



Columbia and Lower Snake Rivers Temperature Advisory Group

June 2025

Agenda

- 1** Welcome and Introductions
- 2** Advisory Group Organization and Roles/Responsibilities
- 3** TMDL Overview
- 4** Ecology's Implementation Plan Process
- 5** Advisory Group Roundtable
- 6** Public Questions/Comments

Introductions

- When called upon please give your name, job title, organization, and favorite area in the Columbia watershed
- If you are listening in, introduce yourself in the chat and feel free to share your favorite area in the Columbia watershed





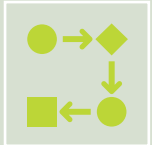
Advisory Group Overview



Why a Technical Advisory Group?



Ecology forms advisory groups for all of its TMDLs to help guide the planning process and engage local partners in solutions.



Ensure a wide array of ideas, viewpoints, and experiences are represented in the planning process.



Increased transparency and engagement with local technical partners leads to better TMDLs and healthier waterways.

Meeting Logistics



Meetings will occur monthly from June to December.



Each monthly meeting will have a topic focus connected to the TMDL (e.g., tributaries, dams, etc)



Meeting will occur monthly from June to December.



All advisory group meetings will be open to the public.

Roles and Responsibilities

- **Ecology staff:** responsible for the scheduling of TAC meetings, creating and sharing meeting agendas, recording meeting minutes, meeting facilitation, information dissemination, write the implementation plan and share implementation ideas/strategies.
- **TAC members:** attend each TAC meeting, come prepared to discuss agenda, share unique experience/knowledge/points of view, suggest agenda items, provide feedback on proposed implementation measures.
- **Meeting attendees:** pose questions to advisory group at the end of each meeting.

Workgroup Expectations

- Be respectful.
- Seek to understand and reserve judgement.
- Maintain an open mind and collaborative spirit.
- Be inquisitive and curious.
- Respect other viewpoints and actively listen.
- Come to meetings prepared
- Share your views and ideas

Tentative Meeting Topic Schedule

Meeting	Schedule Topic(s)
June 2025	<ul style="list-style-type: none">• Advisory group intro• TMDL and Implementation Plan overview
July 2025	<ul style="list-style-type: none">• Tributaries• Restoration priorities and areas
August 2025	<ul style="list-style-type: none">• Tributaries• Water resources• Cold water refugia
September 2025	<ul style="list-style-type: none">• Point sources
October 2025	<ul style="list-style-type: none">• Dams• Interactions with other WA efforts
November 2025	<ul style="list-style-type: none">• Dams• Action prioritization• Next Steps
December 2025	<ul style="list-style-type: none">• Preliminary implementation plan outline• Advisory group comments



Columbia and Lower Snake Rivers Temperature TMDL



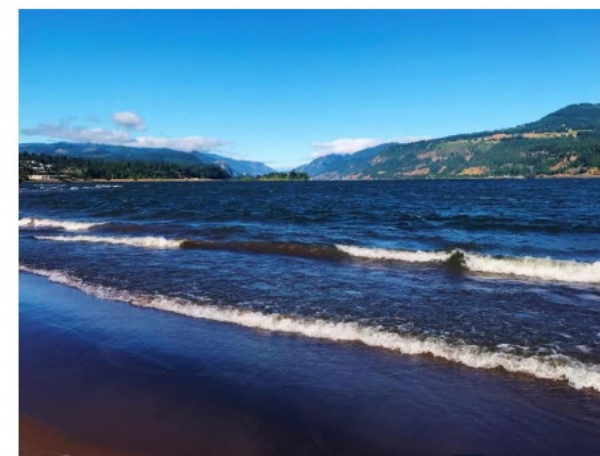
TMDL Overview

- Due to the size and multijurisdictional nature of the Columbia basin, EPA was deemed the appropriate lead for the TMDL.
- The final TMDL was published in August of 2021.
- Both Washington and Oregon are responsible for producing state-specific implementation plans



