projects

- **King County Environmental Lab**
  - mixed highway & residential stormwater characterization study
- **Herrera** – testing influent and effluent with TAPE devices for removal of 6PPD-q in Seattle and Portland





# Stormwater Action Monitoring Program (SAM)

- Permittee-driven research to improve the effectiveness of municipal stormwater management programs
- Ongoing 6PPD studies:
  - **WSU-Puyallup** – longevity of bioretention media
  - **Redmond** – street sweeping effectiveness
- Four proposed studies with 6PPD-quinone parameter

# Regulatory Response: Stormwater Management Manuals (SWMMs) and MS4 Phase I and II Permits

- **Phase I and II Permit changes** - Reduced project thresholds to require runoff treatment with new and redevelopment; Street sweeping requirements; Incentives for watershed collaboration in retrofit projects
- **Just Phase I** - New minimum requirements for structural stormwater facility retrofits; Incentives for retrofit projects in High Pollutant Generating Transportation areas
- **Just Phase II:** Stormwater retrofits required
- **SWMMs:** Guidance within section [I-1.5 Stormwater Pollutants and Their Adverse Impacts](#); [Emerging guidance](#) added on an ongoing basis

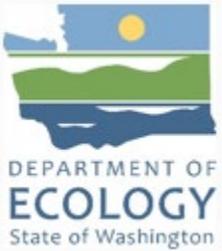
# Gaps to Fill with New Studies

- **Testing BMP effectiveness:** Street sweeping, grassy swales, soils, vegetation, filtration inserts, treatment technologies (TAPE), road embankments
- **Bridging policy and research:** operations and maintenance standards, treatment thresholds, retrofits, road development planning, street waste disposal, industrial facilities

# Gaps to Fill with New Studies (continued)

- **Cost effectiveness** of different BMPs
- **Stormwater characterization** for different land uses
- Understanding the **fate and transport** of 6PPD and 6PPD-q
- BMP effectiveness in **different geographic regions** and under **climate change conditions**

# Questions?



## ADA Accessibility

The Department of Ecology is committed to providing people with disabilities access to information and services by meeting or exceeding the requirements of the Americans with Disabilities Act (ADA), Section 504 and 508 of the Rehabilitation Act, and Washington State Policy #188.

To request an ADA accommodation, contact Ecology by phone at 360-407-6831 or email at [ecyadacoordinator@ecy.wa.gov](mailto:ecyadacoordinator@ecy.wa.gov). For Washington Relay Service or TTY call 711 or 877-833-6341. Visit [Ecology's website](#) for more information.

### For more information:

**Morgan Baker**

6PPD Management Analyst

[morgan.baker@ecy.wa.gov](mailto:morgan.baker@ecy.wa.gov)



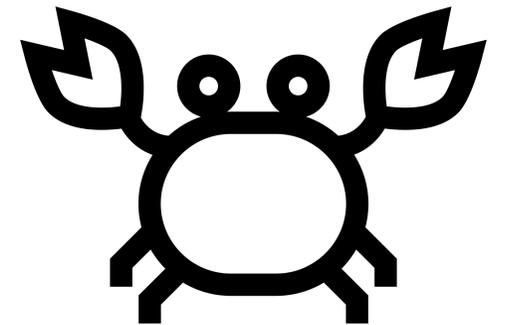
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# General Permit Update