Columbia and Lower Snake Rivers Temperature Total Maximum Daily Load

U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101-3188

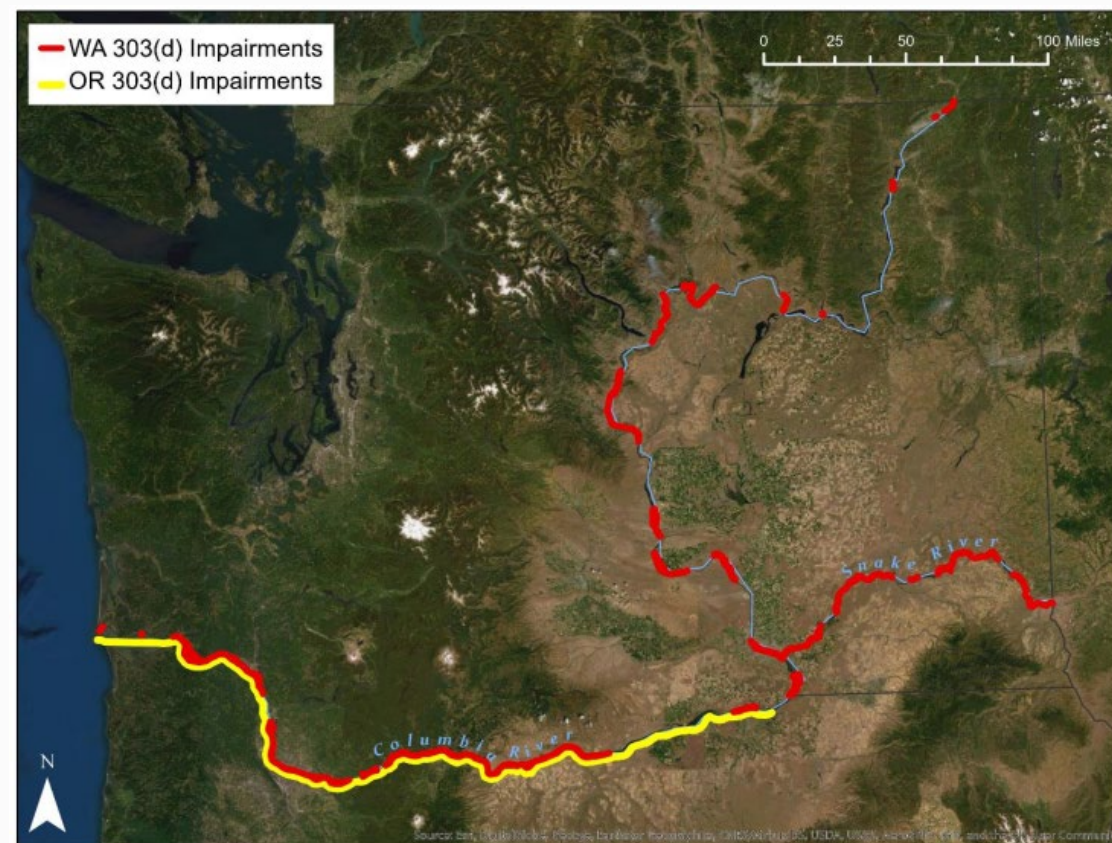


August 13, 2021

Document was revised on May 10, 2022 to correct minor formatting errors and inadvertent omission of a water quality limited segment from Table 1-1 (see letter from Daniel Opalski to Vincent McGowan on October 7, 2021).

TMDL Overview

- 50 segments on the Columbia (41 AUs) and Lower Snake (9 AUs) Rivers are currently listed on Washington's 303(d) list as impaired for temperature.
- TMDL boundary conditions in Washington cover the mainstem Columbia River from the Canadian border to its mouth and the mainstem Snake River from Clarkston to its confluence with the Columbia.



TMDL Overview

- The TMDL examined the impacts of climate change, 15 dams, 23 major tributaries, 127 individual NPDES point sources, stormwater, upstream boundary temperatures, and withdrawals from the Banks Lake Pump Project and Dworshak Dam.
- Nonpoint source impacts from dams and climate change were found to be the dominant sources of temperature impairment in the Columbia and Snake Rivers.
- Implementation plans are required to outline how each state will meet target load allocations in the TMDL.

TMDL Overview

- The TMDL assigned total allowable load capacity of 0.3 °C to the mainstem Columbia and Lower Snake Rivers.
- This loading capacity was divided equally between the primary heat sources identified in the TMDL: tributaries, dams, and NPDES point sources.

Table 6-3 Aggregate allocation: allowable 0.3°C

	WLA and LA (°C)	Source Group		
		Dams (Nonpoint source) (°C)	NPDES Point Sources and Reserve (°C)	Major Tributaries (°C)
Aggregate Allocations	0.3	0.1	0.1	0.1

Implementing a TMDL

NPDES Point Sources

- Over 80+ WA point sources identified in the TMDL and given wasteload allocations.
- Reserve allocation set in the TMDL for future sources.
- Heat loads will be incorporated into NPDES permits.

Tributaries

- 0.1 °C cumulative temperature increase allocated to 23 major tributaries.
- 12 primary cold water refugia identified for restoration and conservation.
- Temperature impacts at tributary mouths need to stay below 0.5 °C to achieve load allocation.

Dams

- 0.1 °C joint allocation for all dams.
- Temperature reduction solutions at dams will be evaluated via WQAP process and included in implementation plan.
- Emphasis on basin-wide system operations to reduce temperatures.



Implementation Plan

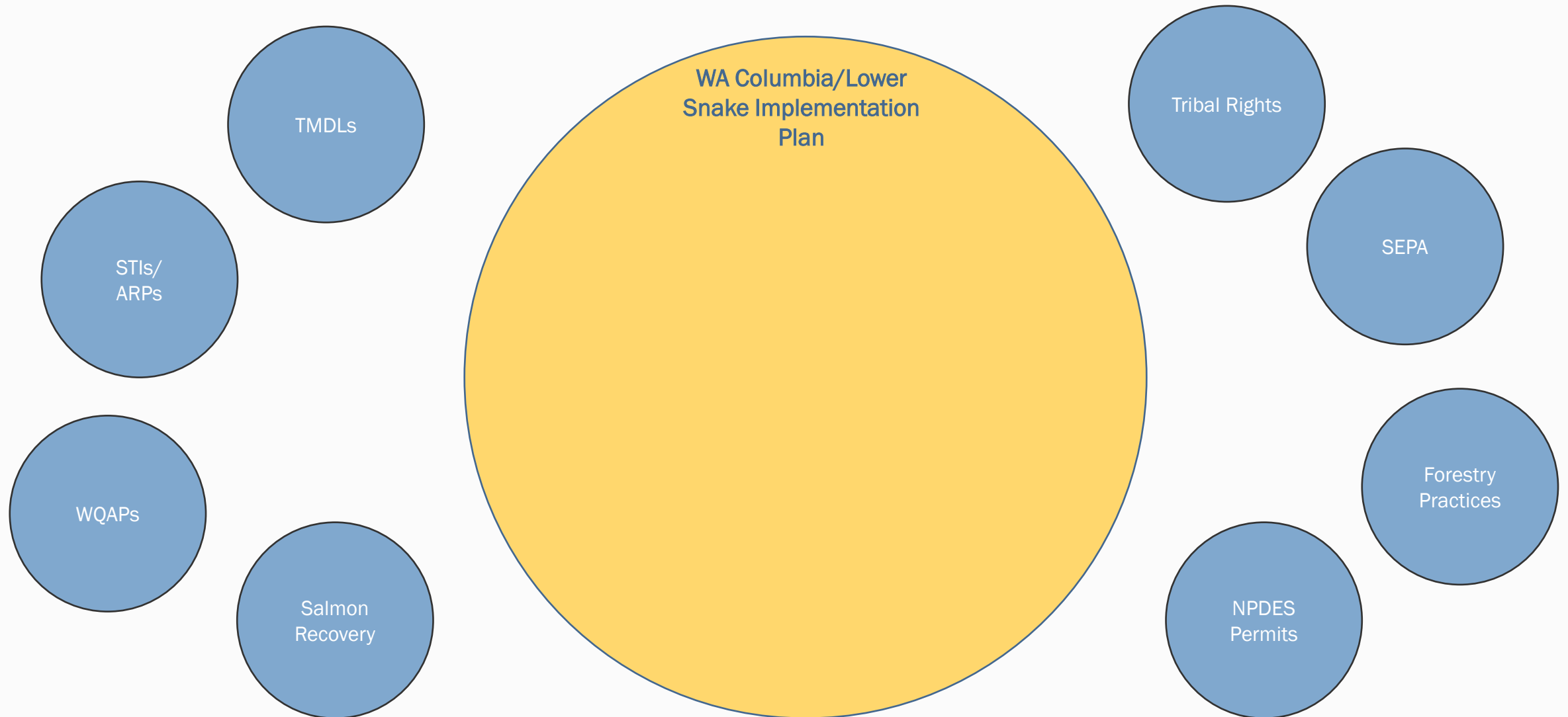


What is an implementation plan?

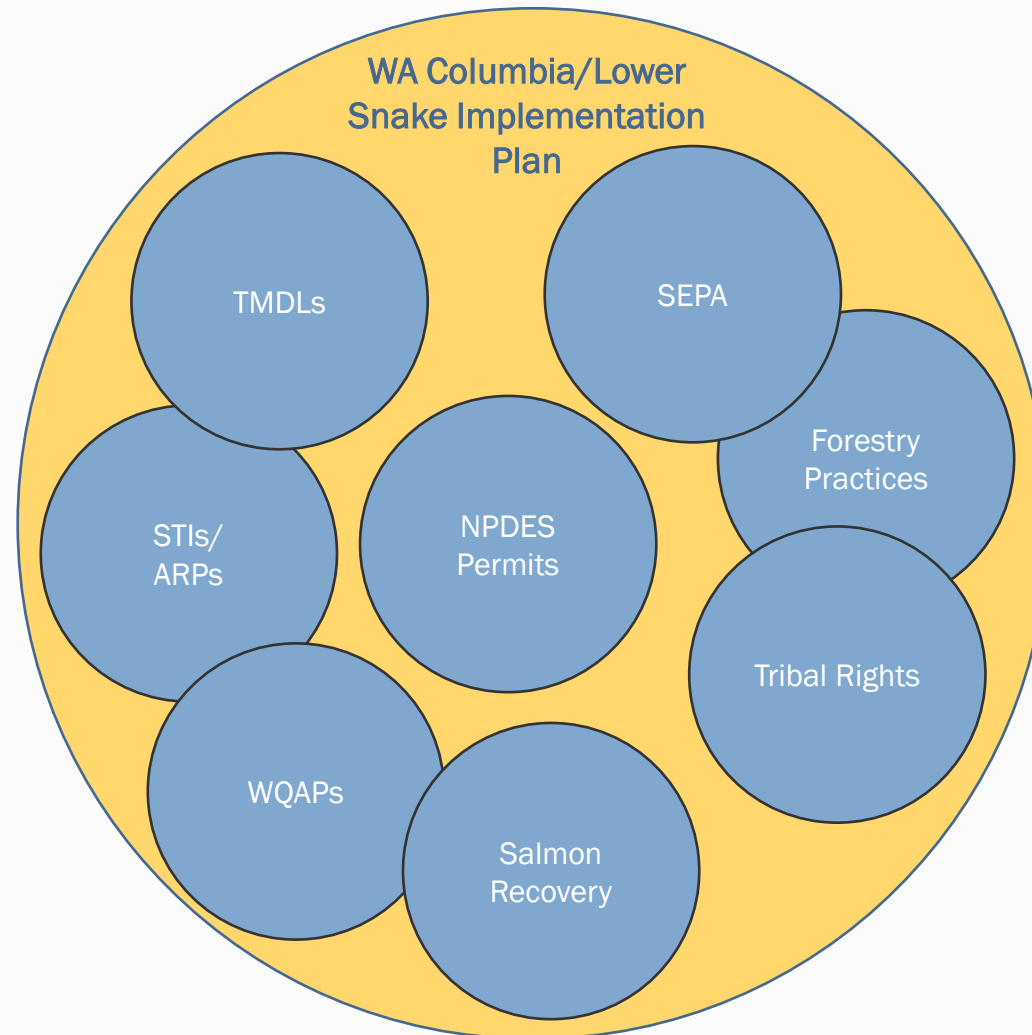
- The state of Washington includes implementation plans in all state produced TMDLs.
- Implementation plans outline the broad strategies and actions necessary to meet wasteload and load allocations outlined in the TMDL.
- Implementation plans are not self-implementing. Actions require a coordinated effort by different organizations across the state.