Lucienne Banning

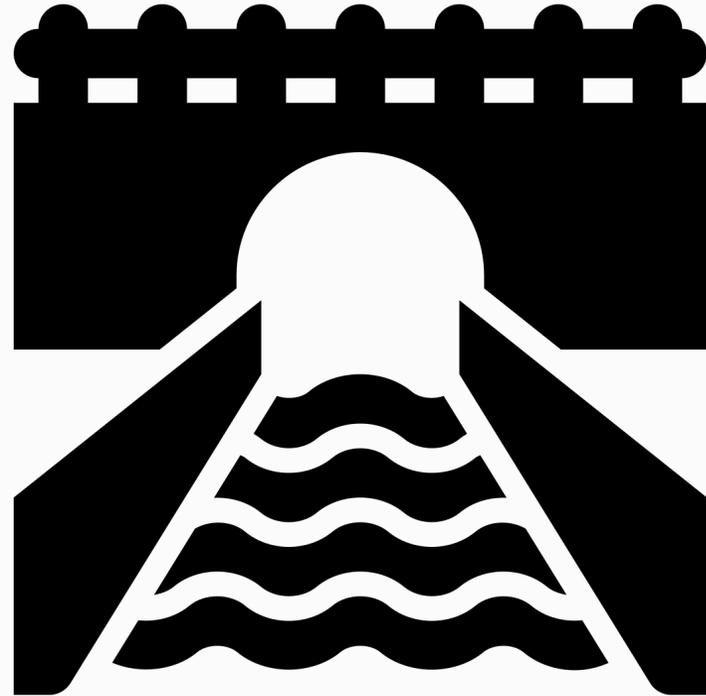
Activities  
Third Quarter  
2023

Aquatic and Invasive Species  
General Permit



# Activities Third Quarter 2023

Irrigation System  
Aquatic Weed Control  
General Permit



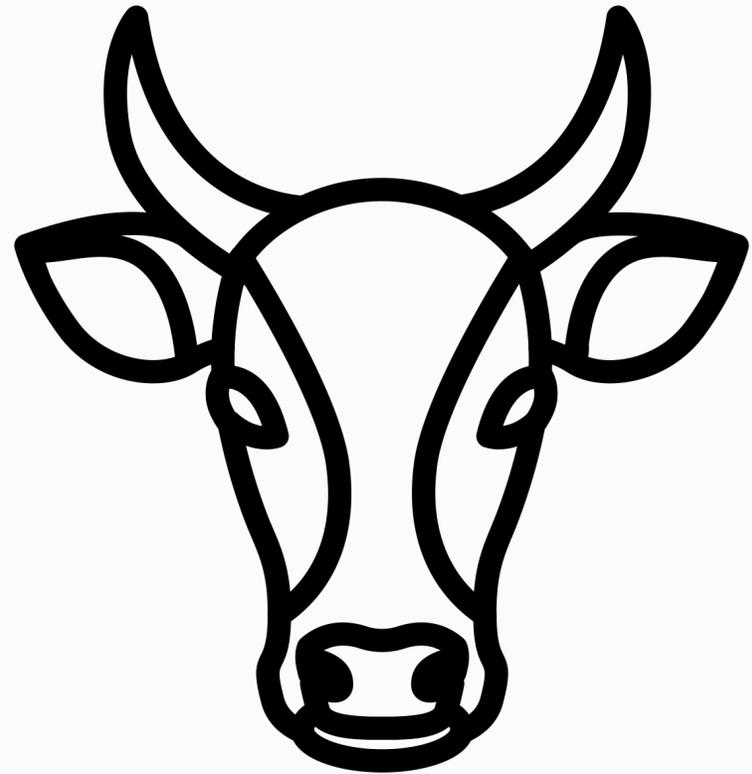
# Activities Third Quarter 2023

Vessel Deconstruction  
General Permit



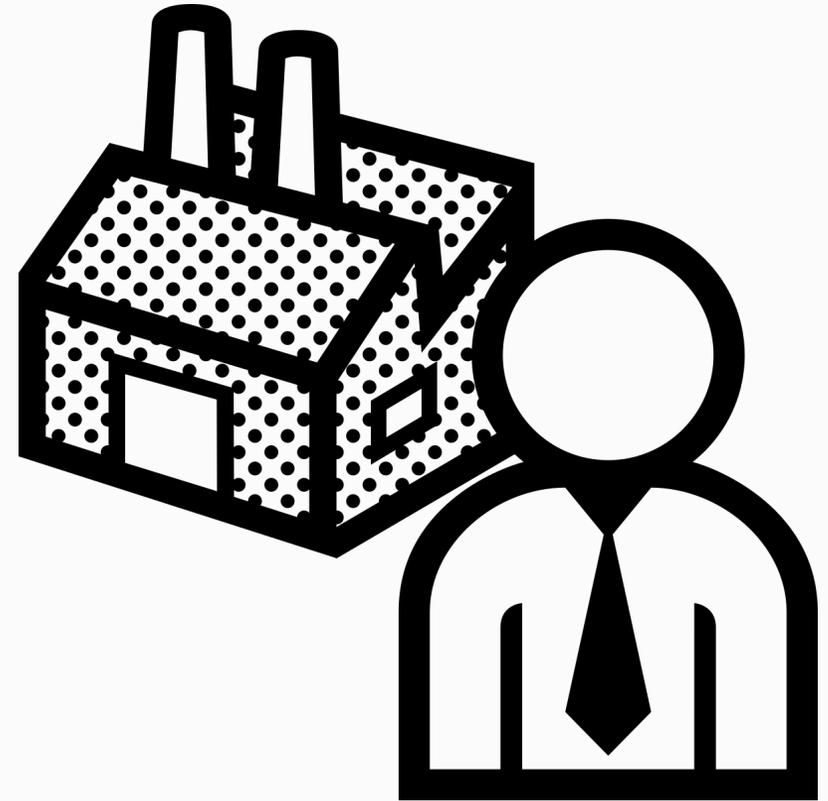
# GENERAL UPDATE

CAFO  
General Permit



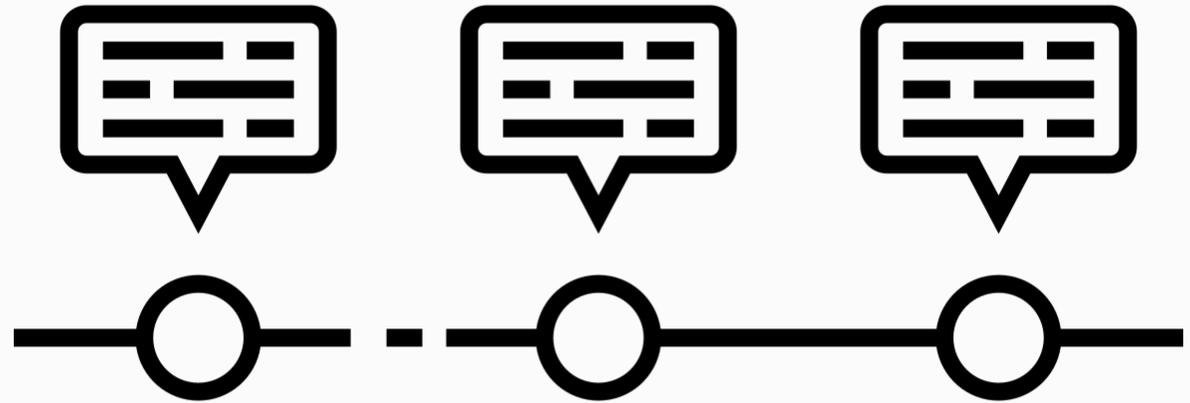
# Ongoing Activities

Industrial Stormwater  
General Permit  
Reissuance and Listening  
Sessions



# Ongoing GP Activities Continued

Mosquito  
Noxious Weed  
Municipal Stormwater  
Puget Sound Nutrient



# SFY 2025 Water Quality Grants and Loans

Nonpoint Activities Funding  
Updates



## Increased Funding Caps (Ag BMPS):

- Livestock off-stream watering \$15,600-\$52,000
- Heavy use areas \$25,000
- Waste storage facilities \$42,000
- Cross fencing \$20,000



New BMP!