What is an implementation plan?



What is an implementation plan?



What does an implementation plan look like?

Who needs to participate in implementation?

A number of local, tribal, state, and federal organizations will coordinate and help to implement this TMDL. They include:

1. Washington Department of Natural Resources (DNR) (regulatory authority): forest practices regulations.
2. Whatcom County (regulatory authority): enforcement of Critical Areas and Shoreline Master Program regulations.
3. Skagit County (regulatory authority): enforcement of Critical Areas and Shoreline Master Program regulations.
4. Nooksack Indian Tribe: technical assistance, watershed monitoring activities, research and problem identification, and special projects support for riparian and in-stream improvement projects.
5. Lummi Nation: technical assistance and special project support for riparian and in-stream improvement projects and watershed monitoring activities.
6. Ecology (regulatory authority): technical assistance, project development and coordination, Centennial and 319 Grant funding, State Revolving Fund Loan program, wetlands protection, regulation of NPDES permitted discharges, and when necessary, enforcement of water quality laws.
7. EPA (regulatory authority): technical assistance, regulation of NPDES permitted discharges, CWA oversight.

Table 40. Implementation activities for the South Fork Nooksack River.

Implementation Goal	Implementation Activity
Increased tree height and buffer width	Preservation and enhancement of riparian shade. Planting native vegetation where buffers are lacking with a goal of providing shade consistent with a climax forest.
Decreased headwater and tributary temperatures	Preservation and enhancement of riparian shade. With a goal of providing, shade consistent with a climax forest where there is flowing water during critical periods
Decreased Channel Width	Increase stability of disturbance zone with log jams
	Implement stream bank stabilization projects
Enhanced hyporheic exchange - also includes enhanced ground water inflow	Form deep pools with log jams
	Reconnect floodplains
	Integrate salmon recovery into floodplain management
	Investigate changes in land cover effect on summer base flows, forest and wetland.
Other -Provide access to refugia	Restore passage at salmon barriers
Other – Comply with Permit	Point source requirements are detailed under the WLA section.

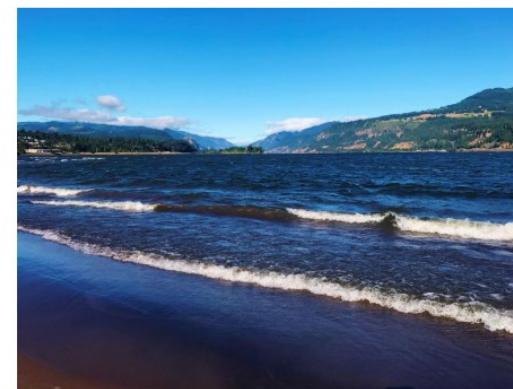
Implementation plan components

- Management goals
- Information on the watershed and land uses
- Solutions to achieve wasteload and load allocations
- Nonpoint BMPs
- Financial and technical assistance pathways
- Education and outreach strategies
- Progress tracking, monitoring, and adaptive management plan



Columbia and Lower Snake Rivers Temperature Total Maximum Daily Load

U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101-3188



August 13, 2021

Document was revised on May 10, 2022 to correct minor formatting errors and inadvertent omission of a water quality limited segment from Table 1-1 (see letter from Daniel Opalski to Vincent McGowan on October 7, 2021).

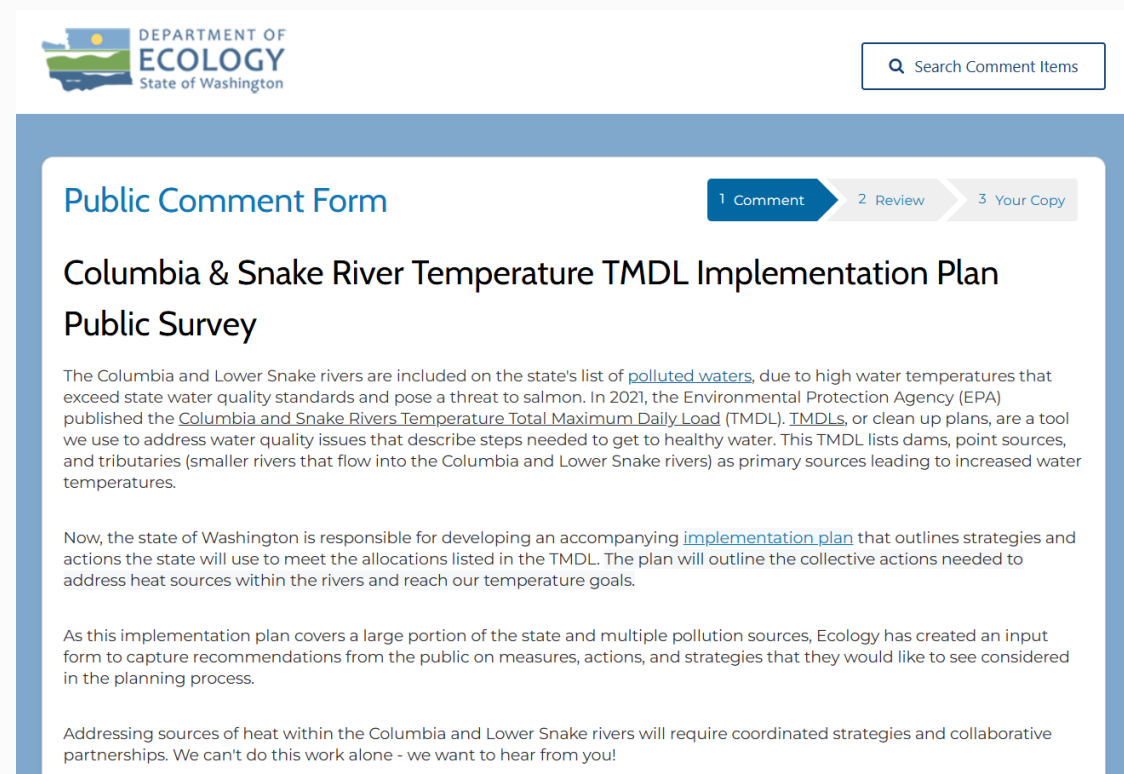
Implementation Plan Priorities

- Examine impacts locally and across the basin.
- Network of Actions
- Adaptive management
- We need to show our math! We don't know what we don't know



Public Input Survey

- Comment form will allow submission of actions, strategies, and solutions that should be included in the implementation plan.
- Input is organized by region and load source (tributaries, dams, point sources).
- Survey will be open from June to October.



The screenshot shows the 'Public Comment Form' interface. At the top left is the Department of Ecology logo. At the top right is a search bar labeled 'Search Comment Items'. Below the header is a progress bar with three steps: '1 Comment' (active), '2 Review', and '3 Your Copy'. The main title is 'Columbia & Snake River Temperature TMDL Implementation Plan Public Survey'. The text explains that the Columbia and Lower Snake rivers are on the state's list of [polluted waters](#) due to high water temperatures that exceed state water quality standards and pose a threat to salmon. It mentions that in 2021, the EPA published the [Columbia and Snake Rivers Temperature Total Maximum Daily Load \(TMDL\)](#). TMDLs, or clean up plans, are a tool used to address water quality issues that describe steps needed to get to healthy water. This TMDL lists dams, point sources, and tributaries (smaller rivers that flow into the Columbia and Lower Snake rivers) as primary sources leading to increased water temperatures. The text continues that the state of Washington is responsible for developing an accompanying [implementation plan](#) that outlines strategies and actions the state will use to meet the allocations listed in the TMDL. The plan will outline the collective actions needed to address heat sources within the rivers and reach temperature goals. It also states that as this implementation plan covers a large portion of the state and multiple pollution sources, Ecology has created an input form to capture recommendations from the public on measures, actions, and strategies that they would like to see considered in the planning process. Finally, it notes that addressing sources of heat within the Columbia and Lower Snake rivers will require coordinated strategies and collaborative partnerships, and that the state wants to hear from the public.