See Guidelines page 49-53 and Appendices G, H, I, and J

# Riparian Buffers - Chapter 12 of CWG

- Recommendations are based on an extensive review of scientific literature.
- Buffer widths support meeting water quality standards including temperature.
- Guidance uses the concept of riparian management zones (RMZs)
  - Includes options for activities within riparian management zones.
- Buffer widths (zones) are based on a combination of factors:
  - Location (east/west side of the state).
  - Stream hydrology – ephemeral, intermittent or perennial.
  - Bankfull width.
  - Riparian forest potential.

# Riparian Buffers Options

1. **Fully forested riparian management zone** that is 1 site potential tree height in width. The default widths are 215ft and 150ft for western and eastern Washington, respectively.
2. **Three-zone buffer with Agroforestry uses** (including silvopastures) in the riparian management zone. Buffer widths are based on location & stream category.
3. **Three-zone buffer with more intensive uses** within the RMZ (outer zone). Buffer widths are based on location, stream category and bankfull width.

# Ecosystem Service Payments

- Projects that implement a riparian buffer one site potential tree height in width are eligible for a lump-sum ecosystem payment of \$2,000 per acre.
- All ecosystem service payments will require Ecology pre-approval, and a Washington State Ecosystem Service Contract that includes, but is not limited to the landowner agreement requirements outlined in Section 2.5.1.



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# Watershed Management Updates

Melissa Gildersleeve

Marla Koberstein



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# Proposed outstanding resource waters rulemaking – Chapter 173-201A WAC

Water Quality Partnership

Sept 21, 2023

# Outstanding resource waters

High quality or unique waterbodies that warrant special protection

WAC 173-201A-330

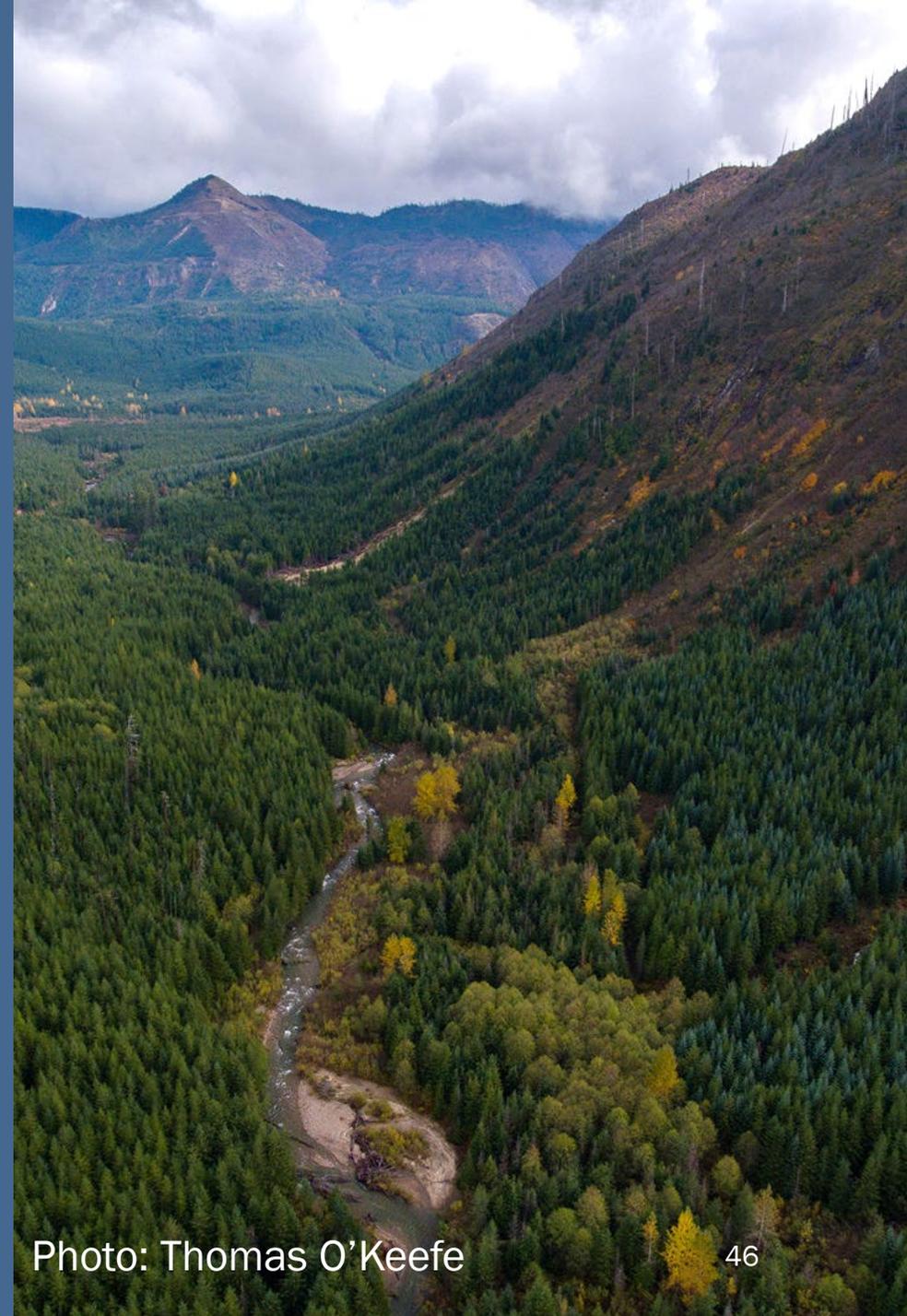
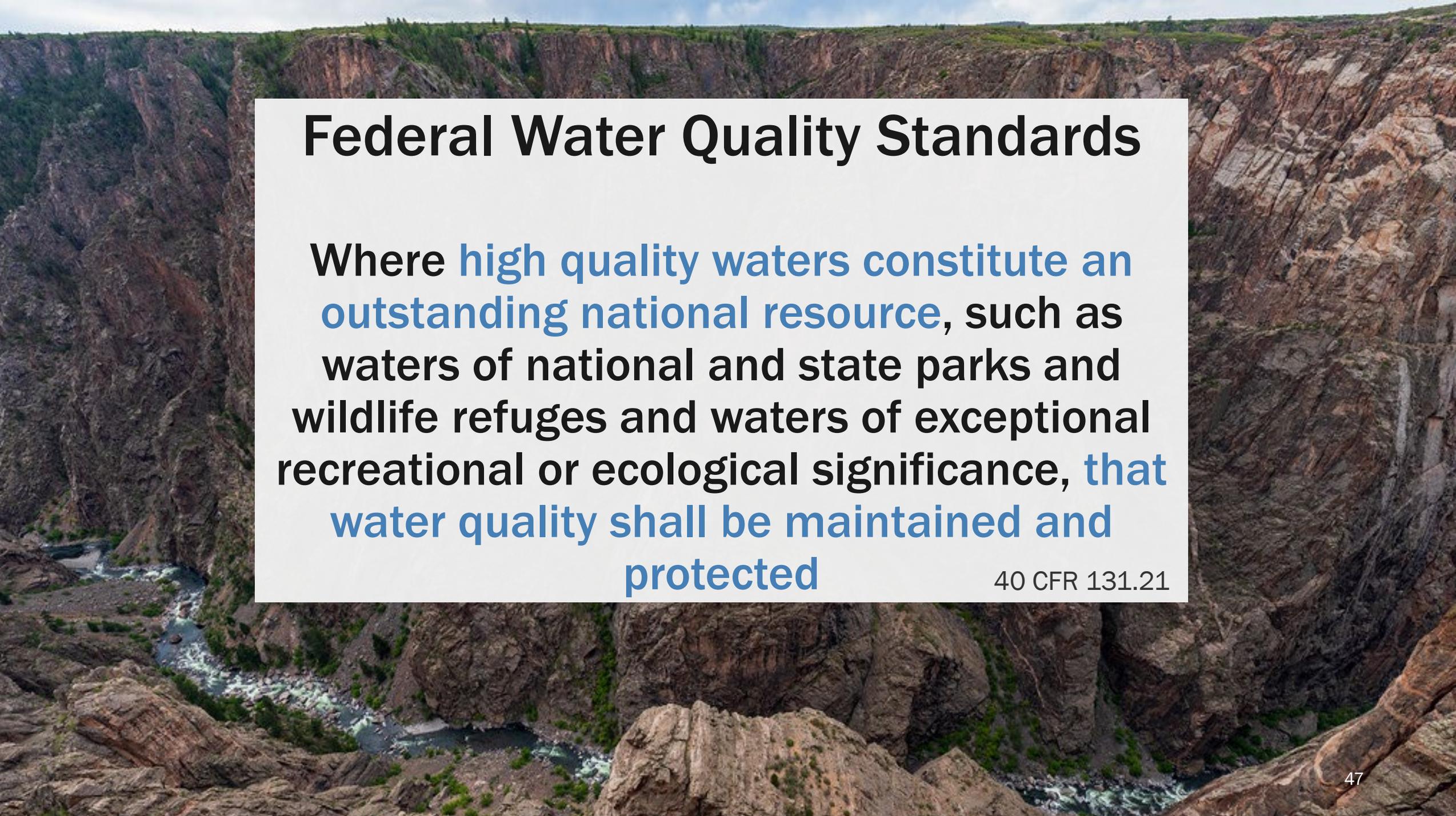