Implementation Plan Forums



2-3 forums planned for Fall of 2025



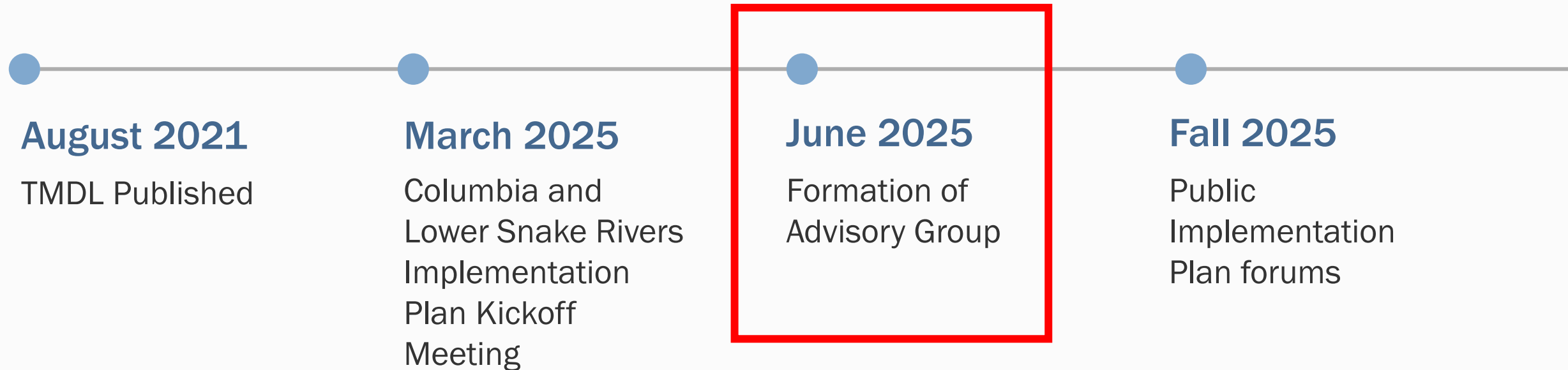
Forums will be open to the public with topics informed the TMDL and TAC meetings



Forum presentations, agendas, and overviews will be shared after each meeting



Implementation Plan Timeline



Implementation Plan Timeline

December 2025

End of
Implementation
Plan planning
process

Beginning 2026

Draft WA
Implementation
Plan/Public
Comment

Summer 2026

Publication of the
Implementation
Plan



Oregon DEQ Update

David Gruen
Columbia River Coordinator
Oregon Dept of Environmental Quality

Group Question

What additional questions do advisory group members have about the implementation plan, process, or their role in the project?



Advisory Group Roundtable



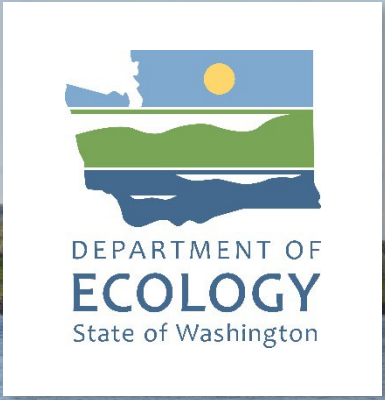
Group Question

Given the scale, scope, and multijurisdictional nature of this TMDL, what elements (i.e., funding mechanisms, restoration strategies, projects, etc) do you believe should be prioritized in an implementation plan?



Next Steps

- Ecology to send out scheduling poll for next meeting (July).
- All meeting materials posted to Ecology's Columbia/Snake TMDL webpage.
- Submit input/suggestions via Ecology's public input survey.
- TAC members submit to Ecology any specific topics/areas of interest they want discussed in future meetings.



Public Questions/Comments



Thank you!

Robbie O'Donnell

Large Scale TMDL Lead

rodo461@ecy.wa.gov