Photo: Thomas O'Keefe



# Federal Water Quality Standards

Where **high quality waters constitute an outstanding national resource**, such as waters of national and state parks and wildlife refuges and waters of exceptional recreational or ecological significance, **that water quality shall be maintained and protected**

40 CFR 131.21

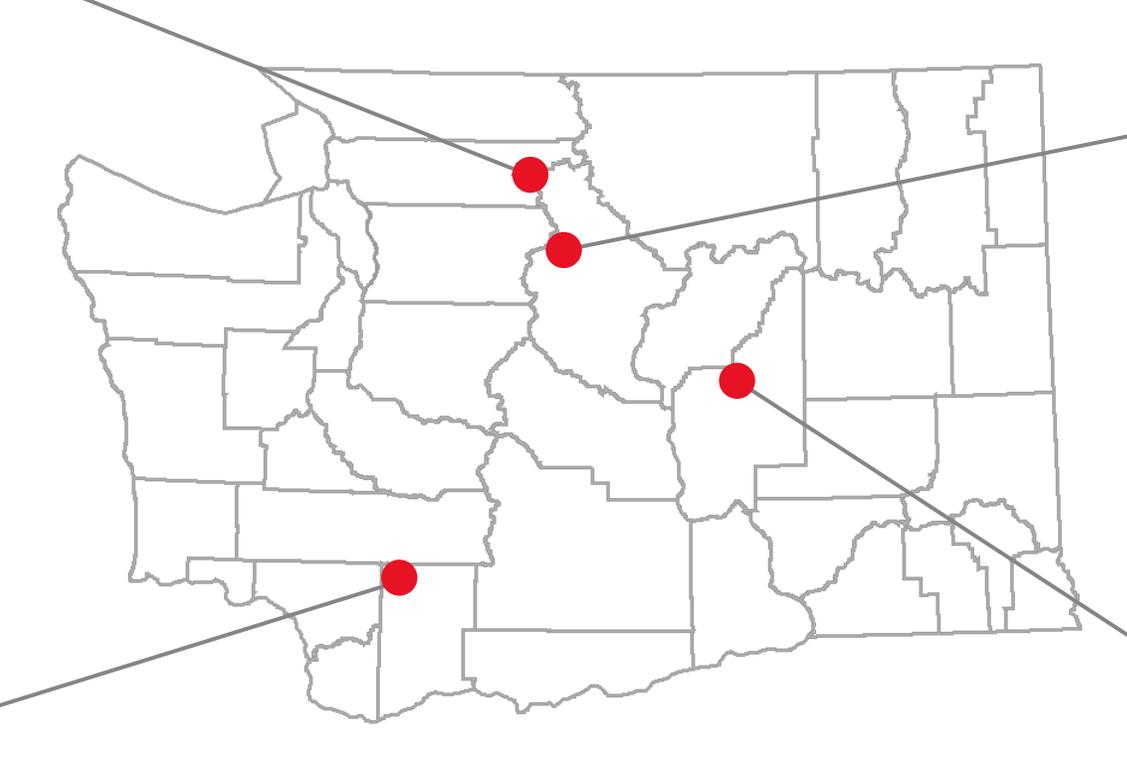
# Proposed outstanding resource waters



Cascade River



Green River



Napeequa River



Soap Lake

# Nominations submitted in 2021 by:

## Soap Lake

- Soap Lake Conservancy
- Confederated Tribes of the Colville Reservation

## Three rivers

- Pew Charitable Trusts
- American Rivers
- Cascade Forest Conservancy
- Wild Salmon Center
- American Whitewater
- Washington Wild
- Trout Unlimited

# Proposed protection levels

## Highest protection – Tier III(A)

- Cascade River
- Napeequa River
- Green River

▷ Prohibits long term changes to water quality after we adopt ORW.

## Second highest level of protection – Tier III(B)

- Soap Lake

▷ Activities may not affect water quality above measurable levels and requires extra protections to control pollution.

## Some actions still allowed

- Actions to protect public interest that may cause short-term water quality changes
- Actions to protect public health or property in an emergency

### **This protection:**

- Does not apply to sources of pollution from the air
- Does not restrict recreational or cultural uses if they aren't changing water quality

# What makes the three rivers outstanding?

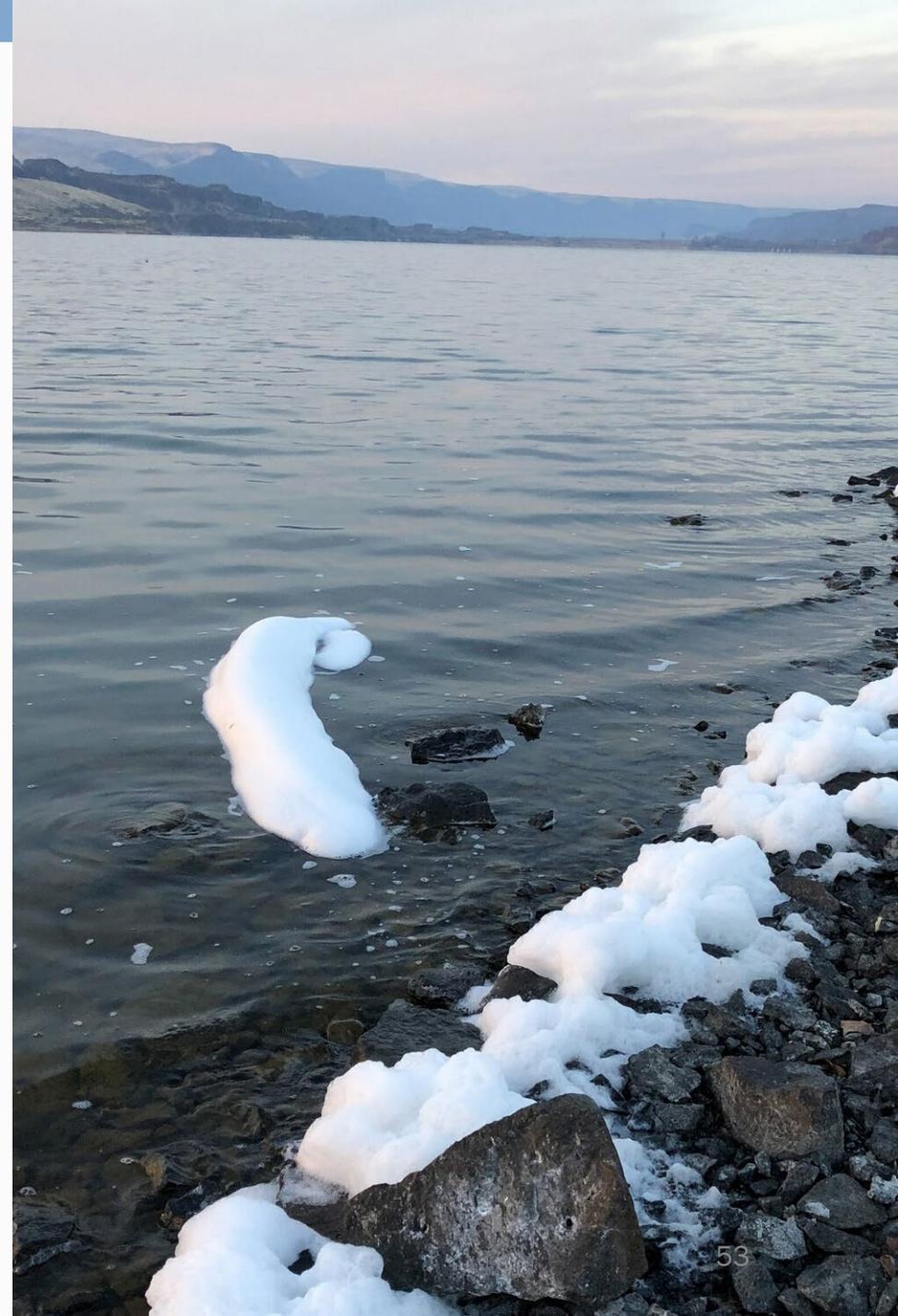
- Relatively pristine **or** exceptional water quality, **and** in a protected area (criteria a)
- High water quality and regionally unique recreational value (criteria c)
- Exceptional statewide ecological significance (criteria d)

Eligibility criteria from WAC 173-201A-330(1) listed in parenthesis

# What makes Soap Lake outstanding?

- Unique aquatic habitat is a regionally rare example of its kind (criteria b)
- Exceptional statewide ecological significance (criteria d)

Eligibility criteria from WAC 173-201A-330(1) listed in parenthesis



# Rulemaking Timeline

Public comments accepted until 11:59 pm on  
Sept. 27, 2023



# Want to learn more?

Visit our [rulemaking webpage](#) to read about how we:

- Evaluated each waterbody: **Draft Technical Support Document**
- Plan to implement the rule: **Draft Rule Implementation Plan**
- Evaluated the potential economic impacts c **Preliminary Regulatory Analyses**

<https://ecology.wa.gov/2206-ORV>





# Thank You

Marla Koberstein

[marla.Koberstein@ecy.wa.gov](mailto:marla.Koberstein@ecy.wa.gov)

# Want to learn more?

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- Evaluated each waterbody: **Draft Technical Support Document**
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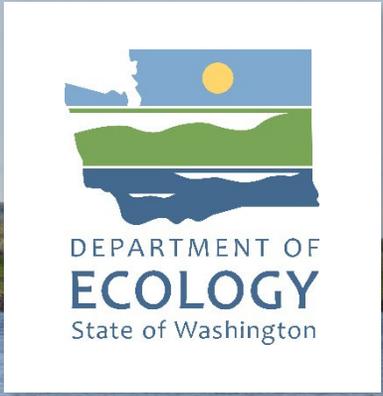
# Roundtable



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# Wrap up

Colleen Keltz



# Thank you

We'll see you at the next meeting on Dec. 6!